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ServiceNow Documentation

Jakarta

Jakarta Release Notes

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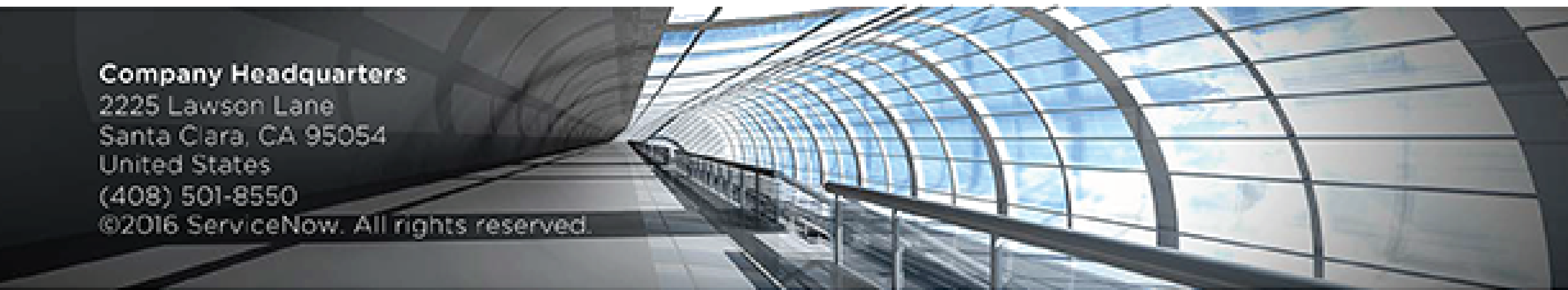

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Contents

Jakarta release notes

The ServiceNow® Jakarta release contains new functionality and fixes to existing functionality. Patch releases and hotfixes provide problem fixes and are released on an as-needed schedule.

Features and changes by product

Review the new features and changes in this release by product.

Now Platform release notes

The Now Platform has new and updated features in the Jakarta release.

Accessibility release notes

ServiceNow® platform accessibility enhancements and updates in the Jakarta release.

Accessibility has been improved throughout the platform in congruence with WCAG 2.0 A and AA standards to make the system more perceivable, operable, and understandable to all users. Changes to accessibility that are feature-specific can be found in the documentation for that feature.

Activation information

Basic accessibility is included as part of the platform; no additional configuration is needed.

Users can enable a user preference to make the platform more accessible.

Enable accessibility	Turns on tabbing for every item on a page and enables the option to skip to different places on a page. Users can enable this option individually on the General tab of the system settings menu. Administrators also have the option to enable this preference for users by navigating to **User Administration** > **User Preferences** and searching for the preference glide.ui.accessibility.

Browser requirements

Some keyboard shortcuts and tab-through are browser-specific. See your specific browser documentation for more information.

New in the Jakarta release

Contrast UI theme	Provides a more accessible theme for users who have a hard time seeing low contrast colors. Users can select the contrast theme from the Theme tab in the system settings window.

Changed in this release

- **Keyboard accessibility improvements**:
  - Tab order is consistent with expectations.
  - Button labeling.
  - Improved access to different UI elements.
  - Consistency for fields and UI elements that have hints (or tooltips).
  - Tab-through and arrow keys move items around in a slushbucket.
  - When focused on tabs, right and left arrow keys switch between tabs.
  - Arrows keys work within menus to navigate between entries.
- **Improvements for screen readers**
  - Screen readers announce when a page reloads
  - Add alternative text to styles. For example, you can add alternative text to the VIP style icon so that screen readers can call it out.
  - In Connect, screen readers inform users when a member leaves a conversation, when a user is added or removed from a chat, and when uploads complete or fail.
  - Variable names have been added to list collector variables to ensure that each variable is unique. Screen readers would read the hard coded variable name more than once if a list collector was on a page more than once.
- **Color accessibility improvements**
  - Enable accessibility in the system settings to switch any color-heavy graphics, such as charts or graphs, to use patterns in addition to colors.
- **Style accessibility**
  - Improvements to alert color and font styles to make them more visible.

API release notes

ServiceNow® API product enhancements and updates in the Jakarta release.

Activation information

- ServiceNow API: Platform feature – active by default.
- Email API: Users with the admin role can activate the Email Service plugin (com.glide.email.service) to enable the Email API.

Changed in this release

Table 1: New scoped classes and additional methods to existing classes

Class	Methods
CatalogClientScript	`appliesToTargetRecord()`
CatItem	`availableForUserCriteria()`,`notAvailableForUserC`

Class	Methods
CatCategory	`availableForUserCriteria()`,`notAvailableForUserC`
CartJS	`setRequestedForUser( )`
GlideAggregate	`addTrend()`
GlideDateTime	`getNumericValue()`,`getUserFormattedLocalTime()`
GlideElement	`canCreate()`, `canRead()`, `canWrite`,`getAttribute()`, `getBooleanAttribute()`, `getDecryptedValue()`, `getHTMLValue()`, `getHTMLValueExt()`, `getJournalEntry()`, `getLabel()`, `getName()`, `getTableName()`
GlideRecord	`_query()`, `addActiveQuery()`, `getAttribute()`, `getClassDisplayValue()`, `getED()`, `getLabel()`
GlideSystem	`beginningOfLastMonth()`, `beginningOfLastWeek()`, `beginningOfNextMonth()`, `beginningOfNextYear()`, `beginningOfThisQuarter()`, `beginningOfThisWeek()`, `beginningOfThisYear()`, `daysAgo()`, `daysAgoEnd()`, `daysAgoStart()`, `endOfLastMonth()`, `endOfLastWeek()`, `endOfLastYear()`, `endOfNextMonth()`, `endOfNextYear()`, `endOfThisMonth()`, `endOfThisQuarter()`, `endOfThisWeek()`, `endOfThisYear()`, `getErrorMessages()`, `hoursAgo()`, `hoursAgoEnd()`, `hoursAgoStart()`, `monthsAgoStart()`, `quartersAgoEnd()`, `quartersAgoStart()`, `setRedirect()`, `yesterday()`
GlideSPScriptable	`getCatalogItem()` has another parameter.
UserCriteria	`setRoles()`, `setUsers()`,`setDepartments()`, `setLocations()`, `setCompanies()`, `setAdvanced()`, `setScript()`, `setName()`, `setGroups()`, `setActive()`, `setMatchAll()`, `create()`, `read()`, `update()`, `deleteRecord()`

Table 2: New global classes and additional methods for existing classes

Class	Methods
CMDBTransformUtil	`getError()`, `getOutputPayload()`, `hasError()`, `logTransformStats()`, `setDataSource()`
GlideEncrypter	`encrypt()`, `decrypt()`

Class	Methods
GlideEvaluator	`evaluateScript()`, `getVariable()`, `putVariable()`

Authentication release notes

ServiceNow® platform authentication enhancements and updates in the Jakarta release.

Activation information

- ServiceNow Authentication: Platform feature – active by default.
- Limit Concurrent Sessions: Feature not active by default. Users with the admin role can activate the Limit Concurrent Sessions plugin (com.glide.limit.concurrent.sessions).

New in the Jakarta release

Limit concurrent sessions	Limit the number of active concurrent sessions per user or per role. When the user logs in after reaching the maximum number of sessions active, the oldest active session terminates and a new interactive session becomes active. If a user tries to access a closed session through a browser, the user is redirected to the login page.
Activating or modifying an IdP configuration	For every new IdP configuration, a successful connection to the IdP must occur to activate the configuration for authentication. Once an IdP configuration is active, any changes to the configuration cannot be saved and made active until the configuration successfully connects to the IdP.
Automatic updates for SSO imported certificates	A new background job polls active IdP configuration for new and updated certificates. It imports these certificates to the IdP configuration. The imported certificates append to the list of existing certificates without replacing any certificates.
Multiple certificate support for SAML SSO	SAML SSO configurations support accepting multiple certificates for an existing configuration, including future dated certificates. An IdP configuration can then use the proper certificate from the list of certificates for the configuration to be valid.

Automated Test Framework release notes

ServiceNow® Automated Test Framework feature enhancements and updates in the Jakarta release.

Activation information

Platform feature – active by default.

Browser requirements

Automated Test Framework works with all browsers supported by the ServiceNow platform, but some browsers have features to throttle CPU time that can hamper automated test performance. For information on how to mitigate these issues, see *browser recommendations for ATF*.

New in the Jakarta release

Run automated test	Choose the browser for the client test runner. If an automated test includes a UI-based step, the system asks you to choose an existing or new test runner.
Screenshots mode preferences	Optimize test performance by controlling which types of screenshots the system captures during a test: all screenshots, no screenshots, or just screenshots for failed test steps.
Schedule automated test suite **executions**	Schedule a test suite to execute at a specified date and time.
Test suite email reports	Designate users to notify by email when a scheduled test suite finishes executing. The email contains information and links to further information for the Scheduled Suite Run and its results.
Compare execution times across different runs of the same test or same test suite.	• *Compare Test Results* compares the length of time to execute each test over selected runs for this test suite. This report is available from the Test Suite Results related list on the Suite form. • *Compare Test Step Results* compares the length of time to execute each test step over selected runs for this test. This report is available from the Test Results related list on the Test form. • *Compare results for automated test suite runs (aging report)* compares how many tests passed versus failed across different runs of the same test suite. This report is available from the Test Suite Results related list on the Suite form.
Transactions recorded during tests	Better understand test performance by inspecting transaction records for tests and test steps. You can view these records from the Step Transactions related list on the Step Results record and from the Test Transactions related list on the Test Results record. See *View transaction data for automated test results*.

REST test steps	Create automated tests that include steps for sending REST requests.
Service Catalog test steps	Write automated tests to validate catalog items. You can write end to end tests for both the requester and fulfiller flows.

Changed in this release

- *Field added to transaction tables* The recorded_at field in the sys_atf_result_item and sys_atf_transaction_mtom tables supports the ability to view transaction data for automated test results.

Assessments and Surveys release notes

ServiceNow® Assessments and Surveys product enhancements and updates in the Jakarta release.

Activation information

Assessments and Surveys is a platform feature that is active by default.

New in the Jakarta release

Domain separation for assessments	Assessments support domain separation.
Survey widget	• Take surveys from Service Portal. • Use the Survey widget to display surveys, quizzes, assessments, risk assessments, and attestations on the Service Portal. • Use the new **Instance option**on the Survey widget: The **Title of the widget** instance option enables you to customize the title of the widget on the Service Portal.
Role-based assessment of the category for an assessable record	Use the **Roles** property to specify which user roles can assess the category when configuring a category for an assessable record.

Calendars and schedules release notes

ServiceNow® calendars and schedules enhancements and updates in the Jakarta release.

Jakarta upgrade information

Starting with the Jakarta release, the Fiscal calendar is a platform feature and is no longer dependent on Financial Management.

Activation information

You can *Activate the Fiscal Calendar plugin* if you have the admin role.

Changed in this release

- *Fiscal calendars*: The Fiscal calendar can be used in the ServiceNow platform. Fiscal calendar periods can be selected in the list v2 and v3 condition builder. User roles have changed:
  - fiscal_calendar_admin: role required to generate a fiscal calendar
  - fiscal_calendar_user: role required to view fiscal periods

Configuration Management release notes

ServiceNow® CMDB product enhancements and updates in the Jakarta release.

With the ServiceNow Configuration Management application, you can build logical representations of assets, services, and the relationships between them that comprise the infrastructure of your organization. Details about these components are stored in the configuration management database (CMDB) which you can use to monitor the infrastructure, helping ensure integrity, stability, and continuous service operation.

Jakarta upgrade information

CMDB content undergoes table per partition *table flattening* during upgrade. This change does not have a performance impact and is transparent to users. Customers with a large CMDB table may experience a longer upgrade duration. See *KB0635006*.

Activation information

Platform feature – active by default.

New in the Jakarta release

CMDB benchmarks	Several CMDB Health related benchmarks are calculated and display in the Benchmark dashboard. Use these benchmarks to compare the quality of the CMDB in your organization with other ServiceNow CMDBs in the industry, and take actions if necessary.

Changed in this release

- **Identification and Reconciliation**
  - *Identification simulation*: A central location for automatically constructing a payload that is guaranteed to be complete and valid. You can then simulate the processing of that payload by the identification engine to test the results before actually submitting it for execution by the identification engine.

  - *Identification engine logging*: To help troubleshoot identification engine errors, debugging experience of the identification engine has been enhanced. Identification engine logging is integrated with Event Management and Discovery, so when identification errors are encountered, direct URLs to log details can be provided. URLs link to a user-friendly display of logging details generated by the identification engine and the service cache, grouped by Context IDs and run times. All logging is in the context of a specific payload and a specific run of the identification engine, and can be filtered by specific data source and specific time range.
  - *Data source refreshness rules* are now used to determine if a CI is stale per specific data source.
  - *Identification and Reconciliation application to Import Sets*. The CMDBTransformUtil API supports a data set with a mapping to reference fields in the CMDB. The CMDBTransformUtil API also supports source scripts in imported data sets.

- **CMDB Health**:

  - *Create health inclusion rule* and identification inclusion lists lets you filter and otherwise control the list of CIs that are included in the identification process.
  - CMDB Health dashboard supports health monitoring and aggregation for *CMDB health groups*. You can configure a separate set of scorecards thresholds for each CMDB group, per KPI or metric.
  - *Relationship health* in the CMDB dashboard provides the following reports:

    - Relations not compliant with suggested relations
    - Relations not compliant with containment rules
    - Relations not compliant with hosting rules

  - CI staleness rules are no longer shared with CI staleness identification by Identification and Reconciliation.
  - The property **glide.cmdb.health.staleness** has been removed. Instead, a default staleness rule for the cmdb_ci class is included in the base system. See *CMDB health KPIs and metrics* for more details.
  - The audit health metric supports scripted audits. See *Prepare a scripted audit for the compliance KPI*for more information.
  - If an audit health test is associated with multiple remediation tasks, then the **Task** field on the *CMDB Health Results form* contains one of the tasks, and the **Additional Tasks** field contains the rest of the tasks.
  - Relationship conditions in an *orphan rule* have been enhanced. You can now specify that for a CI to be considered orphan, the CI either has no relationships or the CI does not have a set of specified relationships.

- **CMDB Query Builder**:

  - The class hierarchy can be filtered to display only classes that can connect to the selected node on the canvas. For more information see *Display Suggested Connections*.
  - Search for a saved query can be based on specific details such as name, creator, query type, or any combination of these details. Search can also be based on a tag that the user added to the query. See *CMDB Query Builder* for more information.
  - Only a section of a query can be selected for running. See *Run a partial CMDB query* for more information.

- The *CI Metadata Editor* is integrated into the CI Class Manager, providing a centralized location and easy access to identification related rules, reconciliation related rules, and metadata rules at the class level.
- *CMDB group* supports encoded queries, in addition to saved queries.
- Guided setups for CMDB Health, Identification and Reconciliation, and Creating CI class are included in the base system.

Dependency Views release notes

ServiceNow® Dependency Views product enhancements and updates in the Jakarta release.

Dependency Views provide maps that graphically display configuration items that support business services and the relationships between the configuration items.

Activation information

Platform feature – active by default.

Browser requirements

The Dependency Views module supports the latest version or service pack of the following browsers:

- Firefox with the latest ESR
- Chrome version 25 or later (latest version recommended)
- Safari version 6 or later
- Microsoft Internet Explorer (IE) version 9 or later

Changed in this release

- ***glide.bsm.max_levels***: This map property controls the size and density of a map. The maximum value for this property is increased to 49.
- ***glide.bsm.show_virtual_node_children***: This map property controls the density of a map when virtual nodes exist, affecting virtual grouping of nodes in a Dependency Views map.
- ***Flow Dependencies***: This dependency type returns all the server to server connections that were discovered using the Netflow collector.
- ***Metric Explorer***: The CIs list in the integrated Metric Explorer, is updated with the same new styling changes that were made in the Metric Explorer.
- Business service node: A business service node on the map displays the CIs included in the business service.

Edge Encryption release notes

ServiceNow® Edge Encryption™ application enhancements and updates in the Jakarta release.

Jakarta upgrade information

Because the Edge Encryption proxy server requires at least 4 GB of memory, 32-bit JREs and 32-bit operating systems are no longer supported starting with the Jakarta release. Review the *Edge Encryption system requirements and limitations* to ensure an optimal environment for your implementation.

When upgrading the Edge Encryption proxy server to the Jakarta release, use the new command-line upgrade commands.

- *Manually upgrade an Edge Encryption proxy server running on Windows*
- *Manually upgrade an Edge Encryption proxy server running on Linux*

Activation information

Request the Edge Encryption™ plugin and configure it according to the needs of your organization. This plugin is available as a separate subscription.

New in the Jakarta release

Edge Encryption proxy server interactive installer	Use the Edge Encryption proxy server interactive installer to install the proxy server without using the command line.
Edge Encryption proxy server scheduled upgrades	After upgrading to Jakarta, the Edge Encryption proxy server can be scheduled to upgrade automatically when an upgrade becomes available. Upgrades can only be scheduled by users with the security_admin role through the proxy server.

Changed in this release

- *Change a field or attachment's encryption type*: You can change a field or attachment's encryption type without creating a new encryption configuration for the field.

Embedded help release notes

ServiceNow® Embedded Help is a new application in the Jakarta release. It includes the guided tour feature.

Embedded help and guided tours have been in the instance since the Helsinki release. In the Jakarta release, administrators can use the new Embedded Help application to create customized embedded help and develop guided tours.

Embedded help features

Embedded help	Embedded help provides targeted help content to a user in a UI page, based on their role. Some embedded help content comes with the base instance. Your organization can add or replace embedded help content. Embedded help content appears in the right sidebar when the user clicks the help icon.
Guided tours	A guided tour provides a way to demonstrate to users how to use a feature. An administrator can create a task demo with callouts to demonstrate how to do something in the instance, such as how to perform a task.

Activation information

The following plugins are activated by default on new and upgraded Jakarta instances.

- Embedded Help (com.glide.embedded_help)
- Guided Tour Designer (com.glide.sn_tourbuilder)

User interface requirements

Both embedded help and guided tours are only available with UI16.

Import and Export release notes

ServiceNow® Import and Export feature enhancements and updates in the Jakarta release.

Activation information

Platform feature – active by default

Changed in this release

- **JSON**:
  - You can import JSON files.
  - You can export to JSON when using Export Sets.
  - You can export to JSON from a list.
  - There is limited support for importing child (nested) arrays within an array.
- **LDAP**:
  - The **Attributes** field is visible by default on the LDAP Server form.
- **Export logging**:
  - Provided detailed logging when imported data exceeds row size limits.
- **Excel**:
  - You can control the wrapping behavior of exported Excel files using the property glide.export.excel.wrap_cells.
  - You can import numeric values greater than 10 million from Excel when the property glide.import.excel.enhanced_number_conversions is true.
- **String exports**:
  - You can control how empty strings are treated during transformation using the property glide.impex.transformer.empty_value_nil.

Knowledge Management release notes

ServiceNow® Knowledge Management application enhancements and updates in the Jakarta release.

Jakarta upgrade information

Review the content in the community page for Knowledge upgrade best practices at *All things Upgrade considered on Knowledge v2 to v3*.

Activation information

Platform feature – active by default

Knowledge Management has changed with Knowledge v3, which is enabled by default for all instances. For migration information, see *Knowledge Management v3 migration*.

New in the Jakarta release

Article versioning	Create multiple versions of knowledge articles, track changes to updated articles, and compare two versions of an article. Capture feedback on specific article versions and, if needed, revert content to an older published version of an article.
Knowledge subscriptions	Subscribe to knowledge bases and knowledge articles. Subscribed users receive notifications when articles are created or modified. Authors receive notifications when content receives feedback and when content is updated by another author.
Knowledge Management Service Portal	Use knowledge management features on the Service Portal. Configure the home page with knowledge bases and article collections. Configure the search results page with multiple ways to filter and sort a list of search results.

MetricBase release notes

ServiceNow® MetricBase is a new application in the Jakarta release.

Use the MetricBase application to collect, retain, analyze, and visualize time series data.

See *MetricBase* for more information.

Mobile release notes

ServiceNow® mobile product enhancements and updates in the Jakarta release.

Access an instance from your mobile device using the native mobile app or directly from your mobile browser.

Activation information

The mobile web experience is active by default.

To access the native mobile app, download the app from either the Apple iTunes or Google Play stores.

Browser requirements

Access the mobile web interface from the latest versions of the Safari or Chrome web browsers on your mobile device.

New in the Jakarta release

Manage your notification settings in the native mobile app	You can enable or disable your notifications and the channels (devices) on which you receive them by using **Notification Settings** in the native mobile app. The list of notifications is organized by categories that identify and group related notifications for easier access. You can set additional notification preferences, such as conditions or filters that affect notification delivery, through the System Settings window on a desktop instance or mobile web browser. For details, see *User notification preferences in UI16*.

Changed in this release

The mobile UI supports:

- Performance analytics on Android devices
- *Field service agent map* - You can use **My Map** to view an agent's location and assigned tasks.
- Field Services Agent Calendar - You can view the Agent Calendar to see assigned tasks by day, week, or month.

Notifications release notes

ServiceNow® platform notifications enhancements and updates in the Jakarta release.

Notifications are a platform feature that includes email and SMS messages, push messages, and the Email API.

Jakarta upgrade information

To enable randomized watermarks in email notifications for upgraded instances, activate the Random Watermark Support (com.glide.email.random_watermark) plugin. This plugin includes system properties for managing a watermark transition period, during which the system recognizes both randomized watermarks and non-randomized watermarks in emails created before upgrading. For details, see *Notifications upgrade information* on page 18.

Activation information

Platform feature – active by default.

Browser requirements

If you are using the Internet Explorer browser, you must use version 11 or greater to support user notification preferences in the System Settings window. You can also use any of the other *supported web browsers* .

New in the Jakarta release

Manage notification preference from a central location	Set your own notification preferences, including personal subscriptions and channels (devices for receiving them). All users can set these preferences for themselves in the **Notifications** tab of the System Settings window. The list of notifications is organized by category, which identifies groups of related notifications for easy access.
Randomized watermarks	Notice that watermarks in email notifications for base systems include a random 20-character string to make each watermark unique. This random string reduces the possibility of a watermark being guessed or coincidentally matching the watermark of an email from another instance.
Email image filtering	Use new email properties to control how inbound email images are attached to target records and displayed in the activity formatter. These properties let you filter out unwanted, smaller email images, such as logos or email signatures, so that they are not attached to or shown in the activity formatter of target records.

Changed in this release

- **Enhancements to notification preferences**
  - *Notification form*: Added the **Category** field. Notification categories identify and group related notifications. This field identifies the family of notifications to which the notification belongs. Admins can *add new or update existing categories* using the Notification Category [sys_notification_category] table.
  - *Notification devices*: Are called channels. Use the **Create Channel** option in the **Notifications** tab of the System Settings window to add or update email and SMS channels.
  - *Personal subscriptions*: Are renamed as personal notifications. All users can subscribe to notifications that interest them and are configured as subscribable. All users can also create preferences and conditions that determine how and when their personal notifications are delivered, or unsubscribe from them. To add personal notifications, use the **Create Personal Notification** option in the **Notifications** tab of the System Settings window.
- *Email Client Templates form*: Includes the **Content** field for admins to add HTML or plain text for the template body.
- **Base system notifications**: Added unsubscribe and notification preferences links.
- *Push notification retention*: Added support for archiving and destroying push notifications that are no longer needed.
- **Connect notification settings**: The Connect notification settings previously listed in the **Notifications** tab of the System Settings window are located in the Connect category on the **Notifications** tab.
- **Twilio account administration enhancements**: *Connect to and disconnect from a Twilio account* and avoid overwriting the Twilio TwiML application. Prevent a ServiceNow instance from connecting to a Twilio account if the account is already configured on a different ServiceNow instance.

Removed in this release

- Removed the **Notification Preferences** link from the User form, since users change their notification preferences through the System Settings window.

Notifications upgrade information

Notifications upgrade information for the Jakarta release.

Randomized watermark support

After you upgrade to Jakarta, you can activate the Random Watermark Support (com.glide.email.random_watermark) plugin, which enables randomized watermark generation for email notifications. The system generates all new outbound emails with the randomized watermark.

However, your instance may still need to process older inbound emails containing non-randomized watermarks sent before the Random Watermark Support plugin was activated. With the plugin, the system recognizes **both** randomized and non-randomized watermarks in inbound emails.

Random Watermark Support adds the following properties for controlling watermark generation:

- glide.email.watermark.generate_random – Generates randomized watermarks only. This property is set to true when the plugin is activated. For non-randomized watermark generation, set this property to false.
- glide.email.watermark.parse_restrictive – Determines the type of watermark generation in effect and processes watermarks accordingly. This property is set to false when the plugin is activated, so the system recognizes randomized and non-randomized watermarks.

To activate the plugin, navigate to **System Definition > Plugins**, and select **Random Watermark Support**.

Before activating randomized watermark support

- Determine a watermark transition period during which the system must recognize both randomized and non-randomized watermarks. This transition period is the time needed for the system to process all outbound email replies containing non-randomized watermarks.
- Review the following items to determine if they parse watermarks and must be updated to handle randomized watermarks:
  - Inbound email actions
  - Business rules
  - Mail scripts or script includes

  For example, if you have a mail script that uses non-randomized watermarks, consider revising the script so that it can handle the longer randomized watermark format, such as: **MSG3846157_aLJc130zDhCVuh3spXmt**.

After the watermark transition period ends

When outbound emails no longer contain non-randomized watermarks, change the watermark parsing behavior to recognize randomized watermarks. Set the glide.email.watermark.parse_restrictive property to true so that the system recognizes randomized watermarks only.

Orchestration release notes

ServiceNow® Orchestration application enhancements and updates in the Jakarta release.

Activation information

The Orchestration (com.snc.runbook_automation) plugin is available as a separate subscription from the rest of the ServiceNow platform. To purchase a subscription, contact your ServiceNow account manager. The account manager arranges the plugin activation on your production and sub-production instances, generally within a few days.

New in the Jakarta release

JDBC stored procedure support	Enhanced support for JDBC stored procedure parameter modes IN, OUT, INOUT for Oracle, MySQL, and MS SQL databases. Added auto-mapping functionality for INOUT, Out parameters for stored procedures.
SCCM device collection activity	New collection activity added to SCCM pack to validate that devices are in corresponding install or uninstall collections.
SCCM user collection activity	New collection activity added to SCCM pack to validate that users are in corresponding install or uninstall collections.
Orchestration Usage Metrics dashboard	This dashboard shows an overview of Orchestration usage metrics to show customers how their organization uses Orchestration and to support license compliance.
Attach script file to MID server	Users can avoid copying and pasting their scripts onto the script field of the record by attaching the script as an attachment directly to the record.
Azure AD Get User Info activity version 2	Update Azure AD Get User Info activity to version 2, which enforces input validation.
Infoblox DDI activity pack version 2	Update Infoblox DDI activity pack to version 2, which supports Infoblox network views and enables specifying the version of WAPI to use in integration endpoints.
Client Software Delivery Application: Software Asset Management (SAM)	Supports an update to the SAM release, a release which provides significant enhancements over the standard SAM release, including data normalization for discovered assets.
Client Software Delivery Application: CSD deployment workflow	Updates the CSD deployment workflow to validate that users or devices are in a given collection (install or uninstall) and to manage them properly.

Changed in this Jakarta release

- **UI Performance**: page loading and page refreshes show better performance when authoring orchestration workflows.

Platform performance release notes

ServiceNow® platform performance features enhancements and updates in the Jakarta release.

Platform performance offers monitoring and diagnostic tools for ensuring system optimization.

Activation information

Platform feature – active by default.

New in the Jakarta release

Index suggestions for slow queries	Create an index for a slow query based on an index suggestion generated by the Index Suggestion Engine (ISE). The ISE analyzes a slow query that you select and recommends an index that can improve the execution time of that query. When you create the index, the ISE continues to monitor the effectiveness of that index during a two-week evaluation period and provides recommendations for managing that index.

Changed in this release

- *Performance homepage* : Features a fresh, updated interface and new functionality for investigating slowness in an instance. Includes data from the database and application tiers, and also custom ServiceNow metrics. The interface provides:
  - Zoom controls to expand each graph and view time series details
  - Aggregate summaries of time series graph data
  - Graph overlay capability to compare two different data sources within a single graph
  - Diagnostic event overlay on each graph that highlights performance anomalies
- *Session-level debugging*: Added aggregate information of slow metric patterns (slow transactions, scripts, queries, events, and mutexes) to session-level output. Use the **Debug Metric Statistics** option to generate this aggregate information and determine what makes a page load slowly.

Removed in this release

- Removed the Disk partition and Linux graph sets from the Performance homepage.

Platform security release notes

ServiceNow® platform security features enhancements and updates in the Jakarta release.

Jakarta upgrade information

The *Contextual Security: Role Management V2* plugin prevents duplicate entries caused by inherited roles in the User Roles [sys_user_has_role] table. This plugin is automatically installed on new instances starting with the Jakarta release and can be activated for upgrades. If upgrading to Jakarta from a previous release, you can manually *upgrade to Contextual Security: Role Management V2*.

New in the Jakarta release

Instance Security Dashboard	The Instance Security Dashboard provides awareness, education, and steps to configure and maintain application security standards. Visit **System Security** > **Instance Security Dashboard** to view your security compliance score, learn more about system properties, configure recommended settings, and manage the overall security health of your instance.

Changed in this release

- *Contextual Security: Role Management V2*: Prevents duplicate entries caused by inherited roles in the User Roles [sys_user_has_role] table. This plugin is automatically installed on new instances starting with the Jakarta release and can be activated for upgrades. The Contextual Security: Role Management Enhancements plugin is a previous version of this plugin installed with the Geneva release.
- *Access control rules in application administration apps*: If no access control (ACL) rules for an application administration app are defined, global ACL rules can apply to the application administration app's configuration records.

Upgrade to Contextual Security: Role Management V2

Contextual Security: Role Management V2 is automatically installed on new instances. You can upgrade from Contextual Security: Role Management to Contextual Security: Role Management V2 to eliminate duplicate roles in the User Roles table and prevent future duplicates.

Role required: admin

If not already active, Contextual Security: Role Management V2 activates these related plugins.

Table 3: Plugins for Contextual Security: Role Management V2

Plugin	Description
Contextual Security: Role Management V2 [com.glide.role_management.inh_count]	Prevents duplicate entries in the User Roles [sys_user_has_role] table.

Plugin	Description
Contextual Security: Role Management V2 REST API [com.glide.role_management.inh_count.rest_api]	Enables API functionality for role management.

Before upgrading from Contextual Security: Role Management to Contextual Security: Role Management V2, test the results of an upgrade by running the script. The script returns a list of changes that an upgrade will perform. If the changes are acceptable, install the Contextual Security: Role Management V2 plugin. If the changes are not acceptable, do not install the Contextual Security: Role Management V2 plugin. Alternatively, you can perform the upgrade and then manually make any necessary changes.

1. Test the impact of an upgrade prior to upgrading by running the following script.
   a) Navigate to **System Definition** > **Scripts - Background**.
   b) Run the following script in global scope.

      ```
      new RoleManagementVerify().verifyInheritedRoles();
      ```

      For large sys_user_has_role tables, the execution may take up to several hours to complete. Do not edit or add user roles during this time.

      Example result based on test data:

      ```
      *** Script: 2016-12-01 19:58:54 Starting checking of inherited roles
       for all users...
      *** Script: User: itam, inherited roles to be ADDED:
       financial_mgmt_user
      *** Script: User: bernard.laboy, inherited roles to be DELETED:
       api_analytics_read,pa_viewer,rest_api_explorer,a123
      *** Script: User: bernard.laboy, inherited roles to be ADDED:
       dependency_views
      *** Script: Number of inherited-role records in sys_user_has role,
       current: 260, after re-calculation: 258
      *** Script: Number of users with discrepancies for inherited roles: 2
      *** Script: 2016-12-01 19:58:55 Finished checking of inherited roles
       for all users!
      ```

   c) Evaluate the script results to determine whether the proposed changes are acceptable.
2. Activate the Contextual Security: Role Management V2 plugin.
   a) Navigate to **System Definition** > **Plugins**.
   b) Find and click the plugin name.
   c) On the System Plugin form, review the plugin details and then click the **Activate/Upgrade** related link.
   d) Click **Activate**.

After activating Role Management V2, the changes outlined in the script result are enacted. The Inheritance Count (inh_count) column in the User Roles table is read-only and automatically reflects the number of times the user inherits a role.

Enable role auditing with Contextual Security: Role Management V2

Set a system property to enable the Audit Roles table to create audit records related to user roles.

Role required: admin

When enabled, the Audit Roles [sys_audit_role] table maintains changes to user records. For more information about role audits, see *Audit user roles*. If the Contextual Security: Role Management V2 [com.glide.role_management.inh_count] plugin is installed, you must set a system property to true to enable role auditing.

1. Navigate to the System Properties [sys_properties] table.
2. Add the glide.role_managment.v2.audit_roles system property and set it to true.

   If the Contextual Security: Role Management V2 [com.glide.role_management.inh_count] plugin is installed, setting this property to true enables the Audit Roles [sys_audit_role] table to create records when user roles change.

Search administration release notes

ServiceNow® platform search administration enhancements and updates in the Jakarta release.

By default, the system uses the Zing text indexing and search engine to index and search record data.

Jakarta upgrade information

To enable scoring knowledge documents by inverse term frequency, regenerate the index for the knowledge table.

> **Note:** Regenerating an index may take a while to complete depending on table size and other factors. You may notice performance degradation or incomplete search results while the system regenerates the index.

The URL to perform exact match searches has changed. Update any legacy target URL from `textsearch.do` to `text_search_exact_match.do`. The legacy URL might be present in these items:

- UI macros for custom search pages
- Custom search engines defined in your browser
- Browser bookmarks

Activation information

Platform feature – active by default.

New in the Jakarta release

Change the query mode of an indexed table	Set the query mode to specify whether searches on an indexed table must match all or only some of the search terms.
Score search terms by inverse document frequency (IDF)	Enable TF-IDF (term frequency–inverse document frequency) to increase the search result scores of search terms that appear more frequently in a document, but less frequently in the whole collection of searchable documents.
Contextual Search widget for Service Portal	Display knowledge articles, service catalog items, or social Q&A records based on keywords entered

in the description. This embedded widget can only be added to a record producer.

Changed in this release

- *Global text search displays results dynamically*: Display global text search results for each table as Zing generates them.
- *Zing matches derived words with stemming*: Set French as the text search stemming language.
- *Contextual Search properties*: Display metadata for KB article search results.
- *Define contextual search for a table*: Link to an article with the **Embed link to article** option instead of embedding the article into the comments of the form.
- *Map fields from two different tables*: Provide a more targeted search result set with the **Filter Configuration** related list.

Service Portal release notes

ServiceNow® Service Portal product enhancements and updates in the Jakarta release.

Service Portal is a portal framework that helps you build a mobile-friendly self-service experience for your users.

Activation information

Service Portal is active by default on new instances. For upgraded instances, you can activate the Service Portal for Enterprise Service Management plugin [com.glide.service-portal.esm] if you have the admin role. Activating the Service Portal plugin does not affect any existing Content Management System (CMS) configuration. For more information, see *Content Management and Service Portal*.

New in the Jakarta release

User criteria	Control user access to pages, widgets, widget instances, and search sources on a more granular level than user roles. User roles are automatically migrated to user criteria upon upgrade. Activate the User Criteria plugin [com.glide.service-portal.user-criteria] to access this option. The plugin includes the following system properties: • glide.service_portal.user_criteria_enabled: Enable or disable user criteria after the plugin has been activated. • glide.sp.entitlement.override: Include a list of roles that user criteria ignores so that certain role types can access anything in the portal.
Condition builder	Use the platform UI condition builder in the **Data table from URL definition** widget to create more complex table searches. The condition builder is disabled by default. Administrators can enable

	using the widget instance options for the **Data table from URL definition** widget.
Contextual search	Narrow search results to specific sources by configuring the contextual search sources in the instance options of a search widget.
New Portal	Create a portal from directly within the Service Portal configuration page using the **New Portal** option on the configuration homepage.
Service Portal Properties page	Access the Service Portal properties page, which lists Service Portal configuration properties in one place.
Portal page Draft option	Select the **Draft** check box in a portal page so that pages remain unpublished in the portal. Draft pages display for Service Portal administrators but not end users.
System Properties	• glide.sp.show_console_error: Sends a message to administrators when users encounter a browser error in Service Portal. • glide.service_portal.stream_entry_limit: Limits the number of entries that appear in the Ticket Conversations widget. The default number is 500.

Changed in this release

- *Shopping cart enhancements*: In the shopping cart widget, users now have more options for managing their cart items.
  - Clear the shopping cart of all items.
  - Add a saved bundle to an open cart, or override the existing items in the cart with the saved bundle.
- **List, form, and widget improvements**:
  - Updated the TinyMCE from the platform UI to widgets that use the HTML field
  - Limit the number of approvals listed in the Approvals widget. The default number of approvals listed is 10, but administrators can increase or decrease the number using the widget instance options.
  - Added Service Catalog related items to a separate plugin called Service Portal - Service Catalog [com.glide.service-portal.service-catalog]. The plugin is activated with the Service Portal for Enterprise Management [com.glide.service-portal.esm] plugin.
- *Accessibility improvements*: Improvements to accessibility were made throughout the platform in congruence with WCAG 2.0 A standards. Improvements made specifically to Service Portal are listed here.
  - High contrast theme: Changes the Service Portal ESM to be more accessible for users who have a hard time seeing low contrast colors.
  - Screen reader title: Use the **Edit Container background** option in the context menu for to add a title that screen readers read aloud.
- server.update(): Sends URL query parameters to the server. Previously the call to server.update() was sending a null value so if users wrote a condition that checked the query parameters for server.update() first, the server would return a null value and simply move on to the next condition. Now that the

server.update() parameter returns an actual value, the server might not move on to check the next condition.

Users should change the order of which parameter the server checks first.

- ***getCatalogItem scriptable API***: The `getCatalogItem(String itemID)` method was changed to `getCatalogItem(String itemID, boolean isOrdering)`, which includes the old method but calls the new method, passing false to the `isOrdering` parameter.

  The `isOrdering` parameter indicates whether the system does a Create Roles security check or a Write Roles security check on the variables for a Service Catalog item. By default, which is set to false, the system does a check on write roles. When users are first ordering an item or have it in their cart, the parameter checks the create roles. If users are not in the process of ordering, for example, if they were looking at a requested item to see the variables associated with that item, then the parameter checks the write roles.

  This change affects the SC catalog item widget, the order guide widget, and the shopping cart widget. Any users who have cloned those widgets or who have a widget that uses the `$sp.getCatalogItem` call should update their methods to the new method signature. If you choose not to update the method calls, the variables go through a write roles check.

System update sets release notes

ServiceNow® system update sets enhancements and updates in the Jakarta release.

Activation information

Platform feature – active by default.

New in the Jakarta release

Preview and commit update sets in batches	A batch update set is a group of update sets you can preview and commit in bulk. The system detects collisions based on "ancestry" and not on date comparisons.

Changed in this release

- *Preview update sets automatically*: By default, the system automatically starts the preview process after retrieving an update set or changing the parent on a remote update set. *To change this behavior*, set the glide.update_set.auto_preview system property to **false**. In this case, you must start the preview process manually.
- ***More precise time stamp for updated files***: Determine the precise time the system updated a file in your update set by inspecting the **Recorded At** [sys_recorded_at] field on the Customer Update [sys_update_xml] or Versions [sys_update_version] tables. This field is a more precise time stamp of when the system updated or modified a file than the **Updated On** [sys_updated_on] field.
- *Back out update set terminology*: The choices for resolving conflicts when backing out an update set have been re-named to more clearly describe their effects. The option previously labelled "Back Out" has been changed to "Decide to Use Previous." The option previously labelled "Use Current" has been changed to "Decide to Keep Current."
- **Warnings and confirmation dialogs**: Added warnings and confirmation dialogs help prevent update-set scenarios that commonly lead to problems.

- **Update operations limited to one at a time**: To provide stability and consistency, the system allows only one update operation at a time. Update operations include upgrading, retrieving an update set, previewing an update set, committing an update set, activating a plugin, Team Dev pushes, and Team Dev pulls.

System upgrades release notes

System upgrades feature enhancements and updates in the Jakarta release.

Activation information

Platform feature – active by default.

Changed in this release

- **Upgrade engine performance significantly enhanced**: The performance of the upgrade engine is significantly enhanced, especially for in-family upgrades. In-family upgrades are those in which the name of the release has not changed but the version number has, such as for patches and hot fixes. For example, an upgrade from Istanbul Patch 1 to Istanbul Patch 2 is an in-family upgrade but from any Istanbul release to any Jakarta release is not. The upgrade engine is only optimized for in-family upgrades in Jakarta and later releases.

  Note: The performance improvement can be significant enough to cause concern that your upgrade may not have run properly. As always, test your upgrades, but do not assume that the upgrade was unsuccessful based just on the time it took to execute.

- ***New dispositions on Upgrade History Log***: The upgrade history log has more detailed information about the disposition of records processed by this upgrade.
- ***Upgrade schedule information and action on Upgrade Monitor***: When an upgrade is not in progress, the upgrade monitor displays the date and time when the system will next check for an available upgrade. You can manually trigger a check for an upgrade by clicking **Check now**.
- ***Warnings to avoid problems with system upgrade checks***: The upgrade monitor displays a warning if records affecting how the system checks for upgrades have been customized or are missing.

User interface (UI) release notes

ServiceNow® platform UI enhancements and updates in the Jakarta release.

Activation information

UI16 is the default user interface for new instances. For upgraded instances, if you have the admin role, you can activate the UI16 plugin [com.glide.ui.ui16].

Browser requirements

Embedding videos in Internet Explorer and Safari is not supported. Both browsers have difficulty streaming videos uploaded to the database. Attach a file rather than embedding if you intend to use one of these browsers or an unsupported file type.

Changed in this release

- *TinyMCE editor*: The HTML field editor was updated with the following improvements.
  - Paste images, text, and formatted content all at once from Microsoft Word or Microsoft Excel into a form HTML field.
  - New icons.
  - Video support for flash animations (.swf), MPEG-4 Video (.mp4), and WebM Video (.webm)
- *Video attachments*: MPEG-4 (.mp4) or WebM video (.webm) files attached to a form plays within the activity stream, rather than downloading directly to the file system. MPEG-4 (.mp4) files uploaded in the Safari browser still download as usual instead of playing directly in the browser.
- *Reference icon preview*: When list v3 is enabled, all reference icons ( ) on lists and forms show a preview with the option to the open the record, regardless of whether list v3 or list v2 is in use.
- *List v3 updates*:
  - Enhancements to the **group by** option in a table
  - Live lists and live related lists are enabled by default. Disable live lists by navigating to **System Properties** > **List v3** and clearing the **Enables real-time record updates on List v3** check box. Disable live related lists by searching for the live related lists property [glide.ui.list_v3.enable_live_related_lists], then change the value to **False**. For more information on this functionality, see *KB0635884*.
- *Navigate directly to a table*: In the application navigator, append any valid table name with `.config` to navigate directly to the personalize_all.do view of the table. For example, typing `incident.config` opens the incident table configuration view. Typing `.CONFIG` opens the personalize_all.do view of a table in a new tab or window.
- *Name-Value pairs*: new field type that enables you to map text values.
- *Accessibility improvements*: Improvements to accessibility were made throughout the platform in congruence with WCAG 2.0 A standards. Improvements made specifically to the UI are listed here.
  - Error messages appear in a message at the top of a form screen rather than in a browser pop-up window.
  - The Contrast UI theme included with previous versions was renamed to Black and White to make way for the accessibility-related Contrast UI theme.

Visual Task Boards release notes

ServiceNow® Visual Task Boards feature enhancements and updates in the Jakarta release.

With Visual Task Boards, you can view and update multiple task records, which appear as *cards* that can be moved between *lanes*.

Activation information

Visual Task Boards are active by default on new instances. For upgraded instances, you can activate the Visual Task Boards plugin (com.glide.ui.vtb) if you have the admin role.

User interface requirements

UI16 or UI15 is required to use Visual Task Boards.

Browser requirements

- The latest public release of Firefox or Firefox ESR
- The latest public release of Chrome
- Safari version 9.1 and later
- Internet Explorer version 11
  - Edge mode is supported.
  - Compatibility mode is not supported.
  - Setting Security Mode to High (via the **Internet Options** > **Security** tab) is not supported.
  - Internet Explorer 11 is susceptible to memory leaks, which may impact performance, especially in Windows 7.
- Access Visual Task Boards on your mobile device using either a browser or the native mobile app. See *Mobile app supported devices* for more information.

Changed in this release

- *View any task board in a list*: On the Information tab of any task board, use the **View List** button in the information tab of the task board tools.

  Note: The freeform board list view only shows cards made by the board and no other tasks that might be added manually.
- *Accessibility improvements*: Improvements to accessibility were made throughout the platform in congruence with WCAG 2.0 A standards. Improvements made specifically to visual task boards are listed here.
  - When tabbing through a task board, use the **View Tasks as a List** *skip link* to view all the cards in a task board in the list view.

Web services release notes

ServiceNow® Web services product enhancements and updates in the Jakarta release.

Activation information

Platform feature – active by default

Changed in this release

- **REST APIs read replica support**:
  - The Table, Aggregate, and Attachment APIs support the sysparm_query_category parameter. This parameter is equivalent to the existing sysparm_read_replica_category parameter.
  - You can get the value of the sysparm_query_category or sysparm_read_replica_category parameters in a Scripted REST API using the *`getRequestedQueryCategory()`* method.
- **WS-Security**:
  - You can *migrate WS-Security x.509 settings from an existing SOAP message function to a WS-Security x.509 profile* using the **Migrate to X509 Security Profile** button on the SOAP Message

Function form if the SOAP message function was configured with x.509 security prior to the Helsinki release.

- **REST API Explorer**:
  - You can no longer send REST requests as a different user from the REST API explorer. To send a REST request using different credentials, use a script such as the provided scripts from the REST API explorer.
- **SOAP**:
  - SOAP XML responses can return an empty element if a numeric field has no value when the property *glide.soap.allow_null_numeric_output* is true.
- **RESTResponseV2 and SOAPResponseV2 APIs**:
  - The *RESTResponseV2* and *SOAPResponseV2* APIs provides the `getAllHeaders()` function to return all headers contained in the response, including duplicate headers.
- **Outbound REST Message error handling**:
  - The HTTP status of the response is 0 instead of 500 when you run a test outbound REST message and no response is returned by the target server.
  - The fields **Error Code** and **Error Message** now appear on the Rest Message Test Runs table. These fields display relevant information if there was an error when testing an outbound REST message.
- **Scripted SOAP web services**:
  - You can *enforce WSDL compliance* for scripted SOAP web services.
- **LDAP**:
  - *Additional properties are available* to control the behavior of LDAP listeners.

Workflow release notes

ServiceNow® Workflow feature enhancements and updates in the Jakarta release.

Jakarta upgrade information

The *table cleaner* for workflow context records is enabled by default. In previous releases, the default setting was disabled to improve performance, which is unnecessary in this release. If you prefer the table cleaner to not run, you can disable it manually.

Activation information

Platform feature – active by default.

Changed in this release

- *Workflow Welcome page* : The Workflow Welcome page lists the published and checked-out workflows as well as links to further help. In this release, it does not include an RSS feed or embedded video.

If you customized the workflow welcome page before upgrading, the system continues to display your customized version. You can update the workflow welcome page to the Jakarta version by *editing the UI page record*.

- **Workflow stages column with List v3**: In the "workflow stage" column of a v3 list, Tab navigates to the next column, Shift + Tab to the previous column, and Enter displays the choice list. This behavior is consistent with the behavior for other columns in List v3.
- *Workflow conditions property*: The **If condition matches** field of the Workflow Version record has a new option, **Run if no other workflows matched**. This option replaces the deprecated option, **Run if no other workflows matched yet (deprecated)**. Workflows previously using **Run if no other workflows matched yet** are automatically updated to **Run if no other workflows matched yet (deprecated)** and retain their original behavior. The new set of options is designed to make it clearer what each option does.

Removed in this release

- **RSS feed and embedded video on Welcome page**: The workflow Welcome page does not include an RSS feed or embedded video.
- **SOAP and REST Message activities deprecated**: SOAP and REST activities are deprecated. They are still available on instances upgraded from a previous release but are not available for new instances. New workflows should use the *Orchestration* application instead.

  For instances in which this activity is still available, existing workflows using it continue to work as designed. To edit this activity in an existing workflow, you may need to *re-activate the activity*.

Application development release notes

Application development product enhancements and updates in the Jakarta release.

Delegated development release notes

ServiceNow® Delegated development feature enhancements and updates in the Jakarta release.

Delegated development allows non-administrators to develop applications on the ServiceNow platform.

Activation information

Active by default.

Changed in this release

- *Manage developers*: Added the **Manage Developers** module so administrators can add or remove developers without opening Studio.
- *Developer permissions*: Updated the list of available developer permissions.

Removed in this release

- Removed the **Manage developers** menu option from Studio.

Business Management release notes

Business Management has new and updated features in the Jakarta release.

Agile Development release notes

ServiceNow® Agile Development product enhancements and updates in the Jakarta release.

Agile Development is an iterative and incremental process for software development environments. Scrum is one of the most popular methodologies of agile development.

In Jakarta, Agile Development is replaced with a new plugin *Agile Development 2.0*, which is not enabled by default on upgraded instances.

Jakarta upgrade information

Installing Agile Development 2.0 replaces the existing Agile Development, if already installed. Review *Agile Development upgrade information* on page 34 before activating Agile Development 2.0.

Activation information

You can *activate the Agile Development 2.0* (com.snc.sdlc.agile.2.0) plugin if you have the admin role.

The dashboards for Agile Development 2.0 must be activated separately using the Performance Analytics - Content Pack - Project Portfolio Suite Dashboards (com.snc.pps_dashboards) plugin. You require the **Performance Analytics** license to use these dashboards.

> **Note:** If you are an existing Agile Development user on a release prior to Jakarta, you are using the Agile Development activated through the Agile Development (com.snc.sdlc.scrum.pp) plugin or through the Project Portfolio Suite with Financials (com.snc.financial_planning_pmo) plugin.

New in the Jakarta release

Agile Development is significantly enhanced with Agile Development 2.0. Previously, there were two places for supporting agile-based execution - 1) Agile Development module, and 2) Agile under Project Management.

Agile Development 2.0 provides the following features for a unified agile development environment:

Unified backlog	Ability to maintain a unified backlog: • Maintain all your backlog in one location and associate backlog stories to a product or a project or both as desired. • Ability to select stories from the backlog and execute them as a project.
Manage releases	A definite timeline to execute prioritized or selected stories from backlog. • Project based execution - Allows release backlog to be executed as one or more projects. • Non project based execution - Allows release backlog to be executed by one or more

	assignment groups using their sprint schedules within a release timeline.
Stories	A story can belong to both a product and a project.
Agile phase in Project	An Agile phase is allowed to have stories from more than one assignment groups. Prior to Jakarta, an agile phase could have stories only from one assignment group.
Ranking	Ranking of stories is possible at three levels: • Overall backlog for ranking of stories across entire backlog. • Product backlog for ranking of stories within a product. • Group backlog for ranking of stories assigned to a group.
Theme and Epic	Allows backlog to be categorized by themes and epics.
Assignment group	Use **Assignment Group** to create an assignment group of type Agile Team. Release team entity is no longer used. It eliminates the confusion between when to use release team versus assignment group. Agile Development 2.0 also allows you to convert a release team into an assignment group.
Sprints for an assignment group	Generate sprints for Assignment Groups. It allows different groups to use different sprint schedules.
Single sprint planning board	One sprint planning board for groups to plan their sprint work.
Dashboards	Two dashboards: the **Product Owner Dashboard** and **Scrum Master Dashboard**, are available to track progress.

Changed in this release

The following changes are implemented as part of Agile Development 2.0 plugin and are not applicable to the Agile Development plugin.

- **Plugin**: Agile Development (com.snc.sdlc.scrum.pp) plugin can no longer be activated independently to enable Agile Development. However, the plugin is activated as part of the Project Portfolio Suite with Financials (com.snc.financial_planning_pmo) plugin.

  All new customers (new customers in Jakarta release, or the customers who have never activated the Agile Development plugin) must activate the Agile Development 2.0 plugin. Existing customers should evaluate upgrade information before applying the new plugin.
- **Product field**: The **Product** field on the Theme and Epic forms is optional.

Removed in this release

The following changes are implemented as part of the Agile Development 2.0 plugin and are not applicable to the Agile Development plugin.

- **Release Team**: Release team has been removed. **Assignment Group** of type Agile team is available for use.
- **Sprints**: Sprints are no longer associated to a release, they are instead associated to an assignment group.

Agile Development upgrade information

Agile Development upgrade information for Jakarta.

Existing customers already having Agile Development installed should evaluate the upgrade information before applying the new Agile Development 2.0 plugin.

Delete previous customizations

If you customized the Agile Development application in an earlier release, *delete* these customizations before activating the Agile Development 2.0. Failure to do so might affect the functionality in Agile Development 2.0 plugin.

Close all open sprints

As sprints are associated to a group as opposed to a release in Agile Development, you must close all the open sprints before upgrading to Agile Development 2.0. All open stories and scrum tasks associated with these sprints should also be closed/completed.

Convert release teams to assignment groups

After upgrading to Agile Development 2.0, you must convert release teams to assignment groups as **Release Team** is replaced by **Assignment Group** in Agile Development 2.0. After conversion, associate the assignment groups to product/release.

Delete a previous agile customization
Delete customizations from the existing Agile Development application before activating the Agile Development 2.0 plugin to ensure that all features work properly.

Role required: admin

Add a system property with the following values:

- Name: `com.snc.sdlc.scrum.pp.delete_customer_updates`
- Description: Deletes customizations to the Agile Development application from the Customer Update [`sys_update_xml`] table.
- Type: true/false
- Value: true

The property deletes:

- the records created by customizations to the existing Agile Development application from the Customer Update [`sys_update_xml`] table. However, any existing customizations which do not affect the new functionality may not be removed. For example, customizations to existing **Script Includes** are not removed.

- the property itself from [`sys_properties`] table after deleting the customizations.

Application Portfolio Management release notes

ServiceNow® Application Portfolio Management product enhancements and updates in the Jakarta release.

Activation information

You can *activate the Application Portfolio Management (com.snc.apm) plugin* if you have the admin role.

Additional requirements

Dashboards for Application Portfolio Management include reports for Change, Incident, and Problem. The following content packs are required to render the dashboards and reports:

- Performance Analytics - Content Pack - Application Portfolio Management and Change Request (com.snc.pa.apm.change_request).
- Performance Analytics - Content Pack - Application Portfolio Management and Incident (com.snc.pa.apm.incident).
- Performance Analytics - Content Pack - Application Portfolio Management and Problem (com.snc.pa.apm.problem).

Browser requirements

Internet Explorer version 10 and later.

New in the Jakarta release

Business Capability Assessment

- Define configuration items (CIs) for the business capabilities of your organization in the new CI class named Business Capability. You can assess the effectiveness of business capabilities based on the preconfigured people, process, and technology indicators.
- To view the assessment scores of business capabilities and the business processes or business services supporting the business capability, use the Capability Maps. To view the assessment of business capabilities, use the capability map report.
- To view the assessment scores of business applications and the business services that the application supports, use the Business Service Applications Map.
- To help enterprise architects and IT executives to identify areas of business that require investments, use the Assessments

	Maps visualization that provides clarity, comprehensibility, and visibility at the enterprise level.
Usability improvements	• Directly navigate to the Application Group Analysis page from the Application Portfolio Management landing page. Click the *Analyze Portfolio* to view the applications and filter them to the fiscal period that you want to analyze. • Hide or show the *labels for bubbles* in the Bubble charts. If you have many bubbles in the chart, hiding the labels helps unclutter the chart. • Click **Clear all filters** to clear all the fields in the Filter Apps section of the Application *Group Analysis page*. • Sort and group the applications in the Application Group analysis and Application analysis pages. • Configure the *Application Roadmap* to group the applications into a family or category.
Integration with Service Mapping	Application Portfolio Management is integrated with service mapping. With this integration Service Mapping lets you to see the relationships or mapping of the CIs that relate to the business application in your organization. You must activate Application Portfolio Management with Business Service mapping (com.snc.apm_sm) plugin for the integration.

Financial Management release notes

ServiceNow® Financial Management product enhancements and updates in the Jakarta release.

Jakarta upgrade information

Financial Management is no longer dependent on its use of IT DataMart. The DataMart Definitions have been upgraded to Financial Management Segments in Istanbul. New segments required for cost model or budget model must henceforth be created in Financial Management Segments.

Activation information

You can *activate the Financial Management (com.snc.financial_management) plugin* if you have the admin role.

ITFM has preconfigured PA dashboards using the plugin, Performance Analytics - Content Pack - Financial Management.

ITFM integrates with Customer Service Management providing preconfigured Cost Models and PA dashboards using the Performance Analytics – Content Pack – Financial Management for Customer Service plugin.

ITFM integrates with Field Service Management providing preconfigured Cost Models and PA dashboards using the Performance Analytics – Content Pack – Financial Management for Field Service Management plugin.

Browser requirements

If you are using the Internet Explorer web browser, version 11 or later (including Microsoft Edge) is required to use all aspects of the workbench.

New in the Jakarta release

Financial Reporting	Financial reporting is an integral part of financial management that helps in reporting the financial aspects to various stakeholders in an organization such as the business unit heads, department heads, or account heads. Use the **showback** feature to report the services consumed, those services that are offered within your organization, to the stakeholder head. Therefore, the showback statements help in providing consumption visibility and improve automation on the services being offered. The showback feature helps service owners that handle services view the consumption details and formulate proactive budgeting. The showback statement reports the services consumed by adding the statement items, which record the service consumption details and the cost for the service, from the source. The source of the statement items can be from any of the following: • Cost model: Sourced from the cost allocation lines of the cost transparency application. • Service catalog: The cost and consumption volumes can be based on fulfilled catalog requests for a particular service catalog category or catalog items. • Consumption table: The cost and consumption volumes can be from any ServiceNow table that contains the consumption data. As a **Service owner**, you can use the **Service Pricing Console** to periodically view the statement lines (consumption details) of the service. You can also optionally set the pricing policy for the statement item, which can be used as reporting cost in the showback statement when reporting. As a **Financial analyst**, you can generate and publish the showback statements for each fiscal period.

As a designated **Showback user**, you can view the published showback statements. You can review and accept them or raise a **dispute** if there is discrepancy and resolve it with the Service owner or Financial analyst through the task workflow.

Cost Transparency **Functional Improvements**

- **Restrict access of cost models to users or user groups**: You can restrict the access of your cost models in the workbench to a specific analyst or group of analysts by associating the cost model to the user group.
- **Cost models data source**: You can choose the data source of the cost model not only to be the preconfigured General Ledger Staged table, but to any data source table. With this enhancement, you can have different cost models with different staged tables as their data source. Therefore, you can create different cost models with expenses staged and budget staged data. Also, you can perform cost transparency without any data source also by entering the amount directly into the buckets.
- **Unit Costs**: You can generate the unit costs for a segment or segment account from the cost model by defining the unit cost metrics in the cost model. The unit cost is generated after the allocation engine runs.
- **Sibling rollups**: You can roll up the amount in an account to its sibling account segment by defining sibling relationship in the cost model. The rollup opens the sibling segment and its related accounts. The sibling rollup is available only for account rollup.
- **Bucket-based rollup**: Define a bucket-based rollup rule to roll up bucket-specific amount and also to use a different rollup rule other than the default rule. The bucket-based rollup is available only for account rollup.
- **Weighted bucket split**: Bucket split can be based on weighted metric, which helps you to get a dynamic percentage split every fiscal period, based on the weight or the consumption table.
- **Enhanced scripted rollup**: Scripted rollup has another argument, fiscal period, to help you with fiscal based scripted rollups.
- **Scripted metric**: For advanced use cases, you can create a scripted metric for use in allocations and rollups.
- **Enhanced Filter**: You can filter the account segments based on the amount in the Allocation Setup page.

Cost Transparency Diagnostic Tool Improvements	• *Enhanced allocation logs*: To make it easy to identify the missing amount during allocation, the allocation log is enhanced to categorically point out the incorrect rules and allocation issues by clearly segregating the logs as bucket allocation, account rollup, and segment rollup errors. This segregation helps you to resolve the allocation issues quickly. • *Generate and preview weight maps*: Preview weight map provides more transparency to the generated weight maps, and provides the percentage split based on the metric definition. You also have the option to generate/regenerate the weight map.
Improvements in Financial Planning	• *Catalog budget item*: You can add a catalog item as a budget item in the Budget Plan. • *Variance columns in Budget Console*: You can view the variance or the difference in amount between the budgeted and forecasted and the actual amount in the Budget Console. • *Currency conversion in Budget Console*: You can view budgets in local currency or converted currency by switching currency in console settings.
Financial analyst and business unit owner PA dashboards	Activate Performance Analytics - Content Pack - Financial Management (com.snc.pa.fm) plugin to activate the Financial dashboards. Use the dashboards to view the current trend of financial costing, budgeting, and showback statements based on the real-time data. Make informed decisions based on the statistics and enhance your business performance.

Governance, Risk, and Compliance common release notes

ServiceNow® Governance, Risk, and Compliance common product enhancements and updates in the Jakarta release.

New in the Jakarta release

GRC:Vendor Risk Management	The Vendor Risk Management application provides a centralized process for managing your organization's vendor portfolio and completing the vendor assessment and remediation lifecycle. Also, integrating with other GRC applications, provides top-down traceability for compliance with controls and risks.

Policy and Compliance UCF upgrade instructions

Instructions for using the resources of the Unified Compliance Framework (UCF) after upgrading to the Istanbul release of Policy and Compliance Management.

UCF has released a new method for allowing authenticated users to download content from the UCF Common Controls Hub (CCH) website. The UCF-CCH integration APIs are different from those of the previous XML-based UCF content library and required an updated ServiceNow UCF plugin for ServiceNow GRC integration. Users configure Shared Lists of Authority documents, then download those into the Policy and Compliance Management application. The GRC: Compliance UCF (com.sn_comp_ucf) plugin is available as a separate subscription.

Role required: admin

1. *Activate Compliance UCF*.
2. Issue a request on HI to validate GRC entitlement.
   ServiceNow HI support initiates the UCF-CCH account creation and enrollment process.

Vendor Risk Management release notes

ServiceNow® GRC: Vendor Risk Management is a new application in the Jakarta release.

The Vendor Risk Management application provides a centralized process for managing your organization's vendor portfolio and completing the vendor assessment and remediation lifecycle. Also, integrating with other GRC applications, provides top-down traceability for compliance with controls and risks.

Vendor Risk Management, focuses on these key capabilities.

- Vendor Portfolio. You create your database of vendors and vendor information, including the vendor contacts you interact with, the business services that the vendors fulfill, along with other general vendor information. The Company database within ServiceNow, is automatically applied to Vendor Risk Management. You can also easily integrate VRM with your existing supplier management systems.
- Assessment Management. You can create templates for your assessments and vary the content and recurrence interval based on the risk tiers of your vendors. You can create proprietary questionnaires using our Assessment Designer, or use the built-in Shared Assessments (SIG) questionnaire. Assessment responses are automatically scored using a robust hierarchical weighted scoring framework that you can customize.
- Vendor Portal. Manage all vendor interaction and communication in a centralized vendor portal, replacing emails and spreadsheets. This provides all vendor stakeholders visibility into what needs to get done, by when, by whom, and what the status is.
- Issues and remediation. As you review assessment responses, you can create issues, review them with subject matter experts, design remediation plans, and share them with vendors for closure.
- GRC Integration. The VRM application integrates with the other applications in the GRC suite. You can associate your policy statements with questions in a questionnaire. **Inadequate** responses from a vendor can automatically mark controls as **non-compliant**. This gives you top-down traceability from an authority document to the question in a questionnaire for a specific vendor. Non-compliant controls will automatically adjust the calculated risk score of risks associated with that vendor, which are then rolled-up into all other IT and operational risks across your organization.

Activation information

The GRC: Vendor Risk Management (com.sn_vdr_risk_asmt) plugin is available as a separate subscription.

See *Understanding Vendor Risk Management* for more information.

Project Portfolio Suite with Financials release notes

ServiceNow® Project Portfolio Suite with Financials product enhancements and updates in theJakarta release.

Project Portfolio Suite with Financials integrates Financial Management and Project Portfolio Suite (PPS).

Activation information

You can *activate the Project Portfolio Suite with Financials* (com.snc.financial_planning_pmo) plugin if you have the admin role.

Note: *Project Portfolio Suite with Financials* is not compatible with Microsoft Project 16.

Browser requirements

If you are using Internet Explorer, version 11 or later (including Edge) is required to use all aspects of the workbenches.

New in theJakarta release

External dependencies	You can set up a dependency between tasks of different projects. When the dates on a predecessor project change, you can analyze the impact on your project schedule, and accept or reject the changes.
Original planned dates	The original start and end dates of a project and its tasks are being captured when the state of a project changes to work in progress. The tracking of original dates helps a project manager identify the variance in planned dates and actual dates of a project.
Planning console	The overall user experience of Planning Console is improved. Keyboard navigation and actions, such as **Copy partial project**, **Copy project**, **Add Child Tasks**, and **Project template** are being introduced. You can zoom and print the Gantt timeline from the planning console of the Portfolio, Program, and Project Workbenches.
Project Status Portal	Project Status Portal replaces My Gantt. The portal provides the following features: • Helps you track the progress of all your projects. The set of projects to be tracked can be derived using any filter. • Provides a comprehensive view of all aspects of your projects, with the projects displayed in a report, work breakdown structure (WBS), and Gantt chart.

- Enables you to share your project reports with different users.

The **Preferences** tab is introduced in the Project form. Using this tab, project managers can view all their project level preferences, and have a better control over their project level settings.

Benefit plan is introduced to estimate the financial benefit of investing in a demand or project. A project or a demand can have one or more benefit plans, each with different time-spans, period values, and fiscal goals. Benefit plan is also used in the NPV (Net Present Value) and IRR (Internal Rate of Return) calculations.

To compare demands/projects/ programs with the other demands/projects/programs, system calculates a score for the demands/projects/ programs entities. By default, a score is calculated based on cost, return on investment, and risk, but users are allowed to configure the formula for score calculation.

Ranks are introduced to prioritize demands and projects for their approval and execution within a portfolio. Portfolio managers can rank demands and projects in their portfolio, based on score, currency or numeric attributes, or manual adjustment.

NPV and IRR

NPV and IRR calculations are being done for projects based on cost and benefit plans data.

Resource Management

- In addition to hours and FTE, you are enabled to request resources in terms of person days. All the resource reports also provide options to view details in terms of hours, FTE, or person days.
- The existing Calendar UI has been replaced with a new Calendar UI, which provides a better way for users or resource managers to view resource allocations. The **Show soft allocations** property is introduced, using which an administrator can configure to show soft allocations in the Calendar UI. Prior to this release, soft allocations were not shown in the Calendar UI.
- When a project is extended, using the **Extend resource plan** option, you can extend the date of an allocated resource plan and allocate resources for the extended period. For more information, see *Extend a resource plan*.
- Resource managers are allowed to reserve a portion of their team capacity for operational work using the **Create New Operational Plan** feature. Resource managers can create resource plans for generic categories (such as KTLO, admin work), allocate time for unplanned

work, and use the remaining time for project work. For more information, see *Create an operational resource plan*.

- The PPS Resource [pps_resource] role is introduced to differentiate PPS users from all other users in the system. Only users with the PPS Resource role are considered for resource planning, and only users or groups with the PPS Resource role appear in resource plans. By default, the PPS Resource role is added to the Project User [project_user] and Demand User [demand_user] roles.
- The Resource Management data model has been enhanced to improve performance and reporting capabilities. The Resource Allocation Daily [resource allocation daily] table is introduced to store all the resource allocations at a granular level. The Resource Aggregate Daily [resource_aggregate_daily], Resource Aggregate Weekly [resource_aggregate_weekly], and Resource Aggregate Monthly [resource_aggregate_monthly] tables are introduced. These tables store the aggregated values (such as capacity, allocated hours, confirmed hours) of every user on a daily, weekly, and monthly basis respectively.

Previously, a requester was able to submit an idea using service catalog. In this release, a requester can edit the idea as long as it is in the submitted state.

If date calculations in a project seem to be incorrect, you can use diagnostics to find if a project is corrupt.

Project diagnostics lets you identify corrupt data in a project, such as tasks with invalid parents, tasks without top tasks, invalid relations, or cyclic relations in a project.

For information about the enhancements in Agile Development, see the *Agile Development release notes* on page 32.

For information about the enhancements in Release Management, see the *Release Management release notes* on page 48.

For information about the enhancements in Time Cards, see the *Time Card release notes* on page 46.

Changed in this release

- : Project Status Portal replaces My Gantt. It provides enhanced functionality over the My Gantt feature.
- : The **Expected Start** label is renamed to **Start date**.
- ***Resource Management***: The **Average Daily FTE Hours** property is renamed to **Average Daily FTE Hours/Hours Per Person Day**.

Removed in this release

- The ITIL role is removed from all the PPS roles. Prior to this release, a few PPS roles were inheriting the ITIL role. This created licensing and compliance issues for customers because the ITIL role was assigned without their knowledge.

  Note: The ITIL role is not removed from existing customers who have already inherited the role.
- The Resource Events [resource_events] table is removed. The Resource Allocation Daily [resource_allocation_daily] table replaces the Resource Events [resource_events] table.
- The field **Generate time cards for top task only** is deprecated. The functionality is available through the **Allow time card reporting on** field on the **Preferences** tab.

  Note: The field **Generate time cards for top task only** may be visible if the form was configured to add this field in the previous release.

Software Asset Management release notes

The ServiceNow® Software Asset Management application is available as a subscription for new and upgraded instances starting in the Jakarta release.

Jakarta upgrade information

If you are using the existing Software Asset Management plugin feature (com.snc.software_asset_management) on a release prior to Jakarta, you are using a feature of the Asset Management application. After upgrading to Jakarta, you can continue to use the Software Asset Management plugin feature.

To migrate to the Software Asset Management application (com.snc.samp), consult your service manager.

Activation information

The Software Asset Management Premium (com.snc.samp) plugin requires a separate subscription and must be activated by ServiceNow personnel. This plugin includes demo data and activates related plugins if they are not already active. See *Request Software Asset Management*.

The Software Asset Management (com.snc.software_asset_management) plugin does not require a subscription but still must be activated by ServiceNow personnel.

New in the Jakarta release

The Software Asset Management application lets you manage your software assets by automatically normalizing, reconciling, and reclaiming software assets.

Software Asset Management dashboard integrated with Performance Analytics	Leverage native ServiceNow platform capabilities to trend cost and compliance over time, or to customize your own key performance indicators (KPIs) to track the progress toward your software asset goals.
Software normalization through Discovery	Standardize software installations to common values using an automated normalization engine while a discovery source populates the ServiceNow *CMDB*. Manual normalization is also supported for partially normalized software products.
Publisher Part Number library	Easily connect purchased software entitlements to discovered software installations to calculate an accurate license position.
Software Asset Management Content Service	Allow your new, unnormalized software to be crowdsourced by ServiceNow anonymously and securely. Updates to the Normalization Library are supplied to customers and, as a result, the software in your CMDB is continuously improved without manual intervention.
Automated software license reconciliation	Keep license positions accurate and up to date without manual calculations using automated license reconciliation. Reconciliation runs weekly or on demand.
Remediation options	Remediate non-compliant reconciliation results. For example, you can create a purchase order on the fly for new software licenses.
Software reclamation and license harvesting	Leverage ServiceNow *Workflow* and *Client Software Distribution* (CSD) applications to automate the process of uninstalling software from a device, and harvesting software rights. You can also set up reclamation rules which automatically identify unused software.
Software usage integration with Microsoft SCCM	Import monthly usage details (last used, and total usage time) for products being monitored through Microsoft SCCM 2012.
Enhanced Software Discovery	Use new and improved software discovery patterns integrated with the ServiceNow *Discovery* application.
Enhanced sourcing and receiving flows	Improve sourcing and receiving flows for allocating software rights, or purchasing new software entitlements with ServiceNow *Procurement* application integration.
Microsoft Server licensing content pack	Automate reconciliation of complex server licensing scenarios for Microsoft products using Microsoft

	content pack. Compliance and optimization initiatives are viewed in a specialized dashboard.
Oracle Server licensing content pack	Automate reconciliation of complex server licensing scenarios for Oracle products using Oracle content pack. Compliance and optimization initiatives are viewed in a specialized dashboard.

Changed in this release

- The Software Asset Management plugin feature of Asset Management must be activated by ServiceNow personnel.

  For the Software Asset Management (com.snc.software_asset_management) plugin feature of Asset Management, see *Software Asset Management plugin*.

Time Card release notes

ServiceNow® Time Card product enhancements and updates in the Jakarta release.

The *Time Card Management* feature works with the Task table to record time worked on projects, incidents, problems, and change requests.

Jakarta upgrade information

When you upgrade to the Jakarta release, some changes are made to the time cards. For details, see *Time Card upgrade information* on page 48.

Activation information

You can *activate the Time card management (com.snc.time_card) plugin* if you have the admin role.

Time Card also gets activated as part of the *Project Portfolio Suite with Financials* (com.snc.financial_planning_pmo) plugin.

Two new dashboards have been introduced for time cards in Jakarta. To view these dashboards, the Performance Analytics – Content Pack - Project Portfolio Suite Dashboards (com.snc.pps_dashboards) plugin must be activated. You require the **Performance Analytics Premium** license to use these dashboards.

New in the Jakarta release

Time sheet policies	The feature provides a framework to define Time sheet policies for recording time by employees of an organization. Each department in an organization can specify its own set of time sheet policies and assign users to them. Time sheet policies also provide an ability to specify appropriate approval workflow for project and non-project tasks. By default, the **Default time sheet policy** is available with the system.

Worker portal	Worker portal provides a single location for time card users to: • view all work (project and non-project work) assigned to them. • record time for the work performed.
Project time category	The feature allows PMOs (Project Management Organizations) to define a broad set of categories under which they would like their employees to record time for a project, for example, Coding, Testing, Meeting, and Travel. Once defined, your team members can use these categories to record time for their project work.
Time card approver role	A new role timecard_approver facilitates the approval process. By default, project_manager and resource_manager inherit this role. However, timecard_approver role can be used independently without the project_manager or resource_manager roles too. Prior to Jakarta, there was no time card approval role and an approver user had to be given time card admin role to approve time cards. The time card policy associated to a user determines who (project manager or resource manager) approves time cards for that user.
Dashboards	Two dashboards - *Project Manager Dashboard* and *User Manager Dashboard* provide the project and user managers with quick reports of time card exceptions, and category wise distribution of time reported.

Changed in this release

- **Time cards for project tasks**: The field **Generate time cards for top task only** on Project form is deprecated. The level at which the time cards for a project can be created is determined by the *field* **Allow time card reporting on**.
- **Roll up of Actual Effort**: The time card property **Update the task's 'Actual effort' based on the hours entered in the time card** is replaced by the field **Update actual effort from time card** in **Preferences** tab on the project form.
- The property **Default hourly rate used when processing time cards if we can't get a rate from labor rate cards (in system currency)** (com.snc.time_card.default_rate) is no longer accessible from time card properties. The property can be set from System Properties.

Removed in this release

- **Time card properties**: The following time card properties have deprecated:
  - com.snc.time_card.start_day
  - com.snc.time_card.time_worked
  - com.snc.time_card.autocreate

- com.snc.time_card.update.resource
- com.snc.time_sheet.max_hours_per_day
- com.snc.time_sheet.max_hours_per_week
- com.snc.time_card.update.effort

These properties have been replaced by Time sheet policy framework.

Time Card upgrade information

Time Card upgrade information for Jakarta.

As part of upgrade, fix scripts copy the values from deprecated fields/properties to the new fields. This prevents any impact to the users upgrading to Jakarta.

Copy time card properties to default time sheet policy

Some of the settings in time sheet policies existed in form of time card system properties in releases prior to Jakarta. A fix script copies the values from time card properties to the default time sheet policy.

The following table details the mapping between time card properties and time sheet policy:

Default Time sheet policy field	Copied from property
week_starts_on	com.snc.time_card.start_day
auto_fill_from_time_worked	com.snc.time_card.time_worked
auto_create_on_task_update	com.snc.time_card.autocreate
update_resource_plan	com.snc.time_card.update.resource
max_hours_per_day	com.snc.time_sheet.max_hours_per_day
max_hours_per_week	com.snc.time_sheet.max_hours_per_week

Generate time cards for project tasks

The value of **Allow time card reporting on** field on the *project form* is set based on the value of **Generate time cards for top task only** field, if configured in Istanbul. If the **Generate time cards for top task only** field in Istanbul was set to True, then the value of **Allow time card reporting on** field is set as Project only in Jakarta. If the **Generate time cards for top task only** field was set to False, the value of **Allow time card reporting on** field is set as Project and project tasks.

Roll up of Actual Effort

The value of the field **Update actual effort from time card** on the project form is copied from the time card property **Update the task's 'Actual effort' based on the hours entered in the time card**.

Release Management release notes

ServiceNow® Release Management application enhancements and updates in the Jakarta release.

Activation information

If you have the admin role, you can activate the plugin (com.snc.release_management_v2).

New in the Jakarta release

Enhancements

> **Note:** The following changes are applicable only to a new customer, and not to an upgrade customer.

- **Label**: The label for the DSL (Definitive Software Library) table is changed to DML (Definitive Media Library).

  > **Note:** The underlying table name of the DSL table remains **dsl**, that is **DML [dsl]**.

- **References**: DML references to the rm_release table using the fields: **Pending release** and **Generated by release**
- **Numbering sequence**: A number generated for the **dsl** table is appended with DML instead of DSL.

IT Operations Management release notes

IT Operations Management has new and updated features in the Jakarta release.

Cloud Management release notes

The ServiceNow® Cloud Management application is redesigned for the Jakarta release. It replaces the legacy Cloud Management application available in previous releases.

Cloud Management features

Integrate with your cloud environments	Link your Amazon Web Services, Microsoft Azure, VMware vSphere, or private cloud vendor accounts to the instance through service accounts. You can also create *cloud accounts*, which are sets of service accounts that are each associated with

	one or more regions, also known as a logical datacenters (LDCs).
Create cloud catalog items	Use blueprints to create cloud catalog items and bundles of items that can be provisioned to your users.
Maintain governance over your cloud resources	Set limitations on the resources in catalog items to prevent wasteful resource usage.
Manage cloud billing	Create billing download schedules to obtain data for AWS and Azure providers to monitor the ongoing costs for maintaining cloud resources.
Order cloud resources	Use the Cloud User Portal to order stacks of resources and monitor the usage of those resources with built-in, easy-to-read reports.

See *Cloud Management setup guide* and *Cloud Management administrator guide* for more information.

Note: Unlike the legacy version of Cloud Management, the Jakarta version requires a *MID Server* between your instance and your cloud accounts.

Activation information

The Cloud Management (com.snc.cloud.mgmt) plugin requires a separate subscription. You must *request activation* from ServiceNow personnel.

Credentials release notes

ServiceNow® Credentials feature enhancements and updates in the Jakarta release.

Activation information

Credentials are available by default in the base instance.

New in the Jakarta release

Chef server credentials	Chef server credentials access chef integrations with the instance.
Cloud Management (CMP) SSH key pair credentials	Cloud Management (CMP) SSH key pairs store the keys that the Cloud Management application automatically generates when users provision stack resources.
Cloud Management (CMP) node credentials	Cloud Management (CMP) node credentials associate credentials for a virtual server that Cloud

	Management provisions. The Cloud Management application automatically creates these credentials.
Infoblox credentials	Infoblox credentials support IP pools (IPAM) in the Cloud Management application.
Azure Enterprise Agreement Credentials	Azure Enterprise Agreement credentials are necessary for the billing functionality that the Cloud Management application provides.

Discovery release notes

ServiceNow® Discovery application enhancements and updates in the Jakarta release.

Jakarta upgrade information

For details on the following upgrade tasks, see *Upgrading Discovery to the Jakarta release*:

Patterns	Several new patterns are available in this release. Certain patterns are inactive by default for upgrades, while others replace probes automatically upon upgrade. Decide which patterns you want to use and make sure that you configure the appropriate credentials for each.
vCenter events	The table schema for vCenter discovery changes upon upgrade. Additionally, several new vCenter events are supported by default but are not automatically added to your vCenter event collector. View the new table schema and configure any existing vCenter event collectors.

Activation information

Discovery is available as a separate subscription from the rest of the ServiceNow platform and requires the Discovery plugin. To purchase a subscription, contact your ServiceNow account manager or sales representative.

New in the Jakarta release

New vCenter event collector events	The vCenter event collector can handle several new events to update virtual machine CIs accordingly.
vCenter probe parameters	Two vCenter probe parameters, disable_vm_nics_vnics and disable_vm_nic_vdisks are available for administrators who want to control the discovery of network interfaces and storage disks in virtual machines. These parameters are

	configured on the VMware - vCenter VMs probe and come with pre-set defaults.
Newly discovered vCenter CIs	Discovery now populates distributed virtual switches, distributed virtual port groups, clustered data stores (storage pods), and vDisks.
SNMP probe parameter for load balancers	The **result_format** parameter for the SNMP - F5 BIG-IP - System and SNMP - Netscaler - System probes returns data in a more compact format for improved performance.
Configuration file tracking	Configure the system to collect information about changes in configuration files belonging to a configuration item (CI). You can also set up a deletion strategy to determine what to do with configuration file CIs.
Serverless Discovery	Discovery can find applications on host machines without the need to discover the host first. Serverless discovery relies on infrastructure patterns and skips the scanning and classification phases of discovery.

Changed in this release

- *New patterns for the Jakarta release*: The functionality in several probes and sensors are now available in patterns.
- *Load balancers*: Discovery uses patterns to find several load balancer by default (for new Jakarta installs).
- *Software Asset Management*: When the Software Asset Management plugin is active, the Applications [cmdb_ci_appl] table references the installed software record in the Software Installations [cmdb_sam_sw_install] table.
- *Storage volumes*: The name, size and object ID of vdisks for storage volumes are populated in the Storage Volume [cmdb_ci_storage_volume] table.
- *VMware vCenter data model*: The VMware vCenter data model includes new tables and relationships.
- *AWS and Azure clouds*: The way that Discovery finds resources in AWS and Azure clouds relies on the configuration of service accounts and MID Server in the cloud. You can track the results of cloud discovery with new logs: the Cloud API Trail and the Cloud Orchestration Trail.

  Note: You can continue using legacy discovery schedules for Azure and AWS. You should disable these legacy Discovery schedules if you want to use the new discovery schedules available on the service account records.

Upgrading Discovery to the Jakarta release

Several changes are made to the Discovery application when you upgrade to the Jakarta release.

Probe-to-pattern conversions

Several probes and their associated sensors are available as patterns. Discovery uses these patterns do find the same types of software or hardware on your network, and continues to populate the CMDB accordingly. These patterns are active by default on new instances. On upgrades to the Jakarta release, Discovery uses the probes and sensors and the patterns are inactive. See *New patterns for the Jakarta release* for more information.

vCenter table schema and events

The parent-child hierarchy of vCenter tables in the CMDB is changed upon upgrade to the Jakarta release. See *vCenter data collected* for the table schema. The following table summarizes the changes:

Table 4:

Table	Old parent	New parent
cmdb_ci_vcenter_datacenter	cmdb_ci_vcenter_object	cmdb_ci_logical_datacenter
cmdb_ci_vcenter_datastore		cmdb_ci_datastore
cmdb_ci_vcenter_cluster		cmdb_ci_host_cluster
cmdb_ci_vcenter_network		cmdb_ci_network
cmdb_ci_vcenter_network		cmdb_ci_network
cmdb_ci_vm_template		cmdb_ci_os_template

Several new events are available for the vCenter event collector. The new events are automatically added to any new Event Collector that you define after the upgrade, but they are not added to existing Event Collectors. See *vCenter event collector* for more information.

Cloud discovery

When you upgrade to Jakarta, new Cloud Management menu and modules appear in the application navigator. Use these menus and modules to manage service accounts, on which you can run discovery. You can continue using previous AWS and Azure discovery schedules. Disable legacy schedules when you want to use the new discovery schedules available on the service account records. When the number of datacenters belonging to a cloud provider account changed, set up a service account, discover the datacenters, and create a schedule to discover the resources. See *Cloud discovery* for more information.

Event Management and Operational Intelligence release notes

ServiceNow® Event Management application and ServiceNow Operational Intelligence application enhancements and updates in the Jakarta release.

Event Management helps you identify health issues across the datacenter on a single management console. It provides alert aggregation and root cause analysis (RCA) for discovered/manual business services and for automated alert groups. Operational Intelligence assists operators with troubleshooting by providing operational metrics data in the context of alerts. Operational Intelligence provides adaptive thresholding capability which reduces noise generated by static thresholds-based alerts. The anomaly detection technology provides early warnings of potential outages letting operators proactively prevent them.

Activation information

The Event Management plugin (com.glideapp.itom.snac) requires a separate subscription and must be activated by ServiceNow personnel. This plugin includes demo data and activates related plugins if they are not already active. The Service Analytics plugin (com.snc.sa.analytics) is activated automatically when Event Management is activated.The Operational Intelligence plugin (com.snc.sa.metric) requires a separate subscription and must be activated by ServiceNow personnel.

New in the Jakarta release

Operational Intelligence	Operational Intelligence, which contains Operational Metrics and learns from historical metric data, builds standard statistical models to detect statistical outliers and anomalies and raise anomaly alerts. Operational Intelligence helps operators prevent outages by detecting early warnings of outages using anomaly detection. Using Operational Intelligence, operators also no longer need to perform routine and error prone tasks of creating event rules and setting thresholds.
Event rule designer	Create event rules to generate alerts for tracking and remediation. Many event rules are provided with the base instance, for example, for Amazon Web Services (AWS) and Microsoft Azure. The OEM 12c Trap event rule is provided with the base instance to enable the processing of Oracle Enterprise Manager Cloud Control SNMP v1 Traps. Using the event rule designer, you can: • Transform information in events to populate specified alert field values and compose alert fields from various values. • Configure threshold rules that create or close alerts only when the incoming matching events exceed the specified threshold. • Bind alerts to CIs using CI identifiers.
Configure event collection from NagiosXI	Configure a connector instance to collect events using the NagiosXI connector definition provided in the base instance.
Oracle Enterprise Manager Cloud Control	Event Management can process Oracle Enterprise Manager Cloud Control SNMP traps as events.
Configure event collection from OMi	Configure a connector instance to collect events using the HP Operations Manager i (OMi) connector definition provided in the base instance.
Collect event messages from cloud endpoints	Configure custom push connectors to connect to external event sources. Use custom script or predefined script to transform the collected event messages to the required event format. You can

	select to send events either through the MID Server or the instance, in each case using the URL of the required format.
Quick response	Respond to an alert by applying remediation or launching an application.
Configure MID Server as event listener endpoint	Configure the MID WebService Event Collector Context extension to enable the URL method to push event messages from an external source to the MID Server. You can collect custom payloads in JSON, XML, or plain text format. See *Event collection from custom payloads*. Transform collected event messages to the required event format using the generic scripts provided in the base instance. Push event messages to the MID Server using the Transform Generic Events MID script and push event messages to the instance using the Transform Generic Events Instance script. In addition, you can use these MID WebService Event Collector extensions provided in the base instance: • *AWS events transform script* • *Azure events transform script* • *Event collection from BMC TrueSight*
Predictive alerts	Alert correlation is now used to predict a sequence of future alerts for automated alert groups. You can use this information to take preventive measures.
Alerts	If you customized the alert [em_alert] form layout and thereafter the Event Management application was upgraded, the new layout, including the feedback field, is not available and feedback cannot be provided. To add the **Feedback** field to your customized layout, use the **Reference default** view to see what the standard form looks like. Thereafter, the customized alert form can be modified to work in the same way. You can add an open alert to a group: • In either Alert Console or All Alerts, double-click the **Parent** column in the row of the alert. You can either specify which alert to use as the parent, or use the search facility. • In the form for an open alert, click the **Parent** field. You can either specify which alert to use as the parent, or use the search feature.

	• In the form for a parent alert, click the Alerts tab and then click **Add To Group**. You can then select the required alerts to add to the group.
Monitored services	You can view all services that are supported by Event Management in a single list, such as, alert groups, discovered services, manual services, and technical services. According to the type of service, you can view service definition details or drill down into the service.
Promotion of anomaly alert	Users can create alert promotion rules, to create a regular Event Management alert that is based on an anomaly alert. The new Event Management alert then appears in the Alert Console, and is processed in the same manner that all other Event Management alerts are.
Advanced script includes installed with Event Management	Advanced script includes are provided with the base instance. They can be customised to perform various functions, such as, assign additional fields from the alert to the task that is opened by default to an incident.

Changed in this release - Event Management

Base system content - connectors and listeners	The base system connectors plus their versions, that are provided with the Event Management application, are listed. A listing of the provided listeners is also presented.
SCOM connector definitions	The MID Server that is configured with the System Center Operations Manager (SCOM) connector is required to run Windows. In the SCOM connector definition form, the collection of Operational Metrics is performed using JDBC in place of PowerShell. When configuring a SCOM connector instance, you can separately configure a SCOM event server and a metric server.

Navigation changes	Connectors and listeners are found under these menu options:
	• *Event Connectors (Pull)*
	  • Connector Definitions
	  • Connector Instances
	• *Event Listener (Push)*
	  • Listener Transform Scripts
	  • MID WebService Event Listener

- MID SNMP Traps Listener

Correlated alert groups

Automated alert groups	RCA can be applied to automated alert groups to identify root cause alert. This helps direct resources to the root cause of a problem. Root cause alerts are displayed in the Alert Console. Use the **Enable Alert Correlation RCA** property to enable this feature.
CMDB alert groups	In addition to using hosting and containment relationships to form CMDB alert groups, there is now also support for user defined suggested relationships. This improves alert coverage for the CMDB alert groups.
Manual alert groups	The Service Analytics Alert Aggregation Learner learns the patterns of the alerts in manual alert groups. This knowledge is then used with incoming alert streams. Service Analytics automatically forms automatic alert groups according to the patterns in the manual alert groups.
Feedback to alert groups	To provide feedback about the usefulness of an alert group, you must use the feedback field on the alert form.

Changed in this release - Operational Intelligence

Operational Metrics data integration to the Service Map	• The metric list has been included as a tab in the right-hand column of the service map. • There is a tab in the top navigation bar to switch between the map and metric chart viewer. • Items can be selected on the map to filter the right-hand list. • The time range for the graphs is tied to the timeline at the top of the service map.

Metric Explorer	• Save, load, and share a user-created custom view which contains open charts and pinned configuration items.
	• Use any of the following three access points to access CIs:
	  • Hottest Configuration Items: Pre-loaded list of the 10 most anomalous CIs.
	  • Pinned Configuration Items: A custom list of CIs to which you can add or remove items, and select a CI from to display metrics for.

    - Business Services: A custom list of business services to which you can add or remove items, and select a business service from to list its CIs.
- New settings for:
    - Refresh interval.
    - Map indicators from Service Mapping and Dependency Views, that can be enabled to display related records such as incidents and problems.
- Enhanced styling to improve clarity of data and usability.
- General performance enhancements.

Anomaly map

- Anomaly maps provide three access points to CIs:

Access point	Description
Hottest Configuration Items	Pre-loaded list of the 10 most anomalous CIs.
Pinned Configuration Items	A custom list of CIs to which you can add or remove items, and select a CI from to display metrics for.
Business Services	A custom list of business services to which you can add or remove items, and select a business service from to list its CIs.

- New settings for refresh interval.
- Navigation between the Anomaly Map and the Metric Explorer by clicking a tile in the Anomaly Map to drill down for more details in the Metric Explorer.
- General performance enhancements to UI and data loading.

Anomaly detection

- Anomaly alerts provide a richer set of details, such as information about why the anomaly alert was created, upper and lower bounds, metric value, and promotion parameter.
- Anomaly detection algorithms have been improved. Improved handling of missing data, time interval detection, and reduced the number of false positives. Also, ability to configure

	anomaly related configuration settings at the CI/ Metric level.
Operational Metrics Setup	• *Create configuration settings rule* centrally override default settings for Operational Metrics MID Servers. Some configuration settings can be configured per CI/metric, to set anomaly scores for example, and other data processing behavior on the MID Servers. • Setting up the MID Server for Operational Metrics - PowerShell is no longer required, as JDBC is used. • Guided Setup provides a step by step guidance to setting up Operational Metrics.

Event Management upgrade tasks

During an upgrade from Fuji to any later release, a script converts and moves Event Management rules and events for the release. Even though this script runs automatically, there are additional upgrade tasks that you may need to complete after the upgrade.

Consider the following additional upgrade tasks:

- If you import additional rules from the Fuji format after the upgrade, manually run the `Import event rules and events` script to the import event transform rules. The script automatically runs only once during an upgrade to any later release; it will not run automatically after you import additional event transform rules. For details, see *Import rules and events* on page 60.
- For any business service that was used in the Fuji release, configure and import it to a manual service.
- During the platform upgrade, the Event Management connectors are working and continue to retrieve events. The events are being processed, transformed to an alert using event rules and if there is a suitable alert action rule, a task is created. However, the impact calculation is not supported during the platform upgrade.

  Note: During the Event Management plugin upgrade, **ALL** Event Management jobs do **NOT** work.

  As of Istanbul, during the platform upgrade, the following Event Management jobs remain running as their **Upgrade safe** flag is marked as `true`:

  - Connector execution job
  - Event Management - close flapping alerts
  - Event Management - close threshold alerts
  - Event Management - create/resolved incidents by alerts
  - Event Management - Maintenance Calculator
  - Event Management - process events

  During the platform upgrade, all other Event Management jobs wait for the platform upgrade to finish.
- After the automatic upgrade, *Review imported rules for Event Management* on page 60 and update event rules as necessary:

  - Notice that the **Source** field replaces the **event_class** field from the previous release. If the event **Source** field is missing or the event originates from an incorrect source, use the event filters on the event rule to get the event originator.
  - In an event record, verify that the **Source instance** field shows the name of the event source. For example, SNMP Trap Collector.

    - Pay attention to rules with the same filter, especially for event rules that use transforms and thresholds. Make the filter uses unique values or set the **Order** field to designate the rule that should run first.
    - If you are sending REST events or using a custom connector, verify that the connector **Source** field identifies the event monitoring software that generated the event. If necessary, add a Connector Parameter for the **Source** and **Event Class** fields.

- After the automatic upgrade, confirm that events and alerts process properly. Update event rules as necessary:

    - If an event rule filter uses the **Source** or **Event Class** fields, the event rule filter may require changes.
    - Notice that event sources that omit the **Message Key** cause the alert to incorrectly identify as a different alert. If the message key is based on the **Source**, the **Message Key** value can change. Verify that the **Source** value contains the event monitoring software that generated the event.

Note: Event Management jobs that started running before the upgrade commenced continue to run during the platform upgrade.

Import rules and events
The `Import event rules and events` script moves Event Management threshold and filter rules to a new table and upgrades events for the Istanbul release. If you want to import events and rules from ServiceWatch, contact ServiceWatch Customer Support.

Role required: evt_mgmt_admin

The import script automatically runs during an upgrade to the Istanbul release. Threshold and transform rules are converted to the new event rule format. The script converts the **event_class** field to the **source** field, and associates events to corresponding rules. Rule records from the Threshold Rule [em_threshold_rule] table are migrated to the Event Rule [em_match_rule] table.

There is no need to run the import script manually, unless you manually imported more rules into the Helsinki format after the upgrade is complete.

1. Navigate to **System Definition** > **Fix Scripts**.
2. Click **Import event rules and events**.
3. Click **Run Fix Script** and then click **OK**.
4. Click **Proceed**.
5. Review the results in the Event Rule table.
6. If any rule or event could not be converted, add event rules and resend the events.
7. Click **Close**.

Confirm that the *import successfully completed*.
Review imported rules for Event Management
After the automatic or manual import of rules and events that were on your instance with the Helsinki release, confirm that the event rules will process properly and that events are not missing.

Role required: evt_mgmt_admin

Review each event rule and confirm that the value processes events properly. You can delete extraneous rules as necessary.

1. Confirm that all the Threshold Rule [em_threshold_rule] table records were moved to the Event Rule [em_match_rule] table.

   If there are any rules in the Threshold Rule table, recreate them in the Event Rule table.

2. Navigate to **Event Management** > **Rules** > **Event Rules** and confirm that each rule has the appropriate threshold and filter values.

   Update the event rules as necessary. For example:

Table 5: Verify these rules from the Helsinki release

Rules to correct	How to correct
A transform and a threshold rule applied to the same kind of event.	Only one rule can apply to an event. The import script generates a transform and a threshold rule for the same kind of event. **1.** Click the event rule that contains the Event Match fields for the transform. **2.** Select the **Threshold rule** check box and add the threshold metrics. **3.** Delete the extra threshold rule generated by the import script.
An ignore rule ran prior to a transform rule for the same kind of event.	The ignore information applies after the transform Event Match fields. **1.** Click the event rule that contains the Event Match fields for the transform. **2.** Click the **Ignore** check box.

3. Navigate to **Event Management** > **All events** and confirm that no events from the previous release are missing.
4. If events are missing, resend or manually create them.

Import a business service as a manual service
Import business services that were created using older releases in the Configuration Management module (**Configuration** > **Business Services**), as manual services for the Istanbul release. They then display in the Event Management Dashboard and are included in impact calculations.

Role required: evt_mgmt_admin

The import operation moves records in the Business Service [cmdb_ci_service] table to the Manual Service [cmdb_ci_service_manual] table. In addition, four levels of CIs that are connected to the Business Service CI in CMDB are copied to the Manual Service. You can also click **Populate** and select the number of related item layers to import. After the import:

- Service and CI information for the manual service appears on the Manual Service map, Manual Services list, and Event Management dashboard.
- Alerts on CIs that belong to a manual service appear on the Manual Service map and in the same places as other alerts.

1. Navigate to **Event Management** > **Settings** > **Manual Services**.
2. Click **Import**.
3. Click the business service name, and then click **Convert to Manual**.
4. Navigate to **Event Management** > **Settings** > **Manual Services**, and confirm that the service records were successfully imported.

Note: If the **Service Configuration Item Associations** list is not populated, click **Populate** and select the number of related item layers to import.

MID Server release notes

ServiceNow® MID Server application enhancements and updates in the Jakarta release.

Jakarta upgrade information

- To understand how the IP range auto-assignment feature affects IP ranges defined in version prior to Jakarta, see *View automation status sets and IP range assignments*.
- Customers who use network service providers must request specific SNMP access to use MID Server IP range auto-assignment. See *Required SNMP OIDs for MID Server IP range auto-assignment for details*.
- In Jakarta, the MID Server can run SSH commands using either the J2SSH client or the proprietary ServiceNow® SNCSSH client. When you upgrade from Dublin or earlier, the MID Server property that controls the SSH client selection is not active in your upgraded instance, and the MID Server will use the J2SSH client by default. To enable the SNCSSH client, you must add the **mid.property.ssh.use_snc** MID Server property and set it to **true**. Instances upgraded from Eureka or later have the SNCSSH client enabled by default, and no configuration is required. For details, see *MID Server properties*.

Installation and configuration information

A *guided setup procedure* is available to easily install and configure individual MID Servers. For manual procedures see *MID Server installation* and *MID Server configuration*.

New in the Jakarta release

Role and settings validation	The system uses real-time validation of MID Server role assignments to prevent incompatible settings. New business rules block unsupported MID Server role configurations and issue appropriate warnings.
Pre-upgrade testing	When a MID Server detects that it needs to upgrade, it automatically performs a series of short tests that evaluate available disk space, access to the download site, and permissions required to execute certain file operations on the MID Server host. If all these tests pass, the MID Server upgrade proceeds automatically. If any test fails, the upgrade cannot proceed, and the instance publishes error messages to the MID Server Issue [ecc_agent_issue] table.
MID Server IP range auto-assignment	An instance can automatically assign MID Servers to IP ranges that represent subnets in your network. The MID Servers must be running and valid and must have access to the subnets to which they are

assigned. When you select a MID Server for auto-assignment, the instance runs Discovery to identify the subnets in your environment and automatically assigns one or more appropriate MID Servers to each subnet.

Guided setup enhancements	These optional MID Server guided setup tasks were added in the Jakarta release: • **Add SNMP credentials**: A setup task allows you to create SNMP and SNMPv3 credentials. • **Auto-assign MID Server IP ranges**: A setup tasks allows you to select available MID Servers for auto-assignment to discovered subnets. To get started, navigate to **ITOM Guided Setup** > **MID Server**.
Managing active issues	The MID Server Issue [ecc_agent_issue] table displays active MID Server issues and publishes error messages that pinpoint the most likely cause of the issue. These issues are managed in the Jakarta release: • *Post-cloning credential issues*: Automatic processes detect and notify you of possible MID Server user credential issues after instance cloning. • *Resource threshold alerts*: The MID Server reports its CPU and JVM memory usage back to the instance at a prescribed interval, and the instance evaluates that usage against configurable thresholds. If either threshold is breached, the instance can log an issue. A new registered event allows users to create email notifications or custom scripts when CPU and memory thresholds are breached. Resource threshold alerting is disabled by default, but each type can be enabled by setting system properties. • *Pre-upgrade testing issues*: When a MID Server detects that it needs to upgrade, it automatically performs a series of short tests to determine if it is capable of upgrading. If any test fails, the instance publishes error messages in the MID Server Issue [ecc_agent_issue] table, allowing an administrator to resolve issues prior to the actual upgrade. • *User connectivity issues*: Error messages published to the MID Server Issue [ecc_agent_issue] table can provide insight into authentication and authorization failures involving MID Server users and help identify network connectivity problems that prevent

	a MID Server from establishing a TCP/IP connection.
Disabling the Asynchronous Message Bus (AMB) Client	A MID Server *connection parameter* allows you to disable the AMB client when it is not suitable for your environment. When the AMB client is disabled, the MID Server queries the ECC queue for work using the polling interval configured in the **mid.poll.time** parameter.

Changed in this release

- **MID Server business rules**: The following business rules were renamed for MID Server *resource threshold alerting* and now evaluate CPU and memory usage for threshold breaches at specified intervals:
  - **Update mean on MID Server Status**: In previous versions, this business rule ran on the ECC Agent Scalar Metric [ecc_agent_scalar_metric] table when CPU data was inserted and calculated the average value of the trailing 24 hours of CPU usage. In the Jakarta release, this business rule is renamed to **Update cpu mean on MID Server Status** and has additional functionality. When a record is inserted in the ECC Agent Scalar Metric [ecc_agent_scalar_metric] table, this business rule triggers a script include that evaluates threshold settings to determine if the MID Server has breached its configured CPU resource thresholds.
  - **Update MID Server Status table**: In previous versions, this business rule ran on the ECC Agent Memory Metrics [ecc_agent_memory_metric] table when CPU data was inserted and calculated the average value of the trailing 24 hours of memory usage. In the Jakarta release, this business rule is renamed to **Update max memory on MID Server Status** and has additional functionality. When a record is inserted in the ECC Agent Memory Metrics [ecc_agent_memory_metric] table, this business rule triggers a script include that evaluates threshold settings to determine if the MID Server has breached its configured memory resource thresholds.

MID Server upgrade

MID Servers are automatically upgraded, but you can also manually upgrade each MID Server separately.

Upgrade methods

- **Automatic**: Allow the instance to automatically upgrade the MID Server. This functionality is available by default. Automatic upgrade occurs:
  - Every hour, when the MID Server checks with the instance to see if there is a different version available for upgrade. You cannot modify this time period.
  - When the instance is upgraded and the MID Server for that version is different than the version currently on the MID Server.
  - When the MID Server *pre-upgrade test* passes without an error. Any errors encountered during this automatic test prevent the upgrade from occurring until the issues are resolved. The pre-upgrade test is enabled by default, but can be disabled by adding and setting a system property.
- **Manual**: Manually start the upgrade by clicking a related link on the MID Server record. Use this method when you do not want to wait until the next hourly automatic update or if your upgrade failed and you want to force an upgrade. See *Upgrade the MID Server manually* for instructions.

Upgrade version

You can configure a property that specifies a different upgrade version if you do not want to use the default MID Server version that is determined by the instance. See *Set the MID Server version* for more information.

The Upgrade state

The instance initiates the upgrade by sending the autoUpgrade system command to the MID Server. Starting with MID Servers upgrading *from* an Istanbul version MID Server, the MID Server **Status** is changed to **Upgrading** while the upgrade is running. The **Upgrading** state is similar to *the **Paused** state*. This is done to avoid potential miscommunication between the new version of the instance and the previous version of the MID Server during upgrade. For the upgrade to run, MID servers must be in the **Up** state and must be *validated*.

While in the **Upgrading** state, you cannot resume or restart the MID Server. However, you can perform the same actions that you can when the MID Server is in the **Paused** state. After a successful upgrade, the queued output is sent to the instance and the MID Server starts retrieving new commands to process. The status also changes to **Up**.

When the instance sends the `autoUpgrade` system command to the MID Server, if it is **Down** or **Paused**, or if it has not been validated, the command remains in the ECC Queue until the MID Server status changes to **Up**. Then the command is processed.

Note: If you are using an Istanbul instance but you are upgrading a pre-Istanbul MID Server to Istanbul, these upgrade states are not available. They are available only for MID Servers that are already on Istanbul.

Failed upgrades

Failed upgrades are handled differently based on the version you are upgrading to:

- Upgrade to another major release: (such as Istanbul to the next full release): the status changes to **Upgrade Failed**.
- Upgrade from a minor version within a release (such as Helsinki patch 1 to patch 2): the MID Server continues using the version it is currently running. It does not perform the upgrade and the status eventually changes to **Up**, assuming the MID Server was already functioning properly.

Upgrading MID Servers in the Down state

If a MID Server is in the **Down** state, it cannot process the upgrade command. When the MID Server changes to **Up**, it immediately checks to see if an upgrade is necessary. If it does need to upgrade, the upgrade process starts before the MID Server processes any other commands.

Upgrade error messages

The MID Server can display the following upgrade error messages.

Table 6: Upgrade error messages

Message	Description
Unable to refresh packages	The MID Server displays this message as a generic error when the error is not handled by a defined error message.
Failed to query instance for MID Server buildstamp	Instance is unavailable or there is a major version mismatch between the MID Server and the instance.
Not a valid package buildstamp	InstanceInfo returned an assigned buildstamp that was not in the correct format, such as a version mismatch.

MID Server pre-upgrade check
The instance automatically tests the MID Server's ability to upgrade on your system prior to the actual upgrade, to identify issues that could cause a MID Server outage or require reinstallation.

Each MID Server contains an AutoUpgrade monitor that compares the MID Server version with that of the instance to determine if the MID Server needs to upgrade. If the AutoUpgrade monitor discovers that the MID Server version is out of date, the monitor runs pre-upgrade validation tests for that MID Server. If an issue is detected, a message is logged to the MID Server Issue [ecc_agent_issue] table, and the upgrade is blocked. The AutoUpgrade monitor continues to run every hour, until the tests all pass. If there are no blocking issues, the MID Server downloads the appropriate upgrade package and begins the upgrade process.

Failed tests leave the MID Server in one of these states:

- **Upgrade Failed**: For upgrades to a different release family, such as from Geneva to Jakarta.
- **Up**: For upgrades within the same release family, such as an upgrade to a patch.

Errors, such as insufficient disk space for the installer and lack of connectivity to **install.service-now.com**, are written to both the MID Server agent log and to the *MID Server Issue [ecc_agent_issue]* table. These errors are published before the actual MID Server upgrade occurs and must be resolved before the upgrade can continue. You can view issues from the MID Server Issue [ecc_agent_issue] table in any of these locations;

- **MID Server Issues** related list in a MID Server record.
- **MID Server** > **Server Issues** navigation module.
- **MID Server Issues** gauge on the MID Server dashboard.

Pre-upgrade tests

The pre-upgrade validation tests check these requirements:

- At least 1GB of free disk space.
- Access to the download site at `install.service-now.com`.
- Permission to execute these file operations:
  - Extract a ZIP archive to a `temp` folder.
  - Copy files from the `temp` folder to the `agent` folder.
  - Read a text file.
  - Delete the pre-upgrade contents.

- For Windows, ensure that the **Log On As** user for the Windows service is either **LocalSystem** or a user that is part of the local Administrator group. By default, domain administrators are added to the local Administrator group when joining a computer to a domain. If the PowerShell script that performs this test does not return the expected output, the system logs a warning to the MID Server Issue [ecc_agent_issue] table, but the test passes.

Data provided

When the instance encounters issues during the pre-upgrade check, it populates these fields in the MID Server Issue [ecc_agent_issue] table:

Table 7: MID Server issue fields

Field	Description
Last detected	Date and time the issue was last detected.
Short description	Contents of the generated message that specifies a possible issue with available disk space, download server access, or file permissions.
MID Server	Name of the MID Server affected by a pre-upgrade test failure.
Issue source	The process that identified the issue. For all issues with MID Server pre-upgrade testing, the source is `UpgradeCheck`.
State	The current state of the issue. Possible states are: • **New**: Starting state when the instance creates the issue. • **Acknowledged**: State set by the administrator when he or she first examines the issue. • **Resolved**: Ending state, set by the instance, indicating that the issue has been resolved. If the scheduled job does not encounter the issue when it runs again, the instance automatically sets the state to this value.
Domain	Domain for the MID Server. For all issues derived from MID Server pre-upgrade testing, the domain value is inherited from the domain of the MID Server user.
Count	Number of times an issue has been detected. Each time the pre-upgrade tests run and encounter the same issue, the AutoUpgrade monitor increments this field.

Errors that block the upgrade

These messages describe issues detected by the pre-upgrade test and published to the MID Server Issue [ecc_agent_issue] table. Failure of any of these tests blocks the upgrade.

- **Not enough free disk space. The system reports <*n*> bytes free**: This message is displayed when less than 1GB of free disk space is detected on the MID Server host. This error is also written to the MID Server agent log.
- **Unable to download updates from install server**: This message indicates that either the MID Server host does not have permission to download the installation package from `install.service-now.com` or network problems prevent connection. This error is also written to the MID Server agent log.
- **Unable to extract contents of pre upgrade check zip**: This message indicates that the service account on the MID Server host does not have permission to extract the pre-upgrade ZIP archive to the temporary folder specified by the system property, **java.io.tmpdir**. On a UNIX host, the value for this property is typically `/tmp` or `/var/tmp`. On Microsoft Windows hosts, the path is `c:\\WINNT\\TEMP`.
- **Unable to create folder <*upgrade check file path*>**: This message indicates that the MID Server service account does not have permission to create the `upgradeCheck` folder for the pre-upgrade checking files in the `agent/package` path.
- **Unable to verify file permissions: <*message*>**: This message indicates an exception has occurred when checking file permissions, such as a file that does not exist or access failure.
- **MID Server Windows Service is not running as LocalSystem or a local Administrator**: This message warns that the Windows service is not running with the desired permissions.

Non-blocking warnings

These warnings are displayed in the MID Server Issue [ecc_agent_issue] table and do not prevent a Windows MID Server from upgrading:

- **WARN: Unable to parse $logOnAsUser** : This message warns that the **Log On As User** value for the Windows service is not in either of these expected formats:
  - user@domain.company.com
  - domain\user
- **WARN: Unable to look up Log On As user's groups**: When the instance attempts to look up the logged on user's group memberships, it executes the **net user <*username*>** command. The instance expects a certain output structure by the Windows service from this command and issues this warning if the expected output does not match the actual output.

These PowerShell warnings are written to the MID Server agent log only. Because PowerShell is not required to use a MID Server, these configuration issues do not prevent a Windows MID Server from upgrading. However, these warnings might indicate issues in your environment that require attention.

- **Skipping PowerShell upgrade checks since PowerShell is not usable**: PowerShell 2.0 (at a minimum) is not installed or `powershell.exe` is not available to the MID Server service user.
- **Continuing with upgrade, but the following issue was encountered during upgradeCheck: <*exception message*>**: This message indicates that there was an issue running the PowerShell portion of the pre-upgrade tests.

Disabling the pre-upgrade check

A MID Server configuration parameter called **mid.upgrade.run_precheck** is set to **true** by default, which allows the automatic pre-upgrade test to run. To disable these tests for a single MID Server, add this parameter to that MID Server's `config.xml` file and set it to **false**. To disable these tests for all MID Servers, add a new record to the MID Server Property [ecc_agent_property] table called mid.upgrade.run_precheck. Set the value of this property to **false** and leave the **MID Server** field blank.

Set the MID Server version
You can specify which version the MID server should upgrade to using a property.

Role required: admin

ServiceNow does not recommend pinning the MID Server to a specific version for a significant amount of time, especially if you upgrade the instance. Under most circumstances, you should let the instance determine which MID Server version to use.

These properties control the MID Server version:

- mid.buildstamp

  The mid.buildstamp property identifies the MID Server version with an identifier based on the date of the build. This property uses a date and time format of yyyy-mm-dd-hhmm.

  The MID Server checks for version information hourly. If no override version is configured, the MID Server looks at the mid.buildstamp property for the version to use. This property resets itself to the default version (the version that matches your instance version) when the instance is restarted or upgraded, so any user changes are lost at that time.
- mid.version.override

  Use this property to set an override condition for the current MID Server version. When the MID Server checks the version each hour, it looks at the mid.version.override property first. If this property is empty, the MID Server will get its version information from the mid.buildstamp property. If an override version is configured, the MID Server uses this value and ignores the version information in the mid.buildstamp property. This override value remains when the instance is restarted and is passed to the MID Server. However, the version in the mid.version.override property is deleted during an upgrade, allowing the MID Server to reset itself to the version in the mid.buildstamp property.

  The MID Server cannot be upgraded until the parameter is cleared.

  Note: Downgrades are only possible within the same major release, such as Helsinki or Istanbul.

1. In the **Navigation** pane filter, type `sys_properties.list`.

   The list of system properties appears.
2. Click **New**.
3. Type `mid.version.override` in the Name field.
4. Enter a description, such as, `Set an override value for the current MID Server version`.
5. Enter a version for the MID Server to use that is different from the version Content-Reference to:../../../common/variables.dita#general/CompanyName has selected in the mid.buildstamp property.

   The date and time format is yyyy-mm-dd-hhmm.
6. Click **Submit**.

Upgrade the MID Server manually
You can manually upgrade MID Servers at any time if you do not want to wait for the automatic upgrade.

Role required: mid_server or admin

For the upgrade to run, MID servers must be in the **Up** state and must be *validated*.

The MID Server is upgraded to the version specified by build stamp on the instance, or by *the upgrade property* that you specify.

1. Navigate to **Discovery** > **MID Servers** or **Orchestration** > **MID Server Configuration** > **MID Servers**.
2. Open the record of the MID Server that you want to upgrade.
3. Click **Upgrade MID** under **Related Links**.
4. Confirm that you want to perform the upgrade.

Service Mapping release notes

ServiceNow® Service Mapping application enhancements and updates in the Jakarta release.

ServiceNow® Service Mapping discovers all business services in your organization and builds a comprehensive map of all devices, applications, and configuration profiles used in these business services.

Activation information

Service Mapping is available as a separate subscription and requires activation by ServiceNow personnel. The following plugins are activated automatically when Service Mapping is activated: Event Management and Service Mapping Core, IP-based Discovery, Pattern Designer, Cloud Management Core, and Service Watch Suite Commons. The Event Management and Service Mapping Core plugin is not the same as the Event Management plugin.

New in the Jakarta release

Discovery of configuration items hosted in the cloud	Discover Platform as a Service (PaaS) applications running on Microsoft Azure Web Sites or Amazon Web Services (AWS). Pattern Designer contains the new cloud rest call operation to extract information from configuration items of the PaaS type.
Ability to track changes in configuration files	Configure the system to collect information about changes in configuration files belonging to a configuration item (CI). Service Mapping uses this information to notify users that CI configuration files changed and to view actual changes to configuration files directly in the business service maps.
Pattern creation wizard	Use traffic-based information to create a pattern step. This step is used in a connectivity section

	of the pattern as a reliable and consistent way to discover this connection.
Business service level map indicators	On a business service map, view indicators for alerts, outages, incidents, and problems opened for the Discovered Service CI.
New UI and functionality for the Pattern Designer	The new Pattern Designer module enhancements include: • *Pattern operations*: Customize pattern operations to create your own operations to serve the needs of your discovery process. • *Customize pattern operations*: Modify parsing strategies that come as part of the base system or add new ones. • *Define an HTTP Get Call query*: Use the Http Get Call operation to extract information from configuration items (CIs).

Changed in this release

- *Dedicated WMI Collector service for MID Servers*

  If your deployment uses multiple MID Servers on the same server, make this deployment more robust by creating a dedicated WMI Collector service for each MID Server.

IT Service Management release notes

IT Service Management has new and updated features in the Jakarta release.

Benchmarks release notes

ServiceNow® Benchmarks is a new application in the Jakarta release.

The Benchmarks feature gives you instant visibility into your key performance indicators (KPIs) and trends, as well as comparative insight relative to industry averages of your peers. You can contrast the performance of your organization with recognized industry standards, and view a side-by-side comparison of performance with global benchmarks.

Benchmarks features

ITSM and ITOM KPIs	Collect ITSM and ITOM category benchmark data to compare against global values. There are 13 ITSM KPIs and 3 ITOM (CMDB) KPIs. For Benchmarks users not on the Jakarta release, you can see the basic Benchmarks version (6 KPIs) by logging in to HI Service Portal.
KPI definition customization	Customize KPI conditions and source as per your implementation.

Benchmarks dashboard in Service Portal	View KPI data and performance trends in the Benchmarks dashboard in Service Portal (mobile friendly).
Downloadable KPI reports	Download KPI list-view and historical trend charts in a single PDF report from the Benchmarks dashboard.
Email notification	Automatically receive an email notification when new monthly Benchmarks data is available.
Integration with Performance Analytics	Integration with Performance Analytics for daily data collection and drill-down capabilities on KPI data.

Activation information

Active by default. The Benchmarks plugin is new in Jakarta. However, you must opt in to the Benchmarks program to participate.

See *Benchmarks* for more information.

Change Management release notes

ServiceNow® Change Management product enhancements and updates in the Jakarta release.

Activation information

Active by default.

New in the Jakarta release

ITIL proven practices alignment	A new plugin that provides alignment with proven ITIL practices is introduced in this release. The Change Management Best Practice – Jakarta (com.snc.best_practice.change.jakarta) plugin is activated by default for your new customers. Customers who upgrade from a previous release must request the plugin by contacting Customer Support. The plugin updates the Change form and functionality in the following ways. • Added the **Outages** related list to the Change Request form. • Sends notifications to the requester when a change is approved and scheduled, when work has begun, and when work has been completed. • Sends notifications to the requester when a change request is put on hold or removed from on hold. • Displays a report showing the list of planned outages, so that decisions about scheduling change requests can be made accordingly.

	• Reorganized the Change form to better reflect the needs of a change manager or requester. • Added the **Task SLA** related list and rearranged related lists. • Updated the fields in the Change Request pop-up view to show the most relevant information. • Added approval history to the change request activity log. • Added the **Requested by** field to the Change Request list view. • Added **Planned start date**, **Planned end date**, and **Type** fields to the Change Task form. • Rearranged the fields on the Change Task form to contain the fields that provide most value for your users. • Updated the mandatory and restricted Change Request properties for standard Change templates. • Added that the change task type **Implementation** must fall within the planned start/end dates of the related change request. • Made **Work notes** mandatory when a change request is canceled. • Added new state values: **Pending**, **Open**, **In Progress**, **Closed**, and **Canceled** to the Change Task form. • Provides a warning that the planned end date is prior to planned start date now occurs on the Change Request and Change Task forms.
Standard change properties	A two-step verification process has been introduced in requesting a standard change from service catalog. The process redirects the requester from a standard change template to a change request that can be viewed prior to submission. The two-step process is enabled in standard change properties. Standard change proposals can now include change tasks. When approved, the resulting standard change templates generate change tasks. Standard change restricted fields are no longer allowed to be included in a standard change proposal.
CAB workbench	• In the *CAB Definition* and CAB Meeting form, the **Order** button is removed and the **Add Sort** button was added for agenda management. This button allows agenda sorting by one or more fields. • The *CAB Date* field is now updated to the most recent CAB meeting date that the change request is associated with. • The **Allotted Time** field has been added to the **Agenda** item list and displays the allotted

time for that item. Allotted time allows the CAB manager to override the default amount of time per agenda item.

- The meeting start time and meeting end time fields are now mandatory.
- The form widget has been enhanced to allow more lines of content to be displayed in the planning form section.

Changed in this Jakarta release

- Impacted CI's/Services: associates all configuration items listed in the **Affected CIs** related list on a change request with the **Affected by Task** related list on the configuration item record. Previously, only the CI identified in the **Configuration Item** field was related.
- CI's Affected by Task: associates the CIs or services listed in the **Impacted Services/CIs** related list on a change request with the **Impacted by Task** related list on the configuration item record.
- CI's Impacted by Task: associates CIs listed in the **Impacted CI's/Services** related list on a change request or service with the CI in question on the **Impacted by Task** related list.

Removed in this release

- In the CAB Definition and CAB Meeting forms, the **Order** button under the **Change Request Addition Conditions** is removed. The **Add Sort** button replaces the **Order** button in the CAB meeting agenda.

Incident Management release notes

ServiceNow® Incident Management product enhancements and updates in the Jakarta release.

Activation information

Incident Management is active by default.

New in the Jakarta release

ITIL proven practices alignment

A new plugin that provides alignment with proven ITIL practices is introduced in this release. The Incident Management Best Practice – Jakarta (com.snc.best_practice.incident.jakarta) plugin is activated by default for new customers. Customers who upgrade from a previous release must request the plugin by contacting Customer Support.

The plugin updates the Incident form and functionality in the following ways.

- Makes the **Work notes** field mandatory when there is a change in the incident priority, so that incident managers can more easily track what caused a change in priority.

- Added the **Request** related list, so that you can more easily track a request opened from an incident.
- Clears the **Assigned to** field when the assignment group is changed.
- Added the **Parent Incident** field to the related forms section, so that your users can see which incidents have parent records.
- Changed the field labels **Closed code** and **Closed Notes** to **Resolution code** and **Resolution notes**.
- Updated the **On Hold** choice list to include **Awaiting Caller**, **Awaiting Change**, **Awaiting Problem**, and **Awaiting Vendor**. If **Awaiting Caller** is selected, it is mandatory to enter additional comments.

ITSM guided setup release notes

ServiceNow® ITSM guided setup product enhancements and updates in the Jakarta release.

Jakarta upgrade information

A new plugin that provides a new, process-centric version of guided setup is introduced in this release. The ITSM Guided Setup plugin (com.snc.guided_setup_metadata.itsm) is active by default for new customers. Upgrading customers can activate the plugin to view the new version of guided setup.

One or both versions appear as modules in the navigation pane or as links on the System Administration homepage. They appear as **ITSM Guided Setup** or **ITSM Guided Setup (Old)**. **ITSM Guided Setup (Old)** takes you to the guided setup created in the Helsinki and Istanbul releases. The administrator can hide the version that you do not want to use.

Note: The plugin name, ITSM Guided Setup, is the same for both old and new versions, but the plugin ID is different.

Activation information

ITSM Guided Setup is active by default.

New in the Jakarta release

Guided setup

- Added **More Information** pages to guided setup including more process information about proposed solutions as well as technical guidance on implementing them.
- Added embedded help topics for the configuration pages.
- Added support for plugin dependencies to be able to be defined against unpublished plugins.

- Added functionality to grant guided setup access to application admin roles at the category or task level.
- Added functionality for guided setup task assignment, so that it includes your users who possess the defined roles.

Note: Users with the admin role always have access.

Password Reset release notes

ServiceNow® Password Reset application enhancements and updates in the Jakarta release.

Password Reset lets your users use a self-service process to reset their passwords on the local ServiceNow instance. Alternatively, your organization can implement a process that requires service-desk agents to reset passwords for users.

Activation information

Password Reset for your instance is active by default and includes example verifications.

The Self Service Password Reset plugin (`com.snc.password_reset`) and the Password Reset (`com.glideapp.password_reset`) plugin are both active by default for new instances and upgrades. By default, when a user requests a reset, the instance sends the user a URL with a user-specific token. After the user opens the URL, the instance prompts the user to enter and confirm the new password. The instance no longer sends a temporary password by default.

Changed in this release

- New installation software and instructions for the Password Reset Windows Application: See *Download and install the Password Reset Windows Application*.

Problem Management release notes

ServiceNow® Problem Management product enhancements and updates in the Jakarta release.

Activation information

Problem Management is active by default.

New in the Jakarta release

ITIL proven practices alignment	A new plugin that provides alignment with proven ITIL practices is introduced in this release. The Problem Management Best Practice – Jakarta (com.snc.best_practice.problem.jakarta) plugin is activated by default for your new customers. Customers who upgrade from a previous release

must request the plugin by contacting Customer Support.

The plugin updates the Problem form and functionality in the following ways.

- Makes the **Work notes** field mandatory when there is a change in the problem priority, so that problem managers can more easily track what caused a change in priority.
- Added the **Major Problem** check box and the **Review Outcome** field to facilitate the management and documentation of major problem reviews.
- Added the report Incident Trend by Configuration Item, so problem managers can view incident trends by service or configuration item (CI) over time to determine potential problems.
- Updated the Problem form layout, adding the fields **Business service**, **Impact**, **Urgency**, **Closed**, and **Closed by** and changed the layout of the form to make it more user-friendly.
- Makes the **Priority** field read-only. This field is set based on the impact and urgency of the problem.
- Hides the **Known error** field on the Problem form and the **Known error** flag is set to true when the problem is set to the state **Known Error**.
- Updated the UI action **Close Incident** to **Resolve Incident** enabling problem owners to resolve and communicate updates to child incidents when a resolution has been identified. Your users can review and confirm the resolution.

Service Catalog release notes

ServiceNow® Service Catalog product enhancements and updates in the Jakarta release.

Service Catalog provides a customer-facing view of available service and product offerings provided by departments within the organization.

Jakarta upgrade information

Before upgrading, you should be aware of changes made to the underlying service catalog data model. These changes affect that way you implement multiple service catalogs. For details, see *Upgrade to multiple service catalogs*.

If you are upgrading from a version prior to the Fuji release, see *Migrate cart layouts*.

Activation information

Service Catalog is active by default.

New in the Jakarta release

Debug UI Customization	**Debug UI Customization**, a new submodule introduced under the **Catalog Administration** module, enables catalog administrators to perform a health check of Service Catalog pages. The corresponding UI indicates UI macros that have been customized and skipped during an upgrade, enabling catalog administrators to pinpoint the issue and self-heal. It helps you identify the source of broken functionality due to customized UI macros in Service Catalog when you upgrade to a new release. Use the **Disable UI Customization Debug module** submodule under the **Catalog Administration** module to turn off the debugger.
Variable Watcher	The **Variable Watcher** tab is available for Service Catalog variables. A catalog administrator can monitor individual variables for changes#in#their state and value due to#Catalog Client Scripts, Catalog UI Policies, and Catalog Data Lookups.
Variable Action Logger	For a full analysis of all the client-side actions affecting the state and values of every variable on a catalog form, use the **Variable Action Logger** window. Use the new submodule, **Enable Variable Action Logger**, under the **Catalog Administration** module to enable this feature. This feature is available only for catalog administrators. Once enabled, you can track the full chronology of actions that happen on all variables of a catalog form. These actions happen due to Catalog Client Scripts, Catalog UI Policies, and Catalog Data Lookups.
Full feature support for variable editors on records created via record producers	The **Applies on Target Record** check box available in the **Catalog UI Policies** and **Catalog Client Scripts** submodules ensures that they are applicable on the default variable editors. Catalog UI Policies, Catalog Client Scripts, Catalog Data Lookups, Reference Qualifiers, and dependent reference fields are supported on the default variable editor used for records created via record producers. This support is applicable only for records created for task-extended tables via record producers.
Enhancements to variables	The following variables are introduced: • **IP Address**: Use this variable type to capture the IPv4 and IPv6 data for a catalog item. Under the **Validation Scripts** submodule, a validation

script type associated with this variable is available.

- **Duration**: Use this variable type to capture the duration-related data for a catalog item.

The following enhancements are made to existing variables:

- Apart from the **Macro**, **Macro with label**, and **UI page** variable types, Service Portal supports all types of variables.

  Note: Convert the UI Macro variable to portal widget and associate with the same widget.

- Service Portal supports two-column layouts only for the top-level containers.
- You can specify example text as a hint for a variable before you enter a value.

Variable set extension	When you apply Catalog UI policy Actions and GlideForm APIs (setReadOnly, setMandatory setDisplay) on a variable set, the actions are applied on every variable within the variable set. You can make variables read-only and mandatory, or change the display of variables by performing these actions on the corresponding variable set. The same feature is available for containers as well. **Note:** This feature is not supported on Service Portal.
Catalog UI Policy condition builder	Variables associated with a variable set have the variable set name associated with them in the **Catalog UI Policy** condition builder as well as in the **Catalog UI Policy Actions** list.
Automated Test Framework for Service Catalog	Catalog administrators can write automated tests to validate their catalog items because Service Catalog is supported in the Automated Test Framework (ATF). You can write end-to-end tests for both the requester and fulfiller flows. You can perform the following functions as part of the ATF for Service Catalog: • Search for a catalog item or record producer • Open a specific catalog item or record producer • Set variable values • Set item quantity • Validate variable values • Validate variable states • Validate price and recurring price • Add items to the shopping cart • Order a catalog item

	• Submit a record producer **Note:** Only catalog items and record producers are supported for Service Catalog in the ATF. Order guides are not supported in this release. ATF is not supported for Portal flows.
Record producer redirection settings	You can configure the redirect behavior of a record producer after its generation in the UI.

Changed in this release

- *Copy behavior of a catalog item*: When you perform the **Copy** UI action on a catalog item, all the associated variables, Catalog UI Policies, Catalog Client Scripts, and Catalog Data Lookups are copied along with the catalog item.

  When using the Language Internationalization plugins, if you perform the copy action in English, a copy of the catalog item is made for English. If you perform the copy action in a language other than English, a copy of the catalog item is made for that language and for English.

  Previously, when you copied a catalog item, any other records in the platform that had a reference to the catalog item were also copied. For example, when you copied a catalog item, any product model associated with the catalog item was also copied.

  In Jakarta, such platform associations are not copied along with a catalog item unless specified. Under the Service Catalog properties, use the **Relationship tables which should be part of Copy Item action. Table Name should be comma separated.** property to specify the table names of associations that should be copied. Use a comma-separated list with no spaces between the values.
- **Behavior of the g_form.clearValue() API**: If the `g_form.clearValue()` API changes a variable value in the Catalog form, this API invokes the onChange scripts for that variable. For example, if the g_form.clearValue('text1') clears the value of a Single Line Text variable, text1, then this API invokes the onChange scripts for text1 to change the value from 'abc' to ''. The `g_form.clearValue()` API also works on variable editors.
- Service Catalog is 508 and WCAG A compliant.

Removed in this release

- All fields except the variable fields have been removed from the **Catalog UI Policy** condition builder to avoid any confusion when creating Catalog UI policies.
- The **Description** field has been removed from the **Question** tab on the **Variable** form.

Service Level Agreement release notes

ServiceNow® Service Level Agreement application enhancements and updates in the Jakarta release.

Activation information

The SLA Timeline plugin (com.snc.sla.timeline) version 2.0.0 is activated for all customers who upgrade to the Jakarta release.

New in the Jakarta release

New and enhanced features of SLA Timeline *SLA timeline*	• Filter has been introduced to provide filtering of the data that the timeline displays. • Task SLA Details section has been introduced that displays information on stages, task updates, and out-of-schedule for SLA timeline. • Stepped zoom has been introduced to provide several zoom in or out levels to control SLA timeline zoom resolution. • Toggle button has been introduced to show/hide task updates that did not cause an SLA stage. • An ability to debug or verify has been introduced for you to check if a task is mapped appropriately with a defined SLA using the SLA timeline. • An ability to select business elapsed time or business time left has been introduced. The selection is saved into user preferences for display in the SLA timeline. • Reference picker has been introduced to preview the task selection to be introduced in the SLA timeline. • Refresh button has been introduced to refresh the SLA timeline with the latest values of the task SLA. • Carousel navigation has been added to take you through all the task stages easily. • An ability to select a different time zone from the SLA timeline has been added. • An ability to calculate the breach date and time of the SLA from the **Due Date** field of the task to which the SLA is attached to.
ITIL proven practices alignment	A new plugin that provides alignment with proven ITIL practices is introduced in this release. The Service Level Agreement Best Practice – Jakarta (com.snc.best_practice.sla.jakarta) plugin is activated by default for new customers. Customers who upgrade from a previous release must request this plugin by contacting Customer Support. The plugin updates the Service Level Agreement form and functionality in the following ways. • The SLA notification and escalation workflow sends notifications when a task reaches a certain percentage of its allotted SLA duration. • The **Service Level Target** field has been added for filtering, searching, and reporting on different service level target types.

Service level agreement roles	Two new roles have been introduced: sla_admin and sla_manager.

Service Portfolio Management release notes

ServiceNow® Service Portfolio Management product enhancements and updates in the Jakarta release.

Activation information

You can activate the Service Portfolio Management plugin (com.snc.service_portfolio) if you have the admin role.

Browser requirements

Internet Explorer version 10 and later.

New in the Jakarta release

Capture new statuses to the business service	Capture additional statuses of a business service that indicates the life cycle of a service, including the business services that are retired.
Track service level requirements	Capture the service level requirements like Service Level Agreements and Service Level targets with the new attribute **Service level requirement** added to the business service form.
Track SIPs and SQPs using projects	Service Improvement Plan (SIP) and Service Quality Plan (SQP) can be tracked as projects in the Project Portfolio Management. Preconfigured CSI (continuous service improvement) is provided to track SIPs and SQPs.
Identify business service records with a number	Identify each business service record with a unique number by configuring the **Number** field in the Business Services list view.
Get the service details as an SDP	Preconfigured knowledge category called the Service Design Package (SDP) is provided, which you can use to capture all relevant information about the service, from its inception until its retirement.

Subscription Management release notes

ServiceNow® Subscription Management product enhancements and updates in the Jakarta release.

Use the Subscription Management application to review and manage how purchased subscriptions are used on your production instance.

Activation information

Subscription Management is active by default.

New in the Jakarta release

Support on PaaS-only instances	User Administration and Subscription Management applications are accessible on PaaS-only instances
New Cost field on the *Subscription form*	The **Cost** field denotes whether the subscription is **For-fee** or **Free**. Some ServiceNow Store apps are free. You do not allocate resources to free subscriptions. Previously, the data was displayed in the **Display only** field.
New Subscription Applications related list on the *Subscription form*	The **Subscription Applications** related list displays applications or suites that are associated with the selected subscription. Users that you allocate to the subscription are subscribed to the listed applications. Click the application **Name** to view the list of top-level plugins that are associated with an application.

Removed in this release

- In earlier releases, until you assigned the usage_admin role, every user with the admin role received all communications that relate to subscriptions. In this release, only users with the usage_admin role get such communications.

Performance Analytics and Reporting release notes

Performance Analytics and Reporting have new and updated features in the Jakarta release.

Performance Analytics release notes

ServiceNow® Performance Analytics product enhancements and updates in the Jakarta release.

Activation information

Platform feature - active by default. Performance Analytics premium requires a separate subscription.

New in the Jakarta release

Performance Analytics widgets on Service Portal	You can add Performance Analytics widgets to Service Portal pages.
Improved Targets and Thresholds	Create personal targets and thresholds visible only to specific users. Provides enhanced notification

	functionality and simplified usability for targets and thresholds.
Improved Forecasting	Provides best-fit forecasting based on available data using multiple algorithms. You are alerted before targets are met through notifications.

Changed in this release

- You can use the Insert and Stay with Relations UI action on a breakdown to copy the breakdown and all associated breakdown mappings, breakdown relations, and breakdown exclusions.
- You can run data collection jobs manually from the list. With this functionality you can start multiple collection jobs in a single action or start a single job using the right-click context menu.
- View targets and thresholds associated with the indicator with the **Targets** and **Thresholds** related lists that appear on the Indicator form.
- When you define a target, single-score widgets appear color coded.
- The property com.snc.pa.default_chart_line_color applies to the list of scorecards, score widgets that display a trend line, and workbench process widgets.
- Depending on your selected widget visualization, certain fields on the Widget form are mandatory.
- You cannot create reports on the pa_snapshots table.
- Score values appear as a table below widgets when accessibility is enabled.
- Benchmarking:
  - The indicator **Benchmarking indicator** field controls if the indicator is used for benchmarking.
  - Indicators configured for use with benchmarking are not editable.

Reporting release notes

ServiceNow® Reporting product enhancements and updates in the Jakarta release.

Activation information

Platform feature – active by default. Some advanced reporting functionality is available only when you have licensed *Get started with Performance Analytics Premium*.

New in the Jakarta release

Import external data	You can now generate and distribute reports based on data maintained outside of your instance.
Content on Service Portal	All reports can be displayed on Service Portal using Service Portal widgets.
Report Designer	Report Designer is enabled by default. You can configure a report, preview it, iterate and adjust it, and then share the report using the integrated **Share** panel. The Report Designer provides a cleaner user interface and guided flow to help both experienced and inexperienced users easily create reports.

Accessibility	Report Home, Report Designer, and reporting content (e.g., widgets on dashboards) meet the requirements of Web Content Accessibility Guidelines Level A.
Highcharts 5	Highcharts 5 supports accessibility and replaces Highcharts 4 throughout the platform.
Interactive analysis	Launch a detailed analysis of your data from any list. Quickly explore data using reports and interactive filters.

Changed in this release

- The Custom Charts plugin is deprecated.
- The **Chart Color** field retains its value when the groupby or stackby field values are changed and when switching between chart types in Report Designer.
- *Multiple datasets* are available to all users. Previously Performance Analytics Premium was required.
- When using **Insert and Stay**, color rules are not copied to the new report.
- Multilevel pivot report improvements:
  - Options added for displaying row and column lines.
  - Added automatic collapsing and expanding of rows.
  - Enhancement fixes for columns headers.
  - Enhancements to PDF export and scheduled export.
  - Improved word wrapping.
- Color coding added to single score reports.
- Changed the configuration of the report_security plugin to default on upgrades. Users who upgrade no longer have to contact security to install this plugin.
- Improved the loading of the table list.
- Fixed warning messages in the zboot console log.
- Improved default color list for multiple datasets.
- Enabled dot walking on the **Aggregation** field for Average and Sum aggregation.
- List functions now available on the Report list
- The [report_view] table is no longer populated with new entries. The **Report Stats** list enables you to view how often each of your reports is run and how long it takes for the reports to run. For more information, see *Report statistics*.

Dashboards release notes

ServiceNow® Dashboards product enhancements and updates in the Jakarta release.

Jakarta upgrade information

Review *Dashboard upgrade information* for information about *responsive canvas* and *dashboard versions of homepages*.

Activation information

Responsive canvas dashboards are enabled by default on new instances. On upgrading instances, responsive canvas must be *enabled by an administrator* . If responsive canvas was enabled during Istanbul, it remains enabled after upgrade to Jakarta.

New in the Jakarta release

Create a dashboard version of a homepage	You can create responsive dashboards from existing homepages, providing better accessibility, improved sharing, and easier widget layout.
Cascading interactive filters	Dashboard administrators can create hierarchical interactive filters. Selecting a filter value at a higher level automatically filters the choices available for lower-level filters in the hierarchy.
Software Asset Management **content pack**	There is a new content pack for Software Asset Management: com.snc.pa.samp.
Solution library	Easily install and update dashboards and visualizations for Performance Analytics content packs.

Dashboards upgrade information

Dashboards upgrade information for the Jakarta release.

Enable Responsive Dashboards

To use Responsive Dashboards, both the Responsive Dashboards and Responsive Canvas plugins need to be active.

- If Responsive Canvas was enabled in Helsinki or Istanbul, Responsive Dashboards functionality is enabled on upgrade to Jakarta. After upgrade all dashboards are responsive, including dashboards that were not responsive during Helsinki. All users on your instance can create, edit, and share dashboards.
- If Responsive Canvas was not enabled in Helsinki or Istanbul, Responsive Dashboards functionality is not enabled on upgrade to Jakarta. The plugins are activated by default, but the glide.cms.enable.responsive_grid_layout system property is set to false. To enable Responsive Dashboards, set this property to true.

Note: If the glide.cms.enable.responsive_grid_layout does not exist or if it exists and is set to true, Responsive Dashboards functionality is enabled.

If you are upgrading from a release prior to Helsinki, Responsive Dashboards functionality is not enabled on upgrade to Jakarta. The plugins are activated by default, but the glide.cms.enable.responsive_grid_layout system property is set to false. To enable Responsive Dashboards, set this property to true.

Review dashboard layouts after enabling responsive canvas

- During conversion to responsive canvas, the layout of dashboards may slightly change. Highly customized dashboards may have significant changes, such as different widget layouts. After upgrading, review each dashboard for changes and adjust the layout as necessary on the drag-and-drop canvas.

Dashboard versions of homepages after enabling responsive canvas

- If you have responsive canvas enabled, you will be prompted to convert your homepages to responsive dashboards. During conversion to responsive canvas, the layout of dashboards may slightly change. Highly customized dashboards may have significant changes, such as different widget layouts. After upgrading, review each dashboard for changes and adjust the layout as necessary on the drag-and-drop canvas.

Migration of permissions

- For releases prior to Istanbul, Performance Analytics roles were required to view and edit dashboards. Starting in Istanbul, dashboards use a new permissions system and Performance Analytics roles are no longer required to view or edit dashboards. To ensure access to existing dashboards remains the same after migration, the pa_viewer, pa_admin, and pa_power_user roles are added to a dashboard or its group during migration to the Jakarta permissions.

  These roles are typically added directly to the dashboards they apply to. However, when no role permissions are defined for the dashboard or the group a dashboard belongs to, the pa_viewer view permissions is applied to the dashboard group. (pa_power_user and pa_admin roles are still applied to the dashboard.)

  Additionally, during the upgrade all existing dashboards are configured to require the pa_viewer role to view with the **Restrict to role** field on the dashboard properties form. This restriction provides an extra layer of security.

Security Operations release notes

Security Operations has new and updated features in the Jakarta release.

Security Incident Response release notes

ServiceNow® Security Incident Response application enhancements and updates in the Jakarta release.

Jakarta upgrade information

Application administration is enabled for Security Incident Response by default. Before upgrading, verify whether you have added custom tables to Security Incident Response. If so, and your custom tables rely on global ACLs, you may need to recreate those global ACLs in the Security Incident Response scope after the upgrade. If you added custom roles or custom ACLs, retest them after the upgrade and ensure the **assignable by** attribute on the roles is set correctly to allow access to application administration.

After you upgrade, modify any custom integrations that write or read Security Incident observables to use the Observables table and the new m2m with Security Incident. The **Context** field in the m2m table defines the relationship of the observable to the security incident for **Observable Types**, such as IP (Source or Destination) and URL (Referrer).

Activation information

Activate the Security Incident Response plugin and configure it based on the needs of your organization. This plugin is available as a separate subscription.

New in the Jakarta release

Security Incident Response workflow templates	You can customize and use many incorporated template workflows in your deployment. • *Security Incident - Confidential Data Exposure - Template* • *Security Incident - Denial of Service – Template* • *Security Incident Lost Equipment workflow template* • *Security Incident - Malicious Software – Template* • *Security Incident - Phishing – Template* • *Security Incident - Policy Violation – Template* • *Security Incident - Reconnaissance – Template* • *Security Incident - Rogue Server or Service – Template* • *Security Incident - Spam – Template* • *Security Incident - Unauthorized Access – Template* • *Security Incident Web/BBS Defacement workflow template* **View Security Workflows** lists all workflows related to security incidents.
Sightings Search for observables	Analysts can perform local searches for observables in log stores and SIEMs to better understand the prevalence of a threat in their environment. New integrations for *IBM QRadar*, *Intel McAfee ESM*, *Splunk*, *Elasticsearch*, and *HPE ArcSight Logger* provide base system implementations for this capability.
Expanded support for Get Running Processes	Carbon Black and Unix systems include base-system integrations to get a list of running processes as part of automated enrichment for a security incident. You can define whitelists and blacklists to exclude common processes and highlight those processes known to be commonly associated with threats.
Related items in security incidents	You can correlate between security incidents and shared observables with new related lists. **Related Users** and **Related Configuration Items** detail users and configuration items from other security incidents with similar observables.

Security tags	You can apply tags to security incidents to classify them in generic ways. You can organize these tags into groups applying a single group member to a security incident. These tags can restrict user access. By default, the system comes with an implementation of the NIST Traffic Light Protocol (TLP). It includes roles that can be used to restrict user access based on the TLP designation.
ProcDump	Execute a `procdump` on Windows systems. The results are gathered through the MID server and stored in a preconfigured file location in your network.
Risk score	Configure automatic calculation of scores based on various factors using the **Risk Score Configuration**. Security Analysts can override the automatic risk score calculation for any security incident.
Post incident reviews	You can target questions to specific pre-defined groups by assigning roles to categories.

Changed in this release

- *Security incident observables*:

  Observables associated with a security incident are stored in a table, which:

  - Improves support for incidents with many observables
  - Enables correlation with other security incidents
  - Provides a way to select and perform local searches using a related list

  Observables are in a related list and can be added individually from this list or using the **Add Multiple Observables** related link.
- **Embedded and related lists for security incidents**: Several embedded lists have been changed to related lists in Security Incident. You can select and view different groupings of related lists on security incident from a set of Related Links.
- **Malware results related lists**: Displays report results from integrations that provide threat intelligence lookups.
- **Label change**: **Business Criticality** has been changed to **Business Impact**.

Removed in this release

- **Security incident fields for observables**: Observable fields are deprecated and replaced with an m2m relationship to the Observables table:

  Note: If you have custom integrations using these fields, they still work, however, they are no longer used by Security Incident Response. You can update your integrations with new fields in *Security Incident observables*.

  - Malware Hash
  - Source IP
  - Destination IP

- Malware URL
- Referrer URL
- Other IoC

Threat Intelligence release notes

ServiceNow® Threat Intelligence application has enhancements and updates in the Jakarta release.

Activation information

Activate the Threat Intelligence plugin and configure it based on the needs of your organization. This plugin is available as a separate subscription.

New in the Jakarta release

Case Management	Analysts can gather information related to an investigation of an ongoing threat in a structured way. **Case Management** replaces the spreadsheets typically used to gather such information. You can associate various artifacts to the case, including: • Security Incidents • Observables • Configuration Items • Users • Indicators Related information for each artifact is displayed. Analysts can include or exclude information in the case until fully characterizing the threat.
Security Tags	You can put observables on a whitelist (a list of known-good items that should be ignored) or a blacklist (a list of items that likely indicate malicious activity). For example, you can identify a list of known-good running processes to hide when showing running processes of a host. Or identify criteria (filter group or condition) that specify a running process that should be blacklisted.
WHOIS Library	Security analysts can perform `whois` lookups on domains and reverse `whois` lookups on IP addresses. Lookup results are stored in the WHOIS library.
Data Breach Library	**Check account compromised**, in the Security Incident Response drop-down menu under **Affected Users**, performs a lookup on

domains and affected users on the site *https://haveibeenpwned.com*. You can perform this lookup from an observable or within Threat Intelligence, as well. Query results are stored in the Data Breach Library.

Removed in this release

Threat Intelligence Overview: Threat feeds no longer work.

Security Operations Trusted Security Circles release notes

ServiceNow® Trusted Security Circles is a new application in the Jakarta release.

Threat intelligence sharing is combined with added automation and anonymity to create Trusted Security Circles as part of Security Operations.

Trusted Security Circles is a channel for sharing threat intelligence, in the form of observables, to a predetermined set of trusted peers, members of their supply chain, or globally. Circles are typically organized around industry, geography, and/or supply chain.

With Trusted Security Circles, security teams anonymously share observable data with industry peers. Responses in the form of the number of sightings per observable are generated automatically by each receiving instance of ServiceNow. When data from respective circles is compared, patterns can emerge to identify targeted attacks against a specific group or industry. These patterns serve as an early warning system to other members of a circle, and a security incident is automatically created when observable thresholds are met. Typically, this sharing happens while investigating a security incident.

Users with Security Incident Response can join the global ServiceNow Trusted Security Circle.

Trusted Security Circles provides mutual benefits: The sending organization can identify whether the activity happening to them is a targeted attack or more broad-based. The receiving organizations get an early warning of potential future attacks.

With the advanced plugin, Trusted Security Circles Client (Advanced) installed, you can join other circles, as well.

Trusted Security Circles features

Share sightings searches **and** *observables*	You can share sightings search results and data with one or more Trusted Security Circles.
Create Security Incidents	Automatically create Security Incidents from threat intelligence shared with you, if the sighting count exceeds your preset threshold.
Join Trusted Circles (Advanced)	Join Trusted Security Circles targeted to various communities.
Create a Trusted Security Circles profile	Determine how you are viewed in the Trusted Security Circles you join by creating additional profiles.
Whitelist tags	Filter the observables that are sent or received from your ServiceNow instance using the whitelist security tag.

Trusted Security Circles Properties	Use properties to control other aspects of sharing including: • whether you automatically respond with local sightings when you receive shared intelligence • whether you automatically share sighting search results with the ServiceNow trusted circle • whether observables with 0 sightings are shared when you automatically share sighting searches

Activation information

For production and sub-production instances, Trusted Security Circles is activated during plugin installation. The Trusted Security Circles Client version is installed automatically when the Security Incident Response plugin is installed. Once registered, you are automatically joined to the ServiceNow Trusted Security Circle. The advanced version, Trusted Security Circles Client (Advanced) plugin is available by subscription.

See *Trusted Security Circles overview* for more information.

Security Operations Integrations release notes

ServiceNow® Security Operations Integrations application has enhancements and updates in the Jakarta release.

Activation information

Each integration requires plugin activation and configuration from the Integration Configuration screen. Plugin information for each integration is included in the product documentation for each integration.

New in the Jakarta release

Integration capabilities	You can dynamically link to abstract capabilities with integration implementations, for example, Get Running Processes. These capabilities can be referenced in UI actions and security runbooks or playbooks.
Sightings search for observables	Analysts can perform local searches for observables in log stores and SIEMs to better understand the prevalence of a threat in their environment. New integrations for *IBM QRadar*, *Intel McAfee ESM*, *Splunk*, *Elasticsearch*, and *HPE ArcSight Logger* provide base system implementations for this capability.
Threat Intelligence integrations	Base-system integrations for *CrowdStrike Falcon Intelligence* and *Recorded Future* enable automated threat intelligence lookups on observables associated with a security incident.
Email parser enhancements	Enable customer defined mappings for reference and choice type fields with value transforms. You

can map to fields that are related to the target table via a relationship.

Removed in this release

IBM QRadar	*IBM QRadar* - Incident Enrichment, with robust search capabilities replaces the previous IBM QRadar plugin.

Security Operations Common Functionality release notes

ServiceNow® Security Operations Common application enhancements and updates in the Jakarta release.

Activation information

Whenever any of the plugins for the main Security Operations applications (Security Incident Response, Vulnerability Response, Threat Intelligence, or Trusted Security Circles) are activated, the Security Support Common plugin is activated. This plugin loads various modules that provide functionality that is common across all Security Operations applications.

New in the Jakarta release

CISO dashboard	Covers activity in four different tabs: • Security Operations Center • Vulnerability Profile • Security Controls Profile • Business Risk Profile Depending on the products installed, you see the appropriate tabs. These dashboards use performance analytics to show you the security posture from these four dimensions.

Service Management release notes

Service Management has new and updated features in the Jakarta release.

Communities release notes

ServiceNow® Communities is a new application in the Jakarta release.

Communities provides a place for you to engage and interact with your organization in various ways, including:

- help quickly solve issues
- learn about best practices from others

- engage with your organization for product feedback

Use Communities to:

- improve support call deflection because users help themselves via crowd-sourced knowledge
- communicate product updates
- increase engagement with existing customers and lure prospects

Communities is built on a highly flexible platform and uses Service Portal features.

Communities features

Forums	Bring together a group of users to discuss matters of mutual interest in hierarchical forums. Administrators benefit from flexible security administration features, including granular permissions for read and write across different types of content.
Topics	Define areas of interest for users to discuss in a forum. Multiple forums can share Topics. Topics can be hierarchically organized.
Content types	Supports multiple types of content that administrators can configure at the forum level: • questions and answers • blogs • videos Supported video sources include YouTube, Vimeo, Dailymotion, and Facebook.
Content feedback	Supports multiple types of configurable feedback content: • replies • comments • upvotes • mark as helpful • mark as correct answer
Moderation	Community moderators can control content quality using powerful features such as: • banned words • new user moderation • abuse reporting • user banning, both automated and selective
Personalized subscriptions	Subscribe to content of interest via Forum and Topic subscriptions. The system auto-subscribes users to content they create. Users see their personalized Activity Feed on the Community

	home page, based on their subscriptions. They can control subscription-based email notifications to focus on just the subjects of greatest interest.
Use the community profile	Learn more about other users from profile pages, including their interests and content contributions. Users can control the information that is shared about them. There is full support for setting privacy on data fields. Community administrators can control the data fields, privacy settings, and default behaviors for users.
Search the community	Search is comprehensive over all content. Controls permit filtering by date, relevance, type, author, and more.

Activation information

Communities is only available for customers who are licensed for Customer Services Management. To activate Communities, activate the Communities plugin (com.sn_communities).

Customer Service Management release notes

ServiceNow® Customer Service Management application enhancements and updates in the Jakarta release.

Jakarta upgrade information

Upgrading an instance brings back demo data for the Customer Service Management Demo Data plugin (com.snc.customerservice.demo) even if the demo data was previously deleted. For more information, see *KB0634950*.

Activation information

You can activate the Customer Service Management plugin (com.sn_customerservice) if you have the admin role. This plugin includes demo data and activates related plugins if they are not already active.

New in the Jakarta release

Self-service improvements for Field Service Management	Capture account, partner, and contact information on work orders. Expose work order information to customers from the Customer Service Portal and the Consumer Service Portal with the required account-based security.
Integration with Financial Management	Provides new customer account-based and channel-based cost models for use with the Financial Management workbench.

Changed in this release

- *Performance Analytics for Customer Service Management*: Provides new indicators and breakdowns and captures data from Customer Service-related tables.
- *OpenFrame*: Multiple active OpenFrame configurations enable access to different communication systems. OpenFrame also supports screen-pop for custom pages.

Field Service Management release notes

ServiceNow® Field Service Management application enhancements and updates in the Jakarta release.

Activation information

The Field Service Management (com.snc.work_management) plugin is available as a separate subscription. This plugin activates related plugins if they are not already active.

New in the Jakarta release

Dynamic scheduling	Enable advanced task assignment to run automatically or manually. Use task filters to select a set of tasks for assignment. Create ordering rules to order the selected tasks based on criteria such as priority levels and SLA dates. Determine if previously assigned tasks can be unassigned to accommodate higher priority tasks. Select agents based on selection criteria, skills, and travel time.
Questionnaires for work orders and work order tasks	Create questionnaires for work orders and tasks using Survey Designer and configure trigger conditions that activate questionnaires, such as state changes or assigned technicians. If desired, configure questionnaire completion as mandatory based on state change.
Enhanced capabilities for Field Service managers	Using the Manage Skills module, Field Service managers and Customer Service managers can: • View agents and assignment groups • View agent schedules and availability in the team calendar • View agent locations in the Manager Map • View open work orders assigned to agents and groups • View recent work order tasks assigned to agents and groups • View and edit agent skills • View and approve agent time sheets
Time recording	Agents can capture time worked on various tasks and activities and create time cards and time

sheets. Managers can define cost rates for different types of activities, convert to expense lines, and calculate and analyze labor costs.

Changed in this release

- *Push notifications and mobile UI enhancements*: Agents can receive push notifications on mobile devices and approve or reject task-related notifications to accept or reject tasks. Enhancements also include upgrades to the **My Map** and **My Dispatch Map** modules, the agent calendar, and the manager calendar.
- *Planned maintenance enhancements*: Maintenance schedules are based on either Duration or Meter and are triggered by the first occurring related condition.
- *Performance Analytics for Field Service Management*: Provides new indicators and breakdowns for Field Service Management and captures data from Field Service-related tables.

HR Service Delivery release notes

ServiceNow® HR Service Delivery application enhancements and updates in the Jakarta release.

HR Service Delivery automates standard HR processes within your organization.

Jakarta upgrade information

HR data migration is recommended when you are upgrading from the global version of HR to the scoped version. The Istanbul release introduced the scoped version of HRSM. The scoped version prevents users outside of HR from accessing HR data.

When you are ready to start using the scoped version of HR, remove the global version of the **Connect Action [connect_action]** table. This process ensures that HR cases can be created in **Connect Chat**.

Note:

HR Migration does not migrate all data from the global version to the scoped version. Not included in the migration are:

- Business rules
- Cases
- Catalog
- Categories
- Data policy
- Email actions
- HR services
- Knowledge base (connections to case)
- List/Form layout changes
- Record producers
- Reporting and Dashboards for cases
- Scheduled jobs
- Script includes
- Service Portal changes in global version
- Skills
- Templates
- UI actions

- UI policy
- Workflows

Customers already on the scoped version of HR do not need to migrate their data.

- *Migration from Non-Scoped to Scoped HR*

Customers upgrading to Jakarta can utilize the new **HR Service Portal**.

By default, the legacy HR Service Portal shows in the Navigation Bar. To use the new HR Service Portal:

- Navigate to **Service Portal** > **Portals**.
- There are two **HR Service Portal** entries. Select the one with the URL suffix of **hrportal**. This entry is the legacy HR Service Portal.
- Change the URL suffix to **hrportalv1**.
- Click **Update**.
- Select **HR Service Portal** with the suffix **hrportalv2**.
- Change the URL suffix from **hrportal2** to **hrportal**.
- Click **Update**.

All HR modules point to the new HR Service Portal.

Activation information

Data migration is available in this release. The plugins for the global version and scoped version must be activated.

The Human Resources Scoped App: Data Migration [com.sn_hr_migration] plugin moves data and roles from the global version of HR to the scoped version. Data migration includes:

- Tables
- Columns
- Choice Lists
- Roles

The Human Resources Scoped App: Integrations [com.sn_hr_integrations] plugin is required to integrate with multiple third-party HR systems for the scoped version of HRSM. HR integration pushes HR profile information from HRSM to a third-party HR application.

The Human Resources Scoped App: Lifecycle Events [com.sn_hr_lifecycle_events] plugin activates the Lifecycle Events module. With this module, different departments within a company can plan, coordinate, and execute complex, multi-department workflows. An example is onboarding a new hire.

Customers also licensed for Facilities Service Management who want a building map to display in the HR Service Portal for onboarding new hires, must:

- Activate the Facilities Move Management [com.snc.facilities_service_automation.move] plugin before activating the Human Resources Scoped App: Lifecycle Events plugin.

New in the Jakarta release

Enterprise Onboarding and Transitions	Combined with other licensed applications, this HR module provides a full-service, onboarding

	experience for new hires and employees managing the process. • Can span multiple departments dependent on licensing. • All HR and licensed application cases and tasks are visible from the HR Case list.
Lifecycle Events Dashboard	Monitor the state of Lifecycle Event cases with this dashboard for HR, IT, and Facilities (if licensed). Reports filter on the office location of employees. Available reports include: • Active cases • Active To-dos • My To-dos • Overdue To-dos • Employee onboarding • Open cases and requests
Create an onboarding request with the HR ticket page	Use widgets to onboard new hires on the HR Service Portal. Widgets include: • Start Date: Provides the start date for a new hire and a countdown of days. • Your Onboarding Team: Lists employees tasked with onboarding a new hire. • Floor plan: Provides a widget you can use in other catalog items and embeds the **Floor Plan Viewer** for facilities location requests.
Migration from Non-Scoped to Scoped HR	Move data and roles from the global version of HR to the scoped version with HR Migration. Data migration includes: • Tables, columns, and choice lists • Roles
HR Templates	Created to reduce the complexity of sys_templates, this custom UI is specific to HR. HR case and task templates include: • Due date calculations • Employee assignments • Driven fields for task types • Commonly defined fields shown
Create or modify bulk HR cases	Create HR cases for multiple employees. There are four ways to select a group of employees: • HR profile • User records • HR criteria

	• Upload list of employees by user name or email address **Note:** HR bulk case creation is designed to create up to 10,000 basic HR cases. Basic HR cases are cases that are not Lifecycle Event or cases that use workflows. HR bulk case creation is designed to create 1,000 Lifecycle Event or cases using workflows. Performance can be affected when attempting to create more.
Create or modify HR services	Add tasks and approvals to an HR service and a business rule triggers them without using the Workflow editor. Includes: • Reusable tasks • Reusable approval rules • Order table defines when tasks and approvals are required.
HR Document Templates	Personalize PDF documents and letters by mapping fields from the case table to place data in fields. Also capture multiple e-signatures in a document and automatically generate once all signatures are captured.
Add or modify an HR task	New HR task types are introduced: • View video • Take survey • Submit Order Guide • Upload documents
Approve an HR case	Employees can accept or reject a case resolution directly from the HR Service Portal. Comments are added and appear in the work notes of the case.
Add or modify an HR task	Identify HR tasks as optional. Employees can bypass an optional HR task and the state is changed to Skipped.
Create or modify content	Customize the HR Service Portal with sections and links that include: • Videos • Announcements • Upcoming Events

	• Holiday Calendar
HR Integrations Scoped	Integrate with multiple third-party HR systems. HR Integration pushes HR profile information from HRSM to a third-party HR application. **Note:** The legacy Human Resources Application: Core [com.snc.hr.core] and Human Resources Application: Workday Integration [com.snc.hr.wday] plugins are still available.

Changed in this release

Creating and generating PDF documents has changed. HR documents can:

- Define and store multiple e-signatures in a document. An example is when an offer letter is sent to a new hire that requires a signature from the new hire and the HR agent.
- Parse fields (for PDFs that enable parsing) to enable mapping of data from tables.
- Auto-generate documents or require an HR agent to review a document before generating and sending it.

- HR Service Delivery Mobile App:

  The HR Ticket and Dashboard pages are updated to optimize the mobile experience.

Facilities Service Management release notes

ServiceNow® Facilities Service Management product enhancements and updates in the Jakarta release.

Activation information

You can activate the **Facilities Service Management** plugin [com.snc.facilities_service_automation] as a separate subscription. This plugin manages facilities requests and enables users to report and track requests by their location. To view requests on a floor plan, the Facilities Visualization Workbench (com.snc.facilities_service_automation.fvw) plugin is required.

The **Facilities Move Management** [com.snc.facilities_service_automation.move] plugin is available as a separate subscription. This plugin enables single user move functionality as well as enterprise move and move planning functionality.

The **Facilities Visualization Workbench** [com.snc.facilities_service_automation.fvw] plugin is available as a separate subscription. This plugin provides map interaction built upon geoJSON file map sets and the Floor Plan widget. Integration files are installed when both the **Facilities Service Management** (com.snc.facilities_service_automation) and the **Facilities Visualization Workbench** [com.snc.facilities_service_automation.fvw] plugins are activated.

New in the Jakarta release

Floor Plan widget	Provides a widget that can be used in other catalog items and embeds the Floor Plan Viewer to reserve an office space. Installed with the **Facilities Visualization Workbench** plugin. Available on the **HR Service Portal** as part of the **Lifecycle Events** module. **Note:** Activate the **Facilities Move Management** plugin before the **Human Resources Scoped App: Lifecycle Events** plugin. Activating in this order allows the Floor Plan widget to load. Search and reserve office space to onboard a new employee using this feature with the HR Service Delivery application.
URL parameters	Provide configuration information for a form or a list with URL parameters. Workbench supports URL parameters.
Updates to custom filters	**Group by field** was added to Map Filters. You can use this filter to group by a field from the table selected for the map filter. You can also specify a color for the map filter.
Added compass to Floor Plan	You can see a compass for directional context on the Floor Plan.
Warranty check to assets	When you create a facilities request and an affected CI has a warranty date in the future, the **Facilities Request Task** tab appears. This tab shows a task for you to check the warranty information.
Option to remove people from Floor Plan when inactive	Automatically unassigns desk/office space when a user becomes inactive.
Added Floor Tree Picker hierarchy	The space hierarchy supports a floor location between building locations and space records. Spaces are shown as underneath a floor when selecting a location in a Tree Picker. The floor location is automatically created when processing map files.

Available versions (Jakarta)

The Jakarta family includes Enterprise patches and hot fixes, as well as releases for Password Reset, ODBC, and Mobile.

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Q1 2018 QPP Targets

Releases	Patch target option (1, 2)	Release notes
Istanbul	*Istanbul Patch 10a*	*Istanbul*
Jakarta	*Jakarta Patch 6* on page 129	*Jakarta*

- (1) Targets are subject to change prior to patching. Target versions for a quarter change only if absolutely necessary.
- (2) ServiceNow will occasionally add an additional letter to some patch and hot fix names (for example, Helsinki Patch 9a). Please consult the release notes for the list of fixes included in each version.

Available versions

For patch release notes that are not yet listed below, refer to *KB0656793*.

For publicly available hot fix and security patch release notes that are not yet listed below, refer to *KB0598632*.

Release version	Release type	Released on	Availability (3, 4, 5)
Jakarta Patch 7 on page 105	Patch	01/05/18	Available
Jakarta Patch 6a	Security patch	12/28/17	Available
Jakarta Patch 6 Hot Fix 1	Hot fix	12/15/17	Available
Jakarta Patch 6 on page 129	Patch	11/30/17	Available
Jakarta Patch 5 Hot Fix 1	Hot fix	11/21/17	Unavailable
Jakarta Patch 5 on page 150	Patch	11/02/17	Unavailable
Jakarta Patch 4 Hot Fix 1	Hot fix	11/02/17	Unavailable
Jakarta Patch 4 on page 174	Patch	10/06/17	Unavailable
Jakarta Patch 3b	Security patch	10/25/17	Unavailable
Jakarta Patch 3a Hot Fix 1 on page 205	Hot fix	11/17/17	Unavailable
Jakarta Patch 3a	Security patch	10/02/17	Unavailable
Jakarta Patch 3 Hot Fix 2 on page 206	Hot fix	10/13/17	Unavailable
Jakarta Patch 3 Hot Fix 1 on page 207	Hot fix	09/25/17	Unavailable
Jakarta Patch 3 on page 208	Patch	09/13/17	Unavailable
Jakarta Patch 2 Hot Fix 6 on page 238	Hot fix	10/23/17	Unavailable
Jakarta Patch 2 Hot Fix 5 on page 239	Hot fix	10/13/17	Unavailable
Jakarta Patch 2 Hot Fix 4 on page 240	Hot fix	09/26/17	Unavailable
Jakarta Patch 2 Hot Fix 3 on page 242	Hot fix	09/20/17	Unavailable

Release version	Release type	Released on	Availability (3, 4, 5)
Jakarta Patch 2 Hot Fix 2 on page 243	Hot fix	09/11/17	Unavailable
Jakarta Patch 2 Hot Fix 1 on page 244	Hot fix	09/01/17	Unavailable
Jakarta Patch 2 on page 244	Patch	08/18/17	Unavailable
Jakarta Patch 1 Hot Fix 3 on page 284	Hot fix	08/21/17	Unavailable
Jakarta Patch 1 Hot Fix 2 on page 285	Hot fix	07/25/17	Unavailable
Jakarta Patch 1 Hot Fix 1 on page 287	Hot fix	07/18/17	Unavailable
Jakarta Patch 1 on page 287	Patch	07/13/17	Unavailable
Jakarta security and notable fixes on page 301 *All other Jakarta fixes* on page 362	Feature	06/15/17	Unavailable

- (3) **Available**: Any user can upgrade to the version. "Available" versions will appear on the *Instance Upgrade Management Dashboard*.

  ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).
- (4) **Available by request**: *Contact ServiceNow Customer Support* for approval to upgrade to the version.
- (5) **Unavailable**: The release version is not available.

Mobile versions

For the latest iOS and Android mobile application release notes, refer to *KB0598602*.

Password Reset Windows Application releases

For the latest Password Reset Windows Application release notes, refer to *KB0598975*.

ODBC Driver releases

For available ODBC release notes that are not yet listed below, refer to *KB0540707*.

Release version	Availability
ODBC Driver 1.0.13 release notes on page 419	Available
ODBC Driver 1.0.12 release notes on page 419	Legacy
ODBC Driver 1.0.11 release notes on page 420	Legacy
ODBC Driver 1.0.10 release notes on page 420	Legacy

Jakarta Patch 7

The Jakarta Patch 7 release contains fixes to these problems.

Jakarta Patch 7 was released on January 5, 2018.	Build date: 12-22-2017_1615 Build tag: glide-jakarta-05-03-2017__patch7-12-13-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta Patch 7 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta Patch 7, refer to *KB0661849*.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Service Catalog: Service Portal Widgets PRB698938 *KB0610410*	Poor performance for Order Guide with a large number of included items and variables	After upgrading to Helsinki, Order Guides are not working correctly. If an order guide has many items and variables, it can experience performance issues and often time out.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
System Applications PRB948133	Fields defined on user-created tables are not appearing in search results	When a user creates a new table and adds the table to a search group, the user-defined fields do not appear in search results. There are two cases: **1.** A table extended from another table: Only the sys ID is displayed in search results. **2.** A table that does not extend another table: Only a single field is displayed in search results.	
Audit History PRB1235550	The activity log is capturing incorrect workflow changes	The Stage field in the Requested Item shows the same value for the old and new stage in the History Set.	
Discovery PRB1204637 *KB0639427*	MID Server Lister incorrectly notifies MID Servers of potential changes		**1.** Initiate a grab log files from an existing MID Server record. **2.** Upon an input response with an attachment, remove the attachment. Note that an ecc_queue record is created per MID Server with the following: Topic: SystemCommand, Source: FileChange, Name: ecc_agent_script_file, Queue: output
Forms and Fields PRB1166822	The date picker is returning incorrect results	When using the date picker on any new record, the expected date is not being selected.	

All Other Fixes

Problem	Short description	Description	Steps to reproduce
Approvals PRB1238554	Manually created approval records are not recognized by the Manual Approval activity	When multiple approval records are added for a workflow that uses the Manual Approval activity, they are added in the 'Not yet requested' state. If one of those approvals are then immediately approved, the Manual Approval activity will not complete.	
Authentication PRB598684	DigestToken is not work as expected all the time	Upon upgrading an instance with DigestToken and activating the MultiProvider plugin, without enabling ExternalAuth, it is observed that DigestToken stops working certain times.	
Automated Test Framework PRB1192032	Clicking a modal step does not allow setting timeout	Clicking a modal with the implementation to support retries within a timeout. However, the timeout is not shown on the form and users cannot set it.	

Problem	Short description	Description	Steps to reproduce
Automated Test Framework PRB1209940	Record Query only asserts immediately	Record Query only immediately asserts the presence of a record. It does not use the step timeout to wait for the record to be asynchronously created. Example: A process generates an approval request. The record is created a few seconds later. The test executes the Record Query step faster than the record can be created and it fails.	
Benchmarks Application PRB1241049	Unable to download scores for the first month after opt-in		
Chat PRB1171082	Guest users are not receiving messages automatically in anonymous support chat	When non-authenticated users start an anonymous support conversation, they do not receive messages coming from the agent.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1189305	Billing discovery problems with instances in east-of-UTC timezones and when tag values have a newline	On an instance with a Central European time zone, incremental billing downloads are not clearing all appropriate days of incomplete/to-be-replaced billing data. The result is that after multiple days of billing discovery, many records are duplicated and the cost is significantly higher than it should be. Also, if there are tag values in the billing data that contain newlines, CSV parser problems can lead to large segments of data being skipped due to unhandled exceptions.	
Cloud Management Application PRB1237718	Tags with capitalized name field cannot have values assigned	Values for the new tag are expected to be assigned and filterable on the Billing dashboard, but values for these new tags are left empty.	
Cloud Management Application PRB1238545	VMware Virtual Machine Template: Guest OS attribute should show up by default	Without specifying the OS type, the provisioning will fail.	
Cloud Management Application PRB1238686	Designer will not be able to access the blueprint that is created	Blueprint designer will not be able see the blueprints that are created/ imported.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1239011	AWS subnet name will be overridden by Object ID after discovery/ provision	The end user chooses the subnet when ordering a VM. If the instance ID shows up, the end user will not be able to choose the subnet properly.	
Cloud Management Application PRB1239076 *KB0656348*	Billing report cost totals are incorrect for European number formats		1. Install I18N: German Translations plugin (or another with same number style). 2. Navigate to **System Properties** > **System Localization** and set the default language for the system to de.DE. 3. Set up and run AWS or Azure billing download.
Cloud Management Application PRB1241568	Catalog: Support for 'Reference' type in the blueprint form	Form loads of the Catalog items in the Cloud Portal of the Cloud Management app in Jakarta are slow.	
Cloud Management Application PRB1241902	Tags applied to CFT are not synced to AWS	Tags applied to CFT when provisioning through cloud service catalog do not get synced to AWS.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1242745	When a resource's tag values are tracked only on-instance and not the cloud, the billing report is not capturing the tags	If a CloudFormation template is provisioned, a stack is created where the resources on the ServiceNow instance are assigned tags, but the tags are not in the cloud. In cases like this, the tags are not part of the CSV content of billing downloads, but are known to the instance because they are linked with the resource. The observed behavior is that this content is treated as having no tag values.	
Configuration Management Database (CMDB) PRB1197952	Run time exception	Impact rules are stored in the Service Model (in the svc_model_obj_impactrule table) for a Business Service and each impact rule has a rule type associated with it (e.g. CI, Cluster, Host etc) that is populated at the creation time. When a customer changes the impact rule (e.g. "Influence" value), the rule stored in Service Model gets updated.	
Configuration Management Database (CMDB) PRB1242469	CMDB Dashboard is not working correctly	CMDB dashboard is not populating completeness/ correctness score properly.	

Problem	Short description	Description	Steps to reproduce
Configuration Management Database (CMDB) PRB953561	Insert lock optimization changes and qualifier insert lock changes	Count in trend graphs for the health dashboard is incorrect if there are more than one runs on the same day.	
CSM Communities PRB1025619	Deleting the topic which has content renders an error	When logged into the community application, deleting the topics and forums which has content gives console errors.	
CSM Communities PRB1240593	Login as a non-system admin in the search result page, the "Author" filter does not work	Search page "Authors" filters are broken for non-admin users after an upgrade.	
Customer Service Management PRB1184387	Anonymous chat is not working	Guest user are not able to chat with an security error 'Security restricted when invoking processor'.	
Discovery PRB1206051	Unable to upgrade the MID Server	System commands upgradenow and autoupgrade are not working as expected.	

Problem	Short description	Description	Steps to reproduce
Discovery PRB1238331	Discovery schedules may not complete if there are many concurrent pattern based discoveries to the same target machine	When there are many horizontal discovery probes triggered at the same time and targeted to the same machine, there is a mechanism that delays their execution based on property controlling the number of allowed concurrent sessions. Users may encounter a situation that those ECC output messages will not be processed at all, and the discovery schedule will remain 'active'.	
Discovery PRB1238866	Create the relationship between a pool to its parent pool when they are nested	Nested resource pools in vSphere are not handled correctly.	
Discovery PRB1242682	Lookup Table: the lookup tables do not update as well when changing the identifier	Changing the lookup tables in the Load balancer identifier during the server is up and running does not update the pattern lookup elements and the pattern failed in running and in debug.	
Event Management PRB1238160	Secure connection failed	BS groups with a lot of groups fail to show alerts in the dashboard.	
Event Management PRB1239850	Service group severity is incorrect after changing a service to maintenance	Event Management dashboard is not updating colors of Service Groups reflecting alerts under them.	

Problem	Short description	Description	Steps to reproduce
Event Management PRB964096 *KB0634458*	Node Count scheduled job issues a slow query in the isNodeLicensable() function		**1.** Create a large CMDB with more than 10M records. **2.** Run the job. Note that the job takes a very long time to complete.
Express to Enterprise PRB1240959	Clean up unrequired customer updates related to ACLs	While converting back, the ACLs/ACL roles are unlocked in the conversion process.	
Financial Management PRB1236738	The budget items are not rolling up in the budget preview	The preview console for budget plans in the ITFM module is not working as expected.	
Financial Management PRB1240545	Performance issues due to leaf level granularity in breakdown lines	The cost allocation engine generates breakdown lines. Performance issues can occur because breakdown lines are generated with leaf buckets. In breakdown lines, leaf buckets should only get populated for bucket-based rollups.	
Forms and Fields PRB1105582 *KB0634482*	Images embedded in HTML content are unexpectedly uploaded by TinyMCE every time a record is opened	Inserting (pasting) an image into an HTML field attaches the image to the record. This change is made to the record, even if the record is not saved.	**1.** Create an HTML field on the incident table. **2.** Paste an image into the HTML field. **3.** Reload the record. An image is attached to the record and appears in the activity formatter.

Problem	Short description	Description	Steps to reproduce
Forms and Fields PRB1114743 *KB0636099*	"Print friendly version" is not working when users have an attachment into the record.		**1.** Navigate to an open Incident record that does not have an attachment. **2.** Click the gear icon in the upper right and select the Printer Friendly feature in the system settings. It should display **ok**. **3.** Attach a file to the Incident record and repeat step 2. The code shown in customer visible description is displayed at the bottom of the page.
Human Resources Service Management PRB1239129	Tabs are not showing up when the language is French	The 'HR Ticket Page' tabs (Description, Attachment, Approval, Chat, and History) are not showing up when viewed in French language.	
Human Resources Service Management PRB719415	Some OOB onLoad client scripts are causing slow response times for the HR application	There are two onLoad client scripts on the HR application that result in slow(er) response times.	
IT Asset Management PRB1239781	After an upgrade, an inactive choice in the incident.state table are re-activated	After users marked the state choice option "Awaiting Vendor" as "Inactive = true", it reverts back to "Inactive = false" after an upgrade.	
Knowledge Management PRB1235592	If only the UI 15 plugin is enabled, post a question does not give the form	In the Knowledge homepage, the "Post a question" functionality is not working as expected. An injector error is thrown in the console.	

Problem	Short description	Description	Steps to reproduce
Knowledge Management PRB934595	On the 'Ask question' page (social_qa), users are unable to write in the field under 'Title'	Users can ask a question from the knowledge homepage by clicking the button 'Post Question'. This button will take the user to the 'Ask question' page (social_qa) where the user can type the question in a field below the 'Title' field.	
Lists PRB1238913	The tags field does not render in list v2 when paginating or ordering by a column		
On-call Scheduling PRB956455	Rotation schedule disappears from 'Members' related list on a Roster (cmn_rota_roster) record	When creating a roster with the OOB 24x7 schedule, the rotation schedule disappears from members related list when the rotation start time falls within the same week the roster record is created.	
Performance Analytics PRB1042304	Clicking the back button returns to the homepage	When 'Accessibility' is enabled, after users click to open the scorecard on the widget from the dashboard, it breaks out of the iframe and the back button does not return to the previous page.	
Performance Analytics PRB1186632	On Performance Analytics scorecards, it is taking a long time to display the score for the selected period	Users face "Page Unresponsive" / "No Score" when running the Performance Analytics Scorecard.	

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB996196	IE11: On the breakdown tab of detailed scorecard, breakdowns are doubled or tripled	When these duplicate breakdowns are selected, accurate scores are not displayed.	
Persistence PRB1078092	[TPP/Clone] CMDB partition tables are not cloned over, and records not displayed in cmdb_ci on the target instance	After cloning, the list views on cmdb_ci_server and cmdb_ci_service do not show the expected data anymore.	
Persistence PRB1154339	Importing XML can cause some records to lose attachments	After importing XML, some records may lose their attachments. This issue occurs because importing XML updates does not follow the table locator. For example, if attachments are stored on a SQL Gateway, and an update set contains new attachments to be imported, those attachments are written to the primary database instead.	
Persistence PRB1159519	Clone needs to skip Clotho Configuration sys_clotho_config		
Persistence PRB1234751	Storage column/alias that exists in multiple partitions but not all partitions are erroneously classified as synchronized in a TPP resulting in SQL exceptions		

Problem	Short description	Description	Steps to reproduce
Persistence PRB1237963	Incorrect SQL issue	TPP dot-walk through a CMDB reference to a field with a name identical to a field on the driving table where columns are stored in different partitions produces an incorrect SQL.	
Persistence PRB1241143	ClassDefNotFound error appears on MetricBase 'Test Connection' with MetricBase HA setup		
Persistence PRB1241406 *KB0657450*	CMDB TPP migration is creating records in the cmdb $par1 table with sys_class_path is NULL	CMDB TPP migration is creating records in the cmdb $par1 table with sys_class_path is NULL. As a result, some relationships are not showing on CMDB related lists and searches against CMDB tables are not returning all records.	Refer to the listed Known Error KB article for details.
Persistence PRB1243178	Performance issues can occur during CI creation or updates	RW serialized record / CMDB compact records should not pull metric data from MetricBase (Clotho) for evaluation.	
Project Management PRB1175271	Updating the actual end date is updating the planned end date on project tasks	When actual End date of the project/project task is updated, the planned end date of the project/project task is set to actual end date.	

Problem	Short description	Description	Steps to reproduce
Project Management PRB713420	Calendar picker is not working in the Planning Console	Calendar picker is not working in the Planning Console when using Brazilian Portuguese or Japanese.	
Reporting PRB1085900	Widgets on PDF are not sorted in the same order as in the dashboard	Order difference of the widgets between the dashboard and the PDF file is noticed.	
Reporting PRB719960	When looking at a list report with expandable fields (such as 'Questions [+]'), the popups do not always appear	For example, if a user is looking at a list report off of the incident table and clicks 'Question [+]', the popups inconsistently appear. In addition, list reports do not support questions and this field should not appear in the slushbucket.	
Security PRB1041779 *KB0623167*	Users who do not have the snc_internal role are unable to export PDF, Excel, and CSV files.	On instances with Explicit Roles plugin: • Remove HTTPAuthProcessor ACL. The ACL is unnecessarily restrictive and hence removed. • Starting with this patch, for all existing or newly created Processor [sys_processor] records with Type=script, the snc_internal role is automatically added to the Roles field if the field is empty	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Service Analytics PRB1238882	TimeSeries models with no content are not synced to MID Servers		
Service Catalog PRB1194586 *KB0647496*	g_form.clearValue on any variables triggers an onChange of that field	When a client script calls g_form.clearValue on a variable, a change is detected and triggers any onChange client script for that field even though the value does not change.	Refer to the listed Known Error KB article for details.
Service Catalog PRB1234171	The variable attribute "ref_ac_columns_search =true" does not work in tasks created by the "Catalog Task" activity in a workflow	After adding the variable attributes "ref_auto_completer=AJAXTableCompleter, ref_ac_columns=asset_tag;manufacturer, ref_ac_columns_search=true" to a catalog item and submit, the attribute "ref_ac_columns_search=true" does not work on a task record created by the "Catalog Task" activity in a workflow.	
Service Catalog PRB1240968 *KB0657126*	Read-only choice fields on catalog shows dropdown values		**1.** Add a drop down variable to a catalog item. **2.** Set the drop down variable to read-only using a UI policy. **3.** Try the catalog item. You will be able to see the options in the drop down variable even if it is set as read-only.

Problem	Short description	Description	Steps to reproduce
Service Mapping PRB1168109	Service Mapping issue with additional prompt	Many of the UNIX servers are sending one or two consecutive prompts when trying to login using SSH. Service mapping SSH engine was not able to deal with that. As a result, all Service Mapping attempts to discover applications on those servers failed.	
Service Mapping PRB1177213	Linux device that has snmp service running on them discovered as ISAM device	The HD pattern of ISAM check that there is response from the snmp query without checking the ISAM string in it.	
Service Mapping PRB1239501	The discovery of SAM-premium related CIs changes from using probes to using patterns	During an upgrade to Jakarta, not all relevant patterns are with horizontal pattern.	
Service Mapping PRB1239868	Requests processed at that time will result in an error	When the WMI Collector service restarts itself due to memory problems or other problems, requests processed at the time of the restart are lost.	
Service Mapping PRB1240147	Hidden characters in patterns	Hidden characters added cause the EVAL closure to fail.	
Service Mapping PRB1240167	IIS patterns triggered in HD failed	Many IIS patterns triggered in HD failed because the W3WP.exe process is not running any more.	

Problem	Short description	Description	Steps to reproduce
Service Mapping PRB1240218	Tomcat discovery terminate since parse file waiting for password instead using failover to none sudo command		
Service Mapping PRB1240298	Cloud access MID custom operation does not work with the proxy	Discovery of AWS data centers fails in Jakarta.	
Service Mapping PRB1240342	Memory leak in the WMI collector service will cause it to restart after reaching the allowed limit	When the WMI collector is highly loaded, there is an increase in the unmanaged memory heap usage. Once the limit is reached (currently 400MB), the WMI collector restarts.	
Service Mapping PRB1240353	Wrong classification on HPOM	The HPOM pattern triggered the horizontal discovery on ovcd process and causes a discovery performance degradation.	
Service Mapping PRB1242240	"process on port - mac" causes the process detection to fail on some certain OS types during the pattern execution.	Some customers who have upgraded to Jakarta are experiencing a regression in the process detection phase of the pattern execution. The problem was identified as a result of the system executing the "process on port - mac".	
Service Portal PRB1240915	When typing the polish letter "#" (Alt Right + s), no text appears	In the search bar, type Right Alt + S, which should type the character '#', but nothing happens.	

Problem	Short description	Description	Steps to reproduce
Service Portal PRB1244310	glide_list does not display properly when the referenced display value contains a comma	A list containing a value with a comma separation when selected as a second or third choice is being listed as separate values.	
Service Portal PRB715786 *KB0622359*	Autocomplete on reference field/variable fails if the display column of target table is translated_text		**1.** In the Dictionary, set display to True for sp_page.short_description field. **2.** Create a new reference field on the problem table, referenced table is sp_page. **3.** Add the new field to the Problem form. **4.** Activate Spanish language plugin (This might take a while). **5.** Switch to Spanish language. **6.** Navigate to Problem form in normal UI. **7.** Type **mis** in new reference field.
Software Asset Management PRB1239091	Reconciliation UI page has displayed with the spinning wheel		
Software Asset Management PRB1242017	Software reconciliation does not complete when there are entitlements with an empty license metric	The Software Asset Management "reconciliation" process is showing "In Progress" and not running to completion.	
Software Asset Management PRB1242022	Discovery model misses are pushed back to CDS before the content has been pulled and the normalization has completed	The discovery model with match not found has been pushed to the cds_client_staging. This should not have occurred since the CDS pull has not occurred and the normalization job has not completed.	

Problem	Short description	Description	Steps to reproduce
Software Asset Management PRB1242037	Device dropdown is not filling up in procurement because of 'is active=true' for an invalid column	CI selection when performing sourcing step in SAMP SW request workflow does not provide any records to select.	
Survey Management PRB1097408	ServicePortalSurvey processor needs to have a 'public' role assigned to it	Unauthenticated users are not able to submit the survey and receive an error message.	
Templates PRB934232 *KB0657393*	Cannot apply a template to set a checkbox if another checkbox higher on the form it is read only.		**1.** Navigate to an Incident. **2.** Add the Active and Made SLA fields to the form and make sure that Active is above Made SLA. **3.** Right click on the Active label and select Configure Dictionary. **4.** In the dictionary record for active check the Read Only checkbox. **5.** Save the dictionary record and navigate back to the incident form. **6.** Make sure templates are visible and create a new template which sets Made SLA to true. **7.** Apply that template to the incident form. There is an error saying that the template could not be applied and Unable to update field 'Made SLA'. If you configure the form layout again and make the Made SLA field higher than the Active field, the template will work.
Time Card Management PRB1239711	Projects are displaying in the worker portal even though no one is assigned at the project level	The user sees the project card and gets an error while submitting a time card that time reporting is permitted only at the project task.	

Problem	Short description	Description	Steps to reproduce
UI Components PRB1241110	Remove com.glide.k15_demo and com.glide.service-portal.k16 plugins		
Update Sets PRB1238818	UpdateMutex is not reaped on the node restart	The mutex is present and prevents other update operations from happening (like plugin activation/ update set preview and commit).	
Upgrade Engine Issues PRB1198005	Upgrade history form layout not resetting on upgrade	The customizations are kept after the upgrade. The related lists, form sections, and list layouts are not reverted to OOTB.	
Upgrade Engine Issues PRB1235020	Unable to revert to the base version if the target record does not have a sys_update_version with a state of current	An error is thrown when clicking 'revert to base system' while resolving conflicts on the upgrade history log table for a record that does not have a sys_update_version record with a state of "current".	
Usage Analytics PRB1206188	Licensing data collections that run on monthly schedules have incorrect accural_period for non-PST timezone instances	Even tough the monthly persistor job runs on local time (e.g. Paris local time 1 am October 2017), the API used to decide the accural period calculates based on server-time which is PST, hence the accural period calculated is off by 1 month.	

Problem	Short description	Description	Steps to reproduce
Usage Analytics PRB1238204	Compliance report "Application Use Without a Purchased Subscription" shows no data or incorrect data	Navigating to "Compliance Overview" and the third report "Application Use Without a Purchased Subscription" shows no data or incomplete data/ count.	
Workflow PRB1118243	Workflow stage is showing multiple times when a sub-workflow is added in Jakarta	After having upgraded the instance to Jakarta, the RITMs show the same stage multiple times.	
Workflow PRB1238666	Stage values are duplicated in the Stage field	Duplicate 'Request Approved (Approved)' appear in the list view of requested items.	

Problem	Short description	Description	Steps to reproduce
Workflow PRB1239361	The deletion of duplicate user approvals causes an incorrect evaluation of the group approval state	When a user is a member of multiple groups that are part of an approval process, the resulting duplicate user approvals are deleted. The missing user approval records cause the group approval state to be evaluated incorrectly. The exact behavior depends on the specific configuration of the workflow and its approval activities, but can be either: • Group approvals that auto-approve because all user approvals in the group have been deleted. • Group approvals that hang because they are waiting for a user approval that has been deleted.	

Other Jakarta Patch 7 information

- *Available system properties*

  One property is added: glide.security.disable_ui_pages_sysparm_client_script.
- *Explicit roles*
  - **Effective with Jakarta Patch 7 and above**: *Content Management System (CMS)* site access is also affected. CMS is set up with Sites (content_site), Pages (content_page), and other resources. Some of the sites may have the **Login page** configured.
    - If CMS sites do not have the **Login page** configured, the public role is automatically added to the **Read Roles** field on Pages (content_page) if the field is empty.
    - If CMS sites have the **Login page** configured, the snc_internal role is automatically added to the **Read Roles** field on Pages (content_page) if the field is empty.

  - **Effective with Jakarta Patch 7 and above**: For all existing Processor [sys_processor] records or newly created Processor [sys_processor] records with **Type=script**, the snc_internal role is automatically added to the **Roles** field if the field is empty.

- *UI page access*

  Do not use URL parameters to load client scripts in UI pages. The system no longer evaluates scripts that are passed by URL parameter. If your implementation depends on this behavior, you can *Add a system property* [glide.security.disable_ui_pages_sysparm_client_script] and set it to **false** to temporarily allow the evaluation of URL parameters passing scripts in UI pages.

Fixes included with Jakarta Patch 7

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 6 Hot Fix 1* on page 128
- *Jakarta Patch 6* on page 129
- *Jakarta Patch 5* on page 150
- *Jakarta Patch 4 Hot Fix 1*
- *Jakarta Patch 4* on page 174
- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 6 Hot Fix 1

The Jakarta Patch 6 Hot Fix 1 release contains fixes to these problems.

For Jakarta Patch 6 Hot Fix 1:	Build date: 12-11-2017_1028 Build tag: glide-jakarta-05-03-2017__patch6-hotfix1-12-05-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 6 Hot Fix 1

Problem	Short description	Description
Financial Management PRB1240545	Performance issues due to leaf level granularity in breakdown lines	The cost allocation engine generates breakdown lines. Performance issues can occur because breakdown lines are generated with leaf buckets. In breakdown lines, leaf buckets should only get populated for bucket-based rollups.

Fixes included with Jakarta Patch 6 Hot Fix 1

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 6* on page 129
- *Jakarta Patch 5* on page 150
- *Jakarta Patch 4 Hot Fix 1*
- *Jakarta Patch 4* on page 174
- *Jakarta Patch 3a Hot Fix 1* on page 205
- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 6

The Jakarta Patch 6 release contains fixes to these problems.

Jakarta Patch 6 was released on November 30, 2017.	Build date: 11-22-2017_2104 Build tag: glide-jakarta-05-03-2017__patch6-11-14-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta Patch 6 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta Patch 6, refer to *KB0656979*.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Forms and Fields PRB1155488 *KB0636102*	Document ID field types are showing the sys_id instead of the display value	When a document ID field is set to read-only via ACL or dictionary (sever-side methods), the field shows the sys_id instead of the display value when viewed in a form.	Refer to the listed Known Error KB article for details.
Lists PRB1153993	The page value in a list v2 in IE11 is not displaying correctly	When using List v2 in IE11, changes to pagination values are not reflected. However, this works as expected in Chrome.	
Asynchronous Message Bus PRB1177878	Queued AMB messages can push session waiters beyond the 'Max Waiters' threshold, resulting in ignored requests	AMB messages queued for delivery can push a session's waiting transactions beyond the system's allowed maximum amount. The result is that legitimate UI requests are ignored.	

Problem	Short description	Description	Steps to reproduce
Persistence PRB1169930	Slowness and potential browser lock ups	When attempting to add extended fields of cmdb_ci (and likely any other Table Per Partition) fields, large table structures can cause adding those fields to be slow, and potentially locking the browser. This may occur in any place where users are able to add extended fields using a slushbucket, like in the report builder or when trying to add dot-walk fields to forms using the form layout.	
Discovery PRB1204788	Performance issues occur when multiple 'discovery.phase.complete' events are processed	Processing multiple 'discovery.phase.complete' events results in the consumption of the same sys_mutex key, which causes performance issues.	

All Other Fixes

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Approvals PRB1211255		Approval Coordinator with a Manual Approval child activity errors out when pre-generating approvals	When using a Manual Approval activity inside an Approval Coordinator, any Generate activity fails to generate approvals. The error "Cannot read property 'duration' from null" appears in logs.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Approvals PRB1234664		Manual approvals skip when included in an Approval Coordinator activity with an error	Manual approvals have unexpected results when included in an Approval Coordinator. Symptoms may include: • Approval states are set to 'No Longer required' rather 'requested'. • Activity throws an error "Cannot read property "total" from undefined". • Activity approves with result=skipped even when approvals exist.	
Approvals PRB1238554		Manually created approval records are not recognized by the Manual Approval activity	When multiple approval records are added for a workflow that uses the Manual Approval activity, they are added in the 'Not yet requested' state. If one of those approvals are then immediately approved, the Manual Approval activity will not complete.	
Assessments PRB1030756	Assessment	The customized scheduled job is overwritten during an upgrade	The scheduled job 'Cancel Expired Assessments' is overwritten during an upgrade.	
Asset Management PRB1237193		Normalization status condition issue	The normalization percentage of discovery models needs to be optimized.	
Asset Management PRB1238408		Fix the log issue related to Software Asset Management		

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Asynchronous Message Bus PRB1197193 *KB0639988*		Leaking listeners causes the number of listeners to grow which impacts the instance performance over time		**1.** Navigate to a task record, problem, incident, etc. **2.** Check the sys_amb_channel_presence table. There is one subscription in your name. **3.** Leave the record from #2. **4.** Check table again. The previous subscription has disappeared as expected. **5.** Repeat step #2. **6.** Open a different tab and navigate to another task record. **7.** Wait a couple of minutes and then navigate back to first tab. This triggers a resubscribe. **8.** Open a third tab and navigate to a task record. Check the sys_amb_channel_presence table for this third record. There are two or more subscriptions.
Authentication PRB1191689		Users cannot log in with SSO while an upgrade is in progress	During the upgrade to Jakarta (from Helsinki), logging in through Multiple-provider SSO does not work. The error message indicates an invalid signature.	
Change Management PRB1107513	Change Management - CAB Workbench	The number of attendees is not updated in the CAB Workbench	CAB Workbench: The counter that shows how many attendees are in attendance at a meeting is not being updated.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Change Management PRB718692 *KB0640003*	Change Management - State Model, Change Request	Change Request state field shows all states on mobile devices	When users view a change request on a mobile device, the state field shows all available states, which is not restricted to the valid states for the state model.	Refer to the listed Known Error KB article for details.
Cloud Management Application PRB1182010		Certain resource script goes missing on in-family Jakarta upgrades, which causes discovery to fail	Discovery can fail when the upgrade overwrites certain resource scripts.	
Cloud Management Application PRB1185034		VM on VMware: VM provisioning is prevented by Guest OS shutdown and power off commands	While provisioning a VM, the application goes into power off and guest OS shutdown stages. These stages conflict with one another, and the VM provisioning does not complete.	
Cloud Management Application PRB1195152		Azure: Blob-based image templates are not being discovered		
Cloud Management Application PRB1202568		CFT provisioning fails	The VM does not get provisioned successfully, and a metadata-related error occurs.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1204680		Changes to Virtual Server resource blocks makes the upgrade difficult	Modifying out-of-the-box resource blocks (such as adding new operations and changing parameters) makes these blocks difficult to upgrade.	
Cloud Management Application PRB1204685		The Catalog customization is difficult	Making changes to customize generated catalog items is not possible. Users have to redo the work each time they modify one aspect of the catalog item.	
Cloud Management Application PRB1235500		The Azure Billing download results in no data when the downloaded CSV column headers are localized to a non-English language	The Azure Billing Schedule runs successfully but cannot retrieve any data. The Azure Cost import set shows 0 records for Insert.	
Cloud Management Application PRB1235890		Azure discovery: List nodes get stuck at processing		
Configuration Management Database (CMDB) PRB1074354	Configuration Management (CMDB)	The edit_ci_relations ACL is not invoked for the new 'CI Relations' formatter	Users are no longer able to add a new relationship, When attempting to save the relationship, users receive an error "Failed to add relationships".	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Configuration Management Database (CMDB) PRB1238584	Configuration Management (CMDB)	[Query Builder] Users cannot add a query filter when Service Mapping is enabled	Users are not able to run the queries and filter out the null values.	
Core Platform PRB1077509		Duplicate submits result in unique key violations and duplicate task numbers	Duplicate incident records are created with the same incident number.	
Core Platform PRB1235252		An exception is thrown when the transform map calls the script include function	The scoped transform map script is encountering an exception when attempting to call a scoped script include function.	
Core Platform PRB650586		Under certain circumstances, all records in a table can get updated incorrectly		
Customer Service Management PRB1021742		ACL added by the Customer Service Management plugin restricts the read operation for users who do not have the "snc_external" role	When the Customer Service Management plugin is loaded, it additionally loads the Customer Service Base Entries plugin which contains a restrictive read ACL on sys_user.sys_id, which prevents users from querying the sys_user table by sys_id.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Customer Service Management PRB1178216	Customer Service	Approval process does not work in the business-to-business registration	Self-registration on the business-to-business Customer Service Management portal does not work correctly.	
Edge Encryption PRB1075054 *KB0656318*		Encryption rules are being recompiled on every request and may cause slowdown on the proxy under a large load	Rule recompilation causes slowness on the proxy after a certain threshold of requests per minute.	Refer to the listed Known Error KB article for details.
Edge Encryption PRB1109300		Users are able to schedule a proxy upgrade for non-Jakarta proxies	Through the Schedule Upgrade feature in Jakarta, users should not be allowed to upgrade an Edge Encryption proxy which has not been upgraded to Jakarta.	
Edge Encryption PRB1236678		Executing the guid file generates an error	Running the proxy keeps trying to read the guid file. When there are any issues in accessing the file, the logs are filled with errors.	
Email PRB1162252 *KB0640042*		Email notification categories created on instances do not share the same sys_id		**1.** Upgrade to a release from Jakarta on two similar systems (for example, cloned instances). **2.** Export one notification from one of the upgrade systems and import it to the other system. **3.** Open the notification on the new system. Note that the Email Category is not displayed.

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Event Management PRB1173838		Events migrated to Jakarta cannot be updated unless create_alert_flag and create_alert_int fields are populated	The record update fails and an error message '[code]<img src="https://hi.service-now.com/b6d8578adb89cb04852c7a9e0f961923.iix" height="" width="" >[/code]' is returned.	
Event Management PRB1234662		Multiple issues with Event Management after upgrading to Jakarta	After an upgrade to Jakarta, legacy binding by rule (to a specific CI type) fails to work and does not create alerts.	
Event Management PRB1234970		Upgrading event rules using the UI action fails	Event rules, which include the sys_domain field in their filters, are corrupted after using the Save and Upgrade UI action.	
Express to Enterprise PRB1040949		During upgrade, the choice list for the change request state and type is reverted to the Express choice list	Applying a quarterly patch to the instance causes the sys_choice records to revert to Express default values on an Enterprise version.	
Financial Management PRB1171752		Budget Console doubles budgeted amounts when a demand is converted to the project, and a budget is repromoted	Issues occur when a portfolio has submitted a budget plan with a demand included in the budget, and the demand is converted to a project. When the portfolio budget is repromoted, carts overstate the budget for the portfolio in the budget console by the amount.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Financial Management PRB1209942	Financial Management	Budget Console Drill detail at a period level does not work correctly	In the budget console in a per period breakdown, the drill detail does not show the period amount for the budget data. The console drill only shows the full year amounts.	
Financial Management PRB1235884	Project Portfolio Suite with Financials	Cost plans spanning across fiscal years are not promoted	The portfolio is not promoted when cost plans spanning across fiscal years are selected.	
Forms and Fields PRB1195085		Currency field that is set to read-only through UI policy or client script does not honor the change in values made through client scripts		**1.** Make a field of type currency. Through a UI policy or client script, make the field read-only. **2.** Use a client script or g_form.setValue to change the value of the currency in the field. **3.** Right-click on the header and save the form. Note that the value goes back to the original value of the currency.
Forms and Fields PRB1238856	TinyMCE HTML Field Editor	Unable to upgrade TinyMCE editor to fix issues		
Import / Export PRB921801 *KB0623472*		LDAP integration: Browsing from the LDAP server form shows the filter as "undefined" rather than being blank		**1.** Navigate to a valid LDAP server, and then open an LDAP OU Definitions record. **2.** Click **Browse**. Note the text "undefined" in the Filter field.

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Knowledge Management PRB1165724	Knowledge Management V3	KB workflow state history is not updating correctly in Jakarta	When the KB article workflow field is changed, the result is recorded incorrectly in the history.	
Knowledge Management PRB1173529 *KB0647755*	Knowledge Management V3	'Update All' and 'Update selected' functionalities are not working for non-admin users	When a user with list_updater and knowledge_admin roles clicks on the update all or update selected option in the knowledge list, a blank screen appears.	Refer to the listed Known Error KB article for details.
Knowledge Management PRB1175038	Knowledge Management V3	After an upgrade to Jakarta, the 'News' page (kb_list.do) no longer displays articles	When a user adds a 'Knowledge base' widget and clicks on the "More..." button, the list of KB articles is empty.	
Knowledge Management PRB1181275	Knowledge Advanced, Subscriptions and Activity Feed Framework	Subscriptions are not copied when a new version of article is published	When users who are subscribed to a knowledge article check out and publish the article, they are not auto-subscribed to the latest version of the article. Therefore, they do not receive any notifications for the actions on this article.	
Knowledge Management PRB1184895	Knowledge Management V3	The JavaScript error in IE11 causes the advanced knowledge search to fail	When users use the Search Knowledge functionality from an incident record, the following JavaScript error appears in the console: Object doesn't support property or method 'getElementsByTagName'.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Knowledge Management PRB1200463		Searching for a KB article returns an outdated version	In the global search, searching for a KB article with versioning enabled returns an outdated version, instead of the published one.	
Knowledge Management PRB743858 *KB0623721*		The image size is lost when a Word document is imported to the knowledge base		**1.** Import a Word document by dragging and dropping the file to the Knowledge Homepage and following the instructions in the pop-up window. **2.** View the article. Note that the image size and the text position are not correct.
Lists PRB699028 *KB0639090*		Users can still use 'Go To' search for tags in a list, resulting in an error: Unknown column 'task0.sys_tags' in 'where clause'		**1.** Go to /incident_list.do to access the incident table. **2.** Click the gear icon and add the Tags column. **3.** Click the column header search icon (magnifying glass). Note that the header search does not work. **4.** Select tags from the Search or Go To field in the list column header, fill in the search term, and search. Note that errors occur when searching.
Password Reset Application PRB1184610	Password Reset	Security Questions Enrollment questions block section does not show up	The Security Questions Enrollment questions block section does not appear on the enrollment page for non-English languages. Also, when the UI is changed to a language other than English, the verification methods 'Enter email' and 'Confirm email' give an error.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Performance Analytics Application PRB1079651	Performance Analytics	Migration runs slow on large pa_scores tables		**1.** Create a scores table with ~100M scores using the data generator. **2.** Run migration. Expected behavior: Migration is finished within 2.5-3 hours. Actual behavior: Migration was running more than 4 hours.
Performance Analytics PRB1068366		Dashboards can be shared with inactive users		
Performance Analytics PRB1202996	Performance Analytics	The score migration process fails on the scores table	If a scores table contains over three billion scores, the migration process will not complete successfully.	
Performance Analytics PRB1203508		Change in Date from the date picker on the scorecard does not reflect on the chart	On a Performance Analytics scorecard, if a user loads the records tab and navigates to the chart tab to change the date, the change in Date is not correctly reflected in the chart.	
Performance Analytics PRB752173	Performance Analytics	Time series applied on a formula indicator displays the formula column with the configured precision	Formula calculation takes the value without considering the precision on the automated indicator. On the formula, the Score tab displays the scores for the formula with the precision set on those indicators, but the result is actually based on the actual values. The formula is no longer displayed on the Score tab if a time series is applied on the indicator.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
PRB1164917	Persistence	The TPP column migration does direct/ raw alters when it should do online alters		
PRB1184155	Persistence	The partition table which joins in CMDB (TPP) are not added for translated fields		
PRB1205143	Persistence	The optimizer is trying to optimize for the ORDER BY when it is better to optimize for the WHERE clause	After an upgrade to Jakarta, the new structure of the CMDB table can cause the MySQL Optimizer to choose the index on the ORDER BY field, even though it would be more efficient to choose the index based on the WHERE clause. This can lead to performance degradation for CMDB queries that fit this criteria.	
PRB718363	Persistence	Searching in the date field gives an error	When users try to search for a date (MM-dd-yyyy) using the 'list header search', the following error is returned: "General Data Exception detected by database (ORA-01843: not a valid month)".	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Reporting PRB1017889		Calendar report does not display the 'Start Date' spanning to the 'End Date' correctly	When a report is created with the Calendar type, the end date is exclusive.	
Reporting PRB1204046		Accessing a public report of the type list deletes the default record of the report table from sys_ui_list, causing the default list for a table to revert to its system-generated version	Accessing the results of a public report from the type list causes the default record from the sys_ui_list table to be deleted. Any list layout configured by the administrator is lost. In addition, a record is created by the guest user on the sys_ui_list table with an empty View field.	
Reporting PRB956246 *KB0655935*		A bar report with stack by does not show stacked bars in the exported PDF		**1.** Create a stacked bar chart for steps to create a stacked bar chart. **2.** Save the report. **3.** Export the report as a PDF by clicking **Export to PDF** on the drop-down next to **Save**. The bar chart does not have stacked columns.
Risk Management PRB1155186	GRC: Risk Management	Risk SLEs and ALEs currency should always be consistent	Risk calculation is not working if the instance default currency is different from the default USD.	
Security Applications PRB1236121		Trusted Circles: cloning should not clear the sn_tis.central.url property	Cloning should not clear the sn_tis.central.url property for potentially previously registered instances.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Service Catalog PRB1192151 *KB0656699*		Automated Test Framework fails when a catalog item does not use the functionality 'use cart layout'		**1.** Navigate to **Automated Test Framework** > **Tests**. **2.** Run a test on a catalog item form that does not have Use cart layout checked. In the Test Results, observe the failure: "FAILURE: Order Now button was not found".
Service Catalog PRB1194586 *KB0647496*	TinyMCE HTML Field Editor	g_form.clearValue on any variable triggers an onChange of that field	When a client script calls g_form.clearValue on a variable, a change is detected and triggers any onChange client script for that field, even though the value does not change.	Refer to the listed Known Error KB article for details.
Service Mapping PRB1108679 *KB0647830*		WMI failed to execute the WMI command on the MID Server localhost		Symptoms include: • The MID Server throws the error "Failed to communicate with the WMI collector service." • The WMI service is stuck in starting state. • The WMI service consumes a lot of CPU. Check the WMI collector error messages in the MID Server logs for further confirmation. **1.** Navigate to **MID Server** > **Servers**. **2.** Select the affected MID Server. **3.** Under **Related Links**, click **Grab MID Logs**.
Service Mapping PRB1166415		MID Server threads are hanging upon the execution of certain groovy steps	MID Server threads are hanging during server discovery, which trigger many horizontal patterns for the same target.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Service Mapping PRB1234649 *KB0647826*		The pattern execution may hang when users try to restart the WMI Collector Service		Symptoms include: • Slow Discovery or Discovery timeout • Unresponsive MID Server
Service Mapping PRB1235886		Business service map is not displayed and gives an error	On certain map topologies, business service maps fail to load with an error 'Cannot display the map: Found link with invalid source/ target'.	
Service Portal PRB1183749	NG shared components	Presence requires three messages that are not provided by the server	Presence requires three messages that are not provided by the server ("viewing", "maybe offline", "entered").	
Service Portal PRB1234756	SCSS Bootstrap Theme	Reference fields do not highlight (Editable Highlight) when navigating through "Tab" key	When users use the keyboard to navigate the variables on an item, reference fields that contain a value do not indicate they are the current element in 'focus'.	
Service Portal PRB1235418		Inactive articles are displayed in the 'KB Category Page' widget	If a Knowledge article (kb_knowledge record) has been made inactive, the article should not be seen in the standard UI (i.e. in $knowledge.do). However, inactive articles are visible in the 'KB Category Page' widget.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Service Portal PRB1236217	Service Portal - Core	glide_list fields and List collector variables do not display correctly if the referenced records' display values have commas		**1.** Navigate to Service Portal Service Catalog. **2.** Add 2 comma-separated names to the field labeled. Expected behavior: Names are added accordingly. Example: [Abel,Tuter] [Abraham,Lincoln] Actual behavior: Names are added incorrectly. Example: [Abel] [Tuter]
Service Portal PRB830424	Service Portal Social QA	The Tagged Question List widget is not fully translated	If using a different language than English, the widget will not be completely translated and 'Newest' will show in English.	
Software Asset Management PRB1116453	Software Asset Management Premium	Scheduled Software Content Library pull errors out	In some instances, the scheduled software content library pull errors out due to HTTP 429 (too many requests).	
Software Asset Management PRB1194507		When the reclamation workflow makes a call to CSD to reclaim a software installation, a configuration record for the Discovery Model is not created	When the reclamation workflow makes a call out to the CSD application, a configuration record should be created for the Discovery Model; otherwise the workflow does not work properly.	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
UI Components PRB1199371		Retina icons may be cached even though the file content changes after upgrading from Helsinki to Istanbul	After an upgrade from Helsinki to Istanbul, the browser may continue to use previously cached icons instead of downloading new ones. This causes items in the UI to display the wrong icon.	
UI Components PRB1237672		When there is a valid session with an IDPinitiate login, RelayState does is not maintained when IDP sends a SAML response	IDP sends a SAML response for each request, even though a user has a valid session.	
Usage Analytics PRB676339	Subscription Administration Base	Usage admins cannot see user roles, but see keywords instead	Admins can see and use roles in creating user sets. However, usage admins cannot see roles in the forms or assign users to the sets based on roles.	
Workflow PRB1234695		In IE11, updating an activity in a workflow makes the pop-up become blank	When users update an activity in the workflow, the pop-up becomes blank in IE11. The pop-up disappears after users click Update in other browsers (Chrome, Firefox).	

Problem	Affected Plugins	Short description	Description	Steps to reproduce
Workflow PRB1239361		The deletion of duplicate user approvals causes an incorrect evaluation of the group approval state	When a user is a member of multiple groups that are part of an approval process, the resulting duplicate user approvals are deleted. The missing user approval records cause the group approval state to be evaluated incorrectly. The exact behavior depends on the specific configuration of the workflow and its approval activities, but can be either: • Group approvals that auto-approve because all user approvals in the group have been deleted. • Group approvals that hang because they are waiting for a user approval that has been deleted.	

Fixes included with Jakarta Patch 6

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 5* on page 150
- *Jakarta Patch 4 Hot Fix 1*
- *Jakarta Patch 4* on page 174
- *Jakarta Patch 3a Hot Fix 1* on page 205
- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 5

The Jakarta Patch 5 release contains fixes to these problems.

Jakarta Patch 5 was released on November 2, 2017.	Build date: 10-25-2017_1637 Build tag: glide-jakarta-05-03-2017__patch5-10-18-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta Patch 5 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta Patch 5, refer to *KB0647774*.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
User Experience Engineering PRB1156612 *KB0635388*	Admins cannot impersonate users after upgrading to Jakarta Patch 2	After an upgrade to Jakarta Patch 2, admin users cannot impersonate ITIL users or users without any roles.	In this example, the demo data user Fred Luddy has itil and admin roles, Bernard Laboy has the itil role, and Abel Tuter has no roles. **1.** Impersonate Fred Luddy. **2.** Impersonate Bernard Laboy. **3.** Try to impersonate Abel Tuter. No records appear in the users list so you cannot impersonate any user.

Problem	Short description	Description	Steps to reproduce
Persistence PRB635272 *KB0598290*	Trying to group by a field with a column name longer than 30 characters results in the label of the group displaying "(empty)"	If users try to group by a field with a name longer than 30 characters, the labels show as "empty" even though the results under the group are correct.	Refer to the listed Known Error KB article for details.
Event Management PRB1175385 *KB0639200*	The Event Management dashboard and the Service Mapping map are redirected to the home page	When the Chrome browser is upgraded to version 61.0.3163, the Event Management dashboard and the Service Mapping map are redirected to the home page.	Refer to the listed Known Error KB article for details.
UI Components PRB1102307	The form section captions are not translated in the Upgrade History module or any module	The form section captions are not translated in the Upgrade History module.	**1.** Change the language to any language other than English. **2.** Navigate to **sys_upgrade_history.list**. **3.** Open any record on the list. The form section captions for the Upgrade History Details and Review Skipped Records modules are not translated.

Problem	Short description	Description	Steps to reproduce
Chat PRB733150	Idle Countdown never times out even after several minutes of inactivity	After several minutes of inactivity, the Idle Countdown does not time out the user. The Connect Support properties connect.support.idle.count_down and connect.support.idle.delay are not working as described in *Configure Connect Support chat timeout*.	Prerequisites • Use two browsers, such as Chrome and Firefox. • Set the Connect Support properties connect.support.idle.count_down and connect.support.idle.delay. Steps to reproduce **1.** In Firefox, impersonate an end user, such as Abel Tuter. **2.** In Chrome, impersonate a chat agent, such as David Loo. **3.** Initiate a chat for the end user by entering any queue (e.g. HR Support: $chat_support.do?queueID=aeb40252d7133100816403548e610363). **4.** As David Loo, respond to the chat after accepting it into your queue. Expected behavior: After 20 seconds of inactivity, the end user should get a timer for a timeout alert. After an additional 10 seconds, the user should get removed from the chat session. The agent should get a message that the user has left the chat session. Actual behavior: After several minutes of inactivity, nothing happens on the end user side.
Import / Export PRB1155952 *KB0639042*	Transforming a 'Basic Date/Time' to 'Date/Time' field creates a NullPointerException	When a date field is configured for an import from an Oracle database with JDBC, the related field is created as a 'Basic Date/Time' field in the staging table. When this field is configured to be transformed to a 'Date/Time' field in the target table, it gives an error.	Refer to the listed Known Error KB article for details.

All Other Fixes

Problem	Short description	Description	Steps to reproduce
Asset Management PRB1106979	JavaScript errors appear on records stored on table samp_software_model_result	These errors appear on OOB Jakarta instances when the Software Asset Management, Software Asset Management Premium, and Procurement plugins are enabled.	
Asset Management PRB1183889	PA reports are missing a filter condition	The correct filtered set of records is not always shown.	
Automated Test Framework PRB1149655 *KB0639979*	Unable to create ATF input or output variables with type reference	Users are unable to create ATF input or output variables with type reference. The 'Reference' field is required, but it does not appear on the form.	**1.** Create a new Step Configuration with any values for all the required fields. **2.** On the step configuration detail form find the Input Variables Related List and click **New**. **3.** Set the input variable Type to **Reference**. The form section that enabled the user to set the reference association is not available.
Change Management Conflict Detector PRB1103073	If an affected CI is a child with many parents, conflict detection can lead to high memory usage when checking for conflict detection		

Problem	Short description	Description	Steps to reproduce
Chat PRB1082395 *KB0634408*	The Chat window does not open and conversations are not displayed on the sidebar	The Connect Chat window does not open. Conversations are not displayed on the sidebar for users that belong to the same chat group if one of the user's user ID has been changed.	1. Impersonate a user (for example, Abel Tuter) and create a new incident. 2. Assign the incident to a different user (for example, David Loo). 3. Impersonate David Loo. 4. Click **Following**. 5. Open **Connect Mini/Full**. 6. Attach a file from the chat. 7. Rename Abel Tuter's user ID. Note that neither Abel nor David are able to launch the Connect Chat window and the connect sidebar does not show any of the conversations/chats that the users are part of.
Cloud Management Application PRB1153803	Order fails with an Java error	If the CMDB's name is unique and a user sets the stack name to be the same via a policy, the order fails.	
Cloud Management Application PRB1179262	Not able to send CustomSpecName attribute to vSphere	While provisioning a VM on vSphere, users are unable to send the CustomSpecName attribute which has to trigger a certain Custom Spec script to be executed on that VM.	
Cloud Management Application PRB1176126	Cloud Mgmt API causes VM folder to use default values, sometimes causing unpredictable user experience	The Cloud Management vCenter API causes VM Folder to use default values from a template, which can sometimes cause an unpredictable user experience.	1. Create a virtual machine item bound for a vCenter datacenter. 2. Deny access to the vCenter service account to use the chosen VM Folder. The VM is provisioned to the template's folder instead of the chosen/denied folder.

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1199304	Azure alert does not work for instances whose names are more than 12 characters		Configure an Azure alert for an instance whose name is more than 12 characters. The user does not receive events, and there is an error on the Azure side: "The action group short name <instance-name> is too long. Please specify a short name with '12' or less characters".
Cloud Management Application PRB1165719	When the glide.ui.i18n_test property is set to true, parameter validation does not occur	This issue can occur when the glide.ui.i18n_test property is set to true, or when the Dutch language is enabled, which causes all provisioning requests to fail.	
Cloud Management Application PRB1203198	Node credential creation fails to pick up image credentials		**1.** Set up a CMP with Cloud Accounts, OS Profile, and Compute Profiles. **2.** Order a VM on a cloud that is configured in step 1. Randomly, the VM node credentials will not persist properly.
Cloud Management Application PRB1180589	No association between Subnet and Availability Zones in AWS		**1.** Provision a VM with approval. **2.** Navigate to an Approval record. **3.** Through the Summary of the item being reviewed, navigate to **Request Item**. The summary of Request item on approval displays sys IDs, and sys IDs are displayed in variables.
Cloud Management Application PRB1203162	VMware VMWareConfigureWindowsProbe Time zone getting parsed incorrectly when prefixed with zero	VMWareConfigureWindowsProbe does not parse time zones correctly, which can lead to errors.	**1.** Install the CMP plugin. **2.** Order a VM. **3.** Try any operation on the VM which is under a policy. **4.** Cancel the Change request. The Operation WF is canceled.

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1204670	Discover EC2 keys	EC2 SSH keys that are provisioned in AWS should be discovered (Key labels and fingerprints) so that they can be used later at the time of provisioning.	
Cloud Management Application PRB1154652	After VMs in Azure are deprovisioned, managed disks are left behind		
Cloud Management Application PRB1196410	If there are duplicate folders in VMware under different data stores, VM provisioning fails		**1.** Set up a folder in two datastores under vSpheres. **2.** Provision a VM on vSphere. Provisioning fails.
Cloud Management Application PRB1204661	ARM / CloudFormation templates (CFT) metadata should tie parameters to resource pools	ARM and CFT parameter metadata should relate back to resource pools in ServiceNow. This will allow catalog forms created from ARM and CFT to offer a contextually relevant drop-down selection to the end user instead of a free-form text that is error-prone and results in failed requests.	
Cloud Management Application PRB1153830	Payload size error during Azure discovery		
Cloud Management Application PRB1164267	If error'd stack has active resources, the quota will not be consumed	Quota calculation allows users to order less than what they can consume.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1195487	Capacity check should happen with Provisioned resource only		
Cloud Management Application PRB1204660	Deprovision operation on a stack on Azure leaves resources running	Deprovisioning an operation on a stack provisioned via ARM template should deprovision all resources that were provisioned through that sane ARM template. This includes the resources that are not modeled as first class entities in ServiceNow.	
Condition Builder PRB1162225	[More than] [Less than] filter does not work with date comparisons in Jakarta		**1.** Create a new report on the incident table that runs a single score. **2.** Add condition that does a date conversion, such as: Created "is less than" 14 Days before Assigned On. The report results in the error "ERROR: Error processing request: null".
Configuration Management Database (CMDB) PRB964340	Metric names are not translated	In the CMDB health dashboard, metric names (Completeness, Compliance, Correctness) are not translated.	
Configuration Management Database (CMDB) PRB1202122	The relationships do not show after CIs are added using the new formatter	The new CI Formatter does not work as expected. User-added new relationships are shown intermittently.	
Core Platform PRB1192063	Some modules and tables are not appearing as expected		

Problem	Short description	Description	Steps to reproduce
Core Platform PRB899921	Exporting to CSV file from a list filtered using 'contains' or 'starts with' operators does not consider translations, and incorrect data is exported		
CSM Communities PRB1209386	Communities form admins cannot see the Accept button in the answers section, and they cannot change Accept to true or false via kb_social_qa_answer_list	For Community users with the sn_communities.admin role, the Accept button is not visible in any record in the Answers section. The answers that have been provided are also hidden due to security constraints. As a Forum admin, the users should have the ability to Accept an answer as correct.	1. Install the Communities plugin. 2. Provide the sn_communities.admin role to a user who does not have the admin role. 3. Impersonate the user. 4. Navigate to **Community** > **Answers**. 5. Open any record. The Accept button is missing for the user. If there is any answer provided, the record is hidden due to security constraints.
Customer Service Management PRB967378 *KB0634950*	An upgrade to a newer version brings back demo data for the Customer Service Management Demo Data plugin	If an instance has the CSM demo Data plugin activated and has removed the demo data manually, an upgrade to a newer version brings back the demo data that was deleted.	1. Activate the CSM Demo Data plugin. 2. Remove the demo data and delete the records manually. 3. Upgrade the instance to a newer version. The demo data is brought back to the instance.
Data Certification PRB1171743 *KB0639495*	Demo data is causing certification schedules to rerun	Certification schedules are unnecessarily rerun, which causes more instances and tasks.	Refer to the listed Known Error KB article for details.
Discovery PRB1170979	HP service manager classifier needs to have a stronger match criteria	The ECC queue can get overflowed with unnecessary tasks, which leads to slow performance.	

Problem	Short description	Description	Steps to reproduce
Discovery PRB1179547 *KB0635899*	MID Server downgrading from Jakarta to any pre-Jakarta release fails	Downgrading the MID Server from Jakarta or later to any pre-Jakarta release fails because of a failing pre-upgrade check.	**1.** Connect a MID Server to a provisioning instance in Jakarta (MID Server up and validated). **2.** Request an upgrade to any pre-Jakarta release, for example, Helsinki. **3.** After downgrading to the pre-Jakarta instance, look at the MID Server record. Note that the MID Server failed and is down.
Domain Support PRB1068290	Domain Separation (com.glide.domain.msp_extensions) installs Project Management v3	The com.glide.domain.msp_extensions plugin includes the install_project_management glidefix script. This script checks to see if either Project Management v2 or Project Management v3 is already installed. If neither is installed, it will install Project Management v3.	
Domain Support PRB1171334	The domain plugin should not be activated as a dependency of any other plugin	The domain plugin should not be installed as a dependency of another plugin. The attribute allowed_as_dependency needs to be set to false.	
Edge Encryption PRB1208956	GUI installer for the Edge Encryption proxy fails to download the requested Edge Proxy from any HTTPS instance		

Problem	Short description	Description	Steps to reproduce
Email PRB1112872 *KB0639929*	Content from style tags defined in email layouts are rendered as HTML when applied to a V1 notification	In some cases, the style definitions for the unsubscribe and notification preferences links in the Unsubscribe and Preferences email layout are not rendering properly in Outlook clients. Style tags and definitions are visible in the email.	Refer to the listed Known Error KB article for details.
Embedded Help PRB1075492 *KB0640062*	Admin users do not have access to Embedded Help > Help Content	When admins navigate to Embedded Help > Help Content in Jakarta instances, the list is not displayed. Users with the admin or embedded_help_admin roles should be able to view Help Content.	As the admin user, navigate to **Embedded Help** > **Help Content**. Note that the list is not displayed. For more information, see the product documentation topic *Embedded help*.
Event Management PRB1184567	Zabbix connector fails when a field (item) is missing on the trigger list	The connectors fail while accessing a null field.	
Event Management PRB1165126	Duplicate event rules are being created in Jakarta		
Express to Enterprise PRB1201241	Istanbul and later - After a conversion from Express to Enterprise, the * ACL needs to grant access to admins by default	Instances that are converted from Express to Enterprise show a security constraint error message for admins where no ACL is defined. This issue affects Istanbul and later instances.	

Problem	Short description	Description	Steps to reproduce
Express to Enterprise PRB1201552	On converted instances, admins are prevented from access to many tables	After converting from Express to Enterprise, admins cannot access many tables.	
Financial Management PRB1173476	Data movement issue between Gl Cleansed and Groomed Table for new Entities	The Cost Center data does not move up into the Groomed table after the bucketing engines runs, which prevents users from splitting buckets by cost center at the allocation stage.	
Forms and Fields PRB1204839	Slowness after an upgrade to Jakarta	List loading for "Cases Opened" or "All Cases" takes up to 10-15 seconds. This issue relates to the list containing a category field, which is set to a choice type field.	
Human Resources Service Management PRB1100767	Users cannot edit V1 catalog when both V1 and V2 plugins are installed		
Human Resources Service Management PRB1196562	Users are unable to acknowledge a policy if their password contains a "#"	In the HR Service Portal, users are unable to acknowledge a policy if their password contains a "#". An alert "Password is Incorrect!" is thrown.	

Problem	Short description	Description	Steps to reproduce
Incident Management PRB1184650 *KB0636123*	Cleanup of resolved/ closed-related fields causes data loss for users who customized the incident state	A business rule was introduced to clean up the resolved/ closed-related fields when the incident state changes and the new state is not resolved or closed. This business rule relies on the Resolved Closed and Canceled incident states to specify under which conditions the business rule should run. However, if the user customized the incident states, the rule will be triggered unexpectedly, cleaning up the resolved/closed-related fields when it should not.	Refer to the listed Known Error KB article for details.
IT Operations Management PRB1165066 *KB0647580*	Data retention policy needs to be updated for Operational Intelligence plugin		Refer to the listed Known Error KB article for details.
Knowledge Management PRB1156388 *KB0639327*	Parameters in URL are stripped when visiting any other page after 'kb_search' in Knowledge portal	When the Knowledge Service Portal is enabled and some navigation menus are added to it, after visiting the kb_search page, all URLs for subsequent Service Portal pages are trimmed, which causes an error.	**1.** Make sure that the Service Portal and Knowledge Management - Service Portal plugins are active. **2.** Navigate to **Service Portal** > **Portals** and open the record for Service Portal (/sp). **3.** Change the Homepage from index to kb_home. **4.** Go to /sp and search for "email". **5.** Choose **Service Catalog** in the header menu. **6.** Open any catalog item. Note that the error message "Item not found" is displayed and the catalog item does not open because the URL is missing parameters.

Problem	Short description	Description	Steps to reproduce
Knowledge Management PRB1086603 *KB0639328*	When High Security Settings is not active, the import on the knowledge home does not take in any input		**1.** Navigate to **Knowledge** > **Homepage**. **2.** Select **Import**. **3.** Click the link **+ To select word files**. Pop-up to choose word files for import is not shown.
MID Server PRB1182253	MID Server pre-upgrade check may fail if the service user's group name is longer than 20 characters	If the service user is part of a group with a name that is longer than 20 characters, the MID Server may abort an upgrade.	
MID Server PRB668904	PowerShell probe does not time out properly and leaves orphaned PowerShell.exe process behind	The ProcessRunner has no timeout which can result in hangs, notably in PowerShell. In addition, PowerShell is launched via the Command Shell (cmd.exe) from Java. Even when timeout is implemented, only the cmd process is killed, leaving the child process for PowerShell behind. There is no clean way to terminate the entire process subtree from Java.	
Orchestration PRB1169980	Upon checkout of an SSH, PowerShell, and JDBC Orchestration activity, the command or SQL statement field is cleared out	In the activity designer, if a user clicks the checkout button of any published SSH, PowerShell, or JDBC Orchestration activity, the command or SQL statement field is cleared out.	**1.** Navigate to **Workflow Editor** > **Custom**. **2.** Click the **Plus (+)** button to add a new SSH activity. **3.** Fill out the form with sample data, and publish it. **4.** Click **Checkout**. The command field is empty.

Problem	Short description	Description	Steps to reproduce
Orchestration PRB1095142 *KB0635660*	Published activities moved through an update set do not show up on the activity designer/ workflow editor	When the custom workflow activity is published more than once and transferred through the update set, the activity does not show up in the workflow editor because the publish field is set to "false".	**1.** Create an update set. **2.** Create an activity, publish it, check out again, and publish. **3.** Close update set, moved it to another instance, and commit. The activity does not show up in the workflow editor's custom tab.
Performance Analytics PRB1083827	When more than 100k records are retrieved, the browser comes to a stop and the session is unusable		**1.** Collect a number of open incidents (or number of incidents) with "collect records" enabled. **2.** Navigate to the detailed scorecard's records tab. The browser is stuck, and the records are not shown.
Performance Analytics PRB1205144	Records tab in detailed score cards shows: Number of rows removed from this list by deletion or Security constraints: 1, and this should be 0	If the score is 0 and there are no snapshots for an indicator, the Records tab in detailed score cards shows the following message: "Number of rows removed from this list by deletion or Security constraints: 1".	
Performance Analytics PRB721683	Exporting a detailed scorecard as PDF does not include the target and threshold details		**1.** Run a job and get score collections. **2.** Navigate to a detailed score card and open an existing score card with data. **3.** Add a few targets and thresholds. **4.** Export the score card as PDF. The PDF does not include the target or threshold details.

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB961326	When changing the time zone to US/Samoa, the wrong date is shown on scores tab, breakdown scorecard tab, and the scorecards list date		**1.** Set the property glide.sys.default.tz to **US/Samoa**. **2.** Collect PA scores. **3.** Navigate to **Performance Analytics** > **Scorecards**. **4.** Using the gear wheel, add the date column. Instead of showing the last collection date, the previous date is showing. This also occurs in the detailed scorecard on the breakdown and scores tabs.
Performance Analytics PRB1094659 *KB0623802*	Dashboard breaks on loading with a browser console error	Dashboard breaks on loading with a browser console error: "TypeError: SNC.canvas is undefined" when user returns as NULL based on a pa_dashboards_permissions record.	Refer to the listed Known Error KB article for details.
Performance Analytics Application PRB1031562	Migration does not start and keeps printing warning messages	Migration is not running, and keeps printing messages "One of data collector, collection cleaner or scoresheet edit is running, migration job will check after 5 minutes" every 5 minutes.	
Performance Statistics and Graphs PRB904119	Oracle graphs do not load on the performance homepage		
Persistence PRB1166647	Rollback does not remove sys_documentation records		

Problem	Short description	Description	Steps to reproduce
Persistence PRB1182304 *KB0636072*	Chunk copying a large table on an Oracle database can degrade over time (e.g. during the TPP migration on a Jakarta upgrade)	Chunk copying is a mechanism for moving data from one table to another. It is done in operations such as online alters and the TPP migration in Jakarta. On an Oracle database, the speed at which the chunk copying is done can degrade over time, causing these operations to take a long time to complete.	Refer to the listed Known Error KB article for details.
Persistence PRB964743	Adding an index (sys_domain_path, sys_id) should be ignored if an index (sys_domain_path) already exists		
Persistence PRB1185378	Automatically schedule a RRD reader/ writer switch when Clotho plugin is activated		
Persistence PRB951324 *KB0635673*	CMDB can be reparented to sys_metadata if a child table of CMDB is update_synch=true before the metadata reparent fix script is run		Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Reporting PRB1081334 *KB0635801*	In domain-separated instances, report creators are unable to see any reports under 'My Reports'	After upgrading to Jakarta, domain-separated users are unable to see their reports.	**1.** Create report and set the report to **Visible to me**. For more information, see the product documentation topic *Administering reports*. **2.** Upgrade from Istanbul to Jakarta. **3.** Try to view the report. The reports are not visible under **My Reports**.
Security Incident Response PRB1194712	Disable automatic sharing through Trusted Security Circles by default		
Security Incident Response PRB1203461	Trusted Circles: some properties are missing read/write roles		
Security Incident Response PRB1187174	Show <Related lists> UI actions on security incidents do not work with List v3	Security Incidents have UI actions that allow you to filter the related lists being shown. For example 'Show Affected Items'. These do not work when List v3 is enabled for related lists.	**1.** Enable Security Incident Response. **2.** Enable List V3. **3.** In the List V3 properties, enable list v3 for related lists. **4.** Open a security incident. **5.** Click one of the 'Show ..' UI actions, for example, **Show IOC**. All related lists disappear. Clicking **Show all Related Lists** will show all lists again.
Server Side Scripting PRB1153149	Global functions which execute themselves during startup can cause nodes to fail while starting		
Service Analytics PRB1203562	Improve anomaly detection models to reduce false positive Anomaly alerts	Metrics need to be classified properly in order to avoid false positive anomaly alerts.	

Problem	Short description	Description	Steps to reproduce
Service Analytics PRB1203558	Metric characterization for anomaly detection	Anomaly detection does not work in certain cases, generating many false positive alerts. Metric characterization should allow customer to override upper and lower bounds for metrics.	
Service Analytics PRB1197822	Add index to sa_metric_map table for metric_identifier	Lookups for the sa_metric_table run slowly when there are more than 1 million entries. Adding an index will improve performance.	

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB1201267	ATF on record producers fails on the step Variable State Validation if the fields in the forms are being controlled by UI policies	ATF tests can fail when a Variable State Validation step is set up. This issue occurs when running ATF tests based on a record producer where UI policies are set up to control the visibility or mandatory properties of fields in the record producer form.	**1.** Open the record producer Service Category Request. This has a UI policy where if the Department option is selected, the Department related records are visible on the form. If Group is the selected option, then Group related fields are displayed. **2.** Create a new ATF Test record. **3.** In the Test steps, add the step: **Open a Record Producer** and add the Service Category Request record producer. **4.** Create a new step: **Variable State Validation**. **5.** In the **Visible** portion, add **Department** from the left slushbucket to the right one. ATF should check if the Department field is visible in the form. **6.** In the **Not Visible** slushbucket, select **Group** and add it to the selected bucket. ATF should check if the Group field/ variable is visible in the form. **7.** **Save** the test. **8.** Run the test. The test fails on the Variable State Validation step with the error message: FAILURE: Expected field 'IO:15e1fbcedb258b008948f72eaf9619cf' to not be visible but it was visible.
Service Catalog PRB1191678	ATF - Service Catalog: Client-side step configurations should be read-only		

Problem	Short description	Description	Steps to reproduce
Service Catalog: Service Portal Widgets PRB1196581	Users cannot attach images to HTML fields on Service Catalog items in Service Portal		**1.** Navigate to **Maintain items**. **2.** Search for **iPad 3**. **3.** Add an HTML field as a variable. **4.** Save and update. **5.** In the Service Portal, go to the **iPad 3**. **6.** In the HTML field, copy-and-paste to attach an image. Notice the console error.
Service Mapping PRB942988	Nslookup on Windows machine may return unpredictable results in case of DNS cluster	The expected result is creating a connection for each of the DNS cluster's endpoints (4 in total). But the MID Server does not create these connections properly, due to the format of the response that is returned from the nslookup command (this CI is on Windows Server).	
Service Mapping PRB1189354	When resuming discovery on a connection going to localhost, the system is replacing the value in the 'host' field in the endpoint with the IP of the computer	This breaks discovery on the next tier.	
Service Mapping PRB1174671	No command is executed for new host class	When a host CI of a new type is created by the user, there is no command that is relevant for the OS class name.	

Problem	Short description	Description	Steps to reproduce
Service Portal PRB1031519	The choices list results are not translated	The options section of the 'Ticket Fields' widget does not show the translated version of the text for the select box choices.	
UI Components PRB1156110 *KB0636103*	After Jakarta upgrade, read-only fields can be expanded and the user can see other dropdown values		In a Jakarta instance: **1.** Access a page that has a read-only field with a drop down menu. **2.** Click the read-only field. The drop down menu appears even though it can not be selected from.
UI Components PRB711381	Two forward slashes are found in the TinyMCE URL	The TinyMCE Editor is missing in the knowledge records, which is caused by the double slashes in the TinyMCE URL.	
Update Sets PRB1108536	Business rule does not trigger upon internal actions, such as sys_update_xml records inserted/ updated by customizations	In Jakarta, a business rule on sys_update_xml stops triggering when updates are triggered by another update, such as customizations on scripts.	
Update Sets PRB1152886	Comparing two updates from Imported Update set shows incorrect content	After a Jakarta upgrade, there is an incorrect UI to compare a local version to a remote update set version for conflicts. Local and remote content is flipped, and this occurs only after importing an update set as a retrieved update set and while previewing.	

Problem	Short description	Description	Steps to reproduce
Update Sets PRB1151790	Importing an update set from another instance and using Compare to Current functionality has stopped working	When attempting to use the Compare to Current on an object in an imported update set, the following message is displayed and the comparison screen never appears: "Unable to compare, no current record exists" This occurs for objects which are found on both the source and target instance.	
Upgrade Engine Issues PRB1184368	Fewer 'changes applied' in an upgrade after database upgrade is restarted	If a user performs most of a family upgrade to Jakarta and then the node restarts, there is one upgrade history record with more than the usual number of Upgrade Details, and far fewer 'changes applied' than expected.	
Usage Analytics PRB1179510	Error messages "UA: Could not find app attrs for app"	These errors appear while doing inserts, updates, or deletes on tables that begin with the prefix u_.	
Vendor Security Risk Assessment (VSRA) PRB1170471 *KB0639443*	Vendor portal user authentication and SSO issues	For external users, a mixed portal and platform authentication solution is inconvenient to use.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Visual Task Boards PRB1157185	Unable to drag additional assignee on VTB cards in mobile device	When viewing VTBs on a desktop, users have the ability to drag avatars over cards. Doing so will allow users to select the primary or an additional drop zone. However, if the VTB is viewed on UI16 on a mobile device (iPad or mobile phone), then the option to drag avatars to the primary or additional drop zone is not available. Users are always set as the primary.	**1.** Navigate to **Visual Task Boards**. **2.** Open a VTB. **3.** To add users as primary and additional assignees, try to drag more than one user on to the task card. The user is unable to drag additional assignees. On mobile, users are only able to drag for the primary assignee.
Vulnerability Response PRB1210218	Scheduled job to async link non-vulnerability-based VI to VG removes all VIs that were not updated within last hour		**1.** Create some vulnerable items. **2.** Create a non-vulnerability VGthat links to these vulnerable items. **3.** Wait for an hour. **4.** Run the scheduled job to link the VIs again.
Vulnerability Response PRB1037254	Vulnerability Response plugin activation does not complete due to an error on the index creation	The Vulnerability Response plugin activation fails and gets stuck on the screen. This is caused by the failure of the index creation (on table: sn_vul_vulnerable_item, field: vulnerability).	
Vulnerability Response PRB1145325	Qualys Appliance Import ignores new records and matches the incorrect CI when multiple IPs are involved		

Problem	Short description	Description	Steps to reproduce
Vulnerability Response PRB1110416	Vulnerability item 'desired_state' is undefined in Internet Explorer, but works fine in Chrome		**1.** In IE, navigate to the Vulnerability Item. **2.** Click **Close/Ignore**. **3.** Fill out the state as 'Fixed'. **4.** Select the 'Fixed' substate. Expected behavior: Two radio buttons should appear under the substate field and users should be able to choose a closing option. Actual behavior: Radio buttons do not appear on the form and an error is displayed in the console. However, it works fine in Chrome.
Workflow PRB1179622	WorkflowApprovalUtils.cancelAll() is not working correctly after PRB713188		

Fixes included with Jakarta Patch 5

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 4* on page 174
- *Jakarta Patch 3b*
- *Jakarta Patch 3 Hot Fix 2* on page 206
- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2 Hot Fix 6* on page 238
- *Jakarta Patch 2 Hot Fix 5* on page 239
- *Jakarta Patch 2 Hot Fix 4* on page 240
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 4

The Jakarta Patch 4 release contains fixes to these problems.

Jakarta Patch 4 was released on October 6, 2017.

Build date: 10-04-2017_1643

Build tag: glide-jakarta-05-03-2017__patch4-09-21-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta Patch 4, refer to *KB0635462*.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Filters PRB1197866 *KB0639240*	During the TPP migration, if a row size limitation error occurs, the CMDB table may experience data loss	During the TPP migration, a MySQL row size limitation error can occur when there is a large number of medium text fields on the CMDB and its child tables. The migration can fail and cause data loss. If this has occurred, the state of the migration will be in "Complete (with errors)". Check the sys_tpp_migration record for "Base Configuration Item [cmdb]" to see the state of the TPP migration.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Email PRB1100030 *KB0635917*	Long running email.read events cause delays in email and other events processing	When processing email.read events, the following can occur due to some changes made in Jakarta and cause a slow query: • Longer time to process email.read events (inbound email specifically). • Backlog of events due to longer processing email.read events (delays for other events in the same queue).	Refer to the listed Known Error KB article for details.
Lists PRB689217 *KB0621139*	Unable to see tags data when the tags column is added to a report		**1.** Navigate to **Incident** > **Open** and select an incident. **2.** In the header, click the More options (...) icon and select **Add Tag**. **3.** Type text in the Add tag field and press **Enter**. Note the incident number. **4.** Navigate to **Reports** > **View/Run** and click **Create a report**. **5.** Create a report with the following values: • Report name: Test Tags • Data Source: [Click **Use a Table instead**] • Table: Incident • Filter: [Number][is][Number of modified incident] **6.** Click **Next** to choose the type of report chart, and click **Next** again to choose the columns to display. **7.** Use the slushbucket to add the Tags field to anywhere but the first column in the report and click **OK**. **8.** Click **Run** to run the report. Note that the Tags column is blank despite the text added to create a tag.

Problem	Short description	Description	Steps to reproduce
Workflow PRB1171830	In the approval script, Group does not default the result as 'requested' while waiting for the approval or rejection	In Jakarta, the approval script does not return the 'requested' state for the item or the task before it is approved or rejected.	
Approvals PRB1115684 *KB0639194*	Manual approval as the first step in a workflow process does not work in Jakarta	In Jakarta, if previous steps do not allow time for a manual approver to be assigned, users cannot have a manual approval as the first approval in a workflow or have a manual workflow in an approval co-ordinator.	Refer to the listed Known Error KB article for details.
UI Components PRB917599 *KB0623807*	List header shows escaped apostrophe/ quote character as \'	This issue affects users who need to have Table Column Label names that contain apostrophes, double quotations, &, and <. These characters are displayed in the list view as escaped \'. Users of languages using apostrophes and such characters frequently are particularly affected (e.g. French).	**1.** Create a table or open any table from sys_db_object. **2.** Change one of the column labels to have an apostrophe in its name. This is a common pattern in the French language (e.g. **l'oiseau**). **3.** Click **Save**. **4.** Visit the table directly in its list view. Ensure that the column with the apostrophe name is visible. Notice that the apostrophe is escaped. In this example, it shows as "l\'oiseau" instead of "l'oiseau".
Service Catalog: Service Portal Widgets PRB1101370 *KB0635792*	Catalog items are not sorted by 'order' in Service Portal when displayed		With an active Service Portal plugin in Jakarta instance: **1.** Navigate to <instance>/sp and click **Order Something**. **2.** Click **How can we help you?** category name on the left. Notice the catalog items are displayed, but they are not sorted by the order set.

Problem	Short description	Description	Steps to reproduce
Email PRB1116828	Inbound email with in-reply-to header matching a record without a target table it will fail to create an email.read event	When an incoming email with an in-reply-to header is received, if the message-id is found on the sys_email, the target table is read. If there is no target table, the application throws an exception. If there is no email.read event created, then the inbound actions will not run.	

All Other Fixes

Problem	Affected plugins	Short description	Description	Steps to reproduce
Activity Stream PRB1110812 *KB0634586*	NG shared components	HTML fields in the activity stream show HTML tags	If an HTML field is added on the form and the activity stream, when the field changes, its content shows on the activity stream including HTML tags. This issue is specific to Jakarta release.	**1.** Navigate to the incident form: incident.do. **2.** Use **Configure** > **Form Layout** to add an HTML field called Test HTML. **3.** Open the incident.do form again, and create an incident with blank value on the new Test HTML field. **4.** Open the newly created record, navigate to the activity section, and click the Funnel or Filter icon. **5.** Scroll down and click the **Configure available fields** link. **6.** Add the Test HTML field in the slushbucket. **7.** Navigate back to the incident.do form again, and change the value in the Test HTML field to 'Hello World'. **8.** Save the record. In activity stream, 'Hello World' appears as ' Hello World '.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Audit Management PRB1109637	GRC: Audit Management	In the Audit Management application, the Generate Control Tests button does not work in Istanbul and Jakarta but works in Helsinki		Install the following plugins • com.snc.governance • com.sn_audit Steps to reproduce **1.** Navigate to **Audit** > **Engagements** > **All Engagements**. **2.** Open any record. **3.** Navigate to the related list "Test plans". **4.** Among the boxes right next to the "i" icon, check four of them. **5.** Click **Generate Control Test**. Despite the message "Control tests have been generated", in the related list "Audit Task" no records were generated. This is not working in Istanbul and Jakarta but is working fine in Helsinki.
Cloud Management Application PRB1030811		Data from Azure billing discovery sometimes ignores smaller downloads (less than 3 MB)		**1.** Set up an Azure billing discovery that has less than 3 MB of data (small subscriptions or early in month). **2.** Execute the billing discovery. About 50% of the time under these conditions, the download finishes more quickly than usual. Data are skipped due to problems with column headers. No data shows up in the download report.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1092986		Virtual machine instance disks information is missing for provisioned instances		Prerequisites **1.** The service account and cloud account should be created. **2.** Run Discovery. **3.** Templates should be mapped to profiles. Steps to reproduce **1.** Navigate to the blueprint module. **2.** Create a virtual machine on vSphere blueprint and generate the cat item. **3.** Navigate to the user portal and order virtual machines on vSphere. **4.** Once the order is complete, navigate to the resource link and look for the virtual machine instance. Disk details are empty for vSphere resource.
Cloud Management Application PRB1107834		Orchestration becomes wrongly successful even if the imported blueprint is invalid and the script execution has failed	When the blueprint is not imported properly, a proper error is expected to display when the script or template is not present. However, the execute script operation suddenly becomes successful even without a script template.	
Cloud Management Application PRB1152123		Unsupported types provisioned via CFT do not get added to the stack	Unsupported resources provisioned from CFT should be put in cmdb_ci_cmp_resource and attached to the stack that is provisioned. The resource is created in cmdb_ci_cmp_resource. However, it is not added to the stack. Errors in the log indicate that it cannot read invocatingNode from undefined.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1157447	ITOM Guided Setup	When provisioning a virtual machine in Azure and creating a resource group, the resource group goes into cmdb_ci_resource_group with an empty name		Prerequisites **1.** A cloud account should be created and discovered. **2.** Templates should be mapped to profiles. Steps to reproduce **1.** Create a virtual machine on Azure BP and create a cat item. **2.** Navigate to the user portal. **3.** Order a cat item. Make sure 'CreateResourceGroup' is set to Yes and provide the resource group name. In the cmdb_ci_resource_group table, the name is empty.
Cloud Management Application PRB1157856		IP address and disk objects are left behind once after deprovisioning the virtual machine on Azure		**1.** Navigate to the blueprint module and import the attached blueprint. **2.** Navigate to the user portal. **3.** Order the application. Make sure the discover, the attach attribute, and the manage disk attribute value is set to true. **4.** Once the provision is complete, deprovision the stack. **5.** Once the deprovision is complete, log into the Azure console and verify the virtual machine, IP address, and disk status. When the deprovision is done, only the virtual machine gets deleted. IP address and disk objects are left behind.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1158173		AWS config creates EC2 instances with a state of "error" due to v1 workflows triggered accidentally after an upgrade	EC2 instances created by the AWS config integration begin in an "error" state (until it is powered off/on, or regular scheduled discovery runs).	
Cloud Management Application PRB1161966		Two scheduled jobs created by the Cloud Management plugin may delete data unintentionally	The job “Global: Clear terminated/stale cloud resources" is inactive by default and the global.cloud.resource.delete_toggle property that activates it is also set to false by default. When the job is executed, it deletes data incorrectly. The job is designed to delete old cloud configuration items (CIs), but it also deletes CIs from the application and service tables. The job "Azure: Clear terminated/stale cloud resources" is also disabled by default. When the job is executed, it deletes the CI resources under Azure scope only.	
Cloud Management Application PRB1164890		Start/Stop stack does not do anything for ARM/ CFT based stacks	After provisioning a stack with virtual machines using ARM or CFT, users cannot stop the stack.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1164982		When a new scripted CAPI is created, users should not be able to create CAPI parameter mappers in the UI	When a new scripted CAPI is created, user should not be able to create CAPI parameter mappers in the UI. This breaks the system completely when it is done and hence the UI needs to be locked down. Importing a scripted CAPI should discard all parameter mappings that are provided in the YAML.	
Cloud Management Application PRB1178349		Cloud API does not error out when the provisioning fails due to the incorrect datastore		**1.** Create a blueprint to provision a VM with datastore. **2.** Assign an incorrect datastore through the policy. The creation of VM fails but the cloud API call is displayed as successful.
Configuration Management Database (CMDB) PRB1114116		CMDB query builder does not return correct results	The query works with the rack filter in place, but fails to return results when the filter is removed.	
Configuration Management Database (CMDB) PRB1118063		Duplicate records in the exported CSV file	Multiple duplicates created when exporting data from CMDB query builder.	
Configuration Management Database (CMDB) PRB1167901		CMDB dashboard relationship widgets do not calculate properly	The CMDB health dashboard jobs are not completing, and therefore not updating the dashboard.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Configuration Management Database PRB1167873	**Configuration Management (CMDB)**	Customer updated records in the cmdb_health_scorecard_threshold table are being overwritten in upgrades	Several records, while still having the update_synch attribute and having it set to true, are not getting the sys_customer_update field on the sys_metadata table set to true. The records show as being updated recently by users, but the sys_customer_update field is not getting set as expected.	
Core Platform PRB749267		When grouping by state on the change_request table, the result often returns an integer instead of the state value		**1.** Navigate to / change_request_list.do. **2.** On the state column header, right click **Group By** > **State**. Some states show as integers instead of string values.
Core Platform PRB965846		Default semaphore exhausted	GlideRecord extended fields are leaking memory when used in a scope.	
Core Platform PRB1020034 *KB0635677*		Service Portal is returning list of empty rows	Calculated Fields are now evaluating ACLs.	Refer to the listed Known Error KB article for details.
Customer Service Management PRB1026026		Duplicate index issue on account_code	An issue occurs when creating a customer account and lots of accounts (by a running import) at the same time. An error message is displayed about a duplicate index on account_code. Two transactions happening at the same time can fetch the same account code, and thus one will have an issue when it is saved.	**1.** Activate the Customer Service Management plugin. **2.** Generate a CVS or XLS file with lots of records. The import should run for 5-10 minutes. **3.** While the import runs, create an account through the UI or a background script.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Customer Service Management PRB1163453		Customers are unable to attach documents through the live chat		**1.** Log into the CSM portal as a customer. **2.** Click the chat icon. **3.** Connect with an Agent. **4.** Click the attachment link and upload any document. The attachment is not uploaded successfully.
Discovery PRB1075293 *KB0623543*		MID Server only caches the first 250 scripts	Attempting to run a JavaScript probe which is in a script that is not cached results in an error: MID Server Script Include VMWarevCenterVMsProbe does not exist.	**1.** Enter **sys_properties.list** in the navigation search field in the instance and press **Enter**. **2.** In the list of system properties, click **New**. **3.** Add the **glide.remote_glide_record.max_count** property and set the value to 50. This reduces the number of scripts includes that can be cached, making it easier to reproduce the problem. **4.** Run a vCenter discovery. Notice that the VMWarevCenterDatacentersProbe script (or one or more of the subsequent vCenter scripts) is not found.
Edge Encryption PRB1041562		Updating to a report list view fails if the filter contains a '<' indication	Through the Edge Proxy, users are unable to update to a report list view if the filter contains a "<" indication. An error occurs in the node log: The value of attribute 'query' associated with an element type 'record_update' must not contain the '<' character.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Edge Encryption PRB1106450		When MID Server is connected through Edge Encryption proxy, MID Server no longer communicates with the instance when an Encryption pattern is active	When MID Servers are configured to route through Edge Encryption proxy, the MID Servers stop sending XML payloads back to the instance.	
Edge Encryption PRB1151421		From proxy, data is getting saved as & when users enter & from the list view		**1.** Create the encryption configuration for the incident.shortdescription. **2.** Navigate to the incident table. **3.** Enter & <> in the short description column from list view. It gets translated to & <>.
Edge Encryption PRB1172763 *KB0635976*		Edge proxy upgrade downloads for auto-upgrades are not using the web proxy settings, making it fail in some of those configurations	Edge distribution downloads for auto-upgrades are not using the web proxy settings. Those downloads will hit the instance directly, relying on the server having access to the internet and will fail if they do not.	Refer to the listed Known Error KB article for details.
Express to Enterprise PRB1175135		cmn_schedule entries are missing after the conversion from Express to Enterprise	cmn_schedule entries are missing after the conversion from Express to Enterprise, which includes 8-5 weekdays, 8-5 weekdays excluding holidays, and the U.S. holidays.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Human Resources Service Management PRB1042630		Notification recipients do not work when using dot-walked fields	When users change the recipient to be a dot-walked value in the Users field, emails can no longer be sent. An error is thrown in the logs.	
Human Resources Service Management PRB1117288		HR tasks event is not functioning properly	When an HR task is closed, the HR task event sn_hr_core_task.allClosed is triggered, but does not trigger the notification "HR All Tasks Closed".	
Human Resources Service Management PRB1100752		Users cannot edit HR services from Lifecycle Events or Integrations application in HR core scope		**1.** Navigate to HR Services. **2.** Open any record (Request LOA or onboarding) and try to edit the record in Human Resources: Core scope. Expected behavior: Users should be allowed to edit the HR service. Actual behavior: An error is thrown: "Invalid 'Service table' selected on the HR Service record. The 'HR Total Rewards Case' table is in application 'Human Resources: Core', but the current application is 'Human Resources: Integrations or Life Cycle'".

Problem	Affected plugins	Short description	Description	Steps to reproduce
Human Resources Service Management PRB1111348		Using the 'HRI My Information' widget in a size 3 container does not wrap word properly		**1.** Activate Human Resources: Service Portal. **2.** Log in as user Abel Tuter. **3.** Change the email address to something very long, like abel.tuter@adfasdfasfdexample.com. **4.** Navigate to SP designer and create a page. **5.** Use any container that utilizes size 3. **6.** Place the HRI My Information widget into any of the containers. **7.** Test the page. <u>Expected behavior</u>: Text should wrap properly. <u>Actual behavior</u>: Text extends the container border.
Human Resources Service Management PRB1114710		Empty HR tasks are being created in the sn_hr_core_task table every time a survey is created	Empty HR tasks are created even if the survey is triggered from the incident table and the survey is unrelated to HR. This issue is caused by a new business rule, installed with the recently enabled HR core plugins.	
Human Resources Service Management PRB1153179	Human Resources Scoped App: Lifecycle Events	When an onboarding case is created from Service Portal, child cases generated are not assigned to anyone		**1.** Navigate to the HR portal as HR agent or LE admin. **2.** Create a request onboarding case from the talent management. The child cases background check and drug screen are not assigned to anyone.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Human Resources Service Management PRB1156608	Human Resources Scoped App: Lifecycle Events	Performance issue with the onboarding record producer when 1 million user records are loaded	'Manager' variable in onboarding record producer is of lookup select box type. The record producer loads very slowly when the lookup type is used.	
Human Resources Service Management PRB1179677		HR Service Portal still displays the 'Chat with HR' header menu item even if Connect Support is disabled		**1.** Set "glide.connect.enabled" and "glide.connect.support.enabled" to false. **2.** Navigate to HR Portal. Note that the "Chat with HR Portal" icon is displayed. **3.** Click the icon. The message "The administrator has restricted access to Connect." is displayed.
Knowledge Management PRB1081985	Knowledge Management V3	The ESS knowledge portal has only 20 categories displayed	Knowledge article content can be truncated because users cannot resize the content block based on the page that is loaded.	
Knowledge Management PRB1173149 *KB0635855*	Knowledge Management V3 I18N: Knowledge Management Internationalization Plugin v2	Allow all forms of search to return knowledge articles irrespective of language as long as there is a keyword match in that language		**1.** Ensure that the following plugins are active: • I18N: Internationalization • I18N: Brazilian Portuguese Translations **2.** Create an article with the word "SSH" in English. **3.** Create an article with word "SSH" in Brazil. **4.** Search for "SSH" to find articles that relate to SSH. Note that the search does not return both Brazilian and English articles.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Knowledge Management PRB752693	Social Q&A	Tags are auto-populated when users try to create a question from the knowledge base form		**1.** Navigate to knowledge bases. **2.** Click any knowledge base. **3.** Under the question related list, click **New**. A new social Q&A question form is created with tags automatically populated.
Lists PRB1173149 *KB0635855*		All forms of search should return knowledge articles regardless of language, as long as there is a keyword match in that language	To use ServiceNow in another language, users activate the I18N: Internationalization plugin in addition to another language plugin, such as the I18N: Brazilian Portuguese Translations plugin. When these plugins are active, users need the ability to modify knowledge search to: • Return articles in all languages. • Weight the order of knowledge search articles by the user's profile or session language setting. To activate the fix for this PRB: • Set the glide.knowman.search.default_language property to the desired default language for searching articles. • Set the glide.knowman.enable_multi_language_search property to **True** to enable search for multiple languages simultaneously.	Prerequisites • I18N: Internationalization • I18N: Brazilian Portuguese Translations Steps to reproduce **1.** Create an article with the word **SSH** in English. **2.** Create an article with word **SSH** in Brazilian. **3.** Search for **SSH** to find articles that relate to SSH. The search does not return both Brazilian and English articles.

Problem	Affected plugins	Short description	Description	Steps to reproduce
MID Server PRB1152720 *KB0635246*		Discovery attempts to use private key strings for password authentication	This issue occurs for users who have a CyberArk SSH Private Key discovery credential. The MID Server sends it to SSH devices which do not support SSH private key authentication, and it is also sent to SSH devices which support private key authentication, even though the key is incorrect for that device. If the device supports password or keyboard-interactive SSH authentication, the MID Server incorrectly attempts to authenticate while using the private key string as the password.	Refer to the listed Known Error KB article for details.
MID Server PRB961706		MID Server CIM threads are cancelled upon Apache HTTP CimIQL shutdown	After running many CIM discoveries, CIM threads on the MID Server can get cancelled. Additional CIM discoveries lead to more thread creations and more threads that are cancelled. The MID Server eventually needs to be restarted.	
NotifyNow PRB1117099	Notify	Opening an incident brings an error when the plugin com.snc.notify is activated	When com.snc.notify is activated, users see an error message "Illegal access to method getRoles in class com.glide.sys.User" when opening an incident.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
NotifyNow PRB1151223	Notify	The kick action in Notify/ Twilio does not log the participant's duration after removing them from the conference call		**1.** Create a conference call with more than 2 users. **2.** Use the 'kick' option to remove a participant. The participant is removed from the conference but the participant's duration on the conference call is not logged.
Performance Analytics PRB1039312	Responsive Dashboards	Unable to select a user/role/ group if not in the first batch of the result list	When sharing a dashboard, users are unable to select a user if they are not in the first 5 results returned.	
Performance Statistics and Graphs PRB1110749		jrobin_shard_0 needs an index	Queries do not use an index when executed, which can add significant load to a database server.	
Performance Statistics and Graphs PRB1162205 *KB0639325*		The ServiceNow Performance dashboard widget is empty	After upgrading to Jakarta, the ServiceNow Performance dashboard is not displayed.	
Persistence PRB1116289		MetricBase - Change the retention policy to match SKU requirements set by the pricing committee		

Problem	Affected plugins	Short description	Description	Steps to reproduce
Persistence PRB1151806		Issues related to CMDB tables in a scoped app		Issue 1 **1.** Create a scoped application in an instance (pre-Jakarta release). **2.** Create a column on the "cmdb_ci" table. **3.** Download the zip file of the application. **4.** Install the zip file of the application into Jakarta release instance. The column created on the "cmdb_ci" table is created in all the child tables of cmdb_ci. When users try to uninstall the application, it will not get uninstalled properly. Issue 2 **1.** Create a scoped application in an instance (pre-Jakarta release). **2.** Create a custom table (the child table of the "cmdb_ci" table) in a scoped application. **3.** Download the zip file of the application. **4.** Install the zip file of the application into Jakarta release instance. The system is creating fields like "Class", "sys_class_path", and "Is Deletable" in a global scope on these tables (fields from the parent table).

Problem	Affected plugins	Short description	Description	Steps to reproduce
Persistence PRB1179246 *KB0636083*		CMDB TPP migration during a Jakarta upgrade can fail if the migration takes over 24 hours	On an upgrade to Jakarta, the CMDB table will go through a migration called TPP. This can fail if the migration runs for longer than 24 hours as the database connections are destroyed after being marked as obsolete by the connection pool sweeper. The upgrade will get stuck on the fix script that is running the TPP migration, z_z_migrate_cmdb_tpp.xml. This can be observed in the upgrade monitor and will require manual interventions or a rollback of the upgrade.	Refer to the listed Known Error KB article for details.
Persistence PRB964725		Table rotation shard selection by sys_id no longer works on domain-separated instances		
Project Management PRB1108705	Project Management	Configuration support issue for custom teamspaces	Users try to create their own teamspaces by using an application integration strategy in which they extend base tables and create custom roles. However, teamspace code assumes that all teamspaces have the 'tspx_prefix' prefix. Users can have any prefix in scoped applications, which breaks the teamspace logic in templates, MSP import, planning consoles, and other areas.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Reporting PRB923321 *KB0622144*	System Import Sets	PDF export can cause out of memory within OOB constraints for rows and columns (glide.pdf.max_rows, glide.pdf.max_columns)	Exporting a report to PDF can cause an out of memory issue when the PDF has a large number of rows. This is often in combination with large text columns. When this problem occurs, the base system constraints that are handled by the following system properties have not been changed: • glide.pdf.max_rows • glide.pdf.max_columns	Refer to the listed Known Error KB article for details.
Security Incident Response PRB1089709	Security Incident Response	PIR on Security Incidents is throwing an error		**1.** Create an SIR and make some changes to the SIR(category, sub category, or add worknotes). **2.** Close the SIR by adding closer notes. Note the PIR is not generated for the SIR. A warning message occurs in logs: org.mozilla.javascript.EvaluatorException: GlideRecord.setTableName - empty table name.
Security Incident Response PRB1096800	Security Incident Response	"RiskScore override is turned off." is being posted on every SIR worknote	When an SIR is created and categories are updated on the SIR, "RiskScore override is turned of by user which allows automatic recalculation of risk score." will be posted on every SIR work note.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog PRB1084082 *KB0635729*		clearValue() function is not working in Jakarta	clearValue() function is not working in Jakarta when using fields which do not exist in the Catalog Item. An error occurs: Cannot read property options of 'null'.	**1.** Navigate to Service Catalog. **2.** Create a variable of any type. **3.** Create a Catalog Client Script with the function: clearValue() and use the variable created earlier. **4.** In the Catalog Client Script, use the same function for another field which does not exist in the Catalog Item. **5.** When data is entered in the variable, try the catalog item. An error occurs: Cannot read property 'options' of null.
Service Catalog PRB1149659 *KB0635591*		Some options in the Jakarta Legacy CI Relationship editor seem to be bringing back options from the cmdb_ci table rather than the sys_user table		**1.** Navigate to **Configuration** > **datacenter**. **2.** Open an existing datacenter record or create a new one. **3.** Click the plus sign to access the Legacy CI Relationship editor. **4.** In the Available Relationships field, select **Log reviewed by** or **Backup done by**. These options should have displayed records from the sys_user table, but they displayed records from the cmdb_ci table.
Service Management Designer PRB719226	Service Management Core	Service Management template does not apply to records produced via the Service Portal	Service Management templates associated to a record producer's model do not seem to be applying to HR cases that are completed via the Service Portal.	
Service Mapping PRB1079211		Azure Discovery fails after an upgrade to Jakarta	An error occurs: "Exception when calling ID engine: java.lang.NullPointerException".	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Mapping PRB646607		Two entry points and two clusters can result in unwanted connections	Unwanted connections occur when a business service has two entry points that point to two different clusters which have the same information.	
Service Portal PRB1069244	Service Portal - Service Status	"Service" should not be in the table body		**1.** Navigate to <instance>/sp. **2.** Select the System Status link. Note the section headers are in the table, and the stated row count includes these headers.
Service Portal PRB1073160	Service Portal - Core	TinyMCE copy/paste images in Chrome on Windows/ Mac does not work	In Service Portal, copying and pasting images into the TinyMCE editor does not work in Chrome.	**1.** Create a test page on the Service Portal containing a TinyMCE field. **2.** Use the snipping tool included in Windows 7 and 10 to take a screenshot. **3.** Click the copy button to copy the screenshot to the clipboard. **4.** Open Google Chrome and navigate to the page. **5.** Try to paste the image. Expected behavior: The image should be pasted. Actual behavior: TinyMCE field does not display the image or attach the file. All other browsers can paste the image successfully.
Service Portal PRB1090811		Related Lists counts are broken on the form	After an upgrade to Jakarta, users cannot see the count of records for Related Lists in the form widget.	**1.** Log into any Jakarta instance. **2.** Navigate to Service Portal. **3.** Open any record which has some data in Related Lists (open it in the "Form" page). Note the count is missing.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Portal PRB1160001	Service Portal - Core	html_template and script fields with 4000 character limit truncate OOB data that exceeds that length in Oracle	On normal MySQL instances, the scripts work as expected. However, on Oracle, users experience problems from time to time with OOB scripts to be longer than 4000 characters on a 4000 characters field. The scripts are cut in half and do not work.	
Service Portal PRB1161730	Service Portal for Enterprise Service Management	Restore Jakarta Service Portal default theme	The Service Portal default theme should be the same in Istanbul and Jakarta.	
Service Portal PRB1163616	Service Portal - Core	A user typing message is no longer displayed in the activity stream		**1.** Impersonate two different users in two different browsers. **2.** Navigate to a request on the ticket page or a form with an activity stream. **3.** Start typing as one user. Note that the ticket conversations widget no longer shows that the user is typing to the other user.
Service Portal PRB922854		Due to the sp_ng_template script limit in Oracle instances, larger templates code gets truncated	In the search results page, the results are showing code snippets for the article meta data.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Portal PRB1184967		Pasted images in the HTML editor need to be converted to attachments		**1.** Add a new HTML field to a form. **2.** Create a new record using the form. **3.** Paste an image into the HTML field. **4.** Save the record. A sys_attachment record for the image is not created, which is inconsistent with the normal UI and may result in performance issues.
Survey Management PRB1072919	Service Portal Surveys	When a survey question is answered in Japanese, the characters are getting converted to some incorrect values		**1.** Assign the survey "Helpdesk Satisfaction Survey" to a user. **2.** Get the survey URL from the assessment created and impersonate that user to take the survey. **3.** Take the survey and enter the text in Japanese on the string field. For example: '########################## #############' **4.** Submit the survey and open the completed assessment instance record as an admin user. **5.** Click the related link to user's response. The text is broken for the question "Tell us what you think about IT and what you want or need."
System Applications PRB1083579 *KB0635328*		Jakarta only: Reinstalled applications are missing files/ records		**1.** Install a store app with application files. For example, sys_app_application_<xxx>, sys_app_module_<xxx>, etc. **2.** Uninstall the store app. **3.** Reinstall the app on the instance. After the app is successfully reinstalled, most of the application files are missing. In the localhost logs, the phrase "Skipping, file unchanged since last upgrade" is printed for all of the missing files.

Problem	Affected plugins	Short description	Description	Steps to reproduce
System Applications PRB1115442		A cross-scope privilege access error occurs in the global search	In Jakarta, a new global search UI is showing an error: "Error MessageExecute operation on script include 'PowerGenKnowledge' from scope 'Enhanced Global Search UI' was denied. The application 'Enhanced Global Search UI' must declare a cross-scope privilege access".	
System Applications PRB762225		Ambiguous search yields lots of ambiguous search term alerts	The message "Your text query contained on common words or ambiguous wildcards, please refine your search and try again" occurs many times on the homepage when users are performing a global search.	
Text Search PRB961986		New search results page no longer gives the option to enter the list view for 0 result tables	In the old search results screen, it was possible to drill down into a table even if zero results were returned. In the new search result screen, it is no longer possible to click through to the table. This is inconvenient for users who then have to navigate to the table manually and re-build the filter.	
Time Card Management PRB1159698		Opening the worker portal changes the display value for the existing time card category to task_work and project_work	In the Time Cards related list, the value under Time type is displaying incorrectly. It shows the value instead of the label name.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
UI Action PRB742211 *KB0634638*		Currency code is reverted to '$' when updating a currency field via the client script	After setting the property glide.system.locale to 'en.AU', the currency code for currency fields should be displayed as 'AUD'. However, the currency code is reverted to '$' when updating a currency field via the client script.	**1.** Do one of the following with the *currency setting*: • Log in as a user with a local currency other than USD. • Open a record with a value in a currency other than USD. • Manually set the field value to a currency other than USD. **2.** *Execute a client script Execute a client script* that sets the value on a currency field using *g_form.setValue(field_name, value)*. Note that the currency is changed to USD. The session currency, or the currency that is currently set on the field, should be preserved.
UI Components PRB1156824		The new datetime functions are not in the glide-api-members.xml	The new datetime function are not visible in scoped apps and should have been added to the glide-api-members.xml file.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Update Sets PRB1172683		Overwriting a replace_on_upgrade record with a custom one using update sets might result in the new customization being overwritten	Because the "Recorded At" in the sys_update_xml entry for a file is copied rather than generated at the time an update set is committed, it can be considered older than the prior version on the system when the upgrade engine considers whether the record is flagged for overwriting. If the new customization was recorded before the replace_on_upgrade version, the upgrade engine will overwrite the customization. The upgrade engine should always preserve customizations committed after a replace_on_upgrade record was committed.	
Upgrade Engine Issues PRB1092359 PRB1092445		After the installation of a store app with/ without static content, the upgrade summary job failed	After a store app is installed with static content, or without static content (without folders like "ui.html", "ui.jforms", or "ui.jtemplates"), the upgrade summary job fails with an exception thrown in the log.	
Vendor Security Risk Assessment (VSRA) PRB1108100		Vendor portal cross scope privilege issue	Vendor Risk Management does not have access to the global script including "SysRelatedList".	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Vulnerability Response PRB1148328	Qualys Vulnerability Integration Security Support Common	Qualys lookup code uses an inefficient query when using the new CI/ VI lookup code	After implementing the Qualys integration for Vulnerability Management, not all data is being imported into ServiceNow.	
Workflow PRB1042822		Workflow is hung at join activity if **rollback to** activity is used	If the workflow has the **rollback to** activity, join activity is getting hung in different languages.	
Workflow PRB1151957	Workflow Authoring Tools	The approval coordinator has a new activity result == skipped but the default activity condition does not include skipped	In Jakarta, the approval coordinator was updated to include the activity.result == skipped. However, by default, this is not added to the activity when it is dragged to the workflow canvas.	**1.** Create a workflow on the incident table. **2.** Add 'Approval Coordinator' activity on the workflow canvas. Notice there is no 'skipped' condition path. **3.** Add an empty 'group approval' within the coordinator. **4.** Connect the approval coordinator to 'end'. **5.** Create an incident to execute the workflow. Expected behavior: A result of 'skipped' defaults to 'approved' and moves to the 'approved' path. Actual behavior: The activity.result == 'skipped', and the workflow cannot move to the next activity.
Workflow PRB1156991		Generate activity does not generate approvals from the Approval Coordinator activity		

Problem	Affected plugins	Short description	Description	Steps to reproduce
Workflow PRB922101		Switch activity is not getting conditions in Workflow editor when the session language is other than English	If the customer is using a different language other than English, Switch workflow activity may not work correctly.	**1.** Activate/install the Hungarian language plugin (I18N: Hungarian Translations). **2.** Open any catalog item (e.g., Apple iPad 3), and add a 'Select box' type variable with at least 2 question choices. **3.** Open the corresponding workflow of catalog item in 'workflow editor'. **4.** Change the session language to **Hungarian**. **5.** Check out the workflow and add the 'Switch' activity anywhere in the workflow (**Alaptevékenységek** > **Feltételek** > **Kapcsoló**). **6.** In the **Switch** activity, select type = 'Variable' and add the recently created 'Select box' variable. **7.** Submit the **Switch** activity. Notice the question choices appear. **8.** Repeat the same steps with the English session. The Switch activity shows desired conditions.

Other Jakarta Patch 4 information

- **Knowledge Management**
  - *Knowledge search*

    The multi-language search feature is available when more than one supported language is enabled. When you enable the language plugin and set the system property for multi-language search to **True**, the search query returns the results in all available languages simultaneously. If you set the system property for multi-language to **False**, the search query returns the results based on the language selected with this filter option.Refer to *Knowledge search properties* for more information.
  - *Knowledge properties*

    Two knowledge search properties are added: glide.knowman.search.default_language andglide.knowman.enable_multi_language_search.
  - *I18N - Knowledge internationalization*

    Refer to *Knowledge search* for information on performing a search on all available languages simultaneously.

Fixes included with Jakarta Patch 4

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 3a*
- *Jakarta Patch 3 Hot Fix 1* on page 207
- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2 Hot Fix 3* on page 242
- *Jakarta Patch 2 Hot Fix 2* on page 243
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 3a Hot Fix 1

The Jakarta Patch 3a Hot Fix 1 release contains fixes to these problems.

For Jakarta Patch 3a Hot Fix 1:	Build date: 11-14-2017_1442 Build tag: glide-jakarta-05-03-2017__patch3a-hotfix1-11-13-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 3a Hot Fix 1

Problem	Short description	Description	Steps to Reproduce
Edge Encryption PRB1075054 *KB0656318*	Encryption rules are being recompiled on every request and may cause slowdown on the proxy under a large load	Recompilation of rules is causing extreme slowness on the proxy after a certain threshold of requests per minute.	Refer to the listed Known Error KB article for details.
Edge Encryption PRB1236678	Executing the guid file generates an error	Running the proxy keeps trying to read the guid file. When there are any issues in accessing the file, the logs are filled with errors.	

Fixes included with Jakarta Patch 3a Hot Fix 1

- *Jakarta Patch 3a*
- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 3 Hot Fix 2

The Jakarta Patch 3 Hot Fix 2 release contains fixes to these problems.

For Jakarta Patch 3 Hot Fix 2:	Build date: 10-11-2017_1110 Build tag: glide-jakarta-05-03-2017__patch3-hotfix2-10-10-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 3 Hot Fix 2

Problem	Short description	Description	Steps to Reproduce
Persistence PRB1182304 *KB0636072*	Chunk copying a large table on an Oracle database can degrade over time (e.g. during the TPP migration on a Jakarta upgrade)	Chunk copying is a mechanism for moving data from one table to another. It is done in operations such as online alters and the TPP migration in Jakarta. On an Oracle database, the speed at which the chunk copying is done can degrade over time, causing these operations to take a long time to complete.	Refer to the listed Known Error KB article for details.

Fixes included with Jakarta Patch 3 Hot Fix 2

- *Jakarta Patch 3 Hot Fix 1* on page 207
- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362

- *Jakarta security and notable fixes* on page 301

Jakarta Patch 3 Hot Fix 1

The Jakarta Patch 3 Hot Fix 1 release contains fixes to these problems.

For Jakarta Patch 3 Hot Fix 1:	Build date: 09-21-2017_1140 Build tag: glide-jakarta-05-03-2017__patch3-hotfix1-09-20-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 3 Hot Fix 1

Problem	Short description	Description	Steps to Reproduce
Persistence PRB1179246 *KB0636083*	CMDB TPP migration during a Jakarta upgrade can fail if the migration takes over 24 hours	On an upgrade to Jakarta, the CMDB table will go through a migration called TPP. This can fail if the migration runs for longer than 24 hours as the database connections are destroyed after being marked as obsolete by the connection pool sweeper. The upgrade will get stuck on the fix script that is running the TPP migration, z_z_migrate_cmdb_tpp.xml. This can be observed in the upgrade monitor and will require manual interventions or a rollback of the upgrade.	Refer to the listed Known Error KB article for details.

Fixes included with Jakarta Patch 3 Hot Fix 1

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 3* on page 208
- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362

- *Jakarta security and notable fixes* on page 301

Jakarta Patch 3

The Jakarta Patch 3 release contains fixes to these problems.

Jakarta Patch 3 was released on September 13, 2017.	Build date: 09-05-2017_1648 Build tag: glide-jakarta-05-03-2017__patch3-08-23-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta Patch 3, refer to *KB0623769*.

Notable Fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Lists PRB1158535 *KB0635225*	In Jakarta, setting the property 'glide.ui.escape_all_script' to 'false' causes issues with List v2 pagination and context menu	This issue only affects List v2 users. When the property 'glide.ui.escape_all_script' is set to 'false', list pagination and the context menu do not work.	**1.** Ensure that List v2 is active. **2.** Go to /sys_properties_list.do and set the property glide.ui.escape_all_script to **false**. **3.** Navigate to **Incident** > **Open**. **4.** Filter the incident based on any date field with a "before" or "after" parameter. Note that data is filtered but the list context menu and pagination are not working.

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB668424 *KB0596358*	Line breaks in multi-line string fields are removed in activity stream	Line breaks in string type description field do not appear in UI16.	The following steps use the incident activity formatter as an example. **1.** Open an instance and ensure that you are using UI16. **2.** Navigate to **Incident** > **All**. **3.** Open an incident record. **4.** Click the menu icon and select **Configure** > **Form Layout**. **5.** Add the **Description** field. **6.** Do one of the following to configure the activity formatter and include the Description field: • Update the glide.ui.incident_activity.fields system property • Customize the fields on the activity formatter **7.** Open a saved incident record. **8.** Add the following text to the **Description** field: 'All work and no play make\n\n' 'Jack a dull boy\n\n' **9.** Save the record. Note that the text you added in step 8 is presented in a single line in the activity formatter. **10.** Switch the user interface from UI16 to UI15. **11.** Open the record from step 7. Note that the text added in step 8 is displayed on two separate lines.
UI Components PRB689175/ PRB1057848 *KB0622815*	g_form.isReadOnly does not work for most fields when marked read-only on their dictionary record		Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Import / Export PRB933291 *KB0622343*	Trying to create an xlsx format template (for update operations) fails for tables containing a currency output field	Exporting an import template and attempting to save it as an Excel template file locally fails. The import template has zero bytes and cannot be opened.	**1.** Navigate to **Asset** > **Portfolios** > **Hardware Assets**. **2.** Right-click a column header and choose **Import**. **3.** Select the **Update** option and click **Create Excel template**. Wait for the export to complete. **4.** Click **Download** and save the file locally. **5.** Try to open the xlsx file. The file size shows zero bytes and an error message appears.
UI Components PRB748992 *KB0622856*	Reference fields with & in their display value show as & when glide.ui.escape_text is false		**1.** Make sure glide.ui.escape_text is set to **false**. **2.** Clear the cache, log out, and log in to verify. **3.** Create a group called **A & B**. **4.** Open incident. **5.** Change assignment group to **A & B**. Expected behavior: The group shows as A & B. Actual behavior: The group shows as A & B.
Lists PRB944713 *KB0634968*	In List v2, a tooltip with the full text does not appear as expected when users hover over a truncated cell	When the value is too long to display completely in the cell, an ellipsis is used to signify that the value is truncated. When users point to the value, a tooltip with the full value should appear. However, no tooltip appears in List v2.	**1.** Navigate to sys_properties.list in List v2. **2.** In the Description column, point to a value that ends with **...** A tooltip that contains the full value is expected to appear, but nothing happens.

All Other Fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1039322	Building history sets can result in a mutex lock and cause performance issues	Multiple users accessing a record at the same time can cause performance issues because history sets are not allowed to build concurrently. Transactions get stuck while the first transaction builds the history set, which sometimes leads to the semaphore exhaustion on all nodes.	
Agile Development PRB1071252	SDLC progress board UI issues	The task board will not refresh automatically to show the entire task. Additionally, changing the state of a story and saving it will not result in the disappearance of the dialog box.	
Archiving PRB868529	Archive rule on a table hierarchy does not archive the related records of children in the hierarchy	The archival plugin allows only one archive rule per table hierarchy. When an archive rule is defined on a parent table in a hierarchy to archive/delete related records, the archival will only archive records in the parent and child tables in the hierarchy. It will not archive/delete the related records of child tables.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1093277	Validation of input data before ordering	Proper validation needs to be enforced on the order form. Users should be prevented from submitting blueprint catalog items without allowed patterns and values.	
Cloud Management Application PRB1096556	MID Server discovery/ operation intermittently fails with Request date header too old	When the header's timestamp is older than 15 minutes from the request made, users may receive 403 errors for blob storage Azure requests.	
Cloud Management Application PRB1102125	Only one security group is populated for AWS VM network selection	All possible security groups should be displayed for an AWS VM selected network, but only one is displayed.	Prerequisites • Set up CMP, service account, and cloud accounts for AWS. Then, run discovery. • Set up OS and compute profiles for AWS. • Create a blueprint to provision an AWS VM. Steps to reproduce **1.** Order a catalog item for an AWS VM. **2.** On the order form, pick a network with multiple security groups. **3.** Look at the security group dropdown. Only one security group is displayed instead of all possible security groups for the selected network.
Cloud Management Application PRB1102686	Blueprint imported through REST API Will not have deployment diagram	Many users move their blueprints around from one instance to other by importing them through the REST API. This PRB causes blueprint diagrams to get lost during REST API imports.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1103198	The attribute stackId is causing the deserialization to OrderDTO fail		
Cloud Management Application PRB1105664	For the Virtual_Server_Datastore, attribute Datastore is missing		**1.** Log into the application as an admin. **2.** Create blueprint VM on VMware. **3.** Navigate to **Operations** > **Steps**. **4.** Click on **Virtual Server. provision operation**. **5.** Search Datastore attribute and check the **Show in form** checkbox. **6.** Click **Save**. **7.** Click **Generate Entities** under related links. **8.** Click **Virtual_Server_Datastore** attribute link. For the Virtual_Server_Datastore attribute, Datastore is missing. It does not reload any value from the pool if it is not fixed.
Cloud Management Application PRB1105666	OS Template: For VMware OS templates, the Guest OS attribute is not visible by default		**1.** Navigate to **OS Profile**. **2.** Create a new OS profile called **Centos**. **3.** In the **OS Profile Mappings** section, click **New**. **4.** Select the cloud account and location. **5.** Type **Centos Image Template** in the select box and select the required Centos image. **6.** Click **Submit**. **7.** In the **OS Profile Mappings** section, click the image you selected for Centos. The Guest OS should be a mandatory attribute that is always visible to the user, but users cannot see it.

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1106090	Virtual Server StorageAccount field is made mandatory for AWS provision	This issue occurs for users with hybrid cloud setups and constraints are added. The storage account field is made mandatory, but it does not show up on the order form. Users cannot submit orders, and VMs on AWS do not work as expected.	Prerequisites • Create an AWS cloud account and run discovery. • Set up an OS profile and compute profile. Steps to reproduce 1. Navigate to the **Blueprint Module**. 2. Create a new blueprint (hybrid VM): • VM on logical datacenter • Select logical datacenter • Add the constraints AWS, Vsphere, and Azure 3. Check the blueprint out, publish it to a catalog, and enable the **Active** check box. 4. Navigate to the cloud user portal. 5. Click **Launch a Stack**. 6. Select the catalog item and click **Launch**. 7. Enter valid data in the order form. 8. Click **Submit**. The Virtual Server Storage Account field is mandatory.
Cloud Management Application PRB1106134	Non-VM resources are showing up in searches for Resource Alias name		1. Create a blueprint that contains a Storage Volume, a Virtual Server, and a vSphere Datacenter. 2. Navigate to **OS profiles**. 3. Click an existing OS profile (e.g. **Centos**). 4. Click **Cloud Script OS Profile Mappings** > **New**. 5. Select the blueprint. 6. Click the search icon to select **Resource Alias**. All VM resources are listed.

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1107304	The Event field should show up by default, and it should be mandatory		1. Navigate to **Blueprint**. 2. Create a new blueprint for a VM on Vsphere. 3. Generate a form. 4. Create a new form load rule. The Event is added from the form layout, but the Event field show up by default and it should be mandatory.
Cloud Management Application PRB1107581	AzureVM Provision: Error message is not correct when password is not set in image credentials		Prerequisites 1. Set up the OS and compute profiles. 2. Create a blueprint to provision a VM on Azure. Steps to reproduce 1. Navigate to **OS Profile**. 2. Open the image template details. 3. Next to the credentials select box, click the information button to open the associated image credentials. 4. Leave the username as-is, remove the entered password, and save. 5. Navigate to **User Portal**. 6. Submit the order to provision a VM. The error message does not display proper logs that reflect the password is not set.
Cloud Management Application PRB1108326	AWS tags are not being discovered	Discovering resources in an AWS datacenter does not return existing tag values for those resources.	1. Create an AWS Service Account. 2. Discover datacenters. 3. Run discovery against a specific datacenter with tagged resources (e.g. tagged EC2 instances). 4. Examine the discovered VM's tag values. There is no data present.

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1108528	Unable to add an existing script under response processor		**1.** Navigate to **Cloud Management** > **Cloud Service Design** > **Resource Blocks** and click **New**. **2.** Create a resource block named **Test**, fill out the fields, and submit it. **3.** In the **Test** resource block, click **Resource Script**. **4.** Create a new resource script of type **Response Processor**, and submit it. **5.** Navigate to **Operations** > **Steps**. **6.** Select **ConnectAndCreateVirtualMachine** and add a step such as **ComputeInterface.createnode**. **7.** Select **ComputeInterface.createnode** and click **Response Processor**. **8.** Click the **+** to add the response processor script. The list does not show any script names for you to select.
Cloud Management Application PRB1110596	Azure discovery fails with "Missing service principal field: ClientId" when both v1 and v2 are installed	When the pre-Jakarta Azure plugins are installed along with the new Jakarta Cloud Management plugins, attempts to discover Azure datacenter result in a root exception.	The following error occurs: org.mozilla.javascript.JavaScriptException: Missing service principal field: ClientId - if your Azure credential (service principal) was imported, please restart your MID server and try again. (script_include:AzureCloudAPIBase; line 341)
Cloud Management Application PRB1112542	Provisioned AWS virtual machine instances do not contain memory information in CMDB		**1.** Activate the Cloud Management plugin. **2.** Create an AWS cloud account and run discovery. **3.** Create an AWS Virtual Machine blueprint and provision. **4.** After the provision is completed, check the cmdb_ci_vm_instance table. Memory information is not stored for the provisioned Virtual Machine instances.

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1117447	Inconsistency in the activation of catalog items	When importing a YAML blueprint, a catalog item is created and automatically activated. However, when creating a catalog item from a cloud template record, the catalog item is inactive by default and users have to activate it.	**1.** Import YAML blueprint and navigate to the resulting catalog item. Observe it is already active. **2.** Navigate to cloud templates and paste in a YAML blueprint. **3.** Select **ServiceNow blueprint** as the type. **4.** Save the record. **5.** Click **Create blueprint and catalog item**. Observe it creates a catalog item that is not active and you have to activate it yourself.
Cloud Management Application PRB1151479	Custom approval policy fails	Custom approval workflow does not spawn from policy.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1151544	Azure Alert implementation needs to get updated due to Microsoft changes	Microsoft has released a new version of their alert mechanism, and the current alert mechanism will no longer be supported starting on October 1, 2017. This affects Cloud customers who are using the com.sn_azure plugin with Azure Alerts turned on. The Azure Alert mechanism syncs the status of CMDB Azure cloud CI's with the actual CI in the cloud. For example, a user runs discovery against Azure when one VM in the 'On' state. However, before the next discovery is run, the VM goes down or someone turns the VM off. Since discoveries do not occur continuously, Azure Alerts immediately provide the new VM status and keep the CMDB in sync with the actual cloud CI. In order to continue receiving Azure alerts from Microsoft, users need the fix for this PRB.	
Cloud Management Application PRB1152044	Disk attach only works for LSI controllers	Currently, only disks with LSI controllers can be attached in vCenter. Disks with non-LSI controllers should be allowed as well.	

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB1153205	Azure private images are not getting discovered	This problem occurs when Azure private images are created from a VM that uses a managed disk.	
Community PRB1027244	Communities wrapper script includes are only accessible within scope and are read-only protected	Without the fix for this PRB, users cannot customize the Community product functionality.	
Community PRB1145610	User activity streams are not populated when activities are created	Since the user activity streams are not populated, there is no activity feed or email notifications.	
Community PRB1154937	Subscriptions are not working for external users	The following issues exist with subscriptions for external users: • When external users post in Community, they are not auto-subscribed to the content. • Clicking on **Subscribe on Forum**, topic landing pages, and content pages does not respond. • If an external user is not subscribed to the forum and posts content in the same forum, then the post can disappear from the activity feed on the home page and profile page.	**1.** Log into Community as an external user. **2.** Posts a question in a forum (IPv6). Make sure the user is not subscribed to this forum. Observe that the post disappears after some time or after the page refreshes. **3.** Click on the question. Observe the user is auto-subscribed to that question. **4.** Click **subscribe**. It is not responding.

Problem	Short description	Description	Steps to reproduce
Community PRB1154957	The avatar is not showing correctly in the activity feed	After the questioner marks a person's answer as correct, the avatar of this person is not displayed in the activity feed, which throws a console error.	**1.** Log into Community as David Loo and subscribe to IPv6 forum. **2.** Log into Community as Abel Tuter. **3.** Post a question in forum (IPv6). **4.** Log in as David Loo and answer the question above. **5.** Log in as Abel Tuter, mark David's answer as correct, and navigate to Abel's activity feed. Observe that David's avatar is not displayed in activity feed.
Core Platform PRB1109409	Download scheduled jobs for cds_client_name and cds_client_mapping are not active by default		**1.** Activate the com.glide.data_services_canonicalization.client plugin. **2.** Go to the cds_client_schedule table. The scheduled jobs for cds_client_name and cds_client_mapping are not active.
Customer Service Management PRB1107640	Approval workflow is not working as expected when a plugin is active	This issue occurs when the Customer Service Management demo data plugin is installed and there is more than one approval group in the approvals workflow. If users have the sn_customerservice.customer role, they do not need to wait for other approvers to approve a record. Then, the workflow activity is approved.	

Problem	Short description	Description	Steps to reproduce
Domain Support PRB650898	UI15/UI16: Domain reference picker does not show 'global' option	After activating the Domain Separation plugin, the domain reference picker does not show the 'global' option. The global domain placeholder cannot be selected by admin users.	Prerequisites • Ensure the reference domain picker is activated on the instance. • Ensure Domain XXX is the default domain. Steps to reproduce **1.** Log in as admin. **2.** Change the domain from picker to **TOP/MSP**. **3.** Try to change the domain to **Global**. The global domain cannot be found. Clicking **Reset to default** sets the domain to XXX (no global domain). **4.** Open any record from sys_user table. **5.** Change the domain from **XXX** to **Global**. **6.** **Save**. The admins cannot go back to the global domain using the reference domain picker.
Edge Encryption PRB1155624	Edge proxies fail to recover from network outages, exceeding the exchange queue size and never catching up to it once the network recovers	After a network outage, the Edge Encryption proxy server fails to recover. The instance marks that proxy as unresponsive during the outage and online after the outage. However, users still cannot access the instance from that proxy. 502 errors are thrown from the client side for requests going through the proxy. In the proxy server log, the following error is thrown: Max queue size 1024 exceeded by HttpRequest.	

Problem	Short description	Description	Steps to reproduce
Event Management PRB1093158	After a CI is changed to Maintenance, the old alert is reopened instead of creating a new alert		**1.** Check the interval for evt_mgmt.active_interval (e.g. 900 seconds). **2.** Create an alert on a CI and close it, make sure the alert is not in maintenance, and close it. **3.** Wait for the duration of the evt_mgmt.active_interval (e.g. 900 seconds). **4.** Open the CI. **5.** Change the CI's status to **In maintenance**. **6.** After one minute, check the alert. It should be marked as **Maintenance: True** with the sys_updated_on updated. **7.** Send an event with the alert's message_key. The event will be bound to the old alert. Instead of creating a new alert, the old alert is reopened.
Express to Enterprise PRB1098496	Records are showing up blank for admin users	After an upgrade from Express to Enterprise, admin users no longer have the read/write access to different tables.	
Facilities Service Management PRB1083503	The Floor Plan Filters popover is slow when there are many rendered options (10,000 or more)		**1.** Install the Facilities Visualization Workbench plugin. **2.** Create 10,000 cmn_department records. **3.** Navigate to $ng_fvw.do. **4.** Open the Filter popover and click around. Notice the delays.

Problem	Short description	Description	Steps to reproduce
Financial Management PRB1104017	When a hierarchy has more than 10 levels, segments do not display on the Workbench UI	When a hierarchy has 10 or more levels and users on the Workbench are trying to add segments through the manual rollup method, the "To Segment" dropdown will show only 1 or 2 options or nothing.	1. Install the ITFM plugin. 2. In the Workbench UI, find an account that has 10 or more hierarchy levels. 3. Click on one of the boxes inside an account. 4. On the **Default Rollups** tab, select **Manual** from the Rollup Method. 5. Click **Add rollup**. 6. Under the 'To Segment', the dropdown is empty or only shows 1 or 2 options. The dropdown does not show all segments from itfm_bucket_allocation_account.
Human Resources Service Management PRB1100562	HR Ticket page performance issue when the number of records in the task table is more than 6 million	When the task table contains more than 6 million records, the HR Ticket page experiences performance issues.	1. Log in to an instance with around 5 million records in the task table. 2. Activate the HR scoped Service Portal plugin. 3. Go to any HR ticket page. There is a performance delay in loading the ticket page, and all dependent REST APIs are timing out.
Import / Export PRB1032318	Load data using Oracle JDBC data source via MID Server fails with NullPointerException	The issue is triggered when columns of TIMESTAMP data type containing NULL values are queried. Returning a NULL value in the result set causes later data processing to fail.	
Import / Export PRB944813	Large CSV/ JDBC/XLS imports holds memory through Import process	When importing data from large CSV, JDBC, or XLS files, memory usage increases and does not go down.	

Problem	Short description	Description	Steps to reproduce
Knowledge Management PRB1105067 *KB0634431*	The page kb_article_view does not render properly in French language	If the com.snc.knowledge_serviceportal plugin is enabled and French language is selected, the kb_article_view page in Service Portal does not render properly. Also, the Comments & Helpful section is missing from the page.	**1.** Enable both plugins:com.snc.knowledge_serviceportal and com.snc.i18n.french. **2.** Follow the steps below: **a.** Change language to French. **b.** Open the following link: http://<instance>.service-now.com/sp?id=kb_article_view&sys_kb_id=<sys_id of the article> The page should render properly with the Helpful and Comments sections showing. However, the page will not render properly. The Helpful & Comments Sections are missing. It also throws some JavaScript errors in the console.
Lists PRB1113348	With List v3 enabled for related lists and having the related record and source record open in separate tabs, editing the related record updates the source record fields		**1.** Navigate to **Incidents** > **Open**. **2.** Open any incident. **3.** Add the "Problem->Parent" related list to the form. **4.** From the "Problems" related list, select **Edit**. **5.** Add any problem to the list. **6.** Open the added problem in a separate tab. The incident will be opened in one tab and the related problem in another tab. **7.** Change the short description of the problem and save the record. Expected behavior: The short description of the problem will change and the incident fields will remain unchanged. Actual behavior: The short description of both the problem and the incident fields change to the new value.

Problem	Short description	Description	Steps to reproduce

Lists
 	
PRB711491
	Duplicate tabs appear on a related list that loads after the form loads (List V3 enabled)	When a related list is loaded after the form loads with List v3 enabled, a second copy of the related list tabs also load on the form.	Prerequisites
			• Activate the List v3 plugin.
			• Enabled related lists to work with List v3.
			• Ensure there are a few v2 related lists mixed with the v3 related list on your test form.
			
			Steps to reproduce
			1. Go to any item_option_new record (variable).
			2. Add the following related list:
			  • Question choice: Question
			  • Options: Question
			  • Item variable assignments: Item Variable
			  • Item variable assignments: Order Guide Variable
			  • Variable layout: Variable, Updates, Versions
			3. Make sure you set your related list to load **After the form loads**.
			4. On the item_option_new record, reload the list and scroll all the way down to see the related list.
			
			After several refreshes, a duplicate set of tabs is loaded. This issue is sporadic and requires multiple refreshes of the form.

MID Server PRB659977	Some sudoers configurations will break snc_ssh	A java.util.regex.PatternSyntaxException error is thrown.	
MID Server PRB671436	MID Servers can persistently get TCP timeouts for a certain IP until the MID is restarted		

Problem	Short description	Description	Steps to reproduce
MID Server PRB718011	CyberArk integration does not work with VMware	VMware Discovery does not work with CyberArk. VMware needs to add DomainName to account (identical to windows) - without a domain prefix, it cannot log in.	**1.** Integrate with CyberArk. **2.** Add a VMware credential in CyberArk. **3.** Add the credential in ServiceNow. **4.** Discover the IP that hosts VCenter.
MID Server PRB750509 *KB0623705*	MID Server operation stalls indefinitely on failed credential load due to 429 error	API transactions to the instance can fail during heavy traffic. If the database stalls briefly under load, the queue of 50 can pile up quickly, resulting in 429 errors coming back to requests. If this occurs when a credential load is in progress, the error is not handled and discovery stalls. Other operations can also be impacted, such as MID Server log writes where there is no queue and retry. This does not impact ECC queue traffic because there are inbound and outbound queues that hold the traffic that does not get received or sent.	Refer to the listed Known Error KB article for details.
Password Reset Application PRB1102896	password_reset.request.max_attempt_window sets expire date in the past if you set the property with a value over than 27 days	When the password_reset.request.max_attempt_window property is set to a value longer than 27 days, users are able to retry password resets for an indefinite period of time.	

Problem	Short description	Description	Steps to reproduce
Password Reset Application PRB1104617	After the deletion of a device from the enrollment page, clicking **Submit** redirects page to 'Notification Preference' with bad device reference	When an SMS device is deleted from a password reset enrollment, the exit screen returns to a device notification form rather than the enrollment successful screen.	
Performance Analytics PRB1057238	Workbench widget crashes on IE11 (PA Dashboards, Service Portal)		In IE11: **1.** Navigate to **Performance Analytics** > **Dashboards**. **2.** Add the workbench widget to a dashboard. The workbench widget causes IE11 to crash. **3.** Navigate to **Service Portal Configuration** > **Designer**. **4.** Add a new page and insert the workbench widget. **5.** Switch to preview. The workbench widget causes IE11 to crash.
Persistence PRB1089776	Jakarta upgrade issue with CMDB flattening.	Errant CMDB dictionary records can prevent the successful completion of TPP migration	

Problem	Short description	Description	Steps to reproduce
Persistence PRB1100441 *KB0634407*	A specific StackOverflowError during a query can leave a node in the corrupt state	During a database query, a specific StackOverflowError can lead to incorrect data deletion or insertion. Due to the unpredictable nature of the error, symptoms are varied and could include any or none of the following: • Multiple scheduled jobs (sys_trigger table) are mysteriously deleted. • Business rule records are mysteriously inserted (sys_scripts).	
Persistence PRB1109574	An ALTER that has already taken 24 hours is not finished as expected		
Persistence PRB1109582	Performance issues can occur for large tables on instances with many concurrent writes to the table being altered		
Persistence PRB1109624	Large table updates are not chunked, resulting in performance degradation		

Problem	Short description	Description	Steps to reproduce
Persistence PRB1116792	Translated fields on partition tables result in invalid SQL and the inability to query tables		**1.** Have a field stored on a partition table per sys_storage_alias.storage_table_name (e.g. cmdb$par1). **2.** Make that field a translated type in sys_dictionary (e.g. translated HTML). **3.** Open the table that contains that field. If there are no other fields that are stored on the same partition as the translated HTML field, the partition will never be joined and the SQL statement will fail.
Project Portfolio Management PRB1148647	JavaScript error on loading the planning console	A JavaScript error occurs when the planning console is loading. This issue happens in Chrome and Safari.	
Security Incident Response PRB1097838	Performance issues with the Qualys integration for Vulnerability Management	The Qualys integration for Vulnerability Management needs to limit the data that is going to be imported.	
Security Incident Response PRB1100387	Remove all references to "Intel" for McAfee integrations and update logo in Integration config		

Problem	Short description	Description	Steps to reproduce
Security Incident Response PRB1113095	Splunk app cannot create security incidents with the sn_si_integration_user role due to scoped administration	If scoped administration is enabled, the Splunk application on Splunkbase fails to create security incidents for users with the role sn_si.integration_user.	**1.** Activate the Security Incident Response plugin. **2.** Create a user with only the role sn_si.integration_user. **3.** Log in as that user. **4.** Navigate to the sn_si_incident_import table. The user does not have access to this table. Alternatively, **1.** Log in to the Splunk app. **2.** Click **Create ServiceNow Security Incident** to create a security incident. A 403 permissions error message is displayed.
Service Catalog PRB1080728 *KB0635648*	On Jakarta, g_form.addOption with an empty value adds the label instead	When the addOptions API is used in an onLoad catalog client scripts, the '-- None --' option is being set as the value of the select box field.	Refer to the listed Known Error KB article for details.
Service Catalog PRB1093349 *KB0635643*	Reference variables autocomplete attributes defined on variables attributes are not honored in catalog reference variables	Autocomplete is not working with the column set up in variable attributes. It is not returning any result and giving an error 'Invalid reference'.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB942734	Reference type variables with a reference qualifier are ignoring the reference qualifier in the lookup popup when the tree_picker attribute is set to true	When the tree picker format is used for the list of records on the referenced table, after users click the reference lookup icon on a Service Catalog reference variable, the reference qualifier is not applied in some situations.	**1.** Navigate to the Service Catalog module and create a new catalog item. **2.** Create a reference field variable with attribute set as tree_picker=true in default value column. For example, the table is referring to cmn_location. **3.** Make sure that variable has a reference qualifier condition as a simple one. For example, **[Condition] [is] [Where City] [is one of] [Baltimore, Seattle]**. **4.** Save the catalog item and click **Try it**. Expected behavior: The list should respect the condition defined under the reference qualifier variable (e.g. Baltimore and Seattle). Actual behavior: The list of records only respects the defined table - it does not honor the condition defined when users set the tree_picker attribute as true. For example, when users type 'San Diego' (which is not part of the defined condition), and click on the reference icon, it displays the list of records belonging to San Diego.
ServiceNow Store Site PRB1109494	Issue with UTF-8 support to upload files	After an app is uploaded, the app title shows up as '???' if it contains Japanese characters.	
Service Portal PRB1015303	Table checkboxes need to be labeled for accessibility	This issue affects Firefox/NVDA. Chrome/VoiceOver are unaffected.	**1.** Navigate to the Service Portal. **2.** Click **System Status**. **3.** Examine the contents of the table. Other than the service names, none of the values in the table are in the tab order.
Software Asset Management PRB956836	Error message after receiving a Software Purchase Order Line	After receiving a Software Purchase Order, users are sent to the Request form. The error message 'Invalid entitlement license metric type' is displayed.	

Problem	Short description	Description	Steps to reproduce
Source Control Integration PRB916398 *KB0622533*	Exceptions thrown during Source Control Commit can leave the local repository dirty, preventing further operations	If an exception is thrown during source control commit (export), the local repository can be left in a dirty state, preventing any further source control operations.	Refer to the listed Known Error KB article for details.
Templates PRB943625	Users are unable to enter further values into Watch List fields on templates after entering an invalid value	When entering an invalid value in the Watch List field on a template, users get an error "Please enter a valid email address or User". After this occurs, they are unable to use autocomplete to assign further users to the field.	**1.** Navigate to an existing change request record or create a new change request record. **2.** Add a user to the Watch List field and save the record. **3.** Create a new template. **4.** Use the "type ahead" or the magnifying glass icon to search and add a new user to the Watch List field. Keep adding users until you see an error message. All the existing users will be cleared and new users cannot be added to the template.
Test Management PRB1069166	Adding test cases to a test plan causes an error	The feature 'Add Test Cases from Test Suite' fails on test records.	**1.** Navigate to **Test Management** > **Test Plans**. **2.** Create a new test plan and save. **3.** Open a new test plan. **4.** Click **Add Test Cases from Test Suite**. **5.** Enter a test suite name in the pop-up window. **6.** Click **OK**.
Transaction and Session Management PRB951339	After upgrading from Geneva to Istanbul, timeout popup screen does not appear after timeout	After a session times out, the timeout popup screen does not appear.	

Problem	Short description	Description	Steps to reproduce
UI Components PRB1082285	The 'Edit tag' icon on the incident form is visible but does not work		**1.** Log into the instance and switch to the UI15 interface. **2.** Open any incident records. **3.** Click the 'Edit tag' icon on the navigation bar. Expected behavior: An input box should appear to insert a new tag. Actual behavior: The 'Edit tag' button is not responsive when clicked.
UI Components PRB1102205 *KB0636091*	Incident priority lookup is not working after an upgrade to Jakarta	After an upgrade to Jakarta, the Priority field does not automatically change when the values for the Urgency or Impact fields change.	**1.** Open an instance in any version prior to Jakarta. **2.** Upgrade to Jakarta. **3.** Open an incident and try changing the Impact and Urgency choice list values. Expected behavior: The Priority field should change automatically when the Urgency or Impact field changes. Actual behavior: The Priority lookup does not get triggered immediately after an upgrade.

Problem	Short description	Description	Steps to reproduce
UI Components PRB1109557	CI reference field which depends on another CI reference field shows no upstream/ downstream relationships with attribute tree_picker=true	When a CI reference field depends on another CI reference field and has the tree_picker attribute set to true, the downstream/ upstream relationship does not work correctly.	**1.** Create the following dictionary records: • Label: CI1 Name: u_ci1 Type: Reference Reference: Configuration Item (cmdb_ci) • Label: CI2 Name: u_ci2 Type: Reference Reference: Configuration Item (cmdb_ci) Dependent: u_ci1 Attribute: tree_picker=true **2.** Add CI1 and CI2 to the problem form. **3.** Open a problem and set CI1 to Blackberry. **Note:** This is an out-of-box demo CI with relationships defined. **4.** Click the magnifying glass next to CI2. Expected behavior: A list of downstream and upstream relations allows users to choose a CI. Actual behavior: An empty list of downstream and upstream relations appears.

Problem	Short description	Description	Steps to reproduce
UI Components PRB688006 *KB0623122*	sys_Metadata_delete grows rapidly for sys_filter deletes and causes outages during upgrades	The Activity Stream field will add a 'mobile = true' sys_filter every time it is viewed. Once 11 or more such records have been created for a single user, the code starts to delete them. For users who use the activity stream, this can result in tens of thousands of such records being created and deleted per week. When these records are deleted, they stay in the table as sys_metadata_delete records because these records are tracked in sys_metadata. Also, they have sys_customer_update set to true, so that for versions affected by PRB951491, the node running the database upgrade can be out of memory.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
UI Components PRB935834 *KB0623128*	Defined related list does not display the correct number on the tab if there is a default filter on the list and List v3 is enabled	When multiple related lists are displayed in a tabbed layout on a form, the tab displays the count of records on that list in the format **n**, where n is the number of records in the list. If using List v2, the number n displayed in the tab correctly reflects the number of records displayed in the related list if a filter is applied. So if the related list initially contains five records, and it is filtered so only three records are displayed, the tab shows **3**, not **5**. If List v3 is active and you view the same related list with the filter, the tab shows 5 even though only three records are displayed. This behavior occurs with List v3 active if the List v3 related list setting is not off.	Refer to the listed Known Error KB article for details.
Update Sets PRB1105514	Unable to edit the sys_property glide.update_set.auto_preview as an admin		

Problem	Short description	Description	Steps to reproduce
Visual Task Boards PRB951955	Clicking assignee avatar from A-side automatically promotes to member	In mobile, if a VTB assignee's avatar is clicked from the A-side, the user is promoted to a member of the VTB.	Using an iPad: **1.** Open a VTB board. **2.** Open the A-side by clicking the Member icon. **3.** Click an assignee's avatar. Instead of taking the user to the profile page, the assignee is promoted as a member.
Vulnerability Response PRB1086049	Vulnerability Groups with a filter type of 'Condition' or 'Filter Group' may cause Vulnerability Inserts and Updates to slow down exponentially		**1.** Load a system with Vulnerabilities and Vulnerable Items. **2.** Test the performance of an import of a known size. **3.** Create several Vulnerability Groups with a filter type that is not **Vulnerability**. **4.** Retest the import's performance.
Workflow PRB1103857	Need to add protection against infinite loop when traversing all positive paths during Generate workflow activity	The 'generate tasks activity' does not work as expected in normal and standard workflows. The activity does not work unless a user deleted and adds the activity again.	
Workflow PRB1110528	After an upgrade to Jakarta, the checkout page is blank	In Service Catalog, the checkout page does not work when there is a workflow assigned to the item.	**1.** Navigate to the requested item (sc_req_item) table and make the default value empty for dictionary entry 'Stage'. **2.** Open any catalog item. **3.** Fill out the catalog form. **4.** Click **Try it**. **5.** Submit the item. Expected behavior: It should display the order status with the created REQ and RITM. Actual behavior: It displays a blank page.

Problem	Short description	Description	Steps to reproduce
Workflow PRB957885	Stage field is empty in the list view with domain separation enabled	wf_stage has a domain_master attribute pointing to wf_workflow_version. For different domain users, they will see an empty stage in the activity_stage field on workflow version.	

Other Jakarta Patch 3 information

- **Security Operations**
  - *Splunk integration setup*

    Before performing Splunk integration setup procedures, be sure to define an integration user with the sn_si.integration_user and sn_si.analyst roles on your ServiceNow instance. Additionally, in order to perform imports, you need the import_transformer role to obtain read and write permission to the security tables. The sn_si.integration_user role should be defined with the import_transformer portion of the role.
- **Now Platform**
  - *Enable domain selection menus in UI16*

    To return to your home domain, click the return arrow next to the reference field. Admin users can click the return arrow to return to the global domain.

Fixes included with Jakarta Patch 3

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 2 Hot Fix 6

The Jakarta Patch 2 Hot Fix 6 release contains fixes to these problems.

For Jakarta Patch 2 Hot Fix 6:	Build date: 10-19-2017_1306 Build tag: glide-jakarta-05-03-2017__patch2-hotfix6-10-16-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 2 Hot Fix 6

Problem	Short description	Description
Cloud Management Application PRB1165719	When the glide.ui.i18n_test property is set to true, parameter validation does not occur	This issue can occur when the glide.ui.i18n_test property is set to true, or when the Dutch language is enabled, which causes all provisioning requests to fail.

Fixes included with Jakarta Patch 2 Hot Fix 6

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 2 Hot Fix 5* on page 239
- *Jakarta Patch 2 Hot Fix 4* on page 240
- *Jakarta Patch 2 Hot Fix 3* on page 242
- *Jakarta Patch 2 Hot Fix 2* on page 243
- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1 Hot Fix 3* on page 284
- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 2 Hot Fix 5

The Jakarta Patch 2 Hot Fix 5 release contains fixes to these problems.

For Jakarta Patch 2 Hot Fix 5:	Build date: 10-10-2017_1641 Build tag: glide-jakarta-05-03-2017__patch2-hotfix5-10-09-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 2 Hot Fix 5

Problem	Short description	Description
UI Components PRB1204839	Slowness after an upgrade to Jakarta	List loading for "Cases Opened" or "All Cases" takes up to 10-15 seconds. This issue relates to the list containing a category field, which is set to a choice type field.

Fixes included with Jakarta Patch 2 Hot Fix 5

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 2 Hot Fix 4* on page 240
- *Jakarta Patch 2 Hot Fix 3* on page 242
- *Jakarta Patch 2 Hot Fix 2* on page 243
- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1 Hot Fix 3* on page 284
- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 2 Hot Fix 4

The Jakarta Patch 2 Hot Fix 4 release contains fixes to these problems.

For Jakarta Patch 2 Hot Fix 4:	Build date: 09-21-2017_1310 Build tag: glide-jakarta-05-03-2017__patch2-hotfix4-09-20-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 2 Hot Fix 4

Problem	Short description	Description	Steps to Reproduce
Persistence PRB1182304 *KB0636072*	Chunk copying a large table on an Oracle database can degrade over time (e.g. during the TPP migration on a Jakarta upgrade)	Chunk copying is a mechanism for moving data from one table to another. It is done in operations such as online alters and the TPP migration in Jakarta. On an Oracle database, the speed at which the chunk copying is done can degrade over time, causing these operations to take a long time to complete.	Refer to the listed Known Error KB article for details.
Persistence PRB1179246 *KB0636083*	CMDB TPP migration during a Jakarta upgrade can fail if the migration takes over 24 hours	On an upgrade to Jakarta, the CMDB table will go through a migration called TPP. This can fail if the migration runs for longer than 24 hours as the database connections are destroyed after being marked as obsolete by the connection pool sweeper. The upgrade will get stuck on the fix script that is running the TPP migration, z_z_migrate_cmdb_tpp.xml. This can be observed in the upgrade monitor and will require manual interventions or a rollback of the upgrade.	Refer to the listed Known Error KB article for details.
Persistence PRB1109574	An ALTER that has already taken 24 hours is not finished as expected		

Fixes included with Jakarta Patch 2 Hot Fix 4

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 2 Hot Fix 3* on page 242
- *Jakarta Patch 2 Hot Fix 2* on page 243
- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1 Hot Fix 3* on page 284
- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287

- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 2 Hot Fix 3

The Jakarta Patch 2 Hot Fix 3 release contains fixes to these problems.

For Jakarta Patch 2 Hot Fix 3:	Build date: 09-16-2017_1651 Build tag: glide-jakarta-05-03-2017__patch2-hotfix3-09-13-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 2 Hot Fix 3

Problem	Short description	Description	Steps to Reproduce
UI Action PRB742211 *KB0634638*	Currency code is reverted to '$' when updating a currency field via the client script	After setting the property glide.system.locale to 'en.AU', the currency code for currency fields should be displayed as 'AUD'. However, the currency code is reverted to '$' when updating a currency field via the client script.	**1.** Do one of the following with the *currency setting*: • Log in as a user with a local currency other than USD. • Open a record with a value in a currency other than USD. • Manually set the field value to a currency other than USD. **2.** *Execute a client script* *Execute a client script* that sets the value on a currency field using *g_form.setValue(field_name, value)*. Note that the currency is changed to USD. The session currency, or the currency that is currently set on the field, should be preserved.

Fixes included with Jakarta Patch 2 Hot Fix 3

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 2 Hot Fix 2* on page 243
- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 2 Hot Fix 2

The Jakarta Patch 2 Hot Fix 2 release contains fixes to these problems.

For Jakarta Patch 2 Hot Fix 2:	Build date: 09-07-2017_0921 Build tag: glide-jakarta-05-03-2017__patch2-hotfix2-09-01-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 2 Hot Fix 2

Problem	Short description	Description
Service Mapping PRB646607	Two entry points and two clusters can result in unwanted connections	Unwanted connections occur when a business service has two entry points that point to two different clusters which have the same information).

Fixes included with Jakarta Patch 2 Hot Fix 2

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 2 Hot Fix 1* on page 244
- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1 Hot Fix 3* on page 284
- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287

- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 2 Hot Fix 1

The Jakarta Patch 2 Hot Fix 1 release contains fixes to these problems.

For Jakarta Patch 2 Hot Fix 1:	Build date: 08-29-2017_1615 Build tag: glide-jakarta-05-03-2017__patch2-hotfix1-08-29-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 2 Hot Fix 1

Problem	Short description	Description
Import / Export PRB1032318 *KB0639046*	Loading data using Oracle JDBC data source via MID Server fails with NPE while querying table that contains column of type timestamp with null values	Loading data from Oracle JDBC data source via MID Server fails with null pointer exception while querying table that contains column of type "timestamp" with null values.

Fixes included with Jakarta Patch 2 Hot Fix 1

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 2* on page 244
- *Jakarta Patch 1 Hot Fix 3* on page 284
- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 2

The Jakarta Patch 2 release contains fixes to these problems.

Jakarta Patch 2 was released on August 18, 2017.	Build date: 08-11-2017_0919

Build tag: glide-jakarta-05-03-2017__patch2-07-25-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta Patch 2 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta Patch 2, refer to *KB0634632*.

Notable Fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
IT Service Management PRB1091777 *KB0623761*	gs.calDateDiff results in an out of memory error when dates cross DST change days	When dates cross a Daylight Saving Time change, gs.calDateDiff results in an out of memory error. gs.calDateDiff is used in the 'mark_closed' and 'mark_resolved' business rules, which are in the Incident module and Incident AutoClose scheduled job.	Refer to the listed Known Error KB article for details.
Workflow PRB1084321 *KB0634377*	Window hangs because of workflow sequence generation when a version still contains pipes "|" in the sequence fields	A Workflow version that still contains the pipes AND are using Legacy or Service Catalog renderers the old behavior is seen on very complex workflows.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Transaction and Session Management PRB1056914	Unclaimed transaction, whose underlying request gets recycled while waiting in queue, is left in the active transaction list	When an instance is running a large UI activity with presence enabled, the following error appears in the localhost logs: 'Cancelling unclaimed (waiting) transaction'. This transaction will stay in the Active Transactions list until restart.	
Express to Enterprise PRB910543	Some ACLs remain after an Express to Enterprise conversion pre-Istanbul	After an Express to Enterprise conversion on a Helsinki, Geneva, or Fuji instance, some ACLs remain that prevent Enterprise admins from fully accessing script fields and other tables/fields.	
Platform Performance PRB1058404 *KB0623334*	Query hash values mismatch after upgrading	After upgrading to Helsinki or later, customers may experience query hints not being applied (that had previously been added to improve performance of specific queries). Queries that used to run fast will now be significantly slower.	Refer to the listed Known Error KB article for details.
Service Catalog Widgets: Service Portal PRB912031 *KB0622029*	Date field submitted through an Order Guide on Service Portal reverts back to the current date	A date field whose value is a future date that is submitted through an Order Guide on Service Portal reverts back to the current date if the date format is set to anything else other than yyyy-MM-dd.	

All Other Fixes

Problem	Affected plugins	Short description	Description	Steps to reproduce
Assessments PRB1084672	Service Portal Surveys	Unexpected white space on Service Portal surveys		1. Create a survey. 2. Assign the survey to a user. 3. On the Service Portal, take the survey. The survey title has extra white space.
Asset Management PRB1058467 *KB0634595*	Integration - Microsoft SCCM 2007, Integration - Microsoft SCCM 2012, Integration - Microsoft SCCM 2012 v2	When Discovery and SCCM are operating together, the SCCM import creates duplicate Discovery model records	If Discovery and SCCM are run in parallel, duplicate discovery model records are created by the SCCM import, preventing software installations from being picked up by CSD reclamation flows. When a user submits a reclamation request for a software installation, the request never recognizes the installation. The request is unable to match it due to the duplicate discovery model. This issue is caused by a redundant SCCM transform map which populates a value on the software installation table that is already populated by a business rule running on that table.	Refer to the listed Known Error KB article for details.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Authentication PRB1057025		Clicking on Password Reset URL in reset emails gives an error	Clicking the Password Reset URL in reset emails gives an error: "Password Reset Error Unauthorized access." This issue occurs when 'sysparm_token' contains a space (special character).	1. Navigate to the Password Reset Default Self Service. 2. Type in username abel.tuter. 3. Type in abel.tuter again to verify. 4. Click **Done**. 5. Navigate to **System Logs** > **Emails**. 6. Open the URL in the Password Reset email. Note an error shows up: Password Reset Error Unauthorized access.
Authentication PRB1094116 *KB0623885*	Integration - Multiple Provider Single Sign-On Enhanced UI	Property glide.authenticate.sso.redirect.idp is overwritten to empty upon upgrade to Jakarta	When an instance is upgraded to Jakarta, the property glide.authenticate.sso.redirect.idp is incorrectly overwritten to empty. In addition, Express instances should have the property created by the system if it is not already defined.	Refer to the listed Known Error KB article for details.
Cloud Management Application PRB1036000		Azure NICs are not removed from the console when a provisioned instance is deleted	When a provisioned Virtual Machine is deleted, network interface cards (NICs) are not deleted from the cloud or the CMDB.	1. Create a VM on Azure. 2. Once the VM is active, navigate to the cmdb_ci_vm_instance table. 3. Verify the NIC's endpoint relationship. The NIC status should be installed. 4. Navigate back to the user portal and terminate the provisioned instance on Azure. 5. Navigate back to the cmdb_ci_vm_instance table. The NIC endpoint relationship is not updated, and the NIC is not deleted from the CMDB.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1056913		After provisioning a Virtual Machine, the user does not know which credentials to use to log in to the VM	On the portal, end users are not told which user they should use to log in to their newly provisioned resources. The end user is able to download their own private key from the portal, but there is no user associated to the key.	1. As a service user, download a key from the user portal. 2. Provision a Linux VM using that key. 3. Try to log into the VM with that key via SSH. You need a username that you do not have.
Cloud Management Application PRB1057050		Issues with Cloud API import feature	Cloud API scripts can be exported, but the import functionality can result in errors in some cases.	
Cloud Management Application PRB1066998		Cloud match fails when resource operation attributes differ from CMP convention	Cloud match fails when resource operation attributes differ from the CMP convention (for example, Network, Subnet ID). This issue occurs when resource operations are created through an external source, such as the AWS Service Catalog.	
Cloud Management Application PRB1074523		Cloud User portal: Users receive errors when clicking on Cloud Network Resource	When a user navigates to the Cloud Network Resource on the User Portal, an error appears in the UI.	1. Navigate to the Cloud User Portal. 2. Navigate to **Resources** > **Cloud Network Resource**. Users receive an error: Server JavaScript error Cannot find function getLabel in object null.
Cloud Management Application PRB1076722		Blueprint functionality does not work when the resource blocks inside the blueprint contain special characters	Blueprints can break when a resource block is put into the blueprint. This issue occurs when a resource block is created with ARM/CFT templates, and the resource block contains special characters or starts with numbers.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1085641		MID Server capability issue	If a MID Server is in AWS, and another MID Server is in vSphere, both MID Servers should be up and validated. However, if a CMP request is made to the vSphere MID Server, the request is picked up by the AWS MID Server. Requests should be routed to the appropriate MID Server.	
Cloud Management Application PRB1085643		Group view on resources that are owned by the member of the group	On the cloud user portal, users should be able to see the resources of groups they belong to, in addition to resources they own.	**1.** Activate the Cloud Management plugin. **2.** Navigate to Cloud Management. **3.** Create a Group. **4.** Associate multiple users to a group (e.g. User A and User B). **5.** Log in as User A and User B. **6.** Set up the data required to order a stack. **7.** Log in as User A and User B, and order some stacks. **8.** Navigate to the user portal to view resources. Users A and B are unable to view and manage the resources of the group they belong to.
Cloud Management Application PRB1086937		Windows VM login issue	After provisioning a Windows VM, the user needs to be able to log in to the VM.	**1.** Complete an AWS discovery. **2.** Create a VM on an AWS blueprint. **3.** Go to the order form and order the blueprint. Once the VM is provisioned successfully, the user cannot log in to it.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Cloud Management Application PRB1090382		When provisioning fails, the VM is not cleaned up	When a failed provisioning attempt leaves a stack in AWS in the 'Rolled back' state, and the stack is deleted, the failed stack still remains in the AWS console.	**1.** Discover a AWS cloud account. **2.** Create a VM attack Volume Blueprint on AWS. **3.** Order the blueprint where VM passes and the volume fails. When the volume fails, the VM is not cleaned up. It still remains in the AWS console.
Cloud Management Application PRB1091824		When provisioning a VM on vSphere, users are unable to select the VNET or vSphere folder	When provisioning a basic VM on vSphere, users should be able to select Network and Folder by default	**1.** Navigate to the User portal. **2.** Click **Launch a Stack**. **3.** Click the vSphere catalog that was already created. **4.** In the order form, click **Provision**. The values for Network and VM folder are not reloaded. By default, the Network and VM folder parameters should get reloaded successfully.
Cloud Management Application PRB1091852		AWS Ohio, London, Frankfurt regions cannot support CloudFormation template	Due to an underlying error with S3 bucket handling, users are unable to launch CloudFormation template on these three AWS regions.	Prerequisites • Set up an AWS Service account. • Set up cloud accounts for the regions eu-west-2, eu-central-1, us-east-2. • Discovery should be complete. Steps to reproduce **1.** Navigate to cloud templates. **2.** Import the **CFT.Generate blueprint** catalog item and **publish** it. **3.** Navigate to the user portal and order the catalog item on the regions **eu-west-2**, **eu-central-1**, and **us-east-2**. CloudFormation does not work in eu-west-2, eu-central-1, and us-east-2.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Community PRB1018919		'guest' permission does not work as expected for public content	If the 'guest' record is deleted with a script, the 'guest user' experience while browsing Community content no longer works as expected. Guest users are unable to see forums, topics, questions, and answers.	
Community PRB1027269		Accessible options on 'CommunityCacheUtilSNC' and 'CommunityGlobalUtilSNC' are set to global which is not a valid option		
Community PRB1034428		Migration script should not create forums for which no SQA content exists	When data is migrated from Social Q&A to Community, a Community forum should not be created if no question exists in the corresponding knowledge base.	**1.** Log in to an instance with the Community plugin activated. **2.** Go to the fix script **Migrate Social QA to Community** and activate it. By default, it is in the deactivated state. **3.** Load the demo data. **4.** Click **Run Fix script**. A confirmation popup will appear. **5.** Click **Proceed in Background**. **6.** Check the progress workers, and wait until the script finishes. A forum is being created for each knowledge base, regardless of the existence of Social Q&A questions in that particular KB. If no Social Q&A questions exist in that particular KB, it should not create corresponding a corresponding forum.
Community PRB1076124	Subscriptions and Activity Feed Framework	'View Subscriptions' times out for non-Community admin users	When using 'View Subscriptions', non-Community admin users are experiencing performance issues. After 5 minutes, the process times out.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Community PRB1085548		A forum's list of topics is empty, and forum admin cannot associate a new topic with a forum	End users cannot see the topics when a forum admin updates a forum. In addition, the forum admin cannot associate new topics created by the community admin to the forum itself.	**1.** Log in as a community admin. **2.** Open an existing forum and name it **F1**. **3.** Associate F1 with an existing topic, e.g. **T1**. **4.** Update F1's description and **save** the record. **5.** Log in as an end user and navigate to forum **F1**. **6.** On the forum landing page for F1, look at the topics on the right side. The topic T1 should be listed, but it is not there. **7.** Log in as a community admin. **8.** Create two new topics in the system. **9.** Log out and log back in as a forum admin for forum **F1**. **10.** Navigate to the forum **F1** and navigate to **Topics** > **New**. **11.** Try to select the topics you created in step 2. The forum admin is not able to see the topics.
Condition Builder PRB1041510	Lists v2, Tablet Device Support - iPad with iOS 6+, NG shared components	Breadcrumbs and conditions constructed from existing query strings display the wrong options, and some options are missing		

Problem	Affected plugins	Short description	Description	Steps to reproduce
Configuration Management Database (CMDB) PRB1106622		CMDB dashboard widgets do not display the data	The data for CMDB dashboard widgets is not displaying.	1. Navigate to **CMDB Dashboard** > **CMDB View**. 2. Look at the different widgets for CMDB Health. The data for the widgets is not populated.
Configuration Management Database (CMDB) PRB743045 *KB0622621*	Service Modeling	"Model too big" exception in Service Model on svc_model_obj_element is breaking the whole service computation	The error should appear without causing computation to fail.	
Core Platform PRB1096460		After upgrading to Jakarta, some users are seeing the error "Illegal access to method getURLString in class com.glide.sys.Transaction"		
Core Platform PRB713495		A report exported to PDF that includes the 'watch list contains' filter displays the sys_id of the watch list members instead of the user name	When a report includes the 'watch list contains' filter and it is exported to PDF, the sys_id of watch list members is displayed instead of the user name.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Discovery PRB1073258		Dirty Flag - Merge operation (some patterns contains invalid merge steps)	While using the pattern designer to view the steps of some patterns, occasionally a step is incorrectly marked as changed, and a 'need to save' UI indication appears even though no changes were made. In some cases, the false-positive save can also cause the removal of some elements from the pattern being saved.	
Discovery PRB1100652		Tomcat process classification is turned off by default	The default setting for Tomcat process classification should be 'true'.	**1.** Activate Discovery. **2.** Navigate to **CI Classification** > **Processes**. The process classification for Tomcat is 'false' instead of 'true'.
Discovery PRB752896 *KB0622861*		'The RPC server is unavailable' error when discovering MSSQL	Users receive the error 'The RPC server is unavailable' when discovering MSSQL.	Refer to the listed Known Error KB article for details.
Discovery PRB951240 *KB0622631*		An IP network specified with a subnet mask of /32 will prevent a Discovery schedule from starting		**1.** Create a Discovery Schedule. **2.** Add an IP Network with an IP **159.202.255.170/32**. **3.** Click **Discover Now**.
Discovery PRB958217		vCenter event creates duplicate VM instances	Multiple reconfigure events can trigger two discoveries on the same VM, which results in duplicate VM instance records.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Domain Support PRB1059048 *KB0623414*		When users are assigned to 200 or more groups, the instance can become slow	domainCache can be undersized for instances that have users assigned to 200 groups or more. This can cause slow performance across the instance.	**1.** Create a user. **2.** Assigned 200 or more groups to the user. **3.** Open a form. Notice the form will take a long time because thousands of queries are sent to the database regarding the domain.
Email PRB960093		Domain separation - When using the 'send email' button feature from within an incident, emails are not received correctly	In domain-separated instances, the incident 'send email' button results in the error "User did not press the Send button in Email Client".	**1.** Create two domains (Tech and Customer) which are in different branches in TOP. **2.** Associate an itil user to the **Tech** domain, and give them visibility to the **Customer** domain. **3.** Create a user in the **Customer** domain. **4.** While impersonating this user, create an incident via self-service. **5.** Impersonate the itil user, and open the incident you created in step 4. **6.** Using the **Email** option in the form, click **Send** to send an email. The sys_email record reports "User did not press the Send button in Email Client".
Event Management PRB1057120		OOM occurs in ImpactStatusUpdater.loadAlertGroupsAndFilteredBSs because AlertHistory had no equals or hash functions	If several business services (BS) change in impact calculation, it loads the AlertHistory records for each BS. But if an alert appears in more then 1 business service, it will load it twice.	
Event Management PRB1080896		Fix alert correlation does not work as expected in domain-separated environments	If an alert's domain is a child of the alert correlation rule's domain, the rule is not visible for the alert.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Express PRB1074525		Express admins starting from Helsinki and below will see blank ACLs when converting to Enterprise on Istanbul	Upon upgrading to Istanbul, some Express admins cannot see ACL columns.	
Financial Management PRB1061774		Budget actuals exclude the last day of the month for periods in GL staged data		**1.** Navigate to **Financial Planning** > **Console**. **2.** In the new window, scroll to **Fiscal Period** and select **Months**. **3.** Select **Fiscal Units: Quarter** and change its value to **FY17: Q1**. Take note of this value. **4.** Select **Fiscal Units: Months** and change its value to **FY17: M03**. When adding the total Monthly values, they should be same as the total value for Q1, but they are not. For example, a user changes all GL Staged data records with posting date of 2017-04-30 to 2017-04-29. If a user changes these back to 2017-04-30 and regenerates the actuals in the Budget Console, these costs are omitted from the Monthly total.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Financial Management PRB1072750	Financial Management	Budget Console: Budget Amount column under 'Budget Plans' only shows 'Operational Budgeted Amount' and does not include the 'Capital Budgeted Amount'	Under Financial Planning > Budget Planning > Console > Plans, the Budget Amount column under Budget Plans only shows 'Operational Budgeted Amount'. In addition, it does not include the 'Capital Budgeted Amount'.	**1.** Activate the Financial Management plugin (com.snc.financial_management). **2.** Navigate to **Financial Planning** > **Budget Planning** > **Console**. **3.** Click **Plans** and open any plan. The 'Budget Amount' column only shows 'Operational Budgeted Amount', and it does not include the 'Capital Budgeted Amount'.
Financial Management PRB1074362	Performance Analytics - Content Pack - Financial Management	New dashboards are not visible to users with Performance Analytics with the Financial Management plugin		
Financial Management PRB1112746		Cost allocation data is incorrect in Jakarta	The cost allocation engine does not produce all general ledger (GL) expense lines.	**1.** Navigate to a Cost Model definition. **2.** Add segments to GL expense lines. **3.** Allocate a few split buckets to the segment. **4.** Trigger the allocation engine, which generates the GL expense lines for the selected segments. The allocation engine does not generate all allocation lines.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Foundation PRB725136	Visual Task Boards, Checklist, Service Management Core	When no user ID is given, all checklist templates are returned (instead of only the current user's templates)		**1.** Enable the Checklists plugin. **2.** On an Incident form, configure the form design and add the **Checklist** formatter. **3.** On the form, create a checklist. **4.** Then, click the arrow to the right of the Checklist and select **Save as Template**. **5.** Navigate to **checklist_template.list**. You are able to assign a Group to a template, but it does not work because all users (in any group) can still apply the template. **Note:** A checklist template is different from a regular form template. To apply it, you need to click the arrow to the right of the 'Checklist' inside the incident form.
Governance, Risk and Compliance PRB956734	Service Management Core	Customized record on knowledge base table is overwritten by an upgrade due to incorrect update name	In the GRC plugin, one of the files is incorrectly named 'kb_knowledge_base.xml', which causes customized knowledge base records to get overwritten during an upgrade. The file should be named 'kb_knowledge_base_3e15d7209f203100 2920f7f8677fcf09.xml' instead.	
Human Resources Service Management PRB1015463	Human Resources Scoped App: Core	User field in HR Criteria > HR Conditions is not being respected		

Problem	Affected plugins	Short description	Description	Steps to reproduce
Human Resources Service Management PRB1017607	Human Resources Scoped App: Lifecycle Events, Human Resources Scoped App: Core	Undefined variable "{targetUserID}" breaks evaluating certain HR Criteria on Bulk Case Creation		1. Install the 'Human Resources Scoped: Core' plugin. 2. Navigate to **HR Case Management** > **Create Bulk Cases**. 3. Choose **Filter by HR Criteria**. 4. Choose **All non-US users**. Notice no results are shown. 5. Navigate to user Abel Tuter and confirm his location is not in the USA.
Knowledge Management PRB1016345	Knowledge Advanced, Subscriptions and Activity Feed Framework	Users subscribed to a knowledge base are not receiving email notifications when article is either created or revised	When a user is subscribed to a knowledge base and an article is created or revised, the user does not receive email notifications. However, users are receiving notifications as expected when a comment is added to an article.	1. Log in as Abel Tuter to an instance with knowledge bases. 2. Navigate to **Knowledge Bases**. 3. **Subscribe** to the **Knowledge** knowledge base. 4. Log in as admin. 5. Publish a new article in the **Knowledge** KB. Abel Tuter does not receive an email notification.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Knowledge Management PRB1101506		kb_category page is blank in Jakarta	The category page is blank when users create a new category from a related list in the Knowledge Base form layout.	**1.** Log in to an instance as admin. **2.** Navigate to **Knowledge** > **Knowledge Base**. **3.** Click **New**. **4.** Enter a short description, description, and set the owner to an end user. **5.** Click **Save**. **6.** Log in as the end user. **7.** Navigate to **Knowledge** > **Knowledge Base**. **8.** Click the knowledge base you created earlier. **9.** Under the **Knowledge categories** related list, click **New**. **10.** Verify the label, value, parent ID, and active fields. No fields are present except the submit button.
Lists PRB717585	NG shared components	List v3 lists all records against a reference field when a value is entered and the reference icon is clicked	When a value has been entered into a reference field and the magnifying glass is clicked, instead of showing records that starts with or contains that entered text, it is showing all records instead. For example, on **cmdb_ci** field, if the text 'computer' is entered and the magnifying glass is clicked, instead of returning records that start with or contains 'computer', it lists all records. This only occurs with List v3.	**1.** Log into an instance with List v3 activated. **2.** Open an incident record where the **cmdb_ci** field is present on the form. **3.** Type in "hp" on the **cmdb_ci** field and click the magnifying glass. It returns all records. **4.** Deactivate List v3 this time and repeat steps 2-3. It only returns records where name starts with "hp".

Problem	Affected plugins	Short description	Description	Steps to reproduce
Lists PRB933539	List v3 Components	If the list has list bottom button UI actions, users cannot see the list pagination controls	If List v3 is active for displaying a list, and there is a List bottom button UI action, it will display the button on the left of the footer at the bottom of the list. However, the list pagination controls are not displayed on the right.	On a Istanbul or Helsinki instance: **Note:** For Helsinki, users might need to deactivate one of the system UI actions for 'Moving to Application' or the catalog item list will display as List v2, not List v3. 1. Activate List v3, and ensure it is active and working for displaying the lists. 2. Navigate to **Service Catalog** > **Maintain Items**. Note that activate and deactivate list bottom button UI actions displayed on the bottom left side of the footer, but the list pagination does not display on the right side of the footer. 3. Click **Configure** > **UI Actions**. 4. Disable the activate and deactivate list bottom buttons (uncheck the box). Users return to the catalog items list. Note that the list pagination controls appear on the right side of footer as expected.
Password Reset Application PRB956033		activate_desktop_plugin.js can cause out of memory issues because the collision detector is restarted		1. Activate the com.glideapp.password_reset.addon.orchestrati plugin. 2. Upgrade the instance. The CollisionDetector is unnecessarily restarted before the next plugin is upgraded.
Performance Analytics PRB1041106		PA content packs do not pre-fill the mandatory fields for forecast	When the indicator edit form is opened, the user is asked to fill out missing default values. This can be confusing and inconvenient.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Performance Statistics and Graphs PRB1095450 *KB0623824*		Performance Analytics dashboard is empty after an upgrade to Jakarta	Performance Analytic dashboards appear as empty. The reports still exist, but the association with the dashboards need to be reestablished. In addition, the ServiceNow Performance homepage does not render.	Refer to the listed Known Error KB article for details.
Persistence PRB1076315		Clotho JS API is missing method to return data to get time stamp of data points		
Persistence PRB1092392		Update sets or an upgrade have the potential to make CMDB data inaccessible	The CMDB code and path can be corrupted, which makes data inaccessible.	
Persistence PRB1096046 *KB0634597*		A field created on a base table is not available to an extended table after applying an update set	A column created on a base table (such as cmdb) is not available to a child table (such as cmdb_ci_win_server) after transferring that column to another instance using an update set. However, the column is still available to the child table on the source instance.	Refer to the listed Known Error KB article for details.
Persistence PRB1097966		Following TPP migration, users with complicated CMDB hierarchies may see invalid SQL in CMDB queries		

Problem	Affected plugins	Short description	Description	Steps to reproduce
Persistence PRB1110419		Users may see duplicate choices for the class field	Choice lists contain the same 'sys_class_name' field label for both target and root tables.	
Persistence PRB1111740		GlideRecordClassSwitcher not working for TPP tables (CMDB in Jakarta)	Class Switching within the CMDB does not work as expected in Jakarta. Users are only able to change to a child of the current class, but they should be able to change to any class in the tree.	
Persistence PRB741410		Before Query business rule works differently when using Glide aggregate count	Under certain conditions, single score reports can display blank or incorrect data. If a Before Query business rule is configured on a table with one or more addOrCondition filter conditions, a single score report on that table generates an invalid SQL, and the OR condition is not in the right place. As a result, the single score reports or widgets display incorrect data. When the user drills down on the report, a list loads with the correct results.	
Persistence PRB957261		'fix_rp_amb_processor.xml' introduces multiple issues by reinitializing the collision detector	Users may notice the following symptoms: • The fix script removes the 'saved' state in the upgrade optimizer. • Fix scripts execute slowly. • The instance experiences memory issues.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Project Management PRB953538	Project Management	Members not loading on Project Status Portal		1. Navigate to **Project Management** > **Project Status Portal**. 2. Click **Show users** > **Add members**. 3. Type the valid name of a user. The user's name does not show in the list of suggestions, and the list indefinitely shows "Searching."
Reporting PRB1070036	Responsive Dashboards	Exporting a PA dashboard to PDF with a breakdown source with the 'act as filter' set results in "java.net.URISyntaxException: Illegal character in query"	When a PA dashboard has a breakdown source and the 'Act as Filter' setting, exporting that dashboard to PDF fails with the error: "An unexpected error has occurred. Please see the instance logs for more details"	Prerequisites • System property glide.cms.enable.responsive_grid_layout is set to **true** • The WebKit HTML to PDF plugin is activated Steps to reproduce 1. Impersonate Fred Luddy. 2. Navigate to **Performance Analytics** > **Dashboards**. 3. Create a new dashboard named **Test**. 4. Navigate to **pa_dashboards.list**. 5. Open the record for the **Test** dashboard. 6. Under **Breakdown Source**, add the **Act as filter** field. 7. Change the **Breakdown Source** to **Incident.State**. 8. Double-click **Act as Filter** and select **Incident Priority - Single**. 9. Navigate to **Performance Analytics** > **Dashboards**. 10. Pick a state value from the filter shown on the page (e.g. **On Hold**). 11. Export the Dashboard to PDF. An error appears: "An unexpected error has occurred. Please see the instance logs for more details".

Problem	Affected plugins	Short description	Description	Steps to reproduce
Security Incident Response PRB1065904	Security Incident Response	When a report is scheduled on the security incident table, users with sn_si_admin and admin roles are not able to view the security incidents fields	When a report is scheduled on table sn_si_incident, the attachment of the report does not show all records or all fields. However, users can see all records and value when only the report is run or from the list view.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Security Incident Response PRB1072373	Vulnerability Response	Vulnerabilities created with SAM NVD causing performance problems	When SAM NVD is installed, it is enabled by default. SAM NVD can cause performance issues because it will create Vulnerable Items whenever new software is discovered, but users may not want this behavior or want to rely on Qualys instead. The fix for this PRB allows users to disable or limit the creation of Vulnerability Items to specific CIs and/or Vulnerability Entries (controlled by filters). To access this setting, navigate to **Vulnerability** > **Administration** > **Configure SAM NVD**, and select the **Detect vulnerabilities using SAM data** checkbox. • For users who have already installed the Vulnerability Response plugin, the setting is 'on' and the behavior is not changed. To disable SAM NVD, uncheck the setting. • For users who are installing the plugin for the first time, the setting is 'off' by default.	**1.** Enable the Vulnerability plugin with demo data in order to populate the NVD. **2.** Enable the Software Asset Management plugin. **3.** Create some software assets with vulnerabilities. The instance experiences performance issues.
Service Analytics PRB1090020		In CMDB grouping, high number of relationships causes OOM exception	When CMDB relationships are used for grouping alerts, and the alert CI has a very high number of defined relationships, users may receive out of memory errors.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog PRB1040411 *KB0635037*		Automated Testing Framework: Users are unable to set the values to the variables in Record Producer and Catalog Items	After defining a 'Set Variable Values' type of Test Step, users cannot add more variables to be set. This works as expected when defining for the first time, but users are unable to update the variables.	**1.** Navigate to **Automated Test Frameworks** > **Tests** > **New** to create a new test. **2.** Provide a name and description. **3.** Click **Save**. **4.** Go to the **Test steps** related list, and click **New** to create one step. **5.** On the popup, select the **Service Catalog** and click the **Open Catalog Item** form to open the item. **6.** Click **Sales Laptop** and **save**. **7.** Go to the **Test steps** related list, and click **New** to create another step. **8.** Select the **Set Variable** values option and click **Submit**. **9.** Open the step you created in step 7 and select **Additional Software requirements**. A textbox does not appear, and the user cannot enter values for the variable. **10.** Select a second variable. Expected behavior: After selecting one variable value, a select box should automatically display to select a value for the other variable. Actual behavior: The select boxes are not shown to select the second variable value. This issue also occurs in record producers.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog PRB1080317		After upgrading to Jakarta, all Catalog Items are throwing an error "Not Authorized"	The UI macro 'catalog_item_grid' no longer works in Jakarta.	In a Jakarta instance: **1.** Navigate to the CMS page **Order Things** (/nav_to.do?uri=content_page.do?sys_id=57f67b720a0a0bdd00f5f11df403c958). **2.** Click **Edit Page** > **Add content**. **3.** Select **Content Blocks - Catalog Item Grid View** and add it to the right column of the page. **4.** Click **Preview**. **5.** Click **Apple iPhone 5**. An error appears: "You are either not authorized or the cart item is invalid".

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog PRB1082072 *KB0635657*		Catalog UI policies and onChange catalog client scripts are not fired on read-only fields	When a read-only variable's value is changed dynamically, catalog UI policies and onChange catalog client scripts associated with any read-only field are not triggered. This issue occurs in record producers, catalog items, and order guides. It does not occur on Service Portal.	In a Jakarta instance: **1.** Set up the following: • Catalog item: **Test PRB1082072** • Variables: **test_dropdown_1** (select box), **test_text_1** (single line text), **test_label_1** (label) • UI policy: **Set Test Text 1 Read Only**. • UI policy: **Reveal Label 1**. This makes Test Label 1 visible when Test Text 1 has 'option2' as the value. • Catalog client script: **Set test text dynamically**. This will set the value of Test Text 1 when Test Dropdown 1 changes. **2.** Navigate to **Maintain Items** and search for the catalog item **Test PRB1082072**. **3.** Open the catalog item, and click **Try it**. **4.** Change the **Test Dropdown 1** to **Option2**. Expected behavior: A label called 'Test Label 1' will appear under the 'Test Text 1' variable. Actual behavior: 'Test Label 1' does not appear, which indicates that the catalog UI policy 'Reveal Label 1' is not being triggered.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog PRB1090985		UI policies run on target records even when they are configured to not run on target records	Existing UI policies are applied on the target record of the record producer even though the 'Applies on the Target Record' option is disabled in UI policy definition	**1.** Ensure that the incident form is configured to display incident variable editors. **2.** Create a record producer on the incident table. **3.** Create a variable for the record producer: • Name: single • Type: single line text **4.** Create a UI policy on the record producer where: if the user enters the value in single line text as "test", the field becomes read-only. **5.** Configure these settings: • Select **Applies on Catalog Item view** • Deselect **Applies on Target record** **6.** **Save** the changes and try the record producer. **7.** Enter the value as "test" in the record producer. **8.** Click **Submit**. Expected behavior: When the user enters "test", the single line text should be marked as read-only. Upon clicking **Submit**, the page should redirect to the incident form, and under the incident form variable editor, the field should not be marked as read-only. Actual behavior: Even though the "Applies on Target Record" option is disabled in the UI policy definition, the conditions are applied on the target record.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog PRB652351 *KB0610420*		RITM records are intermittently created without their variables	Variables are either being deleted or (more likely) are not even being created for some RITM records.	This issue is not reproducible on demand. However, based on the final outcome, the steps to reproduce are: **1.** Order a Catalog Item. **2.** Check whether variables are created. Note that sometimes the RITM is created without the variables.
Service Catalog PRB946137		On the RITM page, if a Catalog item has two or more reference variables, and one of them has a "Write Role" associated to it, then all the following reference variables will be read-only		**1.** Log into an instance. **2.** Navigate to **Maintain items**, select any item, and add two reference variables. **3.** Assign a write role to one of the variables. **4.** Make sure to associate an order to the variables so that the variable with the write role associated to it runs first. **5.** Order a Catalog item and navigate directly to the RITM. Notice that all variables are now read-only.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog Widgets: Service Portal PRB686965	Service Portal - Core	Autocomplete in Service Portal catalog items reference picker does not behave the same as platform reference picker	In a reference element field on a Service Catalog item, several variable attributes can, optionally, be defined on the variable. This enables Service Catalog administrators to control: • The fields that display in the autocomplete dropdown for a reference element • What fields to search • The order in which the fields appear These variables should be supported by Service Portal. For more information, see *Auto-complete for reference fields*.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog Widgets: Service Portal PRB721238 *KB0621064*		In Service Portal, the Variable Editor widget does not work with sc_task records and does not load client scripts properly	In Service Portal, the Variable Editor widget fails when a catalog task is added to the portal. Also, variables do not display on the form.	**1.** Navigate to **Service Catalog** > **Open Records** > **Tasks**. **2.** Open any catalog task that has variables. For more information, see *Add catalog item variables to a task*. Note that the variable formatter is displayed. **3.** Navigate to **Service Portal** > **Pages**. **4.** In the **ID** column, find and open the record for the **index** page. **5.** In **Related Links**, click **Open in Designer**. **6.** In the **Widgets** list on the left, select the **Unordered List** widget. **7.** Drag the widget and drop it in any location on the page. **8.** Click the edit icon to edit the widget. Use the following values: • **Table**: Catalog Task [sc_task] • **Display field**: Short description • **Link to this page**: Form **9.** Click **Save**. **10.** Navigate to Service Portal. **11.** Select the task from step 2. Note that the SP-Variable Editor widget fails and variables are not shown on the form. If you configure the form and remove the Variable editor, the error is not displayed.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog Widgets: Service Portal PRB727410		Catalog UI policy does not work on requested items viewed on the form page of the Service Portal		**1.** Create a catalog item. **2.** Create a variable. **3.** Create a catalog UI policy for the catalog item: • Select **Applies on Catalog tasks** • Select **Applies on Requested Items** • Set **Run scripts in UI Type** to **Both** **4.** Create a UI policy action for the variable with the following: **a.** Read Only: true **b.** Mandatory: Leave as is **c.** Visible: Leave as is **5.** Using the Self-Service view, access the catalog item. Take note of the requested item that was created. **6.** Open the requested item created from the Service portal using the form page: http://instance/sp?id=form&table=sc_req_item&sys_id=&<sys id of the requested item> The variable is not set to read-only. The catalog UI policy does not take effect on the form page of the Service Portal. This works as expected when the **Applies on a catalog item view** option is selected. However, selecting this option causes the Catalog UI Policy to take effect when user the accesses the catalog item to order.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog Widgets: Service Portal PRB751778		An odd number of reference variable fields in container in form causes fields to shift from right to left and vice versa	An odd number of reference variable fields in a container of type '2 columns wide, alternating sides' causes the odd number field to jump from left to right and right to left after a value is selected in the other reference fields. An even number of variables in a container of type '2 columns Wide, one side then other' causes one side to render more variables than the other.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Catalog Widgets: Service Portal PRB934309	Service Portal - Core	Date/Time variable does not show the correct value in the Variable Editor widget	The Date/Time variable does not show the correct value if the record is accessed through the Service Portal after submission.	**1.** Activate the Service Portal plugin. **2.** As a user with elevated privileges, navigate to **Settings** and change the time zone to **US/Central**. **3.** Navigate to **Service Catalog** > **Maintain Items** > **Sample item**. **4.** Activate the catalog item. **5.** Click **Try it**. Notice the field 'Date/Time' shows the current time in US/Central. **6.** Set the value in this field and submit the request. The RITM Variable editor shows the same time you set before submitting the record for the Date/ Time variable. **7.** Access the same record in Service Portal (/sp? id=form&table=sc_req_item&sys_id= 41bdcafbdb423200f2fff71fbf961948&view=sp). Make sure that the page ID is 'form'. The variable editor Date/Time field should show the same time in the Service Portal as seen in RITM record outside of the Service Portal. Instead, the variable value shows a time that is five hours ahead than expected. The issue is not related to the Date/ Time picker but with how the value shows up after submitting for the Date/ Time variable.
Service Portal PRB1015177	Service Portal Social QA	'Ask a question' submission does not provide feedback	When a user submits a Social Q&A question, the page appears without notifying the user that any change has occurred. This issue occurs when using Chrome/VoiceOver or Firefox/NVDA.	When you submit a social Q&A question, the page appears without notifying the user that any change has occurred. This can be seen using either Chrome/VoiceOver or Firefox/ NVDA.
Service Portal PRB1015268	Service Portal - Core	The Requests menu is not presented as a menu	Instead of being presented as a link, the Requests menu should be a collapsed menu.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Portal PRB1061820	Service Portal User Criteria Support	sp_widget, sp_page, and sp_search_source forms should change based on glide.service_portal.user_criteria_enabled system property	When user criteria is set to 'true', related lists should be shown and the roles field should be hidden. The opposite should occur when user criteria is set to 'false'.	**1.** Install the Service Portal User Criteria Support plugin. **2.** Navigate to the sp_widget/ sp_page/sp_search_source list. **3.** Select a record to navigate to the respective form. Note that roles and user criteria lists are always displayed. When the glide.service_portal.user_criteria_enabled system property is true, user criteria related lists should be visible and roles should be hidden.
Service Portal PRB1065406	Service Portal User Criteria Support	sp_admin cannot view or apply existing user criteria to sp_widget, sp_page, sp_search_source, or sp_instance records		**1.** Install the Service Portal User Criteria Support plugin. **2.** Set the glide.service_portal.user_criteria_enabled system property to **true**. **3.** Impersonate a user with the sp_admin role (who does not have the 'admin' role). **4.** Go to the sp_widget/sp_page/ sp_search_source, or sp_instance list. **5.** Select a record to navigate to the form. The user criteria is restricted for the sp_admin, who should be able to view and apply existing criteria.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Portal PRB1068750	Service Portal User Criteria Support	Users lose access to Service Portal pages/ widgets/ instances upon activation of user criteria if Explicit Roles plugin is not enabled	This issue only occurs for users who activate user criteria when the Explicit Roles plugin is not activated.	In an instance without the Explicit Roles plugin enabled: **1.** Activate the Service Portal User Criteria Support plugin. **2.** Navigate to the system properties list and set glide.service_portal.user_criteria_enabled to **true**. **3.** Log out and log in to Service Portal as Abel Tuter. **4.** In the header menu, click **Service Catalog**. You are taken to a 404 page - Abel Tuter lost access to the sc_home page.
Service Portal PRB1069238	Service Portal - Core	No notification of change on screen upon filtering search results		**1.** With a screenreader enabled, go to the Service Portal. **2.** Enter a search query and click the search icon. **3.** Change from one search source to another by selecting **Service Catalog**, **Knowledge**, or **All**. The screenreader does not announce that there has been a page change. Page changes should be announced even though the user is staying on the same Service Portal page.
Service Portal PRB1070609	Service Portal - Core	Only admins can view and modify sp_search_source records, but sp_admin users should also have this ability	Users with the sp_admin role should be able to create, read, update, and delete sp_search_source records.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Portal PRB1071547	Service Portal - Core	Choice list labels are not mapped with their respective drop downs in the page from a screen reader standpoint	With a screen reader in Catalog Variables, the choice list title is read as though it is a string, and it does not associate the labels to the drop down contents.	
Service Portal PRB1079096	Service Portal - Core	Reference fields are not properly mapped to their labels	When a user tabs to reference elements, the labels are not read on the tab and the user is unaware of which field is selected.	**1.** Navigate to /sp?id=sc_cat_item&sys_id=ae44f5804f889200086e **2.** Tab to the reference elements. The labels are not read on the tab. The labels should be associated with the elements so that users have context for what they are selecting.
Service Portal PRB713442	Service Portal - Core	Time picker does not adjust for time zone when defaulting to current time		**1.** Change your time zone to a different time zone. **2.** Install the Service Portal Test Pages plugin. **3.** Navigate to /sp?id=sc_cat_item&sys_id=d6893d420b131200b0b The time is not calculated correctly, though it is in the general UI.
Service Portal PRB935688	Service Portal - Core	List collector variable type unexpectedly allows emails to be added	In Service Catalog, while ordering an item that has a List collector variable type, users must select from options that appear in slushbuckets. Users are not able to type options that do not exist in the reference list. In Service Portal, while ordering the same catalog item, users see a watch list type variable instead of slushbuckets. Any emails can be added even if they do not exist in the system.	**1.** Navigate to **Maintain Items** > **Standard Laptop**. **2.** Create a List collector variable to add to this item. **3.** Order your catalog item from the Service Catalog. Notice you have slushbuckets. **4.** Navigate to the Service Portal and click **Service Catalog** > **Order your catalog item**. Notice you can enter arbitrary data that may not exist in the system.

Problem	Affected plugins	Short description	Description	Steps to reproduce
Service Portal PRB936258	Service Portal - Core	On Oracle instances, widget link script gets truncated if longer than 4000 characters		In an Oracle instance: 1. Activate the Time Card Management plugin. 2. Navigate to **Service Portal** > **Widgets** > **Time Card Grid**. The link part of the widget is truncated.
Survey Management PRB955317 *KB0640054*		In Hebrew, creating a survey with question type 'numeric scale' results in '1' appearing as '1.0' in all rows		1. Activate the I18N:Internationalization plugin. 2. Activate the I18N: Hebrew Translations plugin. 3. Create a new survey that contains a question of type **numeric scale**. 4. Test this survey. The scale shows the numbers as 1 2 3 4 5 6 7. 5. Change the language to Hebrew. 6. Test the survey again. The scale shows the numbers as 1.0 2 3 4 5 6 7.
Survey Management PRB958276	Assessment Designer Common	GRC 'Properties' dialog box is missing appropriate WAI-ARIA information	In GRC, the 'Properties' dialog box does not have markup for Web Accessibility Initiative - Accessible Rich Internet Applications.	GRM - Vendor - Administration - Questionnaire Templates - New (Designer)
UI Components PRB1097905 *KB0623893*		Randomly, system-wide, the NONE choice in choice list will appear to be empty	On random instances, the "None" (or -None- or -- None --) in the choice list can appear with no label (or empty). This will appear system-wide for all choice lists.	Refer to the listed Known Error KB article for details.

Problem	Affected plugins	Short description	Description	Steps to reproduce
UI Components PRB740915	NG shared components	In ticket-conversation widget in Service Portal, snResizeHeight directive in Edge browser might not set height properly	If users open a request in the Service Portal with the Edge browser, the input text box to send messages are showing very short in height. The issue occurs in Edge browsers only.	1. Open the Service Portal. 2. Click **Order something** > **Developer laptop** > **Submit**. 3. Click **Request** in the request dropdown in the header. Notice that the resize does not work properly on request fulfiller form.
UI Components PRB931685		'Date and time' field's value selectors for the [between] operator are displayed differently	When the [between] operator is selected, the 'date and time' field value selectors are incorrectly shown one above the other.	Using List v3: 1. Navigate to the **Incident** module. 2. Open the filter widget. 3. Create a filter: [Due date] [between] the last fiscal month and this fiscal month. The value selector shows one on top of the other.
Update Sets PRB1022173		Debugging ACLs can be very slow	When a user enables 'Debug All' on the Security Debugger and navigates to a list view with a lot of data, the page takes 20-30 seconds to load.	1. Navigate to the Script Debugger and enable **Debug all**. 2. Navigate to **incident.list** and reload the page a few times. Watch the logs for 'low memory' errors.
Upgrade Engine Issues PRB1083234	System Applications Core	Fix script runner does not work in UI11 on Jakarta, but works in Istanbul	In Jakarta, the ability to run fix scripts from the UI does not work properly in UI11. When a fix script is created and the user clicks 'Run Fix Script', a dialog window appears and stays in a "Loading..." phase indefinitely.	

Problem	Affected plugins	Short description	Description	Steps to reproduce
Workflow PRB675174 *KB0598352*		Manually translated workflow stages are not being reflected on RITM Stage field by default	The system does not display custom translated text from a workflow stage when viewing the status of a Service Catalog requested item.	**1.** Enable a language pack plugin, for example, French Canadian. **2.** Select English as the session language. **3.** Create a custom workflow for the Requested Item table. **4.** Create a custom stage for the workflow, for example: **Name**: Test Stage 1 **Value**: test_one **5.** Navigate to **System Properties** > **System Localization**. **6.** Set **Add the labels, messages, or choices to the appropriate table in English with an ending of the language code for newly added customizations that are missing translations. (Translate and Learn)** to Yes. **7.** Change the session language to French Canadian. **8.** Reopen the Workflow Canvas or refresh it if it is already open. **9.** From the menu, click **Edit Stage**. The system displays the Stage name as "Test Stage 1 [fq]". **10.** Navigate to sys_translated.list. **11.** Find the entry you created. **12.** Modify the Label to different text, for example, Translated Test Stage 1. **13.** Trigger the workflow. **14.** View the requested item status. The stage uses the English rather than the translated value.

Fixes included with Jakarta Patch 2

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 1 Hot Fix 3* on page 284
- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 1 Hot Fix 3

The Jakarta Patch 1 Hot Fix 3 release contains fixes to these problems.

For Jakarta Patch 1 Hot Fix 3:	Build date: 08-14-2017_1212 Build tag: glide-jakarta-05-03-2017__patch1-hotfix3-08-10-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 1 Hot Fix 3

Problem	Short description	Description	Steps to reproduce
Financial Management PRB1112746	Cost allocation data is incorrect in Jakarta	The cost allocation engine does not produce all GL expense lines.	**1.** Navigate to a Cost Model definition. **2.** Add segments to general ledger (GL) expense lines. **3.** Allocate a few split buckets to the segment. **4.** Trigger the allocation engine, which generates the GL expense lines for the selected segments. The allocation engine does not generate all allocation lines.

Fixes included with Jakarta Patch 1 Hot Fix 3

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 1 Hot Fix 2* on page 285
- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 1 Hot Fix 2

The Jakarta Patch 1 Hot Fix 2 release contains fixes to these problems.

For Jakarta Patch 1 Hot Fix 2:	Build date: 07-20-2017_0935 Build tag: glide-jakarta-05-03-2017__patch1-hotfix2-07-19-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 1 Hot Fix 2

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB1082072	Catalog UI policies and onChange catalog client scripts are not fired on read-only fields	When a read-only variable's value is changed dynamically, catalog UI policies and onChange catalog client scripts associated with any read-only field are not triggered. This issue occurs in record producers, catalog items, and order guides. It does not occur on Service Portal.	In a Jakarta instance: **1.** Set up the following: • Catalog item: **Test PRB1082072** • Variables: **test_dropdown_1** (select box), **test_text_1** (single line text), **test_label_1** (label) • UI policy: **Set Test Text 1 Read Only**. This makes test_text_1 read-only. • UI policy: **Reveal Label 1**. This makes Test Label 1 visible when Test Text 1 has 'option2' as the value. • Catalog client script: **Set test text dynamically**. This will set the value of Test Text 1 when Test Dropdown 1 changes. **2.** Navigate to **Maintain Items** and search for the catalog item **Test PRB1082072**. **3.** Open the catalog item, and click **Try it**. **4.** Change the **Test Dropdown 1** to **Option2**. Expected behavior: A label called 'Test Label 1' will appear under the 'Test Text 1' variable. Actual behavior: 'Test Label 1' does not appear, which indicates that the catalog UI policy 'Reveal Label 1' is not being triggered.

Fixes included with Jakarta Patch 1 Hot Fix 2

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 1 Hot Fix 1* on page 287
- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 1 Hot Fix 1

The Jakarta Patch 1 Hot Fix 1 release contains fixes to these problems.

Jakarta Patch 1 Hot Fix 1 was released on July 18, 2017.	Build date: 07-16-2017_1250 Build tag: glide-jakarta-05-03-2017__patch1-hotfix1-07-15-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Fixed problem in Jakarta Patch 1 Hot Fix 1

Problem	Short description	Description	Steps to reproduce
IT Service Management PRB1091777 *KB0623761*	gs.calDateDiff results in an out of memory error when dates cross DST change days	When dates cross a Daylight Saving Time change, gs.calDateDiff results in an out of memory error. gs.calDateDiff is used in the 'mark_closed' and 'mark_resolved' business rules, which are in the Incident module and Incident AutoClose scheduled job.	Refer to the listed Known Error KB article for details.

Fixes included with Jakarta Patch 1 Hot Fix 1

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *Jakarta Patch 1* on page 287
- *All other Jakarta fixes* on page 362
- *Jakarta security and notable fixes* on page 301

Jakarta Patch 1

The Jakarta Patch 1 release contains fixes to these problems.

Jakarta Patch 1 was released on July 13, 2017.	Build date: 07-07-2017_1811 Build tag: glide-jakarta-05-03-2017__patch1-06-20-2017

ServiceNow QPP targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions. For example, entitlements are not required to upgrade to Helsinki Patch 12 (Q4 2017 QPP target) or Jakarta Patch 2 (patch).

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta Patch 1 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta, refer to *KB0623601*.

Notable Fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
UI Components PRB952152 *KB0634545*	Users without privileges cannot save the filter using the condition builder		**1.** Impersonate the user Abel Tuter. **2.** Go to any List - All incidents/ All HR cases. **3.** Click on filter and add a condition. For example: active is true or state is new. **4.** Click **Save**. **5.** Give the name - sn_test for "save as" **6.** Click **Save**. **7.** Click **List control** just above. **8.** Click **Filters**. Expected behavior: sn_test filter should be available after saving. Actual behavior: sn_test is not available.

Problem	Short description	Description	Steps to reproduce
Domain Support PRB1073031 *KB0623425*	Upgrades are causing domain table to be reset back to sys_user_group, causing recalculation of domain paths and unique constraint violations	A Unique Key violation error occurs when adding/importing a group into a domain separated instance upgraded to Istanbul Patch 6. Istanbul Patch 6 adds a unique index to sys_user_group table, which is supposed to allow duplicate values.	Refer to the listed Known Error KB article for details.
Incident Management PRB680207 *KB0598528*	Base system business rules mark_closed and mark_resolved still use deprecated calendars and return incorrect results	Because deprecated calendars are being used, the mark_closed and mark_resolved business rules return incorrect results.	**1.** Navigate to **Incident** > **All**. **2.** Personalize the list by adding the following columns to the list view: • Open • Closed • Business duration • Business resolve time For more information, see *Personal lists*. Note that some of the Business duration and Business resolve time entries are incorrect.
Service Mapping PRB832751 *KB0622179*	Under certain circumstances, Discovery processing is very slow or stuck	When Service Mapping discovery is run for multiple services (or all services), the discovery job may slow down due to the service recomputation jobs being processed. As a result, discovery tasks can time out.	
Import / Export PRB916708 *KB0622076*	Setting glide.export.excel.wrap_cells to **false** does not allow user to Export .xlsx format excel files with columns containing more than 255 characters		Refer to the listed Known Error KB article for details.

All Other Fixes

Problem	Short description	Description	Steps to reproduce
Assessments PRB962693	When guest user is unavailable, users are unable to create multiple instances for public surveys		1. As admin, delete the guest users from the instances. 2. Create a survey and make it public. 3. Copy the URL under **View Survey**. 4. Paste the URL into two different browsers. Instead of creating two survey instances under asmt_assessment_instance, only one survey instance is created.
Asynchronous Message Bus PRB1020423	Long-running AMB unsubscribe transactions can result in business rules not running for the rest of the session		1. Navigate to a form. 2. Invalidate the cache. 3. Navigate away from the form. If your unsubscribe transaction is slow enough to get cancelled while we are loading table descriptors for variables tables (var__*), your session may be left with workflow turned off.
Change Management Conflict Detector PRB1015102	On search page, change_request_search.do, value for conflict_Status field is already set, rather than --None--	When a Change Request form is loaded in Search mode (change_request_search.do), the Conflict Status field value shows as No Conflict instead of None. Since the form is loaded in Search mode, all the fields are expected to be empty, and choice list fields are expected to be shown as None.	In an Istanbul instance, navigate to: **https://<instance-name>.service-now.com/change_request_search.do**. Notice conflict_status field has a value set, rather than --None-- like other fields with choices.

Problem	Short description	Description	Steps to reproduce
Cloud Management Application PRB965152	Blueprint YAML import/export issues	• Importing a YAML file for resource block works the first time, but deleting and reimporting the same file will make the resource block unusable because there are duplicate entries in the sn_cmp_rb_op_param table. • Exporting a resource block YAML only works partially, and records in sn_cmp_rb_keyvalue_mapping are not exported. • On the keyValue table form view, the Object mapping field and the embedded list for the mappings are not showing.	
Community PRB1021040	If a user's name contains special characters, the wrong initials are displayed	When a user's name contains special characters, the user initials and avatar display the wrong initials.	
Community PRB1037143	Performance issues for various Communities pages	There are performance, content display, and profile issues when users go to the Community homepage or view a question.	
Configuration Management Database (CMDB) PRB1020654	Checkpoint reaper encounters an error when trying to set the previous checkpoint reference to a non-existent sys ID	The following error occurs: java.lang.IllegalArgumentException: Trying to set field svc_model_checkpoint:previous_checkpoint to reference non-existent record	

Problem	Short description	Description	Steps to reproduce
Core Platform PRB717578	When domain separated is enabled, form caches should key entries more effectively	ActionManager (UI actions) should define syscache_ui_action as the private cacheable instead of sys_ui_action. In addition, ActionManager domain selection should retrieve the domain from the record, not the session. Domains for the sys_choice cache should also be implemented correctly.	
Delegated Development PRB960391	User with delegated_developer role cannot see the Studio module		**1.** As admin, create an application and add a user as a delegated developer. **2.** Log in as the user in step 1. **3.** In the left navigator, type **Studio**. The user cannot see the Studio module.
Discovery PRB1024507	The 'Retrieve File Content' button from 'Parse File' operation occasionally disappears after running it	The only way to bring the 'Retrieve File Content' button back is to click away to another step and come back to it.	
Discovery PRB1024480	When debugging is complete, the popup timing should be reduced	When a debug is successful, the window should close at the end without waiting for the user. When a debug fails, the window should remain open.	
Discovery PRB1024475	When typing in variables, the "+" sign remains		**1.** Go to any operation in which a temp variable can be used. **2.** Type in the temp variable name and press tab. A "+" sign remains at the end.

Problem	Short description	Description	Steps to reproduce
Discovery PRB905030 *KB0622114*	Discovery source attribute is not populated for Windows cluster and Hyper-V CI	When Discovery creates a 'Windows Cluster' CI in the cmdb_ci_win_cluster table, the sensor does not fill in the discovery_source field as "ServiceNow". It is inserted with an empty value. CIs created by Discovery on cmdb_ci_hyper_v_cluster and cmdb_ci_hyper_v_server also have an empty discovery_source as well.	Refer to the listed Known Error KB article for details.
Discovery PRB945908	A discovery can be set to 'complete' before it is actually complete	When a discovery is prematurely set to 'complete', the next schedules are triggered even though the discovery is not done yet.	
Domain Support PRB852436	Forced update on domain record results in unnecessary recalculations of the domain code and path	Changing the domain's code and path can potentially turn into an expensive operation that updates millions of records in other tables.	
Domain Support PRB649761	Using record domain does not work for choice lists in mobile	Choice list entries created for domains do not show up properly in mobile when viewing records in domains different from the session domain.	
Forms and Fields PRB942534	Embedded lists can cause forms to load slowly	When 'insert new row' is active on embedded lists, the form loads slowly and can cause degradation to client response time for unreliable network connections.	**1.** Navigate to an incident form. **2.** Customize the incident form and add the **Affected CIs** embedded list. **3.** Load the form. Notice the error in the console. *** WARNING *** GlideAjax.getXMLWait - synchronous function - processor: GlideSystemAjax2017-04-19 15:52:06.069

Problem	Short description	Description	Steps to reproduce
HI Administration PRB1035558	Using [code] and meta elements inside of an activity stream entry can cause a page redirect	When a [code] snippet or meta elements are in an activity stream entry, the user is redirected to another page.	
IT Asset Management PRB965226	True up cost and over-licensed amount are wrongly calculated when there are multiple software models with the same display name		**1.** Create multiple software models with same name and multiple entitlements under each model. **2.** Create some matching installs and run reconciliation.
Knowledge Management PRB931938	Cannot use the 'Update all' list editor function on Knowledge articles	When a user clicks the 'Update all' function to update knowledge records, a blank screen opens. Users are able to edit knowledge records in the list and form view, but the blank screen appears when using 'Update all' or 'Update selected'.	**1.** Add these roles to abel.tuter: knowledge_admin, knowledge_manager, knowledge and list_updater. **2.** Enable **Debug Security Rules**. **3.** Impersonate Abel Tuter. **4.** Navigate to **Knowledge** > **Published**. Verify Abel can see the articles, can open the records, and update them. **5.** Navigate back to the list and click **Update All** from the table's context menu. **6.** In the popup that appears, click **OK**. Instead of seeing the form with the available fields for editing, the user sees a blank screen.
Knowledge Management PRB689691	Category picker does not load for newly created knowledge bases (e.g. while creating an article)		**1.** Navigate to a knowledge base. **2.** Click **Create new article**. **3.** Click the knowledge base lookup, and create a new knowledge base. **4.** Click the category lookup. The categories do not load, and you cannot create a new category.

Problem	Short description	Description	Steps to reproduce
Knowledge Management PRB670593	In IE11, the scroll bar overwrites the content displayed with Knowledge search from Incidents	In IE11, the top-right of kb_view and kb_find pages are covered by IE's scroll bar.	**1.** Navigate to **Contextual Search** > **Table Configuration**. **2.** Select the incident. **3.** Uncheck **active**. **4.** Create an incident. In the short description, type **system**, then select the knowledge book at the end of the field. Notice the vertical scrollbar overlaps on the far right.
Knowledge Management PRB1016193	When there is only one Active KB that contains articles and questions with empty categories, navigating to that KB shows a blank page		**1.** Log in to an instance with only one Knowledge Base that has Articles and Questions without any category. **2.** Try to navigate to the Knowledge Base. A blank page is shown.
Language and Translations PRB1079012	Add language translations for Jakarta	This PRB adds language translations for various products to Jakarta.	
Persistence PRB1028514	Unnecessary ORA-00932 errors can appear for on-premise users	The error message is "ORA-00932: inconsistent datatypes: expected - got CLOB)".	
Persistence PRB1067373	Values added to a choice field do not appear in the form		**1.** Navigate to the cmdb_ci_service table. **2.** Add new choices to the operational_status field. The form does not display the values, but they do exist in the dictionary for this choice field.

Problem	Short description	Description	Steps to reproduce
Persistence PRB954855	Improvements to process of retrieving Clotho data for ITOM Metrics		
Security Applications PRB1059112	Fix filtering on sharing	The filters that are used to share observables are not working as expected.	
Security Incident Response PRB1037749	Records with the whitelist tag are not filtered on the related lists of Security Incidents		
Security Incident Response PRB1028683	Severity calculator causing performance issues when creating Vul Items	Due to performance issues with the severity calculator, it takes a long time to create or update large numbers of vulnerable items.	
Service Catalog Widgets: Service Portal PRB713239	Variable Editor widget (sp-variable-editor) does not respect mandatory fields used in shopping cart		

Problem	Short description	Description	Steps to reproduce
Service Level Agreement (SLA) PRB1003371	SLA retroactive start/pause - Incorrect timing calculation when attaching a Task SLA that is in a Paused stage at the time of attaching	This issue occurs while using retroactive pause/ start. When a Task SLA is in a Paused stage at the time of attaching, the last temporal piece of paused time is incorrectly added when calculating the elapsed time.	**1.** Create a **P5** incident with state **New**. **2.** Change the priority to **P3**. **3.** As soon as the incident is created (within the first minute), move the state to **On Hold**. **4.** Move the state to **In Progress**. **5.** As soon as you complete step 4 (within the first minute), move the state back to **On Hold** again. **6.** Wait a few minutes, and then change the incident's priority to **P1**. The Task SLA will attach with the correct Stage (Paused) but with the wrong 'Business Elapsed time', 'Business elapsed percentage' and 'Business time left'. The 'Has breached' flag is incorrectly set to True.
Service Mapping PRB1040524	'All Applications' discovery schedule does not complete due to hanging SSH threads in the MID Servers	During each run of the 'All Applications' discovery schedule, several output probes are stuck in the Processing state. As a result, none of the 'All Applications' discovery schedules are completed.	

Problem	Short description	Description	Steps to reproduce
Service Portal PRB745319	When users are viewing a KB category, all the article attachments start to download	When viewing KB category in Service Portal, it downloads all the article attachments.	Make sure you have the 'Service Portal for Enterprise Service Management' plugin enabled with demo data loaded. **1.** Open one of the KB articles. **2.** Attach an image to the text content. For example, upload an image for KB0000008 as an attachment, and insert the image into the text content. **3.** Navigate to the default demo Service Portal home page (https://[instance URL]/sp). **4.** Click **Knowledge Base**. **5.** Open the browser developer tools and monitor the Network activities. **6.** On the Service Portal page, click one of the categories, which contains the KB you added attachments in step 2. For example, the 'Devices' category which contains 'KB0000008'. Notice the network activities are downloading the KB attachments even the KB is not opened yet.

Problem	Short description	Description	Steps to reproduce
Service Portal PRB724097	Read-only referenced variables cannot be previewed by users who have read access to the referenced record	Clickthrough on reference fields in the Service Portal are disabled, even if the system property glide.sc.variable.reference.clickthrough is set to **true**.	**1.** Go to any catalog item (e.g. Blackberry). **2.** Add a reference variable to the item and point it to a table such as sys_user. **3.** Make the field be read-only via a catalog UI policy dependent on "replacement" variable if "yes" is selected as an option. **4.** In the Service Portal, open the catalog item. **5.** Select a value in the reference field (any user). **6.** Select **yes** as the "replacement" option. (This will turn the reference field to read-only). <u>Expected behavior</u>: Even if the field is read-only, the clickthrough property should allow the user to open reference field variables. <u>Actual behavior</u>: The property is ignored and the reference field clickthrough is disabled via CSS.
Survey Management PRB945266	Mandatory survey fields show up as non-mandatory in the Service Portal for languages other than English		**1.** Create a survey ($ng_sd.do). **2.** Drag any controls to the survey area, click the gear icon, and check **Mandatory**. **3.** Save and publish the survey. **4.** Through the Service Portal, access the survey: **sp?id=take_survey&type_id=SYS_ID_OF_THE_CREA** If you have English set to your system language, the mandatory fields appear correctly, and you cannot submit the survey until the fields are filled. In any other language, the fields are not mandatory and you can submit the survey.

Problem	Short description	Description	Steps to reproduce
UI Components PRB1034987	Hiding Additional Comments field via UI Policy is not working	When a UI Policy is created to hide the Additional Comments field, the field is not hidden.	**1.** Create a new UI policy for the Incident table: • When to Apply: add a filter condition by selecting "State" for the choose field box • Operation: Is • Value: In progress **2.** Save the UI Policy and reopen it. **3.** In the **UI Policy Actions** related list, click **New**: • Field: Additional Comments • Visible: False **4.** In the new UI Policy action record: • Field: Work notes • Visible: False **5.** Navigate to **Incident** > **All**, and select any incident in the state **In Progress**. Expected behavior: The UI policy should hide both the "Additional Comments" and "Work notes" fields. Actual behavior: The "Additional Comments" field is always visible, but the "Work notes" field gets hidden as per the policy.

Other Jakarta Patch 1 information

- **Encryption**
  - *Encryption support*

    When exporting encrypted text fields in a list or form to a file format, only fields encrypted by an encryption context available to the current user will display in the exported document.

Fixes included with Jakarta Patch 1

* Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- *All other Jakarta fixes* on page 362

- *Jakarta security and notable fixes* on page 301

Jakarta security and notable fixes

The Jakarta release contains fixes to these problems.

Jakarta was released on June 15, 2017.	Build date: 05-31-2017_2011 Build tag: glide-jakarta-05-03-2017__patch0-05-18-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

Security-related Fixes

Jakarta includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Jakarta, refer to *KB0621173*.

Important fixes in Jakarta

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Performance Statistics and Graphs PRB698328 *KB0621158*	Blank lists might display when trying to view a table	Many operations, like loading the list view for a table, are timed for building performance metrics. An issue with this timing causes the transaction it is timing to error out.	One possible symptom is seeing a blank list when trying to visit a table despite not failing any ACLs. The issue resolves itself in a few hours or days.
Performance Analytics PRB881126 *KB0621762*	All pa_snapshots for an indicator are deleted	On a new or upgraded Istanbul instance, unlinking a breakdown from an indicator deletes all pa_snapshots for that indicator.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Edge Encryption PRB762588 *KB0621513*	Selecting 'Update All' or 'Update Selected' in a list view nullifies Edge Encryption encrypted fields	This issue only affects Edge Encryption customers who have tables with Edge Encryption encrypted fields and active encryption configurations for these fields. Data loss can occur when attempting to update records with edge encrypted fields. This is due to a defect in the handling of the multiple update function in a list view. When a user updates several records with encrypted fields in list view using **Update All** or **Update Selected**, the contents of the encrypted fields are lost once **Update** is clicked.	Refer to the listed Known Error KB article for details.
User Interface (UI) PRB693251 *KB0596952*	IE11: Applying a Microsoft MS16-084 critical patch breaks URLs containing JavaScript calls	After installing the MS16-084 patch, if you access a Fuji, Geneva, Helsinki instance using Internet Explorer 11 and try to apply a template to a record, the pop-up window for selecting templates is blank. The changes to the security settings are blocking any URLs which contain a javascript() function call. For more information, see *Microsoft Security Bulletin MS16-084*.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
User Interface (UI) PRB716032 *KB0598890*	User preferences are incorrectly being set to false, breaking homepages and related lists	Related lists are disabled for the user until an accepted value is entered. This causes errors when loading homepages and dashboards.	**1.** At the bottom of a browser console, enter `CustomEvent.fireAll(undefined,false);` **2.** Refresh the browser and click the gear icon. Note that in General, Home has no default selections - neither Homepages nor Dashboards were selected. Refer to the listed Known Error KB article for details.
Platform Performance PRB641485	A high volume of transactions from a single session can exceed transaction queue, causing HTTP 429 errors	Due to an issue with max waiters, which admit only [x] number of transactions for the same session into the transaction queue, more than [x] transactions for a single session can end up in the transaction queue when the transactions for this session have very short transaction processing times.	
Platform Security PRB735958 *KB0622157*	Virtual tables do not work with read-only mode	A symptom of this issue is that an instance's plugin list appears as empty.	**1.** Navigate to **v_plugin_list.do**. Note table is empty. **2.** Clear the cache. **3.** Reload the plugins. The plugins appear.
User Interface (UI) PRB713397	Safari 10.0.1 redirects users to UI11	Users who log in to their Fuji, Geneva, and Helsinki instances from Safari version 10.0.1 are redirected to the legacy UI11 instead of UI16.	**1.** Set user agent string to: "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_1) AppleWebKit/602.2.7 (KHTML, like Gecko) Version/10.0.1 Safari/602.2.7". **2.** Log in to the instance. UI11 appears.

Problem	Short description	Description	Steps to reproduce
User Interface (UI) PRB705910 *KB0596992*	Icons are incorrect after upgrading from Geneva to Helsinki	After upgrading from Geneva to Helsinki (where the icon fonts have changed), users continue to use the old Geneva icon font, and all icons throughout the interface are incorrect. This issue occurs because the server does not recognize that the icon fonts have changed.	Refer to the listed Known Error KB article for details.
User Interface (UI) PRB720998 *KB0610429*	Activity stream does not load if relationship changes are in the feed and modifications were made by an invalid or nonexistent user	Activity stream does not load if relationship changes are in the feed and modifications were made by an invalid user or a user that no longer exists.	**1.** Impersonate an admin user (e.g. Fred Luddy). **2.** Navigate to **Incident** > **Open**. **3.** Select any Incident and note its number. **4.** Right-click in the form header and choose **Configure** > **Related Lists**. **5.** Add **Task->Parent** to the **Selected** list and click **Save**. **6.** Go to the Tasks related list on your Incident and click **Edit**. **7.** Move any Task to selected and click **Save**. An activity stream entry for your relationship change is displayed. **8.** Delete / change the user ID from the admin account (e.g. Fred Luddy). **9.** Reload the Incident from step 3. Note that instead of the user ID for the invalid account being displayed, the activity stream does not load, and NPE errors are listed in the logs.

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB665292 KB0565455	Variables are not aligned on sc_req_item page if using variable set	Fields in variable sets are not aligning with other variables on the sc_req_item page.	**1.** Log in to a Geneva instance. **2.** Navigate to **Service Catalog > Catalog Definitions > Maintain Items**. **3.** Open the item **Packing and Shipping**. **4.** In the **Variable Sets** tab or section, click **New**. **5.** Fill in the following fields: • Name: Customer • Order: 100 • Layout: 1 Column Wide **6.** Click **Submit**. **7.** In the **Variables** tab or section, click **New**. **8.** In **Type**, select **Single Line Text**. **9.** Click **Submit**. **10.** On the **Catalog Item** record for **Packing and Shipping**, click **Try It**. **11.** Fill in the mandatory fields. **12.** Click **Order Now**. The variables are not aligned on the created sc_req_item.
Knowledge Management PRB707453	Frame gets shortened - Order an item in Service Catalog	After you select an item to order, the frame gets shortened. This occurs for any users who have 'ess' in their URL.	**1.** Navigate to **Service Catalog** > **Service Offering** > **Hardware**. **2.** Select **Sales Laptop**. Notice the frame is shortened, as iframe is given the style="height:141px;" attribute.
Import / Export PRB674142 KB0596143	Export to Excel fails if one of the columns is currency	Export to Excel fails if there are more than 32,000 rows when exporting to XLS or with hundreds of rows when exporting to XLSX, and one of the columns is of type currency.	**1.** Navigate to a list containing more than 32000 rows. **2.** Ensure that a **Currency** field is in the list. **3.** Right click on the header and select **Export** > **Excel** (.xlsx). The export fails.

Problem	Short description	Description	Steps to reproduce
Asynchronous Message Bus PRB732813 *KB0621950*	After upgrading to Helsinki, HttpClient thread count grows on the MID Server	MID Server can go down due to a thread leak that causes the MID Server to run out of memory and go down.	Refer to the listed Known Error KB article for details.
User Interface (UI) PRB629855 *KB0597592*	Dot.walked fields add foreign class to Label, causing Field Watcher in context menu to not be visible		Refer to the listed Known Error KB article for details.
Authentication PRB703022 *KB0597327*	LDAP requests fail after upgrade to Helsinki	After an upgrade from Java 6 to Java 8, which is required in the Helsinki release, LDAP requests produce the following error: "Certificates does not conform to algorithm constraints." or "Connection reset" A rollback to Java 6 is not possible. Java 8 forces TLS V1.2 and also deprecates some cipher suites, which does not work with certain LDAP servers with SSL enabled. The SSL connection functions correctly via OPENSSL with no issues.	**1.** Create a new node with no modified wrapper.conf adjustments. **2.** Upgrade from Geneva to Helsinki. **3.** Test the LDAP connection on the node.

Problem	Short description	Description	Steps to reproduce
User Interface (UI) PRB713556 *KB0598416*	Using AMB Client on the parent frame from the contained frame causes a memory leak in IE11	In Geneva and forward in Internet Explorer 11, the iexplore.exe process consumes more and more memory with each page load, constituting a memory leak. The memory leak stems from the asynchronous message bus that powers many live features in UI16. When this feature is used on pages containing iframes, there is a bug in Internet Explorer 11 that causes the browser to maintain unnecessary information in memory. The fix works around the Internet Explorer 11 memory leak by handling the message bus connections differently.	**1.** Open an instance using Internet Explorer 11. **2.** Open the task manager to observe Internet Explorer memory usage. **3.** Navigate to an incident form. **4.** Use the arrow keys on the top right to move between incident forms. Notice Internet Explorer memory usage continues to climb by 10 - 20 megabytes per page. If you continue to navigate between pages, Internet Explorer will crash after going through a large number of forms.
Lists PRB732836	Slush bucket "Loading..." causes a long loop when processing a large set of data that is not readable	When clicking the "Edit" button on a related list or when viewing a Service Catalog List Collector variable, the instance appears to be frozen. This can happen if a user is looking at a slush bucket of a table with more than 5,000 records and where the user does not have read-access to any of the records.	

Problem	Short description	Description	Steps to reproduce
Discovery PRB755422 *KB0621168*	Large number of rows in the Discovery Log [discovery_log] and TCP Connection [cmdb_tcp] tables can cause performance issues during an upgrade	Starting with the Helsinki release, the sys_domain and sys_domain_path fields were added to the Discovery Log [discovery_log] and TCP Connection [cmdb_tcp] tables. Upgrades of instances that have large numbers of rows in these table can lead to performance issues when the upgrade process adds and populates the new fields.	Refer to the listed Known Error KB article for details.
Platform Performance PRB719780	Excessive cache flushing can cause network card to be maxed out		
Authentication PRB716685 *KB0621521*	logout_redirect.do causing SAML signed authentication failure	After upgrading from Fuji to Geneva or Helsinki, some customers who have signed SAML requests are unable to log in using SAML. For example, after an upgrade from Fuji to Geneva or Helsinki, authentication fails.	Refer to the listed Known Error KB article for details.
Condition Builder PRB994630 *KB0634466*	Unable to add an 'and' filter condition in related lists and catalog list collectors	The 'and' button to the right of a filter condition does not work. An error is thrown: Uncaught TypeError: Cannot read property 'filterObject' of null addConditionSpec.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Edge Encryption PRB716727	During mass encryption or decryption of large tables, wrapper JVM crashes repeatedly, causing the proxy to eventually go offline	During mass encryption or decryption of large tables of more than 1M records, wrapper JVM crashes repeatedly with Internal Error (sharedRuntime.cpp:834), causing the proxy to eventually go offline. This issue is a known Java defect, closed by Oracle on 2016-07-17 as not reproducible: [JDK-8159216] JVM crashed with "Internal Error (sharedRuntime.cpp:834)" - Java Bug System	
Upgrade Engine Issues PRB663115	A second upgrade can be triggered between un-pausing the instance and updating glide.war		
Platform Security PRB734805	User roles are deleted when glide.role_management.use.inh_count is true without Role Management V2 plugin	When the property glide.role_management.use.inh_count is manually created on an instance without activating the Role Management V2 plugin (com.glide.role_management.inh_count), it ends up deleting entries in the sys_user_has_role table that are marked with 'inherited' true.	On an instance that does not have Role Management V2 plugin, create a new system property glide.role_management.use.inh_count set to **true**. Notice that as you make changes to the user roles, some of the inherited roles are automatically deleted.
Embedded Help and Tours PRB856179	Embedded Help REST call is degrading instance performance	The Embedded Help CDN HTTP call is on a foreground client thread, which negatively impacts instance performance.	Browse to a page without any Embedded Help content. Note the HTTP request from the client's browser takes longer then expected.

Problem	Short description	Description	Steps to reproduce
Edge Encryption PRB916539 *KB0622239*	When the number of connections increases, the Edge Encryption proxy experiences extreme slowness	Edge Encryption proxies can run extremely slowly. This issue occurs when concurrent user sessions drive up the number of simultaneous user connections to the instance through the proxy. There are also no logs to indicate the proxy's processing.	**1.** Start up an Edge Encryption proxy and connect to an instance. **2.** Simulate users going through the proxy and using connection-intensive pages, such as Service Portal and Knowledge. Notice that after a certain threshold, response times become extremely slow in the browser.
Asset Management PRB727025	After the upgrade to Helsinki the location fields in [cmdb_ci] get blanked out by business rule "Update location as needed" if the location field on [sys_user] has no value	This can cause data loss if the location field is not used in the sys_user record.	
Edge Encryption PRB756425	A network outage can cause the proxy server to give up trying to connect back to the instance	This issue only affects Edge Encryption users. Users should be able to set the connection retry interval and retry limit for the proxy server. The fix for this PRB allows users to set the retry interval and limit with the edgeencryption.register.retry.count property. The default value for the connection retry interval is **5 seconds**, and the default value for the retry limit is **0**. When the retry limit is set to **0**, the proxy server will attempt to reconnect until a connection is established. See *Edge Encryption proxy server properties* for details.	

Problem	Short description	Description	Steps to reproduce
UI Components PRB818282	If Comments and Worknotes are not selected to display on the activity filter, data can be lost	If one of the fields Comments or Worknotes are not selected to be displayed in the activity filter, adding data to those fields is not tracked and the data is lost.	
Project Portfolio Management PRB888455	JVM Memory is exhausted very quickly when an invalid year is entered into the 'Planned End Date' of a Project Task	If the user accidentally enters an invalid year in the 'Planned End Date' of a Project Task, the instance runs out of memory very quickly.	
Customer Service Management PRB954662	Account and contact info intermittently load slowly on new case CSM form	When there are many contacts (customer_contact) in the system (200k - 600k), creating a case without selecting an account takes a lot of time (minutes). Sometimes the page crashes.	

Other notable fixes in Jakarta

Problem	Short description	Description	Steps to reproduce
Import / Export PRB686120 *KB0596141*	Currency values are incorrect in Export to Excel	The currency field icon is missing when Export to Excel is used. On some glide.system.locales, the first digit can be printed twice, and an extra 0 is added.	**1.** Create a table with a currency column. **2.** In the fx_currency table, change the symbol for TRY to #. **3.** Set glide.i18n.single_currency to **false**. **4.** Set glide.i18n.single_currency.code to **USD**. **5.** Set glide.sys.default.tz to **Europe/ Istanbul**. **6.** Set glide.system.locale to **tr.TR**. **7.** Create a record in the new table with a currency amount in $ (e.g. **$100**). **8.** Export to Excel. Note that the output value is **1100.00**.
User Interface (UI) PRB689186 *KB0598896*	With List v3, the sys_user table list fails to load if the name field starts with a dot followed by a space	In List v3, if the name field for a record from sys_user table starts with <dot/ period><space><the rest of the name> (for example, ". restofname") and that record is displayed in the current list, the list fails to load.	**1.** Create a new sys_user record with name that starts with ". " • Do not use the quotation marks: <dot/period><space><the rest of the name> • Note whether the name field is displaying first then last or last then first. • Make sure that the name field starts with (without quotation marks) ". <the rest of the name>" . **2.** Make sure that sys_user list is using List V3. **3.** Navigate to **sys_user.list**. **4.** Make sure that the new record is being displayed in the current list. If it is not, sort or navigate to the record. There will be errors on the server and client. Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
UI Components PRB716923	Users receive login/ authentication prompts when trying to attach files	When attaching an image for Welcome/ Login page content, authorization is required. Users do not expect to have to enter login credentials to attach an image.	
Email PRB689121 *KB0598453*	Date/ Time fields sporadically show the time zone, which causes an 'invalid date' error message	When opening a form or creating a new record, Date/Time fields such as "Opened at" and "Created by" sporadically display the timezone. This causes updates/inserts to fail because the "Invalid Date" error appears when attempting to save.	The issue has occurred most often in Internet Explorer, but has also occurred in Firefox. The issue is not reproducible consistently, but appears sporadically on task forms containing glide_date_time fields. **1.** Open any form with a date/time field. **2.** Check to see if the fields have a time zone. Note that the date/time field is displaying the time zone sporadically. The date/time field should not display time zone if the system property format is yyyy/dd/mm HH:mm:ss.
Platform Performance PRB704793 *KB0622432*	When using UI16 in IE, the application navigator (left nav) is blank - it loads continuously or does not load	When the server is busy, it returns HTTP response code 202 messages. The application navigator does not always handle these response codes correctly.	
Import / Export PRB678591	After Geneva upgrade, columns in Excel export auto-wrap and do not automatically resize the width to fit all content in one line	In Fuji, columns in Excel exports were resized automatically to fit the width of all content in one line on an Excel export. This behavior changed in Geneva - all columns are exported as a fixed with by default, and the text for each field wraps to the next line.	In a Fuji instance **1.** Open any list report. **2.** Export the report to Excel. The column width automatically resizes. In a Geneva instance **1.** Open any list report. **2.** Export the report to Excel. The column width is fixed with text wrapping.

Problem	Short description	Description	Steps to reproduce
Workflow PRB758994 *KB0622609*	Cannot open workflow in Diagrammer view if it contains an Approval Coordinator that has one or more child activities with stage(s)	If a workflow contains an Approval Coordinator and it contains a child activity with a stage, when opened in the Workflow Diagrammer, the following error is thrown and the Workflow will not open: Error loading diagram - Cannot read property 'Stage' of undefined	**1.** Add an Approval Coordinator to a workflow. **2.** Add a Child Approval activity to the coordinator and give it a Stage. **3.** Close the workflow. **4.** Re-open the workflow in the Workflow Diagrammer.
Email PRB641889	Multiple corporate logos attach to incident on inbound email	If an outbound email contains a picture (e.g. a logo), a reply to that email includes the logo, the incident will update with the replied email, and the logo will be attached to the incident. Multiple replies throughout the incident lifecycle result in many identical logos attached to the incident.	**1.** Add an image to an email notification, such as an 'Incident opened for me' notification. **2.** Create an incident. The caller will receive an email with that logo. **3.** As the caller, reply to the email. The incident is updated with an attachment of the logo. If users reply to the email multiple times, the incident has multiple attachments of the same image.

Problem	Short description	Description	Steps to reproduce
User Interface (UI) PRB710758 *KB0610274*	Editing a report definition and expanding child tables is slow and delayed	When creating or editing a report, dot walking into fields in the cmdb_ci table produces long waits and, at times, browser errors.	Perform the following steps using the Chrome browser. **1.** In the Application Navigator, type **sys_properties.list** in the **Filter navigator** text box and press enter or return on your keyboard. **2.** Find and open the record for the property named **glide.ui.list.allow_extended_fields**. **3.** Set the **Value** to **true**. **4.** Click **Update**. **5.** Navigate to **Reports** > **Create New**. **6.** Set the **Table** to **CI Relationship** (**cmdb_rel_ci**). **7.** In the **Available** column, click **Parent [+]**. **8.** Click the **+** button between the columns (slushbuckets) to expand the column and view dot-walked fields. A Chrome browser error appears asking you to 'kill' or 'wait' for the transaction to complete. If you wait, the fields become visible for editing.
Email PRB665889	Copy/pasting or dropping images into email client generates valid HTML, but RFC2397 is not supported by all receiving email clients	Although copy-paste and dragging and dropping images on an email client generates valid HTML, certain email clients do not support this way of displaying inline images. TinyMCE embeds the image data into the HTML using RFC2397 with a tag such as "<img src=3D"data:image/png;base64...". However, because email HTML renderers do not treat HTML the same as web browsers, many email programs do not display images embedded in the HTML using RFC2397.	**1.** Navigate to **Incident** > **Open** and select an existing incident. **2.** Send an email message with an image. **a.** Open the email client. **b.** Copy and paste an image from an application (MS Paint, MS Word, or the like). **c.** Send the email. **3.** In the outbox, verify that you can see the images correctly. **4.** Send the email out of the instance. On Outlook, the image does not display, but on Apple Mail, it does. Other email clients might or might not display the image.

Problem	Short description	Description	Steps to reproduce
UI Components PRB626022 *KB0547641*	Video .mov files do not render in TinyMCE when uploaded via System > Videos	When a video is uploaded as an attachment in a format that the system supports (such as .mov), the video does not play back.	
Service Catalog PRB712453 *KB0621186*	Cart layouts are not functioning correctly	If Price, Quantity or Subtotal are unchecked, the Item Ordering Widget is not visible.	**1.** Navigate to **Maintain Cart Layouts** > **Shopping Cart Widget**. **2.** Uncheck **Visible** and **save**. **3.** Navigate to **Maintain Cart Layouts** > **Item Ordering Widget**. **4.** Fill in the form in the **Components** section as follows: • Price - Uncheck • Recurring price - Check • Quantity - Uncheck • Subtotal - Uncheck • Recurring subtotal - Check • Delivery time - Check **5.** Go to a Catalog Item. Notice the entire Item Ordering Widget is not visible. If you check any one of the check boxes for Price, Quantity or Subtotal, then the Item Ordering Widget is visible.
Transaction and Session Management PRB713504 *KB0597902*	Canceling a homepage can cause CellRenderThread threads to wait indefinitely	Under the right cancellation circumstances, the CellRenderThread can get stuck.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
UI Components PRB607829 *KB0598247*	UI policy conditions are not evaluated correctly when using variables in the condition builder	Conditions are not evaluated as expected when using variables in the condition builder for SLA definitions, UI policies, or other condition builders. The metadata for the variables used in the filter are not parsed correctly, causing an incorrect dot-walked condition.	Refer to the listed Known Error KB article for details.
User Interface (UI) PRB657825 *KB0563691*	HTML fields do not render content when dot-walked to other records	When dot-walking to an HTML field on a form, the TinyMCE container and HTML text do not appear. Only the field label and the icons to expand(+)/collapse(-) the field appear.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
UI Components PRB666363 *KB0622727*	Editing template data for list field removes entries (watchlist)	When saving data for a template for a glide_list field, data is removed from the list.	**1.** Open an incident. **2.** Press **(...)** next to the UI actions in the top right corner. **3.** Select **Toggle Template Bar**. **4.** If there is no template, click **Create New Template**. Otherwise, press (...) on the right of the template bar, and select **Edit** to the right of any existing template. **5.** If it is not already a field in the template, add the Watch list field to the template. **6.** Add 4 or more entries to the **Watch list** value field, separated by commas. This can be any combination of email addresses or users in the system. Note who you have in the second to last position. **7.** Save the template, then edit it again. The second to last object in the list is removed. **8.** Save again, and go back to the template. The Watch list is unchanged. **9.** Add another object to the end of the list. Again, note who is second to last. **10.** Save. The second to last object in the list is removed.
User Interface (UI) PRB692578 *KB0598164*	Records created via Parent and Child Templates are not properly linked	Records created from Parent/Child templates may not be linked by the correct field. For example, Change Task records may be linked to a Change Request record by the Parent field, instead of the Change Request field, which may not be displayed on the Change Task > Change Request related list.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Import / Export PRB589093 *KB0598425*	LDAP error occurs when importing a large number of attributes	The following LDAP error occurs when importing a large number of attributes: "Row size too large. The maximum row size for the used table type, not counting BLOBs, is 8126. You have to change some columns to Text or Blobs."	**1.** *Configure an LDAP server*. **2.** *Configure a data source* to fetch user records from this LDAP server. **3.** Ensure that the **Attributes** field of LDAP server data source is empty. **4.** Ensure that the remote LDAP server contains a large number of attributes, enough so that when you count the byte size of all attributes together for one of the records, it is larger than 8126. **5.** Run the import. Note the following error in the import log: "Records that are larger than 8126 in size are skipped by the import process with this error."
Workflow PRB703060 *KB0598053*	Published version of workflow included with plugins reverts to OOB version	The published version of workflows is reverted to the OOB version, and user data is being overwritten.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Project Management PRB697330	Cannot 'Close Complete' project task with manual calculation due to a modified actual start date	If the actual start date is modified for a manual calculation project's a project task, the user will no longer be able to close off the task as 'Closed Completed'.	**1.** Create a new project (pm_project.do) and fill out the mandatory fields. **2.** Set the calculation to Manual and save the record. **3.** Create a new project task via the related list, filling out the necessary mandatory fields. Save. **4.** Set the project task's state to Work in Progress and save. **5.** Change the Actual start date to a date in the future (increase by 1 day) and save. **6.** Change the Actual start date again (increase by another day) and save. **7.** Change the state for the project task to Close Complete and then save. Expected behavior: The project task is closed without issues. Actual behavior: The user is unable to close the project task as completed. The following error messages appear: "Cannot change the planned end date of closed task. Invalid update"
Discovery PRB714622	When an instance upgrades from Eureka/Fuji to Istanbul, the mid.version is not updated in sys_properties.	This leads to a false error on the MID Server form in the instance.	
Service Catalog PRB713494 *KB0598709*	Record producer variables are returning "undefined" instead of an empty string	When a record producer with a variable of type Yes/No or Multiple Choice with 'none' included is used to produce a record, the variable returns "undefined" instead of an empty string.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Workflow PRB884253	Workflow Editor - When opening a "published" workflow that has been checked out by another user, UI warning message should be displayed on the editor	When opening a 'published' version of the workflow that has been checked out by another user, the workflow editor should display a warning message with the username of the user that has checked out the workflow. This way, if the workflow is checked out by User A for example, User B will be aware of this when viewing the workflow through the editor.	**1.** As System Administrator, navigate to **Workflow** > **Workflow Editor**. **2.** On the workflow editor, open **Default SLA workflow**. **3.** On the icon (left of the workflow name), click **Checkout**. The workflow is now checked out. **4.** Log out and log in as another user with the "workflow_admin" role or as another administrator. **5.** Then, repeat steps 1-3. Notice that when you click on the icon (left of the workflow name), there is no checkout or published button. This is expected because another version exists where its been checked out by the System Administrator" user. However, the workflow version at the top of the workflow editor says "Published", giving the impression that the user should also be able to check out the workflow.
User Interface (UI) PRB679644 *KB0610408*	List v3 ignores the glide.ui.goto_use_contains system property	On Helsinki instances, List v3 ignores the glide.ui.goto_use_contains system property.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Email PRB695468	Inbound email incorrectly classified as 'new' when no watermark or record number, but In-Reply-To header's message-id refers to an email in the instance	When an email arrives in the instance with the following conditions, the email should be classified as a reply, but is incorrectly classified as a 'new' email. **1.** Reply prefix exists in subject (e.g. "Re: <subject>") **2.** no watermark in the email **3.** no record number in the email **4.** An In-Reply-To header in the email, with a message-id of an email that exists in the instance email log **5.** The email located by message-id has a target record existing in the system. The system incorrectly treats this email as a 'new' email instead of locating the original email by message-id and finding the target record from that. This results in opening a new incident, when the email should have matched on the target record via the In-Reply-To header.	**1.** User A sends email to a ServiceNow instance, and cc's User B. **2.** User B clicks 'reply' in their email program, and sends it to User A and the instance. User B's email arrives in the instance (and contains an In-Reply-To header referencing User A's email, which exists in the system from step 1.

Problem	Short description	Description	Steps to reproduce
Database Indexes PRB703001	Table Cleaner on v_rrd_slow_script, v_rrd_slow_transaction, and v_rrd_slow_query causes replication to fall behind	Slow DELETES occur against v_rrd_slow_script, v_rrd_slow_transaction, and v_rrd_slow_query from Table Cleaner, even when there are no rows to delete. Deletes against v_rrd_slow_* tables can run for tens of hours (30-50 hours) even when there are no rows to delete, and this causes replication to fall behind.	1. Observe Replication Lag is beyond the operations threshold. 2. Observe the DELETE statements on the secondary database are running long against the tables: v_rrd_slow_script, v_rrd_slow_transaction, and v_rrd_slow_query 3. Optionally, verify the "Table Cleaner" job is running in stats.do.
Orchestration PRB712299	Workflow Editor is taking a long time to load when opening up a workflow when Orchestration is active	The issue usually occurs when users have opened up multiple tabs within the Workflow Editor. Other example symptoms: • When the Workflow Editor opens and a user clicks on any Workflow to open, it takes over 10 -15 seconds to load. • The user is on the latest version of Google Chrome (Version 53.0.2785.101 (64-bit)) or Firefox.	
UI Components PRB746865	HTML with namespaces are not properly displayed within CODE tags in the activity formatter	XML namespace tags and values remain for some examples.	
UI Components PRB660554 *KB0597990*	UI16 does not render the email reply button on the activity (filtered) formatter	The functionality is available after switching to UI15.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Discovery PRB808426 *KB0622288*	When Windows Server 2016 is discovered, it is incorrectly classified as a Computer CI	When Windows Server 2016 is discovered, it is incorrectly classified as a Computer CI (cmdb_ci_computer), and not as a Windows Server CI (cmdb_ci_win_server) in the CMDB.	Discover a Windows 2016 server.
Express to Enterprise PRB910543	Some ACLs remain after an Express to Enterprise conversion pre-Istanbul	After an Express to Enterprise conversion on a Helsinki, Geneva, or Fuji instance, some ACLs remain that prevent Enterprise admins from fully accessing script fields and other tables/fields.	
Email PRB606205	Emails render with Global domain display values for choice list labels	When a user is logged into a domain other than the Global domain and views an incident record, the user can select another domain from the domain picker. However, any email notifications that are sent based on changes to the same incident reflect the choice list values that use the Global domain, not the user-selected domain.	**1.** Select a domain other than Global. **2.** Update an incident that fires a notification. The notification contains information based on the Global domain, not the user-selected domain.
Upgrade Engine Issues PRB683186	Private properties generating 'skip errors' during upgrade	During upgrades, a private sys_property is skipped, and it is reported to the end user as a 'skip error' .	**1.** Mark a sys_property as **is_private=true** and modify it. **2.** Upgrade the instance. **3.** Review the upgrade log. The modified sys_property is skipped and incorrectly marked as a skipped_error. The property is correctly skipped because it is private, but the error is confusing.

Problem	Short description	Description	Steps to reproduce
Record Certification PRB712817	After Helsinki upgrade, users receive roles that were previously removed from the ITIL containing role	After an upgrade to Helsinki, deleted relationships between roles resurface.	In a Geneva instance: **1.** Install the Architecture Compliance plugin. **2.** Verify ITIL role is added with another inherited role: **Certification**. **3.** Delete this relationship. **4.** Schedule an upgrade to Helsinki. After the Helsinki upgrade, this deleted role will be seen with the ITIL role.
Chat PRB825291 *KB0623061*	Connect throws 500 error when resetUnreadCount is called on an empty conversation	In Helsinki and Istanbul, error messages appear in System Logs > Errors.	**1.** Clear out all **live_group_member** records on the instance. **2.** Navigate to the **$c.do** tab. **3.** Switch to a different tab. **4.** Switch back to the **$c.do** tab. Browser shows the HTTP request tries to call /api/now/connect/conversations/undefined
Discovery PRB725029	CIs are being created with the name [OBJECT OBJECT].[OBJECT OBJECT]	Configuration items are being created with the name "[OBJECT OBJECT].[OBJECT OBJECT]"	
Survey Management PRB755324	After upgrading to Istanbul, Survey invitations are not displaying a URL link	This issue occurs because the AssessmentUtils script include performs a GlideRecord query on sp_portal table without checking whether 'Service Portal - Core' plugin is activated on the instance. The system throws an error when the query is executed.	
HTML Editor PRB601128	Insert/Modify Link icon on empty TinyMCE Knowledge editor is enabled but URL/text is not saved	The Insert/Edit Link icon on TinyMCE is enabled on empty editor, but clicking it and adding URL and text does not work.	

Problem	Short description	Description	Steps to reproduce
Studio PRB636482	Scoped apps: Activity Formatter not supported for configuration	The activity formatter is global and available to all task tables. To configure it for a specific table, users must create a system property formatted as follows: glide.ui.<MY CUSTOM TABLE>_activity.fields However, in a scoped application, it is <MY SCOPE>.glide.ui.<MY CUSTOM TABLE>_activity.fields. This does not work properly.	
Lists PRB658785 *KB0597991*	List v3 is not rendering stages properly for columns of type Workflow	The new List v3 view is not rendering stages properly for columns of type Workflow.	Refer to the listed Known Error KB article for details.
Discovery PRB690012 *KB0598562*	CIM_ERR_INVALID_PARAMETER: CIM_HostedShare warning is displayed during storage Discovery	The warning "CIM_ERR_INVALID_PARAMETER: CIM_HostedShare is displayed during storage discovery" appears when discovering specific CIM servers.	Refer to the listed Known Error KB article for details.
Chat PRB716841 *KB0621686*	Inconsistent audio and desktop notifications in Connect	In Connect, there is inconsistent behavior for audio and desktop notifications. When desktop and audio notifications are set, notifications appear, disappear, and then appear again. Audio notifications are also inconsistent, especially when related to transfers.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
UI Components PRB753885 *KB0622265*	Delay in Type Filter on left navigation panel	There is a delay when typing text into the Type Filter text in the left navigation panel. The delay is much more significant in Istanbul vs. Helsinki due to styling changes, including some additional markup between the Helsinki and Istanbul releases.	**1.** In the filter navigator, type **System** or any other term. **2.** Notice the slight delay in the type-ahead.
Update Sets PRB900722 *KB0622591*	sys_storage_alias entry is not deleted when dropping a field from an extended table in update set commit	Records in the sys_storage_alias table are not deleted when dropping a field from an extended table via an update set commit.	Refer to the listed Known Error KB article for details.
Update Sets PRB671146	Error when previewing/ committing update set with an unusually formatted payload	Some specific update set payloads that have been formatted with line breaks can cause errors when previewing/ committing. This PRB only addresses updates with line breaks in the payload element AND the payload starts with: <record_update> <sys_dictionary ...	
Language and Translations PRB678727	Service Catalog categories only display the title of the parent in translated instances	After changing the instance language to German (or French), the Service Catalog Category "Titel" displays the translated value of the corresponding translated value of "Übergeordnet" (parent) or "Katalog" (sc_catalog) if at least one of these columns is on the list and has a value. The element furthest to the right in the list is used and is displayed as "Titel."	

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB722351	HTTP Code: 408 error while exporting a graph as an image	When exporting a large widget to a PNG or JPG image, there is a timeout error and the image is not downloaded. The fix for this PRB includes a new property, com.snc.pa.max_exportable_chart_size. This property has a default value of 2 MB - if the file size is exceeded, the Export button will not appear.	
Discovery PRB733653	Linux - Storage sensor for computers with lots of disks will run instance node out of memory and cause a restart	Node performance is noticeably affected when running large sensors.	
UI Components PRB710184	Non-admin users with only the role 'filter_group' are not able to save group filters in List V3	When non-admin users only have the 'filter_group' role, they are unable to save group filters in List V3. In the condition builder, the 'Save Filter' button only shows 'Only Me', without the 'Group' option.	Pre-requisites • Activate the List v3 plugin. • Make sure List v3 is enabled: make sure that the system property named 'glide.ui.list_v3.enable' is set to 'true'. • An ITIL user only has the 'filter_group' role with no other filter roles. Steps to reproduce **1.** Impersonate the ITIL user. **2.** In the filter navigator, enter **incident.list**. **3.** Edit the filter and set **Active** to **true**. **4.** Click **Save Filter**. The filter does not show the 'Group' option.
Asynchronous Message Bus PRB717454	AMBClient disconnect does not have a timeout and waits indefinitely		

Problem	Short description	Description	Steps to reproduce
Mobile PRB719371	Clearing and adding options to a choice field multiple times in a client script does not work as expected		
Knowledge Management PRB721929	Resizing issues with Knowledge pages	Knowledge pages are not always resized properly - some pages are cut off. In addition, the Knowledge ESS script should only run when knowledge pages are being rendered.	
Security Incident Response PRB732930	Security Incident Response plugin is causing issues with attachments and work notes	The Security Incident Response plugin is stopping user access to journal fields on any non-task table.	
Service Mapping PRB832751	Discovery processing is very slow or stuck	When Service Mapping discovery is run for multiple services (or all services), the discovery job may slow down due to the service recomputation jobs being processed. As a result, discovery tasks can time out.	
Reporting PRB903785	Unable to use semicolons to separate multiple emails in scheduled reports	When multiple email addresses are added and an email is generated, the semicolons separating each email address are not replaced with a comma. This prevents the scheduled report from getting emailed to users.	In an Istanbul instance: **1.** Set up a scheduled report. **2.** Separate multiple emails in the 'Email addresses' field with semicolons (;). **3.** Execute the scheduled report. **4.** Navigate to **System Logs** > **Emails**. The email record is in a state of 'send - ignored'. If you open the email log record, the semicolons between each recipient were not converted to commas. Updating the scheduled report to use commas sends the report as expected.

Problem	Short description	Description	Steps to reproduce
Usage Analytics PRB905758	ua_instance_state table is not included in clone excludes table		
Core Platform PRB610822	GlideAggregate returns the incorrect display value for Service Catalog variable fields	In reporting, legend labels and data labels display the variable choice values instead of the display value. For example, 'Storage' is shown as 'sixtyfour' instead of '64 GB'.	
User Interface (UI) PRB657559 *KB0564244*	Template Dialog has double save buttons with UI advanced property enabled	When the system property glide.ui.advanced is set to true, two Save UI Action buttons are visible when creating a new template for Incident.	Refer to the listed Known Error KB article for details.
Workflow PRB664759	Window hangs because of workflow sequence generation	While designing a workflow, windows might hang.	

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB683185 *KB0621722*	Any data records in tables with a custom field referencing a catalog item will also be copied when that catalog item is copied via 'Copy' UI action	When using the 'Copy' UI action on any catalog item (or record producer, order guide) record, the code that copied the referencing records will also copy all other records that have custom reference fields also referencing the catalog item. For example, a custom field task.u_record_producer referencing sc_cat_item could be used for keeping track of which record producer was used to create an incident or change request. Copying the record producer will result in duplicate incidents or change records being created for all of those created from the record producer. This does not affect any Requested Item records that reference catalog items, which is an out-of-box field.	**1.** Navigate to any table (e.g. Incident). **2.** Create a new reference field **Catalog Item** referencing the table **sc_cat_item**. **3.** Pick a record in the incident table and populate the newly created field **Catalog Item** to **Access** (a catalog item). **4.** Navigate to **Maintain Item** and open the catalog item **Access**. If you click **Copy**, a new Item will be created with name 'Copy Of Access', but a duplicated record is also created in the incident table where the Reference field is created. Duplicate records have the 'Catalog Item' field populated to 'Access'.
Service Portal PRB698394 *KB0622950*	A user cannot use the shopping cart on the Service Portal implementation of Service Catalog	When users go to a catalog item, they cannot click on the button "Add to Cart".	

<table>
<tr><th>Problem</th><th>Short description</th><th>Description</th><th>Steps to reproduce</th></tr>
<tr><td>Mobile
PRB708073</td><td>Mandatory catalog variables in variable sets are not honored in the native app and Helsinki mobile web</td><td>Making a Catalog Variable within Variable Sets mandatory appears to have no effect in the native app other than the asterisk marking it as mandatory. Catalog items can still be submitted with these fields left blank.</td><td>1. Create a catalog item. Make sure Availability is set to Desktop and Mobile.
2. Create a variable set for the catalog item.
3. Create a variable within the variable set. Make this variable mandatory using the Mandatory check box.
4. Test this catalog item in the desktop UI, mobile UI, and the native app.

Note that in the native app, users do not receive a mandatory field warning, and the catalog item can be submitted.</td></tr>
<tr><td>Service Portal
PRB709066</td><td>Changing the currency symbol (in the fx_currency record) causes $0 priced items to display their prices in Service Portal</td><td>When the currency symbol field is changed in the fx_currency record, prices for $0.00 items are displayed with their prices in the Service Portal.</td><td></td></tr>
<tr><td>Mobile
PRB709403
KB0610402</td><td>In mobile UI client scripts, current roles are unavailable on the g_user object</td><td></td><td>Refer to the listed Known Error KB article for details.</td></tr>
<tr><td>Edge Encryption
PRB709440
KB0598181</td><td>Three known use cases can cause false Edge Encryption proxy outage alerts</td><td>In each case, the string "No Edge Encryption proxy online" appears in the instance logs, which triggers the outage alert.</td><td>These three use cases can cause false outages:
• A proxy starts up for the first time (Intermittent). When a brand new proxy connects to a freshly zbooted instance, it takes some time to start up after its registration, which can sometimes exceed the default 25-second outage time.
• GlideCacheManager.invalidate() is called by a script.
• An operation like an upgrade script flushes the Glide cache.</td></tr>
<tr><td>System Applications
PRB715040</td><td>Slush bucket does not work as expected</td><td>Users are intermittently unable to add items from the 'Available' to 'Selected' columns in slushbuckets.</td><td></td></tr>
</table>

Problem	Short description	Description	Steps to reproduce
Integrations PRB738710	LDAP synced users are not able to login because "No DN returned for [user_name]"	After the LDAP authentication is turned on and all configurations are complete, LDAP synced users cannot log in. In the LDAP log, users see messages such as: • <User name> cannot login • No DN field returned for <User name> • No user information found in ldap for <User name>	
Service Portal PRB878189 *KB0622398*	In Service Portal, catalog item variables are read-only for non-roled users	When the variables in a catalog item have write_roles configured and a non-roled user tries to create a request using the catalog item, all of the variables are read-only in Service Portal. However, the variables in the catalog item in the normal catalog UI are not read-only.	**1.** As an admin user, navigate to **Maintain Items**. **2.** Open the **Sales Laptop** catalog item. **3.** From the related list, open the **Additional software requirements** variable. **4.** Add the **Write roles** field to the form if is not already there. **5.** Add the admin role to the variable (so that the admin is required to write to the variable). **6.** Click **Update**. **7.** Impersonate an ESS user. **8.** Navigate to the Service Portal. **9.** Search for and view the **Sales Laptop** catalog item. Expected behavior: Variables are writable in the normal UI and Service Portal. Actual behavior: Variables are read-only in Service Portal. They are writable only in the normal UI.

Problem	Short description	Description	Steps to reproduce
Core Platform PRB653930	Forms and lists can load slowly if they render multiple reference fields that have blank display values	Depending on how many times the form is trying to render the reference field that has a blank display value, the form will load slowly. Specifically, this has been seen with a blank "name" field on the cmdb_ci table.	
Service Catalog Widgets: Service Portal PRB683264 *KB0621041*	action.setRedirectURL and producer.redirect do not work on Service Portal	producer.redirect defined on an item/ record producer does not work on Service Portal.	Refer to the listed Known Error KB article for details.
Knowledge Management PRB687331 *KB0622851*	Images are lost after importing Word article through Knowledge portal		**1.** Navigate to **Knowledge > Homepage**. **2.** Click the **Import Articles** button. **3.** Click **Click to select** and and choose the Word document. **4.** At the prompt, identify the location of the article. **5.** Choose a **Knowledge Base** and click **Import**. Note that although no error message appears, images in the article do not appear.
Upgrade Engine Issues PRB689915	Users are unable to revert to base version the changes made to the backout UI action by a recent write audit		
Reporting PRB691552 *KB0596651*	The 'Other' section of a report does not display the correct data if the report is not saved	The 'Other' section on grouped reports shows no data when clicked; unsaved changes to reports do not display when report is run.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Knowledge Management PRB692419 *KB0622848*	A knowledge base with disabled Social Q&A still shows when users try to create a question	When navigating to the Knowledge page and posting a question, users can select a knowledge base for which Social Q&A is disabled. When the question is submitted, an error appears.	**1.** Enable Social Q&A for a knowledge base. **2.** Check that you have at least one knowledge base that does not have Social Q&A enabled. **3.** Navigate to **Self-Service** > **Knowledge**. **4.** Click **Post a Question**. **5.** In the **Knowledge Base** field, click the arrows to show the drop-down menu. Note that all knowledge bases are listed, even the knowledge bases for which Social Q&A has not been enabled. **6.** In the **Knowledge Base** field, select a knowledge base that does not have Social Q&A activated. **7.** Add a **Title**. **8.** Click **Post Question**. Note the error message: 'Error in fetching question'. The question cannot be submitted successfully.
Chat PRB701399 *KB0598984*	Wait time is not displayed in legacy chat window	When an end user initiates the chat, the displayed message is: "You are currently in position 1 in the queue. Your approximate wait time is 7 Seconds." However, this message is not displayed when using legacy chat.	Refer to the listed Known Error KB article for details.
Reporting PRB711605 *KB0622603*	Script logs contain entries from home_grid.xml	When a homepage or CMS calls home_grid.xml, these log statements appear: '>>>> layout: layout_2_across'	

Problem	Short description	Description	Steps to reproduce
Delegated Development PRB713012	List UI actions are doubled on the sysapproval_approver table in Helsinki and Istanbul	The list choice UI actions 'Approve' and 'Reject' appear twice in the sysapproval_approver list, in the "Actions on selected rows" drop-down choice menu.	**1.** Navigate to **sysapproval_approver.list**. **2.** At the bottom, click **Actions on selected rows**. 'Approve' and 'Reject' appear twice on the list.
Service Portal PRB713048 *KB0610283*	Fonts and glyph icons do not display as expected in Helsinki	Fonts and glyph icons in .woff2 font file resource in /sp-fonts folder cannot be found on instances upgraded to Helsinki.	To determine whether an instance is affected: **1.** Navigate to **System Definition** > **Plugins** and activate the Service Portal plugin. **2.** Open a browser window to a Service Portal (for example, /sp). If the browser throws a 404 error failing to download /sp-fonts/glyphicons-halflings-regular.woff2, the instance is affected.
Knowledge Management PRB734679	When ESS users access the Knowledge homepage, categories intermittently do not show up	ESS users are experiencing intermittent issues with categories on the Knowledge homepage. When some ESS users click the ESS link to the Knowledge page, no categories are loaded. Sometimes, all categories load correctly.	This issue occurs intermittently. **1.** Log in to an instance as an admin user. **2.** Navigate to **Self-Service** > **Knowledge** > **Knowledge Bases**. **3.** Make one knowledge base **active**, and make the remaining knowledge bases **inactive**. **4.** Navigate to ESS. **5.** Press **command** and click the knowledge link 20-30 times continuously on that page. This will cause 20-30 tabs to open. In some of these tabs, the categories do not load. Expected behavior: The categories load on the knowledge base home. Actual behavior: The categories do not load.

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB810213	If a variable value contains unprintable ASCII characters, the Edit Cart and 2-step Checkout pages will not load	If a variable value contains unprintable ASCII characters which are invalid XML once encoded (e.g. &#11;, &#16;), the Edit Cart and 2-step Checkout pages will not load. If a user pastes a value into a catalog item string variable, which includes unprintable ASCII characters: **1.** The value will be saved in the cart item sc_item_option record. **2.** The Edit Cart/2 step checkout page (com.glideapp.servicecatalog_cart_view_v2) will not load with an error such as "Character reference "&#16" is an invalid XML character."	**1.** Create a Catalog item with a single-line text variable. **2.** To open the item in the catalog, click **Try it**. **3.** Copy/paste text into the variable, including some hieroglyphs starting with 17h, followed by "proper text after unprintable characters". **4.** Add to cart. Note that a sc_item_option record now exists with this value. **5.** Click **Edit Cart**. This loads the 'com.glideapp.servicecatalog_cart_view_v2' UI Page that is also used for 2-step checkout. Note the error: "Character reference "&#17" is an invalid XML character."
Email PRB632003	Formatting of HTML in the email client template is lost when opening the email client	HTML placed in the "body" field of an email client template record can lose formatting when it is rendered in the email client. Some observed issues: • If you add html <table> tags to a email client template the tags will get converted to <div> tags. • Extra lines are added to line item structure.	

Problem	Short description	Description	Steps to reproduce
Server Side Scripting PRB634999	Dot-walking through a reference to tags field results in Syntax Error or Access Rule Violation	If a user configure a list to add a dot-walk to the tags field of a reference, the list no longer displays properly. The user receives these listed errors when viewing the list: • MySQL: Syntax Error or Access Rule Violation detected by database (Unknown column 'task4.sys_tags' in 'field list') • Oracle: Syntax Error or Access Rule Violation detected by database (ORA-00904: "TASK1"."sys_tags": invalid identifier)	
UI Policy/ Client Script PRB668742	HTML editor TinyMCE strips out the onclick link attribute despite adding it to the HTMLSanitizerConfig HTML_WHITELIST	For example, Note: For steps on how to submit a WSR refer to KB0000001 - <a href="/" onclick="return getLinkToKB(this, 'KB0000001');" target="_blank"> changes to Note: For steps on how to submit a WSR refer to KB0000001 - How to Submit a WSR	

Problem	Short description	Description	Steps to reproduce
Persistence PRB684316 *KB0622001*	Deleting a non-empty table that extends sys_metadata does not remove sys_metadata records for rows in that table	If a table extending sys_metadata is deleted and there were rows in that table, then the sys_metadata records corresponding to the rows in that table are not removed.	**1.** Create a new table that extends sys_metadata. **2.** Navigate to that table and create a new record in it. Note the sys_id of the the record you just created. **3.** Delete the table (without deleting the record in it). **4.** Navigate to sys_metadata and search by sys_id using the id from step 3. Note that the record has not been removed.
Reporting PRB689636	Printer-friendly version not working with reports	• For pie charts, the printer-friendly option (in the gear wheel/ settings) results in a blank page with a 'Click to Print' button. The Chrome console shows an error: SetupSeries not defined. • Bar charts experience this same issue. For bar charts, the Chrome console shows this error: Failed To Load Resource 400: Bad Request.	In a Helsinki instance: Pie charts **1.** Navigate to **Report** > **All Contracts by Type** report (a pie chart type report). **2.** Click the gear wheel (settings). **3.** Click **Printer Friendly Version**. Note there is a blank page with a 'Click To Print' button. If you enable Chrome Console (COMMAND+OPTION+J), you will see an error: Uncaught ReferenceError: setupSeries is not defined Bar charts **1.** Change the pie chart to a **bar chart**. **2.** Run the report. **3.** Click the cog wheel (settings). **4.** Click **Printer Friendly Version**. Note the page is blank without a 'Click To Print' button. The Chrome console shows this error: Failed To Load Resource: 400 (Bad Request).
UI Components PRB707224	Reference lookup issue when using List v3		

Problem	Short description	Description	Steps to reproduce
UI Components PRB709998	When settings content outgrows the container, it overflows	When you click on the Settings icon while using a tablet, content overflows from the container on the General and Theme tabs.	Using a tablet in UI16: **1.** Click on the **Settings** icon in the header. Note that the 'Printer-friendly version' icon is outside of the containing frame. **2.** Click on the **Themes** tab. Note that the last few themes are overflowing the container.
Chat PRB710681	During an upgrade, connect_action is forcibly updated	This can interfere with customer customizations or changes.	**1.** Update the Connect Action titled **Create Incident**. **2.** Upgrade the instance. **3.** After the upgrade, check the Connect Action titled **Create Incident**. It has been reverted to its OOB state.
Persistence PRB711355	Handling empty sys storage alias	In various situations, the table editor or other source can insert an empty sys_storage_alias.storage_alias. As a result, a NullPointerException (NPE) is thrown when the db layer is loading the sys_storage_alias for table or column changes. If the NPE is thrown in the middle of upgrade, the upgrade can fail.	

Problem	Short description	Description	Steps to reproduce
Service Portal PRB714152 *KB0622099*	If a requested item is ordered as part of an order guide from Service Portal, the Order Guide field on the Requested Item form does not show the order guide name	If a requested item is ordered as part of an order guide, the Order Guide field on the Requested Item form should show the order guide name. However, when the request is submitted from Service Portal, the Order Guide field is empty.	In a Helsinki instance: **1.** Open the Service Portal home page. **2.** Navigate to **Service Catalog** > **Can We Help You?** **3.** Select **New Hire**. This is an OOB Order Guide. **4.** Enter all mandatory fields. **5.** Click **Submit**. You will get a small pop-up near the header: "Created REQ0010011 - track using 'Requests' in the header or click here to view". **6.** Open this REQ and associated RITM. In the RITM form, the Order Guide field is empty. If this same request is submitted from Service Catalog (outside Service Portal), the Order Guide is populated correctly.
Email PRB714393 *KB0621603*	Cannot enable notification preferences for a mandatory notification on non-primary email devices	The notification preferences page causes the mandatory notifications to display as though all devices will receive the notification. The user cannot switch off preferences for any of the devices. In addition, only devices with a cmn_notif_message for a mandatory notification receive the notification.	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Upgrade Engine Issues PRB715145	Resolve Conflicts action displays 'Payload is not found' on a coalesced record	The 'Resolve Conflicts' UI action on a skipped record displays a 'Payload is not found' message if there is no sys_update_xml for that record. The system looks for a sys_update_xml with the file name that is in source control, without considering whether that file has coalesced and exists under a different name/sys_id.	**1.** Navigate to **sys_ui_view.list**. **2.** Search for 'Name' = **default**. **3.** Customize that record and verify a sys_update_xml is generated. **4.** Upgrade the instance. **5.** After upgrade, navigate to the sys_upgrade_history record for the upgrade. **6.** Filter down the skipped list to only sys_ui_view records with 'Target Name' = **default**. **7.** Click any of these records, excluding the one you modified in step 3. **8.** Click **Resolve Conflicts**. Expected behavior: The user should be able to tell that this record coalesced to the one modified in step 3 and show the difference. Actual behavior: The user sees a 'Payload is not found' error message.
Automated Test Framework PRB716341 *KB0622763*	Screenshots are not displayed in test results due to missing extension	Automated Test Framework test results are missing screenshots due to generated attachments having no extension.	**1.** Navigate to **Automated Test Framework** > **Test** and create a test. **2.** Add a step to the test to '**Open a new form**'. **3.** Set the form table to **Incident**. **4.** Run the test. Expected behavior: The Test Result record has a JPG screenshot with a file extension. Actual behavior: The Test Result record has a PNG screenshot with no file extension.

Problem	Short description	Description	Steps to reproduce
Lists PRB721465 *KB0598844*	Reference field autocomplete/ typeahead blocks the filter's reference input field and when editing a list	When attempting to auto-complete a reference field value in a filter, the input field is covered with the suggestions list. When only one result is returned, a one-item list appears *above* the text field, but you need to use the *down* arrow to select it using the keyboard.	**1.** Navigate to **Incident** > **Open** (or fix targets or stories). **2.** Open the filter builder and add a new AND clause. **3.** Choose Configuration Item (Problem on HI, or Target Branch for fix target or story). **4.** Tab over to the text area and type a single character. Note that suggestions appear starting above the text area and continuing down over the top of it
Service Portal PRB723439 *KB0622405*	Mandatory field alert is not translated	The alert texts "The following mandatory fields are not filled in" and "The following fields are incomplete" are not translated in the Service Portal.	Refer to the listed Known Error KB article for details.
Reporting PRB723987 *KB0622579*	List calculation disappears once the report is saved	List calculations such as total, average, minimum, and maximum values disappear from the report when Save is clicked.	
UI Components PRB648326	Accessibility - Context menus cannot be navigated with a keyboard	When opening the list controls menu via a keyboard, focus cannot be placed on the opened list.	

Problem	Short description	Description	Steps to reproduce
Asset Management PRB653476	Clicking on form sections on the form layout screen for alm_hardware, can cause the sections for alm_asset to be loaded	When this happens, new form sections are added to alm_asset instead.	**1.** Open an alm_hardware record. **2.** Right-click the form header and select **Configure** > **Form Layout**. **3.** In the **Section** field, click **New...** to create a new section. Be careful not to click any of the existing sections first. **4.** Create a new section and add a field to the section. **5.** Return to the alm_hardware form. Note that the section appears as expected. **6.** Right-click the form header and select **Configure** > **Form Layout** > **General**. Note that the Sections in the section field change. Hardware used to be the first section, but now Asset is first. **7.** Create another new form section, add a field to it, and **save** again. **8.** Return to the alm_hardware form. Note that the second new section created in step 7 does not appear. **9.** Open the sys_ui_section list and look for the form section you created in step 7. Note that it was created on alm_asset instead of alm_hardware.
Persistence PRB665289	Received ORA-00932: inconsistent datatypes: expected - got CLOB error when searching TAG		
Platform Performance PRB667006	Progress workers are not limited/throttled, which can lead to resource constraints on application nodes	Progress workers are not limited or throttled, which can lead to resource constraints on the application node and potentially no free memory, high CPU, and no available database connections.	

Problem	Short description	Description	Steps to reproduce
Change Management PRB678036 *KB0621305*	In a standard change catalog, an equals sign in template values produces an error message	If a mandatory field for the submission of a standard template contains an equals sign (=), the test for the field fails with the error message ""Change Request values" have not been provided: Short description, Description, Implementation plan." The field is read as though it does not contain a value even if there are values present along with the equals sign.	Refer to the listed Known Error KB article for details.
UI Components PRB710112	'Is one of' treats white spaces in fields values as delimiter in List v3	When using List v3, when the 'is one of' filter condition is used, and the value added to the condition contains two strings with an white space in between, the system turns the white space to a comma.	**1.** Activate List v3 in an out of the box instance. **2.** Go to **sys_ui_action.list**. If List v3 fails, go to list control and check the List v3 compatible check box. **3.** Create a filter with the name 'is one of' 'Request Approval' or 'View Toggle', without the quotes. **4.** Run the filter. Expected behavior: The filter should be "name in 'request approval' , 'view toggle'". Actual behavior: The filter will be translated to "name in request, approval, view, toggle".
Text Search PRB710467	The text indexer triggers whichever logic is associated to a variable during the indexing process	The text indexer encounters delays when processing a Lookup Select Box variable that is associated with the sys_user table. The variable has a defined choice list that will fetch all sys_user records. This causes a performance issue for the indexer and prevents it from completing work.	**1.** Create an incident from the Service Catalog. **2.** Update the incident, which triggers a text_index update update event on the incident table. When this event is getting processed, the indexer is loading large data rows.

<table>
<tr><th>Problem</th><th>Short description</th><th>Description</th><th>Steps to reproduce</th></tr>
<tr><td>Service Portal
PRB713489</td><td>Catalog UI policy with empty condition cannot make HTML variable read-only</td><td>When using a catalog UI policy to set 'HTML' variable to read-only, it is not honored when viewing the catalog item from the Service Portal.</td><td>Activate the Service Portal for Enterprise Service Management [com.glide.service-portal.esm] plugin.
1. Navigate to Maintain Items > Report an Incident.
2. Add a new variable to Catalog Item:
• Type: HTML
• Question: test
• Name: test
3. Create a new catalog UI policy to catalog item.
4. Add a catalog UI policy action to the catalog UI policy:
• Variable name : test
• Read-only: true
5. Go to Service Portal.
6. Click Order Something, Can We Help You?, and Report An Incident.
The "test" HTML field is editable instead of read-only.</td></tr>
<tr><td>Audit History
PRB719751</td><td>Printing an audit-enabled table throws error "Illegal access to method getSpecialED() in class com.glide.audit.AuditRecord"</td><td>Printing an audit-enabled table throws UI error message at the bottom of the page: "llegal access to method getSpecialED() in class com.glide.audit.AuditRecord".</td><td></td></tr>
<tr><td>Service Catalog
PRB720592
KB0598710</td><td>Unable to add variables to Service Catalog items</td><td>When the High Security plugin is not activated, users are unable to create new variables after upgrading the instance to Helsinki. Some base system ACLs are missing.</td><td>This issue occurs only when High Security Settings Plugin (com.glide.high_security) is not enabled.
1. Log in to an instance as a catalog_admin or catalog_editor.
2. Navigate to Service Catalog > Catalog Definitions > Maintain Items.
3. Click New.
4. In the Variables section or tab, click New.
Note that all of the fields are read-only.</td></tr>
</table>

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB730979	User should not be able to save the widget form until all the required fields are filled in	Users are able to save widgets without providing mandatory information. If a user has not filled in or configured the required mandatory fields, they should receive a message that tells them to fill in the fields before saving the form.	
Update Sets PRB733389	Users can create a field with the same name on a parent and child table using update sets	Creating a field with the same name on the same branch (such as task or incident) should not be possible, but users are able to do so with update sets. This can cause intermittent erratic behavior.	
Upgrade Engine Issues PRB828187 *KB0622592*	Upgrading the com.snc.service plugin overwrites changes made to the sys_user Dictionary record		Refer to the listed Known Error KB article for details.
Service Catalog PRB860988 *KB0622339*	Questions are not visible on the risk assessment survey when called within a dialog box	Some users are trying to use glideOverlay as the popup on the UI macro 'Fill Out Risk Assessment'. When glideOverlay is used, the questions are being hidden.	
UI Components PRB618278	Reference qualifier set in a reference field does not work when using the auto-completer feature	This occurs in multi-language instances.	

Problem	Short description	Description	Steps to reproduce
Reporting PRB651917	Reports do not display correctly under the My Reports section when the user's username has been changed since they created the report	When a user creates a report and then later has a username change, reports do not display correctly under the My Reports section. Some users may have gotten a new primary email address and a new username/login for ServiceNow.	
Discovery PRB654648 *KB0598565*	During Discovery, Windows 2012 storage sensor sometimes overwrites the model ID of a computer on new CIs	During the discovery of a new computer, the computer OS information and the model ID are written to the CI while the storage probe is running. However, the storage probe occasionally overwrites the model ID with an incorrect value.	Discover a new Windows 2012 computer on your network. Note that occasionally the model ID shows an incorrect value on the CI.
UI Components PRB703542	Bullet font size within HTML fields using TinyMCE and/or HTML editor does not honor font size changes within the data when uploading a Word file	While creating knowledge base article using numbered list in TinyMCE text editor, upon increasing the font of the entire content, only the text changes and not the numbered list.	**1.** Create a new knowledge base article. **2.** Edit the KB_knowledge.text field to make it a numbered list in the text editor. **3.** Enter some text, select all, and try to increase the font size. The numbered list's font size does not increase.
Discovery PRB709239 *KB0622394*	Sensor error when processing Windows - Storage : TypeError: Cannot convert null to an object	When the ProviderName from the WMI property 'Win32_MappedLogicalDisk.ProviderName' is empty, the 'Windows - 2008 Storage' probe payload, the sensor will get the error: "TypeError: Cannot convert null to an object"	Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
UI Components PRB711039	'Communicate workaround' button on Problem records adds '_123STREAMENTRY321_' to the comment	When using the 'Communicate Workaround' UI action, the comment that is posted to the child incidents has '_123STREAMENTRY321_' prepended to the beginning of the comment.	This can be reproduced on any problem with child incidents in an out of box instance. **1.** Fill out the workaround and press **Post**. **2.** Press the **Communicate workaround** UI action. '_123STREAMENTRY321_' is added to the comment.
Service Portal PRB719565	When using Service Portal, timestamps are incorrect on records	Affected users are seeing incorrect timestamps when records are updated (e.g. incident records).	
Forms PRB733103	Activity stream appears as empty	Some users are experiencing issues with the activity stream - users cannot view work notes and additional comments. This issue affects any journal fields (e.g. work notes, comments, or custom types).	**1.** Perform a cache flush. **2.** Open an incident and fill the **Short description** with: **Here's a test**. **3.** **Submit** the incident. **4.** Go to **/incident_list.do**. **5.** Open any other incident. Note the activity stream remains empty. Errors appear in the developer console.
Service Mapping PRB733872	Service Mapping performance issues	Some users are experiencing performance issues with Service Mapping. When changes occur around the same time in multiple business services, the service model re-computations take a long time and occupy all worker threads.	
Chat PRB741898	Enable agents to create a record off a chat after a conversation is closed	If an end user leaves chat unexpectedly, the 'Create Incident' option disappears for the chat agent. The option should remain.	The **Create Incident** option disappears when: • The agent ends a conversation before a record was created of the chat. • The end user unexpectedly leaves a conversation before the agent is able to create a record.

Problem	Short description	Description	Steps to reproduce
Service Portal PRB746327 *KB0622402*	Cannot view content of large, read-only text field because input does not resize		**1.** Create a problem record with large content in the **Description** field. **2.** Switch to the **/sp?id=form** view of the record. Note that the Description field does not resize to show content. If the field were read-only, the content is unreadable.
Incident Management PRB756822 *KB0622353*	When a resolved incident is reopened, the Resolved By and Resolved fields are not cleared or updated	When an incident is resolved for the first time, the 'Resolved' and 'Resolved by' fields are populated. If the incident is reopened, these fields do not get cleared. Then, when the incident is once again moved to the 'Resolved' state, the original 'Resolved' and 'Resolved by' values still persist. These fields are not updated with new values.	Refer to the listed Known Error KB article for details.
Survey Management PRB806545	'Take Survey' widget fails to save/submit when the URL contains a trailing slash	A user can access a Service Portal with a URL suffix of "sp" using either of the following URLs: **1.** https://instance.service-now.com/sp **2.** https://instance.service-now.com/sp/ When using the second URL, the Take Survey widget no longer works.	**1.** Add the **My Surveys** widget to the homepage. **2.** Impersonate a user who has a 'Ready to Take' survey instance. **3.** Open the Service Portal via the following URL: https://instance.service-now.com/sp/ **4.** From the **My Surveys** widget, open the survey. **5.** Once the survey loads, click **Get Started**. **6.** Complete part of the survey and click **Save**. The following error message is displayed: "Something went wrong. Please try again later."
Core Platform PRB606043	Listeners are not notified when property is deleted	When a property is deleted, the listeners are not notified of a change.	

Problem	Short description	Description	Steps to reproduce
Persistence PRB645369	Concurrent HashMap transactions on Database Views cause stuck semaphores	If two transactions try to access a database view at the same time, the transactions can get stuck.	
Project Management PRB664936	When a scrum story has a project but no team selected, 'Assigned To' reference icon in scrum tasks (rm_scrum_task) form returns no rows	The SDLC Scrum Task form does not return any values in the 'Assigned To' reference popup when the associated story for the scrum task has a value selected for Project but no value for Team is selected.	Make sure all of the Project, Portfolio, and SDLC Scrum plugins are installed. **1.** Create a new Story with a value for **Project** selected but no Team selected within the Story. Or, select any existing such record. **2.** Create a new Scrum Task for the story, or if one exists, open it. **3.** Click on the Assigned to reference popup for the field. Note it comes up with no values.

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB668581	'Price if checked' and 'Recurring price if checked' fields are Decimal type, preventing the use of multi-currency for check box catalog variables	A currency cannot be set for the 'price_if_checked' and 'recurring_price_if_checked' fields on check box variables because these are Decimal type fields. This causes problems with the catalog item calculation and the display values shown on the forms when the catalog item and its other variable prices are not the same currency as the one derived from the default system locale, which is what is assumed for this decimal value. Where the Item is in a different currency to the default locale's local currency, the variable prices are wrong. The system assumes the variable prices are in the default locale currency, and not in the same currency of the rest of the catalog item.	
User Interface (UI) PRB672994	Fixed queries are not part of the export query in v3		

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB680224	Pivot scorecard visualization always displays only the first 10 elements of the breakdown		Make sure to have collected scores in the instance. **1.** Log in as admin. **2.** Navigate to **Performance Analytics** > **Dashboards**. **3.** Click on edit dashboard and **Add content**. **4.** Select **Performance Analytics** > **Breakdown**. **5.** Create a new widget with visualization "Pivot scorecard" and breakdown "Assignment Group". **6.** Save and on the related list add 3 indicators that are using that breakdown (e.g. Number of open incidents). **7.** Save and reload the dashboard. Notice that only the first 10 elements are displaying with values.
Import / Export PRB683830	Profile Date Format causes unexpected easy import date/time fields issues		**1.** Set your profile date format to any other than yyyy-MM-dd (e.g. **MM-dd-yyyy**). **2.** Find any table which contains a date/ time field, or create a date/time field (e.g. incident.opened_at). **3.** Right-click the column to initiate easy-import. **4.** Select **Insert** and download the Excel template. **5.** Open the Excel template and set the 'Opened' field format to the custom **yyyy-mm-dd hh:mm:ss** and put in a date/time value **2012-10-29 19:53:21**. **6.** Complete the easy import and check the results. Expected result: 10-29-2012 19:53:21 Actual result: 0017-11-03 03:53:21

Problem	Short description	Description	Steps to reproduce
Assessments PRB697321	Public surveys require the guest account, which gets removed when demo data is removed	Public surveys require the guest account to work. However, the guest account is considered demo data and will get deleted if a user requests to remove all demo data. After that, trying to access a public survey will result in a blank page.	
Chat PRB698659 *KB0621323*	Legacy chat 'invite user' notification alert works only if the browser is refreshed	When using the 'invite user' feature in legacy chat, the alert notification does not work consistently.	Refer to the listed Known Error KB article for details.
Service Mapping PRB706567	Identification rule error about using a non-existent field - upon upgrade, a schema change is not applied to the cmdb_ci_endpoint_storf table	After an upgrade to Istanbul, users see the error "Rule entry under cmdb_ci_endpoint_storf identifier using non-existent field is ignored during identification!" This issue occurs because the identification rule is using a non-existent field (container).	
Reporting PRB706658	Drilling down to the Total/Total on a pivot table does not show correct data when 'Show Other' is turned on	If a pivot report is made to display the 'Other' column, drilling down to the Total/Total value will not show correct data. In some cases, the filters are broken.	**1.** Create a pivot report on the incident table: • Row: Incident state • Column: Caller • No. groups: 10 • Show other: true **2.** Set the condition to **Created on This year**. **3.** Run the report and drill down to Total/ Total. Notice that the resulting filter is broken and shows all records from the table.

Problem	Short description	Description	Steps to reproduce
UI Components PRB706701	Compact list Date/Time settings are not retained after the setting is enabled	After the compact list date/time is changed to ON in system settings, the date/time display is not retained after refresh.	**1.** Navigate to system settings and make sure that **Compact list date/time** is disabled. **2.** Go to any page with a date column on list. For example, navigate to Incidents > Open and add the date column, which is in the format YYYY-MM-DD HH:MM:SS. **3.** Navigate to system settings and enable the **Compact list date/time** setting. Then exit the settings window. The date formation changes to the compact list format: the year is not shown for date values within the current year, and seconds are not shown for time values. **4.** Refresh the page. The date column changes back to YYYY-MM-DD HH:MM:SS. **5.** Navigate to system settings. The **Compact list date/time** is still enabled. The date column should retain the compact list format YYYY-MM-DD HH:MM.

Problem	Short description	Description	Steps to reproduce
UI Components PRB709886	List v3: Pagination disappears when a UI action is added as 'List bottom button'	Pagination disappears on List v3 once a UI action button is added to the list view as a 'List bottom button'.	1. Navigate to **System Definition** > **Plugins**. Make sure the List v3 plugin is active. 2. Navigate to **Incident** > **All**. Observe the pagination in the bottom-right corner of the list. 3. Get the context menu for the table by navigating to **Configure** > **UI Actions**. 4. Create a new UI action with following properties: • Table: Incident • List bottom button: Checked 5. Name the UI action and **save**. 6. Go back to **Incident** > **All**. Observe that no pagination is present on the list.
Project Portfolio Management PRB710682	In List view, 'current.sys_class_name' evaluates as undefined, causing ACLs to fail for dot-walked fields	'current.sys_class_name' evaluates as undefined when used in ACL scripts and when the ACL is executed while pulling list data. The same 'current.sys_class_name' evaluates properly when the ACL is executed from a form allowing the ACL to pass.	1. Open **pm_project_task_list.do**. 2. Configure the list layout and add the dot-walked field **Project (Sub tree root).Short Description**. As an admin you will be able to see the short description field. 3. Impersonate it_project_user. 4. Open the project task list. You will no longer see the short description.
Platform Security PRB711306	Excessive number of records on 'sys_user_role_contains' table can cause the RoleManagementListener.java to stall an upgrade		

Problem	Short description	Description	Steps to reproduce
Service Portal PRB712274 *KB0597772*	Catalog UI policy action does not run on-load in Service Portal for conditions on the check box variable type	Catalog items with a check box variable type that used to show another field via a catalog UI policy are not working the same on Service Portal. For example, a catalog item has the following: • Field A (check box) • Field B (Single Line Text) On load, Field B is hidden. It only appears after Field A is set to true (selected). This works correctly within the Service Catalog. On the Service Portal. the action within the Catalog UI policy only runs when selecting and clearing Field A.	Refer to the listed Known Error KB article for details.
Change Management PRB713865	"Affected CI's" related list on Incident form triggers a warning on the logs	For a base system with the related list CIs Affected [task_ci] added to the Incident Form, each time the incident is loaded and there is a CI on the list of Affected CIs, the following warning message appears in the logs: "WARNING *** WARNING *** *** Script [ChangeProposed]: [init] Unknown parameter passed in: [object GlideRecord]"	**1.** Open an incident form record. **2.** Add the Affected CIs related list to the form. **3.** Add a CI. **4.** **Save** the record and copy the URL. **5.** Navigate to **System Logs** > **Utilities** > **Node Log File Tailer**. **6.** Open a new tab, paste the URL that you copied in step 4, and open the URL. **7.** Navigate to the **Node log file tailer**. In the logs, the following error message appears: *** Script [ChangeProposed]: [init] Unknown parameter passed in: [object GlideRecord]

Problem	Short description	Description	Steps to reproduce
Reporting PRB714172	When accessing sys_report_drill.do?SCHEMA, it causes a NullPointerException from the ACL	The report drill down ACLs do not make sure that the report exists before trying to get the root report. This causes a NullPointerException.	
Email PRB714383	Turning notification preferences on and off for non-primary devices on mandatory notifications makes them permanently on for that device	After unsubscribing from a notification, users continue to receive them.	
Discovery PRB718623	Windows credentials with special characters do not work when used by new PowerShell implementation (affects test credential and WinRM)	The new PowerShell API, which is used by WinRM and test credential, does not correctly handle Windows credentials where there is a PowerShell-specific special character such as "$" in the username or password. This will cause authentication failures with targets even though the credentials are correctly defined.	**1.** Create a Windows credential for an associated device that has a special character such as "$" as part of the password. **2.** Run test credential against the device. Notice the credential test fails, even though this is the correct credential. As part of verifying the credential is correct, running a normal quick discovery on the target (as long as WMI is being used and not WinRM). This should result in a successful authentication and discovery of the device, and there should be an IP affinity created with the credential that failed the test in step 2.
Security Access Control Lists PRB902940		On Express, clean demo data generates a large number of ACLs	These ACLs have 'express_security' set to 'false', so they do not affect Express customers. However, after a user converts to Enterprise, these ACLs affect users.

Problem	Short description	Description	Steps to reproduce
Change Management Risk Assessment PRB723003 *KB0621455*	Change Risk Assessment popup on submit is not being saved correctly	This issue can only be reproduced in Windows 7 (32 bit) and Chrome 54. When a change's risk assessment is filled in and submitted, and the user views the record in the Risk Assessment related list, there is no Completed by or date stored. When a user tries to execute Risk Assessment, it errors out with a message saying the Risk Assessment must be completed. The Istanbul Patch 1 fix for PRB723003 also includes a fix for PRB726440.	Prerequisites • Ensure you are using a 32 bit Windows 7 VM: • Download Windows 7 and install as 32bit on VMware fusion *here*. Steps to reproduce In a Geneva instance: **1.** Install the 'Change Management - Risk Assessment' plugin with demo data. **2.** Set the form to load related lists on demand. **3.** Create a Change record with category **Software** and click **Submit**. **4.** Click **Fill Out Risk Assessment**. **5.** Fill in the survey and click **Submit**. **6.** Load the related lists to see the Risk Assessment list. See that the record is there; however, no "Completed by" or "Completed date" is populated. **7.** Click **Execute Risk Assessment**. Note the message "A risk assessment is required..."

MID Server
 	
PRB744428
	Users are seeing 'org.slf4j.impl.StaticLoggerBinder' errors upon MID Server startup	When the MID Server starts up, errors appear in the wrapper log.	The following errors appear:
			
			`2016/12/21 18:56:25 | Overriding formatter to:`
			`com.glide.util.DefaultLogFormatter (for handler: java.util.logging.FileHandler)`
			`2016/12/21 18:56:39 | SLF4J: Failed to load class`
			`"org.slf4j.impl.StaticLoggerBinder".`
			`2016/12/21 18:56:39 | SLF4J: Defaulting to no-operation (NOP) logger implementation;`

Service Portal PRB747324	Autosize functionality is not working for form fields - TEXTAREA		

Problem	Short description	Description	Steps to reproduce
Date and Time PRB626390	User was able to create calendar record with conflicting hours, which led to an ArrayIndexOutOfBoundsException and blocked alert processing	The user created a calendar record with conflicting hours. The first record was Monday from 00:00 to 23:59:59, and the second record was Monday from 12:00:00 to 20:00:00. This led to an ArrayIndexOutOfBoundsException error during the GlideCalendar load whenever the EventProcessor would run. Deleting the record restored the event processor.	
HR Service Management PRB706117 *KB0598025*	When upgrading, HR demo data defaults are reactivated and overwrite customizations	If HR demo data is customized or categories deactivated in base system content, the content might revert to the base system defaults after upgrading.	**1.** Modify the base system content in one of the following categories, or deactivate the data: • HR Categories • Workday scheduled job • Surveys • HR Case and Task templates • Document templates • HR skills • Connect action • Chat queue • HR Portal preferences • HR groups **2.** Upgrade the instance. Note that the records have reverted back to the base system default data values.
Server Side Scripting PRB753842 *KB0621769*	Very large filter scripts are compiled even when com.glide.script.filter.interpreted.mode = true, causing metaspace memory issues		Refer to the listed Known Error KB article for details.

Problem	Short description	Description	Steps to reproduce
Survey Management PRB671239	In Geneva, adding a large amount of questions (100+) into the Survey Designer causes the instance to suffer performance degradation	The system can become slow and unresponsive.	**1.** Navigate to **Survey** > **Survey Designer**. **2.** Drag and drop multiple questions into the UI tool. After adding 100 or more questions, the system begins to experience performance issues.
Asynchronous Message Bus PRB935863 *KB0622397*	Memory leak may prevent AMB (chat, record watcher, etc.) messages from being sent when session_message_queue_size reaches capacity	In Istanbul, a memory leak has been discovered that prevents the AMB session message queue from being flushed correctly.	Refer to the listed Known Error KB article for details.
Project Portfolio Management PRB933046	When a Project is created from a Demand, customized code should set the demand as the parent of the project		**1.** Customize the script include 'DemandToProjectCreationHelper' to add demand as a parent of project, just before inserting the demand record. **2.** Then, create a Demand. **3.** On the demand, select **Create Project**. **4.** Check the project record that is created. The parent is pointing to the demand, which breaks the engine.

All Other Fixes

To view a list of all other PRBs fixed in Jakarta, refer to *All other Jakarta fixes* on page 362.

Other Jakarta information

- Upgrade duration is significantly reduced for in-family Jakarta upgrades as a result of upgrade engine optimizations. See *System upgrades release notes* on page 27 for details.
- Before upgrading to Jakarta, review the *Upgrade and migration tasks by application or feature* on page 435.

- *Changes to plugins in the Jakarta release* on page 460 lists new plugins in the Jakarta release and existing plugins that were deprecated, renamed, or changed in some way.

All other Jakarta fixes

The Jakarta release contains fixes to these problems.

Jakarta was released on June 15, 2017.	Build date: 05-31-2017_2011 Build tag: glide-jakarta-05-03-2017__patch0-05-18-2017

For more information about how to upgrade an instance, see *Upgrade to Jakarta* on page 421.

For more information about the release cycle, see the *ServiceNow Release Cycle*. For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

Note: This version is approved for FedRAMP.

All other Jakarta fixes

Problem category	Number	Short description
Agile Development	PRB585798	UI action 'Create story' introduced in Calgary does not work on rm_enhancement if there is no related or embedded list
Agile Development	PRB654355	Calculation on daily total points leads to incorrect spike in burndown charts
Agile Development	PRB727491	Story "Convert into epic" UI action generates a work note message with an unmatched trailing parentheses
Agile Development	PRB628460	Column headers are not aligned with the data on the rank window of stories
Approvals	PRB868619	Approval history journal entries do not reflect the correct created timestamp
Approvals	PRB819800	getValue and getDisplayValue should not result in the evaluation of workflow pathing for the stage rendering
Approvals	PRB671426	One of the lines in the Reject UI action does not deal properly with the Japanese message
Approvals	PRB742265	Empty values of the variable's lookup label is getting displayed as 'null' in approval summarizer formatter
Approvals	PRB935869	Performance issue with approving a change request - it takes a long time to approve a linear function of # of Approvers on the change
Approvals	PRB662854	Querying for existing approvals on task inserts/updates is slow and sometimes unnecessary
Archiving	PRB679057	Archiving tables with long names cause truncates the archived table name
Archiving	PRB913668	Restored record points to archive table instead of original table

Problem category	Number	Short description
Archiving	PRB657362	Reference field loses reference if the referenced record is archived.
Assessments	PRB760266	Assessment > Administration > Bubble chart is not working as expected
Asset Management	PRB703801	When setting Retired state and --None-- substate on Asset record, CI it is not synchronizing the Status / Substatus value.
Asset Management	PRB677286	Modifying form sections in one product model (i.e. cmdb_software_product_model) also affects other model form sections
Asset Management	PRB760360	Assets substatus from a source request transfer order do not stay as reserved
Asset Management	PRB910654	Fix scripts to enable SAM transform maps do not work if the SAM is installed before SCCM
Asynchronous Message Bus	PRB709024	Multiple threads building AMB processor cache lead to duplicate registrations with Bayeux server.
Audit History	PRB716857	Calendar view of a record history does not respect ACL on the sys_email table. All emails are always visible.
Audit Management	PRB753395	When adding profiles to an engagement, the popup's pagination is broken
Authentication	PRB654728	Patching or update results in SAML2 installation exit activation, even though MultiSSO is active
Authentication	PRB724071	Business rule "MultiSSO - Activated second IDP" throws a warning
Authentication	PRB649671	Digest authentication is not functioning as expected via the Multi-SSO configuration
Authentication	PRB900799	Looping occurs during SAML login
Authentication	PRB819407	Demo Data for SSO is loaded with an expired certificate from SSO Circle(SAML 2.0) Certificate
Authentication	PRB712179	Service Portal with SSO enabled redirects to nav_to.do?uri=/sp
Authentication	PRB811786	When users work with LDAP configuration and update the scheduled load settings for OUs, the "Test & Save" button is not always activate even if they have modified some values (e.g. changing it from every 5 to ever 10 hours).
Authentication - SSO	PRB801361	Issue with SSO authentication post-Istanbul upgrade for MultiSSO update set.
Authentication - SSO	PRB812097	When a user logs out of the instance, 'not_allowed.do' appears
Automated Test Framework	PRB712630	Duration(days and hours) for the repeat field cannot be set
Automated Test Framework	PRB803670	Jasmine test suite result only reflects the last spec's result.

Problem category	Number	Short description
Automated Test Framework	PRB833259	Set Field Values step configuration does not support asynchronous updating fields
Automated Test Framework	PRB821936	Copying the Record Query step configuration results in a new step configuration that cannot be rendered when adding the Test Step to a test
Change Management	PRB677478	Change so restricted fields do not show up in the field list of Change Request values
Change Management	PRB718578	std_chg_template_handler UI macro breaks CMS functionality
Change Management	PRB719914	When creating a Standard Change from an incident, the parent field on the change request does not inherit the incident number
Change Management	PRB900298	When using the Copy Change feature of change request, date time fields are shifted by the difference between system time and the users local time
Change Management	PRB733903	"Request Approval" UI action on Insert does not work on change_request
Change Management	PRB714933	UI action sets the 'State' field incorrectly on the new change form
Change Management	PRB709972	Propose changes and add button on task_ci table are not compatible with List v3 and needs to be corrected
Change Management	PRB818314	CAB Workbench: CAB Workbench form widget runs into JS errors if for some reason getForm() returns no data
Change Management	PRB718562	Some base system record producers have a read-only protection policy that prevents them from being renamed
Change Management	PRB711477	The 'Statistics' tab for a standard change template does not work. It says "0" even if there are plenty of changes visible in the 'Changes' tab.
Change Management	PRB748068	When closing a change, the work_end field is populated with the current date/time which overwrites the user defined date/time.
Change Management	PRB833134	Orphaned Change Tasks are created when using 'Copy Change' on a Change Request with Change Tasks
Change Management	PRB716162	CAB Workbench dependencies load on all Service Portal pages
Change Management	PRB711089	Issue with progression of approval coordinator activity when approval user activity has approval records as no longer required
Change Management	PRB881565	"Create Standard Change" UI action for "Change Management - Standard Change Catalog plugin "references sc_catalog instead of sc_catalogs
Change Management	PRB722939	On a change request, the related list of emergency changes is not visible after upgrading

Problem category	Number	Short description
Change Management	PRB726541	"Execute operation on script include 'SysRelatedList' from scope 'Change Management - CAB Workbench' was denied" error is displayed on a CAB record when List v3 is enabled
Change Management	PRB704660	The 'Notify Change Calendar Remove' is not triggered
Change Management	PRB879366	getTotalNumberOfItems function in AssociateCIToTask script include fetches all rows just to get count
Change Management	PRB886147	List field in Standard Change Properties will not end up as a list on the standard change proposal form that the producer creates
Change Management	PRB824281	In standard change proposals, there are errors when submitting and some demo data is duplicated
Change Management Conflict Detector	PRB865345	Pop up window for mandatory fields shows after the form has loaded.
Chat	PRB890629	Configuring roles in connect.roles system property prevents users without the role from initiating Connect Support chats
Chat	PRB760910	"... has left the support session" is not accessible for screen readers,
Chat	PRB717038	Group avatars do not change when updated with a different image and the conversation list does not reflect the correct avatars.
Chat	PRB715128	'$chat_support.do' breaks out of frame in Helsinki
Chat	PRB717327	Using Legacy Chat in Helsinki, the chat client user does not see responses until the chat window is reopened
Chat	PRB721313	Connect lacks support for cross-domain conversations, leading to poor behavior in MSP instances
Chat	PRB712490	Console error when creating a chat with another user
Chat	PRB733486	User presence fails to update watch list when user first or last name contains a comma ","
Chat	PRB718493	Using 'Chat Live with Support' on the iOS mobile app causes user messages to be erased as they type
Chat	PRB692435	When Connect is on, UI16 does not change the browser title to reflect the page
Chat	PRB915079	When trying to create a new chat conversation on IE, the list of users is not displayed
Cloud Management Application	PRB760095	cmdb_ci_vmware_nic table is missing after activating Discovery, and cmdb_ci_virtual_nic exists instead
Cloud Management Application	PRB714527	getOldestSnapshot for AWS returns the wrong snapshot ID

Problem category	Number	Short description
Cloud Management Application	PRB734700	AWS - Discovery creates duplicate records in auto-scaling group launch configuration table
Cloud Management Application	PRB898073	Cloud User Portal - Workflow stages issue
Cloud Management Application	PRB830489	Tax has not been properly calculated during data rollup, as a result AWS Cost report does not match billing report from AWS
Cloud Management Application	PRB733826	Change request work flow is not getting triggered for Azure Resource Group that are under change conditions, when ordering from the service catalog
Cloud Management Application	PRB859533	VM instances have empty names and states from AWS configuration events
Cloud Management Application	PRB880353	Issue with VPC security group in AWS configuration
Cloud Management Application	PRB749455	Azure daily billing downloads results are missing some data, especially at the end of the month
Cloud Management Application	PRB724529	Azure discovery creates duplicate records in the Azure resource table
Cloud Management Application	PRB734602	Azure discovery failed to create new storage account record
Cloud Management Application	PRB663054	AWS Discovery fails to discover images in US regions
Cloud Management Application	PRB826911	AWS Discovery: Subnet Discovery is broken
Cloud Management Application	PRB715841	Not able to use req_item.variables in the condition builder
Cloud Management Application	PRB711701	Run script activity "Determine node management variables" does not work as expected
Configuration Management	PRB758410	Log warnings are caused by Business rule: 'Cloud and Config auto cancel change'
Configuration Management Database (CMDB)	PRB811532	Refresh does not work for CMDB dashboard

Problem category	Number	Short description
Configuration Management Database (CMDB)	PRB691791	Users receive "Can't find TimeLine Checkpoint <sys_id>" exception - broken references to previous checkpoints
Configuration Management Database (CMDB)	PRB717738	'CMDB Health Dashboard - Correctness' is not getting updated
Configuration Management Database (CMDB)	PRB715444	The OOB suggested relationships for racks and computer rooms appear to be backwards. A rack should be downstream from server since the server depends on the rack, but the OOB suggested relationship has the server upstream from the rack.
Configuration Management Database (CMDB)	PRB719770	Incorrect values for metric scores and total processed CIs
Configuration Management Database (CMDB)	PRB748483	Improve error logging messages for identification engine
Configuration Management Database (CMDB)	PRB820982	CMDB/PA dashboard not accessible to ITIL, asset role
Configuration Management Database (CMDB)	PRB724415	If new CI Relations are used, changes in new relationship editor are captured as sys_audit but not in history_set
Configuration Management Database (CMDB)	PRB714962	Old version CMDB sys_choice unloads are overwriting customer updates
Configuration Management Database (CMDB)	PRB702502	Error Log message (getEditLink)
Configuration Management Database (CMDB)	PRB712669	If a record contains the CI Relations formatter, the printer-friendly version page is misaligned
Configuration Management Database (CMDB)	PRB713909	Clicking on any of the graphs from completeness and compliance pages gives a blank page

Problem category	Number	Short description
Configuration Management Database (CMDB)	PRB714575	All CMDB angular page have issue on IE compatibility view
Configuration Management Database (CMDB)	PRB726125	CMDB Dashboard Staleness processor taking too long
Configuration Management Database (CMDB)	PRB733334	If a CI/users relation type and a CI/groups relation type have same "Parent descriptor", the suggested relationships filter does not work properly in relationship editor
Content Management System (CMS)	PRB626950	Calendar widget in CMS is cut off in Fuji & Eureka
Contextual Search	PRB679442	Using the "OR" in contextual search generates parser errors in the log
Contextual Search	PRB680811	Setting dot-walked fields in glide.knowman.attach.fields property does not work
Contextual Search	PRB725034	Contextual search fails
Contextual Search	PRB711115	while previewing from contextual search in IE, KB article with 'Attachment Link' set gets stuck
Contextual Search	PRB667860	Contextual search is not resizing in record producers
Contextual Search	PRB730502	Some gaps (blank spaces) are shown in place of the contextual search results in the record producer. It happens when there is a variable with a higher position order in the form.
Contextual Search	PRB744659	Cannot add a search field under any table configuration if high security is disabled or the strict actions property is set to false
Core Platform	PRB754944	Instance is unavailable after a calculated list of users is added to the user table
Core Platform	PRB899890	HR profile causes stuck default semaphores when locations have themselves as their parent
Core Platform	PRB753517	GlideWrapFactory is using the wrong scope
Core Platform	PRB884011	Export fails when filter contains duplicate Tag
Core Platform	PRB899686	A group can be its own parent, leading to infinite recursion
Core Platform	PRB830071	Excessively large number of conditions cause Javascript compilation exception
Core Platform	PRB913389	List field and slushbucket do not retain language translations

Problem category	Number	Short description
Core Platform	PRB840675	Unable to successfully revise CTI Processor solution for Istanbul by following KB0620953
Core Platform	PRB963801	glide_list fields made from choice entries instead of referenced records expose choice cache race condition
Core Platform	PRB711549	Business rule puts unscoped sys_user_preference records into scoped update sets
Core Platform	PRB649315	Exception handlers should not swallow transaction cancellation exception.
Currency	PRB713703	Expense line related list calculation not working
Currency	PRB758500	Converting from calculated price to multiple price in a catalog item price creates FX price record with no currency code displayed
Currency	PRB759808	Record watcher reports incorrect update on currency fields
Currency	PRB808372	Record watcher reports incorrect update on currency fields
Currency	PRB753671	Currency without fx_rate entry causes error 'Invalid currency, or currency table not populated'. It should say "entry on fx_rate table is required"
Customer Service Management	PRB820059	When selecting change layout in any overview screen on any of the incident/problem/change module, there is a blank layout present.
Customer Service Management	PRB672966	Stages are not appearing correctly on list view
Customer Service Management	PRB711278	Link to Notification preferences is missing in CSM portal profile
Customer Service Management	PRB725014	Users cannot add fields to Activity Formatter on case form
Customer Service Management	PRB833066	Issues with sys_user.user_name 'create' ACL, which is part of the Customer Service plugin
Customer Service Management	PRB707317	"Accepted Solution" or "Rejected Solution" shows up multiple times on the page.
Customer Service Management	PRB748503	Activating Customer Service plugin results in the contract record having a default scope of Customer Service instead of global
Customer Service Management	PRB944837	Clicking 'Find Agent' and 'Save' on new sn_customerservice_case records throws an error message, and a new record with only assigned_to field populated is created

Problem category	Number	Short description
Customer Service Management	PRB702769	Timeline renders incorrectly when moved from Case form section
Customer Service Management	PRB714981	Fix CSM app to use right snc_internal sys_id in updated xml files
Customer Service Management	PRB718629	"Create Case" record producer shows "HiddenField" on service portal
Customer Service Management	PRB718361	Editing System Properties > UI Properties requires you to switch scopes twice with Customer Service plugin installed
Customer Service Management	PRB954662	Account and contact info intermittently load slowly on new case CSM form
Customer Service Management	PRB754346	Unable to modify scoped dictionary overrides for Customer Service app when the base table is not owned by the app
Data Certification	PRB702064	CertificationTaskScript.processCheckedElements function makes a call to GlideAjax.getXMLWait()
Data Certification	PRB744168	Slow performance with Data Certification
Data Certification	PRB899453	Updating the related list on a data certification task does not update the related record
Date and Time	PRB652152	'Opened At' is set to a time later than the 'Created On' during the hour switchover of DST
Delegated Development	PRB706737	"Configure" menu item is missing for delegated developer which makes it hard for a DD to get to business rules, ACLs, UI actions, etc. for a particular table
Demand Management	PRB713702	Demand Workbench - List refresh does not work correctly if "Show - xx rows per page" is changed
Demand Management	PRB854137	Cost Plan breakdowns are not calculated correctly and costs are not rolled-up on the related demand
Demand Management	PRB731717	Decision records (dmn_decision) have only the Rejected state configured as a close state.
Demand Management	PRB820913	Client Script "Disable or Hide Teamwork area " is causing a client JS error when loading the idea.do form on Istanbul
Demand Management	PRB736538	OOB labor costs script has an incorrect value
Dependency Views (BSM Map)	PRB757036	Expand cluster node does not work
Dependency Views (BSM Map)	PRB888410	Exported image has a grey background instead of white

Problem category	Number	Short description
Dependency Views (BSM Map)	PRB752732	Nodes are not grouped in Dependency Views
Dependency Views (BSM Map)	PRB760954	The Role - dependency_views (which is supposed to have minimal privileges), is able to modify map menu actions (ngbsm_context_menu)
Design Experience Organization	PRB744034	Issue with alignment of fields on a form on Metric Attributes and Default Metric Attributes table
Discovery	PRB749890	Discovery on Linux creates file system relationship with parent='undefined' for multi-path devices
Discovery	PRB679070	MID Server JSON.parse() causes exception when called with Java string
Discovery	PRB719239	disk_space fields are being updated unnecessarily and causing many additional sys_audit records to be created
Discovery	PRB668393	CIM discovery issue on HP 3PAR storage servers
Discovery	PRB741269	Layer 2 Discovery not working as expected - issue with not creating Device Neighbor records because "cdpCacheEntry" values not matching to "ifEntry" values.
Discovery	PRB680733	Recursive relationship "DistributedBy::Distributes" can be created between services and computers in F5 load balancers
Discovery	PRB722267	Incorrect and missing object IDs interfere with UCS Discovery
Discovery	PRB758339	SNMP - If a 'SNMP - Routing' record is missing some ipCidrRoute or ipRoute fields, NullPointerException errors occur
Discovery	PRB715487	SMI - Storage Server probe can produce out-of-memory error
Discovery	PRB718089	Default view for these CI classes ("dscy_swtch_fwd_rule", "dscy_switchport" and "dscy_swtch_partition") shows nonsensical data
Discovery	PRB667110	SNMP probe command times out
Discovery	PRB900954	Fibre Channel Target Port wwpn and wwnn values are swapped when stored.
Discovery	PRB715059	Lookup of credentials by IP address in CyberArk fails if the IP address is a substring of another IP address
Discovery	PRB718782	Memory issues when processing load balancer exploration sensors with large payloads (SNMP - Netscaler - System and SNMP - F5 BIG-IP - System)
Discovery	PRB583965	Unparseable date: "Saturday, April 20, 2013 1:38:08 AM CDT" warning on Unix uptime probe under Solaris
Discovery	PRB642152	For large discoveries, the logs are filled with errors such as "No discovery source passed to ObjectSource"

Problem category	Number	Short description
Discovery	PRB713809	When MID Server uses WMI for Discovery instead of the "Windows - Installed Software" PowerShell probe, Discovery does not return the correct data on installed software
Discovery	PRB900884	MID Server upgrade fails because it is unable to delete a .dll file
Discovery	PRB825155	'schema' parameter is not respected by new SMI probes
Discovery	PRB715697	Additional check for DiscoverySolarisStorageSensor to handle iostat results with no "data.Size" nor "portInfo.serial_number" ('DiscoverySolarisStorageSensor' script include at line 61)
Discovery	PRB676611	SNMP GETBULK requests might not return results from some devices
Discovery	PRB717683	Discovery of storage on Linux fails and displays the error message 'Linux - Storage: TypeError: Cannot read property "data" from null'
Discovery	PRB858519	Linux Device Nodes associated with MPIO device containing Fibre Channel Disks are being reported as SCSI disks (FCTarget ports mapped to MPIO devices are not reported by script run on target Linux host).
Discovery	PRB761971	Disks in multipath pool (MPIO) are discovered separately which does not reflect the correct disk space of a server
Discovery	PRB732419	Usage of backtick in nginx probe parameter is causing errors in some shells
Discovery	PRB686788	Windows - MSSQL probe fails with 'Unexpected token' error due to incorrectly created MSSQL instance name
Discovery	PRB709724	Network adapter information is not populated for Mac OS X
Discovery	PRB711405	VMware credentials interceptor missing on Upgrades
Discovery	PRB714435	Session pool fails to unblock borrows when returning failed connections
Discovery	PRB742563	New identifier rule on cmdb_ci_computer does not do an exact count match on serial number
Discovery	PRB734008	Issue with how Discovery is picking up MSFT SQL instances on clustered SQL servers
Discovery	PRB690937	Discovering new network adapters does not set IP addresses to 'Absent'
Discovery	PRB758669	Unexpected behavior for Cisco UCS Discovery
Discovery	PRB730436	Discovery populates incorrect MAC addresses for AIX servers (AIX - Network sensor)
Discovery	PRB832300	Load balancer discovery not setting status of non-existent services, pools, and the like to Absent
Domain Support	PRB756920	Table upgrades and the domain hierarchy validation job invoking domain path validation on large tables cause database performance issues

Problem category	Number	Short description
Domain Support	PRB716985	Domain select & Reference picker shows inactive domains
Domain Support	PRB648491	Label of domain reference picker shows up for a user with no roles
Domain Support	PRB817692	'Domain - Cascade Domain - Task' business rule causes slow SQL
Domain Support	PRB698591	Transform of domain records after import is delayed if the run business rule is set to true
Domain Support	PRB754618	Domain validator notification is not respecting daylight savings
Domain Support	PRB855867	Domains: DWR GenerateOperation is not creating UPDATE DWR for tables which have sys_overrides column
Edge Encryption	PRB717547	Edge Encryption mass encryption job fails on fields with long column names
Edge Encryption	PRB667577	Edge Encryption proxy does not support 'http://' requests that are redirected to 'https://'
Edge Encryption	PRB711423	Having two different record producers that both have encryption rules results in conflicts during encryption
Edge Encryption	PRB711596	Edge Encryption does not support certificate authentication for SafeNet
Edge Encryption	PRB713719	Edge Encryption should better handle the case of invalid table names
Edge Encryption	PRB716526	List view of large tables (11M+ records) via proxy results in 504 gateway timeout error
Email	PRB713084	Adding excessive number of recipients in email client can prevent email from being sent successfully
Email	PRB860963	When an unregistered user sends an email to instance, inbound email incorrectly will be classified as 'new' when no watermark or In-Reply-To header, but a subject line starting with a recognized reply prefix and a valid existing record number
Email	PRB743945	Subscription (sys_notif_subscription) changes are being tracked in update sets as of Helsinki
Email	PRB732246	Receive-type is set to 'new' when email filter triggered even though classification should be reply or forward.
Email	PRB718569	Notification preferences does not load in Firefox
Email	PRB705054	If a user is added as a BCC recipient multiple times in a notification and recipient chunking is triggered, the user will receive duplicate emails
Email	PRB742904	Instance performance reading emails with large attachments from IMAP server is slow
Email	PRB723473	Notification template v1 does not perform substitution of ${NOTIF_UNSUB} in a layout

Problem category	Number	Short description
Email	PRB675707	Customer headers in outgoing SMS notifications are excluded
Email	PRB689954	The device names on the notification preferences page are overlapping in text value in Helsinki
Email	PRB706598	Reply emails without a watermark that have a non-unique or multi-word display field will be classified as 'new'
Email	PRB645083	Inbound Email Action unable to transfer attachments to target record due to calculated field on target table accessing getJournalEntry
Email	PRB652059	Force Delivery on a notification does not deliver to inactive device
Email	PRB698391	Having a slow connection to an SMTP account + email client template makes Email Composer/Client come up slowly.
Email	PRB719136	Notification option "Exclude delegates" exclude directly included users
Email	PRB714069	syslog_transaction is not found for AjaxClientTiming: sysId: , table: , view: Default view, form: email_client_template
Email	PRB716858	Testing the function GlideEmailOutbound on a scoped application fails with Java constructor for 'com.glide.notification.outbound.ScopedEmailOutbound' with arguments '' not found
Email	PRB713717	When guest user is locked out or inactive, emails that are unprocessed have a type of received instead of received-ignored
Email	PRB910614	Events inserted in event queue are case-sensitive, which can impair notifications
Email	PRB747705	The sysapproval reference does not exist when assigning approvers via the 'Approval field'. However, the sysapproval value (sys_id) does exist.
Embedded Help	PRB717550	Embedded Help requests are not cached
Event Management	PRB714234	Threshold performance issues
Event Management	PRB717378	When alert group filter has a condition with reference field and operator that is not 'is' or 'is not', the dashboard bottom panel displays all alerts.
Event Management	PRB754138	Error occurs while trying to update impact rule
Event Management	PRB715787	MID Server users can send events, but they do not have permission to the time zone processor
Event Management	PRB742365	Incident creation business rule race condition is affecting Alert Rule execution
Event Management	PRB711443	Alert rule causes incidents to be created for closed alerts

Problem category	Number	Short description
Event Management	PRB712161	Domain separation - Create incident job changes the domain ID and does not return it to original
Event Management	PRB738638	SolarWinds - on first collection cycle should retrieve events from last 7 days only (max 3000 events)
Event Management	PRB877957	OOM on impact calculation of many services (e.g. 3000)
Event Management	PRB724612	When drilling down from EM dashboard, service map displays slowly
Event Management	PRB713541	Error on log when only mapping plugin is activated (No EM)
Event Management	PRB736795	When bi-directional is defined with an alert rule that automatically acknowledges the alert and creates an incident, the incident id can not be updated on the SCOM side
Event Management	PRB759285	Connector MID List does not work as expected
Event Management	PRB730500	SCOM connector should retrieve the owner field from SCOM alert
Event Management	PRB741357	In Helsinki, reactivating the plugin "Event management" creates blank sys_db_object record
Event Management	PRB727013	Event with blanks in 'type' field fails to be processed
Facilities Service Management	PRB715989	facilities_admin role contains invalid role reference to plan_maint_admin (9af6749deb303100eae001e64206fe16) after activating facilities service management
Facilities Service Management	PRB719160	Customizations to the groups: "Facilities Dispatchers" and "Facilities Assignment Group" are overridden on upgrade
Facilities Service Management	PRB911529	Clicking on the search result in the "Found In" in facilities catalog of Service Management gives error.
Facilities Service Management	PRB734023	Assigned vendor on Facilities Management Templates does not show results after choosing the assignment group
Facilities Service Management	PRB742558	After upgrading from Fuji to Helsinki, Facilities Service Management demo records are added
Field Normalization	PRB716358	Customizing normalized mapping is not supported in the normalized data services plugin
Field Service Management	PRB718961	When navigating back to a homepage that contains the dispatch map after drilling into a record from the homepage, all you can see is the dispatch map
Field Service Management	PRB884824	On Android, Galaxy S6 Android 6.0.1, users are not able to "Start Travel" or "Start Work" from the work order task
Field Service Management	PRB802726	Central Dispatch is very slow

Problem category	Number	Short description
Field Service Management	PRB901344	Dispatch map group filter is incomplete, empty, or only shows "All" option. It does not return all valid dispatch groups.
Field Service Management	PRB730588	When creating a work order and using the "auto assign" UI action does not check if a user is Inactive
Field Service Management	PRB732582	Field Service knowledge base is activated after upgrading to GP7HF9
Field Service Management	PRB723562	Users with wm_qualifier role are not able to edit scheduled times on work order tasks, which are in the draft state
Field Service Management	PRB725129	Estimated travel duration field on sm_task table is not set to 1 hour by default per the documentation
Field Service Management	PRB732877	Work order moves to Qualified state when not all work order tasks have been qualified.
Filters	PRB667716	Filter condition is hidden for async business rules
Filters	PRB710911	'at or after' condition evaluates to the previous date than specified in the filter when used on a date field type
Filters	PRB744029	For instances running Oracle DB, when 'glide.secondary.query.sysid' is set to 'true', DB errors occur when filtering against tags
Finance Service Management	PRB747302	Upon upgrade, Finance templates revert to OOB settings
Financial Management	PRB718147	The application calculated Total cost does not reflect the values added to unit cost.
Financial Management	PRB740887	Cost Transparency and Budget Console do not load if the user date format is different from the server
Financial Management	PRB724689	Budget Variance page always displays values with $ symbol
Financial Management	PRB667992	View accounts in this bucket shows no results for certain split values, like #N/A
Financial Management	PRB892002	When importing (itfm_ca_segment_map) the segment column is not populated for the (itfm_allocation_aggregate/ itfm_allocation_breakdown) table.
Financial Management	PRB720085	'Budget cost' field does not roll up the cost after making changes under Project Budget (related list)
Financial Management	PRB733373	Levels of hierarchies cause the allocation setup to become out of order
Financial Management	PRB820552	When a user creates a portfolio budget plan for 445 and 13 period fiscal calendars, an empty budget plan is created
Forms and Fields	PRB901364	Response time bar is overlapping and shown at the beginning in the configure form layout in the incident or problem form
Forms and Fields	PRB714929	Activity stream inputs have too much spacing on top when expended to show multiple inputs

Problem category	Number	Short description
Forms and Fields	PRB668349	User would like to update field labels on their Okta plugin
Forms and Fields	PRB723150	A Catalog Item with many List Collector variables generates many synchronous AJAX calls to the QueryParseAjax processor, causing excessive variable editor render time
Forms and Fields	PRB733558	Approval summarizer shows 'Hold SHIFT and move cursor...' message
Forms and Fields	PRB633015	Unable to tab to or select text from read-only fields
Forms and Fields	PRB760383	Fields marked as mandatory in the dictionary are not announced as mandatory
Forms and Fields	PRB902529	_123STREAMTEXT321_ shows up in emails sent from instance
Forms Designer	PRB646275	Properties dialog (gear) does not handle default values properly
Forms Designer	PRB728597	Form Designer renders Japanese language as HTML-encoded strings for UI formatters and does not translate the labels
Forms Designer	PRB732516	While making form level changes using "Form Design", the section order for the change_request default view is incorrect when committing update set on the target instance.
Foundation	PRB655283	Content site 'kb_knowledge' in CMS 'Service Management' contains invalid package calls
Governance, Risk and Compliance	PRB721128	General users lost read-only access to the CMDB Business Services, because a new ACL added as a product of turning on the GRC application that limits to sn_grc.manager role
Governance, Risk and Compliance	PRB905229	UCF Configurations records do not load properly when 'glide.ui.escape_text' is set to 'false'
Governance, Risk and Compliance	PRB883833	GRC Profile Generation null table error stops remaining profile generation
Governance, Risk and Compliance	PRB805633	When attempting to close a demand in the non-production instance, it loops back to screening.
Governance, Risk and Compliance	PRB722431	Manual indicators may error with 'GRC indicator nightly run'
Governance, Risk and Compliance	PRB829840	Issue regarding the GRC Indicators: when users try to select a "First Run Date" with the 1st of the month, it displays an error
Guided Setup	PRB831180	Delete list action is missing from list actions of subdomains
Guided Setup	PRB753194	Express to Enterprise migrated customers cannot launch Guided Setup
HTML Editor	PRB679587	UI action script field window does not show

Problem category	Number	Short description
Human Resources Service Management	PRB715538	hr_category_* Tables in the com.snc.hr.service_portal plugin is not tracked in Update Sets
Human Resources Service Management	PRB716194	When the Workday's Push feature is disabled in ServiceNow, it breaks the Termination Process and the inactive users will not transform
Human Resources Service Management	PRB906215	Issue with looking up or populating reference fields
Human Resources Service Management	PRB678305	Date/Time Variable values will be updated after changing fields (record fields, not variable fields).
Human Resources Service Management	PRB734626	Bullet points and numbered lists are rendered in the generated PDF documents
Human Resources Service Management	PRB722072	The OOB business rule 'Add HR supervisors to watch list' causes issues for inbound email to create a HR case, when the sender is a VIP.
Human Resources Service Management	PRB762272	If sys_app_application is not parented to sys_metadata, V1 + V2 activation is going to mark all applications links as legacy
Human Resources Service Management	PRB716381	Record producers with names exceeding 40 characters (which are created via Manage HR Catalog page) create records with the 'Category' field blank
Human Resources Service Management	PRB717179	Workday field maps are lost upon an upgrade from Geneva to Helsinki
Human Resources Service Management	PRB711713	HR category records (hr_category) are updated after patching from Helsinki Patch 2 to Helsinki Patch 3 (this issue also exists on Geneva)
Human Resources Service Management	PRB714139	Case created from HR portal sorts variables by question and not by order in description field
Human Resources Service Management	PRB725245	Russian characters inside <td> tag do not appear after generating a PDF

Problem category	Number	Short description
Human Resources Service Management	PRB717173	On HR task template, the value in Description field never pass on to HR task
Human Resources Service Management	PRB719415	Some OOB onLoad client scripts are causing slow response times for HR application
Human Resources Service Management	PRB749133	HR core plugin is updating the "sla" field on the "hr_case" task records after the SLA engine updates the task SLA records.
Human Resources Service Management	PRB890715	Assigned_to is not getting auto populated when the user is selected from Assignment_group.
Human Resources Service Management	PRB729220	hr_profile widget does not display contact information in French in Service Portal
Import / Export	PRB635105	Import Set Deleter stops working if an import set record has a null import set table (table_name)
Import / Export	PRB652496	The SFTP and SCP integrations depend on BouncyCastle library, which is not always installed
Import / Export	PRB662449	Transform map incorrectly pass empty values to tables as a java string object containing the value 'NULL'
Import / Export	PRB673928	Using Easy Import and doing an update with only SysId and one other field value entered fails after upload
Import / Export	PRB713566	LDAP AuthenticationException errors are not captured in system logs
Import / Export	PRB748738	Easy import - cannot import file when in customer service (scoped application)
Import / Export	PRB741220	Setting ignore=true in onStart script in one of Transform Map is causing inconsistent behavior in the remaining transform map execution
Import / Export	PRB728849	Roles imported via spreadsheet are hidden and cannot be deleted by admin
Import / Export	PRB708904	Data imported from Oracle via JDBC data source cannot create attachment record with MID Server if the Oracle source table has BLOB field
Import / Export	PRB661741	Web Service Import Sets fails with NullPointerException if a table display field value is NULL
Import / Export	PRB753746	Bad business rule on "sys_status" table can result in creation of unlimited LDAP worker threads which can cause instance to be unresponsive

Problem category	Number	Short description
Import / Export	PRB722971	Journal fields "Additional comments" and "Work notes" cannot be exported in report
Import / Export	PRB678083	The 'Export Set' context menu displays error 'Fix the Action script by using GlideURL to set the location'
Import / Export	PRB632390	The sys_update_version table grows excessively due to XML-based imports
Import / Export	PRB660546	Import set table is missing values when doing an LDAP import via MID server if the first row does not contain all the attributes specified in later rows
Import / Export	PRB714445	LDAPListenTransform threads do not have timeout mechanism to guard against bad transform script (infinite loop)
Import / Export	PRB577446	LDAP listener threads running in secondary datacenter can induce OutOfMemory
Import / Export	PRB630276	If an LDAP server had 2 OU Definitions with the same RDN values, if one is disabled, it is still possibly being used.
Import / Export	PRB655847	Data source with URL encoded sysparm_query values fails to filter the results
Import / Export	PRB669470	If a currency field of the data is ¥10,000,000 or more, the field is not imported properly
Import / Export	PRB591804	Usability problems with Operating System field when populating the CMDB with data import (Excel template)
Import / Export	PRB655301	Blank RDN fields on LDAP OU definitions are not handled gracefully
Incident Alert Management	PRB892130	Activating Notify plugin adds a non-existent role (notifynow_admin) to the "ia_admin" role if Incident Alert Management is active and Legacy Notify is not active.
Incident Management	PRB590917	incident_state is used in global business rule intended to be generic for task extended tables
Incident Management	PRB714202	Transaction times out when a new incident is submitted with a CI selected and Major Incident checked
Incident Management	PRB854677	The incident.reopen_count field may not be present on old instances, but its referenced by the 'Reopen Count' business rule.
Incident Management	PRB647048	Mobile: Location field is not populated automatically according to user location.
Incident Management	PRB659667	Show Related Incident icon always displays the default Alert Triangle icon
Integrations	PRB578855	Import sets with multiple transforms only run the *first* transform against all records. Every later transform only runs against 10000 records.
IT Service Management	PRB742212	The deleted task on the legal request template comes back after updated.

Problem category	Number	Short description
Knowledge Management	PRB714959	knowledge_admin should be added to create and write ACL for kb_keyword table
Knowledge Management	PRB673022	Output warning message occurs when opening the New Knowledge Record form without admin role
Knowledge Management	PRB673983	Images must have <alt> so as to make them available to external applications like VoiceOver
Knowledge Management	PRB689282	Cannot control whether or not to display attachments with the search results
Knowledge Management	PRB690606	Knowledge search results articles cannot be clicked if the article number has any spaces
Knowledge Management	PRB691923	Scrolling does not work correctly in the 'Tags' tab of a knowledge base homepage or knowledge search results
Knowledge Management	PRB700081	Change in the IR_QUERY_SCORE from 'Integer' to 'Double'
Knowledge Management	PRB707431	When attaching a knowledge article to an incident, the use_count field for the attached knowledge article does not increment.
Knowledge Management	PRB742431	Activity log on kb_knowledge does not display anything by default (when initially added to the form)
Knowledge Management	PRB824105	Inaccessible custom buttons
Knowledge Management	PRB698979	In Knowledge V3, a table inside an article if aligned left or right, the "authored by" section gets misaligned
Knowledge Management	PRB711671	In Windows Edge browser, Knowledge v3 import button does not upload documents as expected for Geneva and Helsinki
Knowledge Management	PRB664666	Firefox - Only printing one page from multiple-page article
Knowledge Management	PRB713866	With Knowledge Management v3, knowledge view count increments for articles with the attachment link broken
Knowledge Management	PRB754840	Favorite button is broken on Knowledge questions
Knowledge Management	PRB733122	Center and right aligned text formatting converts to left aligned when importing word documents into Knowledge
Knowledge Management	PRB677471	Knowledge Management - Tags on extended tables are only visible on Knowledge homepage if a kb_knowledge record with this tag exists
Knowledge Management	PRB719161	(empty) categories in Self-Service Knowledge are not be translated to (vacío)
Knowledge Management	PRB712535	On the social Q&A page, some text is not translated
Knowledge Management	PRB687945	Users with knowledge_admin role do not have read/write access to all knowledge bases

Problem category	Number	Short description
Knowledge Management	PRB670500	Table styling from imported doc file is stripped out when document is imported into Knowledge.When a document is imported into Knowledge, the imported file loses its table styling. The table structure is still present and works as expected, but its styli
Knowledge Management	PRB746462	Import issues with large Word docs: 'import completed with error' 'Unknown error', and content is lost
Knowledge Management	PRB759183	Lists in UI page does not load if a 'sysparm_rollbased' parameter is passed in through the URL
Knowledge Management	PRB729960	Translated HTML fields are not set properly when instance language is not 'en'
Knowledge Management	PRB679727	[Knowledge Category Picker] After a new category is created, it will not be selected unless users click out of the text field
Knowledge Management	PRB718166	Creating a new KB article with Instant 'Publish Workflow' publishes article twice which causes issues
Knowledge Management	PRB708903	Empty categories do not show despite property 'glide.knowman.show_only_populated' is set to false
Knowledge Management	PRB709846	Knowledge creation from incident fails and gives incorrect messages when an end user closes the incident
Knowledge Management	PRB650366	'Could not load template' error in URL redirect of knowledge base
Knowledge Management	PRB712435	Several KB articles where the author is blank populate the user icon with the person logged in, which is confusing for users.
Knowledge Management	PRB687334	Bullet number format is not retained after importing article into knowledge portal
Knowledge Management	PRB696065	'knowledge base' and 'category' fields on upload panel do not get pre-populated while users are browsing
Knowledge Management	PRB701381	When importing MS Word doc into Knowledge, some formatting is lost (color and center alignment)
Knowledge Management	PRB709817	Publish date is not displayed if a user logs in as non-English
Knowledge Management	PRB742586	Indentation of paragraph, numbered list, images, etc are lost when importing documents to KM
Knowledge Management	PRB729784	User gets file parsing error when uploading .docx word document on Knowledge Base. Alternative text breaks the import function.
Knowledge Management	PRB673204	Within knowledge articles, the 'Last modified' field element ID is not unique in the DOM
Knowledge Management	PRB715953	Nested Knowledge category names are truncated in the 'Filter by Type' list

Problem category	Number	Short description
Knowledge Management	PRB716861	When a large number of KB categories is present, opening the KB homepage is slow
Knowledge Management	PRB717605	When there are multiple Affected Products on a published KB article, there is no space between them
Knowledge Management	PRB698373	Drag and drop to create favorites does not work from Knowledge home page
Knowledge Management	PRB667848	KB header that has Attach to [Task] button is not available for certain users due to conditions in 'kb_view_common' UI Macro
Knowledge Management	PRB962869	Knowledge search text is no longer translatable/translated by default
Knowledge Management	PRB715609	Users with knowledge_manager role are not able to create/edit/delete KB categories.
Knowledge Management	PRB716366	Articles are being sorted alphabetically (rather than numerically), meaning articles appear in the incorrect order
Knowledge Management	PRB717102	Question mark icon appears in mobile when the question option is disabled
Knowledge Management	PRB689521	Knowledge search result order property is not honored
Knowledge Management	PRB709014	In Knowledge V3, the page never finishes loading when a user enters two numbers or letters (or a combination of both) into the homepage search
Knowledge Management	PRB739307	glide.knowman.search_character_limit was set to 3, but search worked only when 4 or above characters were entered
Knowledge Management	PRB829734	In Knowledge, the 'Copy permalink' link does not display upon page load of a KB article
Language and Translations	PRB713485	Open record button in activity stream is not translated
Language and Translations	PRB674631	Unable to translate variables within scoped applications.
Language and Translations	PRB712094	Global search groups tooltips do not show I18N translated text when hovering-over
Legal Service Management	PRB710530	Customized legal group record is overridden on upgrade
Legal Service Management	PRB723178	Related lists are reverted back to OOB state (com.snc.legal_service_automation)
Legal Service Management	PRB711417	Fuji upgrade: Legal > Self-Service > Contract Review and Management items are reset to OOB
Lists	PRB709991	List v3 related list - If editing a field such that it does not match the filter for a related list, it does not show the update when saved.
Lists	PRB658998	Unable to perform a multiple update on a currency field

Problem category	Number	Short description
Lists	PRB712586	Breadcrumb filter does not get truncated
Lists	PRB585916	Portal view on gauges prevents user from setting gauge to the default view
Lists	PRB682242	In List v3, when the page is reloaded, no announcement is made so screen reader users do not know anything reloaded or changed
Lists	PRB737148	Accessibility - Activity stream flyout
Lists	PRB806531	List Filter search button is no longer available for ESS users in Istanbul
Lists	PRB682239	In the filter widget, the clear all button appears before the run button, so it should be accessible in this order with the keyboard
Lists	PRB689794	Grouping UI makes it much harder to figure out the biggest groups
Lists	PRB680941	When tabbing through list page, unintended scrolling occurs and hides the first row
Lists	PRB682237	In List v3, the 'rows per page' drop-down menu is not accessible
Lists	PRB682236	Table sort direction is activated only by entering keypress, not by space bar
Lists	PRB713097	v3 related list 'loading' message when multiple tabs are open
Live Feed	PRB670678	Requests to /api/now/live_feed/conversations are slow if a user is a member of many conversations (caused by thousands of short "get" queries)
Live Feed	PRB718120	service.restModel incorrectly routes requests to /api/now/live_feed/conversations
Live Feed	PRB673917	Within the ServiceNow platform, the attach icon in 'Add Comments' of a knowledge article does not have a role assigned internally which prevents application accessibility
Managed Documents	PRB670236	Manage documents- Checking out a document and clicking on the 'back' button cause the document to download again. Customers are stuck in the document definition page
Marketing Service Management	PRB875951	After upgrade, Marketing custom states are deleted
MID Server	PRB760534	If a MID Server is configured for ALL IP Ranges, IP ranges configured for exclusion are ignored
MID Server	PRB675028	Inappropriately named MID files cannot be loaded
MID Server	PRB756101	MID Server Script Files created outside the scripts directory/folder when using relative directory/path (..\) in script name
MID Server	PRB876652	Multi-page payload support consumes a lot of memory on the MID Server

Problem category	Number	Short description
MID Server	PRB671308	Using SFTP to import files specified by relative path often fails
MID Server	PRB881451	MID Server dashboard homepage is not available in an upgraded instance from Eureka to Istanbul
MID Server	PRB886536	AMB Client on the MID Server does not work in all environments; Need a way to revert to old MID Server polling frequency
MID Server	PRB907405	After new install and verification, multiple errors are being displayed in the agent log
MID Server	PRB732291	MID file syncing of a scripts modifies the file contents
Mobile	PRB820217	Android mobile app users - getDeviceType used in some UI actions for mobile returns "doctype"
Mobile	PRB899880	phone_number_e164 field type should display call button on mobile devices
Mobile	PRB717237	Service Catalog on mobile does not display any categories
Mobile	PRB724087	List type fields with only choices, prevent the user from viewing or creating a record in mobile UI
Mobile	PRB717211	User unable to create new incident or change request on mobile interface for both Express and Enterprise
Mobile	PRB721245	Setting the system property glide.ui.escape_all_script to true and setting a mobile theme causes the mobile web UI to not render
Mobile	PRB739983	In mobile, users are unable to scroll in read-only text fields
Mobile	PRB737729	Clicking on the attachment is broken for native apps (both iOS and Android)
Mobile	PRB755183	UI action 'New Mobile Module' does not copy fields to the new form when selected from a scoped app module
Mobile	PRB662464	In mobile, dot-walking using variables does not work
Mobile	PRB836816	[Accessibility] - Language of content is not identified
NotifyNow	PRB698612	When Status is "no answer", NotifyNow is supposed to set active as false
NotifyNow	PRB705213	Incorrect phone numbers are not added to the participants table
On-call Scheduling	PRB855277	If a group contains more than 35 active Rotas, the calendar view does not display the rosters
On-call Scheduling	PRB745454	Tab focus should be limited to modal dialog when open and focus should return to element that opened modal dialog when dialog closed
On-call Scheduling	PRB718912	Rota column shows on the wrong side of the weekly schedule when spanning overnight
On-call Scheduling	PRB709434	On-call calendar group drop-down shows all groups

Problem category	Number	Short description
On-call Scheduling	PRB627015	OnCallRemindersNG().getNumberOfDaysTillNextRotation() function returning incorrect number of days when it spans a daylight savings change
On-call Scheduling	PRB658323	Schedule validation does not always consider excluded schedules
On-call Scheduling	PRB910015	Reports do not display when using 'On-Call Scheduling > Schedule Report' with more than 20 groups selected
On-call Scheduling	PRB738698	On-call scheduling calendars do not obeying sys_user_group table display field
On-call Scheduling	PRB913812	During upgrade process, executing custom business rules that use API: "var rota = new OnCallRotation(current)" results in error
On-call Scheduling	PRB888095	OnCallRotationJS.java needs to expose method addCurrentToNotified
On-call Scheduling	PRB725443	Rotations without members are not displayed on the on-call calendar
On-call Scheduling	PRB741089	Calendar setname method renders HTML tags
On-call Scheduling	PRB715370	Missing on-call API: who is currently on-call is not returned
On-call Scheduling	PRB732272	Rota header is not properly rendered in calendar with include/exclude schedules
Open Database Connectivity (ODBC)	PRB711960	Disk cache error: Field length:93238 exceeds maximum limit of 65535
Open Database Connectivity (ODBC)	PRB708941	Querying more than 4MB with ODBC driver creates temp files
Orchestration	PRB745200	SQL statement field on Activity designer is truncating to 1000 characters
Orchestration	PRB721148	Infoblox API call to create DNS a record is failing
Orchestration	PRB734797	JDBC activities fail to execute stored procedures in Oracle database. Besides, they do not support OUT and INOUT parameter modes.
Password Reset Application	PRB668565	Password Reset Ctrl+Alt+Del add-on does not properly work with the new Captcha in Geneva update 5
Password Reset Application	PRB730244	Quickly clicking the 'Forgot password?' link results in an error showing that Password Reset application is already running
Password Reset Application	PRB697445	In the pwd_process table 'User must reset password'(password_needs_reset) should be independent of 'Auto-generate password' (auto_gen_password)
Password Reset Application	PRB880385	Password Reset Desktop Application: Some French translations failed

Problem category	Number	Short description
Password Reset Application	PRB634057	Password Reset Client window in windows logon screen has wrong size, and users need to scroll down
Password Reset Application	PRB878676	Password Reset - Multiple duplicate users/credentials under the 'More choices' list
Password Reset Application	PRB643528	Password Reset CTRL+ALT+DEL software install issue
Password Reset Application	PRB654665	Geneva ResetPwdAjaxProcessor makes incorrect assumption on sys_user.source being populated
Password Reset Application	PRB753917	num_enroll change in verification cause enrollment issues
Password Reset Application	PRB717719	Some of the modules in the Password Reset Application are not translated in a different language completely, such as the text 'QA Verification', 'SMS Verification', 'Personal Data - Confirm Email Address' and 'Processes'
Password Reset Application	PRB876692	Cut off loading dialog in $pwd_new page
Password Reset Application	PRB756588	When no one is logged into a device, Password Reset shows the 'Other User' tile
Password Reset Application	PRB795781	Password Reset Automatic Enrollment does not work when Notify / Twilio is enabled; at verification it still asks for provider, which is for SMS
Password Reset Application	PRB729454	The captcha label is not customizable on the desktop application
Password Reset Application	PRB719946	Minimum length requirement for security answers only works for admin users
Performance Analytics	PRB737563	Grammar in error message is incorrect(error message for real time score in Performance Analytics).
Performance Analytics	PRB727006	Breakdown - Pivot scorecard widget fails to render breakdown labels and throws javascript error: [ngRepeat:dupes]
Performance Analytics	PRB715990	X-axis does not show the exact date of extraction of the data
Performance Analytics	PRB703788	ACLs do not run when querying score notes from detailed scorecard or widgets
Performance Analytics	PRB735999	List widgets scorecard indicator and detailed scorecard do not have colored scores when target is zero
Performance Analytics	PRB743923	PA Collection job with empty relative start and relative end date
Performance Analytics	PRB759847	After the Performance Analytics plugin is activated, all system properties become read only if High Security Settings are not active
Performance Analytics	PRB724659	Widgets do not follow element if the visualizations are 'Speedometer' or 'Dial'

Problem category	Number	Short description
Performance Analytics	PRB725789	Running a PA collection job with a user that cannot be impersonated will cause scores to be created in the global domain as user 'guest'
Performance Analytics	PRB726997	Records do not appear when the 'Records' tab is selected
Performance Analytics	PRB823060	Filter on 'New Indicator Wizard' does not allow dot-walking when List v3 is not active
Performance Analytics	PRB683507	For a widget with aggregate weeks or months, specific date drill-down from dashboard to detailed scorecard always goes to the latest score
Performance Analytics	PRB718182	Additional conditions for indicators do not work correctly in two scenarios and impact data collection
Performance Analytics	PRB735043	Scoresheet aggregate scores are broken when the sum is greater than 999,999
Performance Analytics	PRB689893	Issues with multiple and current score options of "Breakdown" widget
Performance Analytics	PRB711909	Warnings during collection of Performance Analytics "WARNING *** WARNING *** getGlideElement called for unknown field 'sys_domain_path' in table 'pa_job_log_rows' "
Performance Analytics	PRB714156	Real-time score is not calculated properly when query contains 'Uber' OR
Performance Analytics	PRB737260	The PA Breakdowns widget breaks if the breakdown name contains special characters
Performance Analytics	PRB712738	DataCollector should not use glide.memory.watcher.log_threads_threshold to kill the job
Performance Analytics	PRB713664	In Internet Explorer 11, parts of time series and breakdown widgets do not render properly
Performance Analytics	PRB850442	Running a historical data collection (relative start = 60 months) results in memory issues
Performance Analytics	PRB917832	PA dashboards not loading - NullPointerException error
Performance Analytics	PRB817617	After toggling forecast series, the message "no data to display" is shown
Performance Analytics	PRB712735	Heatmap does not work with Indicators whose Frequency is other then "Daily" - displays "No data to display"
Performance Analytics	PRB865358	Scoresheet table can update slowly, because com.snc.pa.scoresheet_edit_in_progress is set and removed after every edit, and this will also flush the cache
Performance Analytics	PRB689606	Formula indicator: setting breakdown exclusions on all the components of a formula will not be respected in the detailed scorecard breakdown selection
Performance Analytics	PRB891385	Time series widget with aggregation does not display trend if it has only 2 points of data

Problem category	Number	Short description
Performance Analytics	PRB747760	On the Performance Analytics indicator wizard user interface, the jobs are listed ordered by description, rather than name.
Performance Analytics	PRB726345	Switching back and forth in a detailed scorecard compresses the breakdown chart
Performance Analytics	PRB727040	Detailed scorecard/widget does not show the chart if there are more than 1000 scores, or if the scores are far in the past
Performance Analytics	PRB718148	Reference Interactive Filter slows performance while having many records to retrieve for the drop-down list
Performance Analytics	PRB864882	Print all tabs is not printing all the widgets in the dashboard
Performance Analytics	PRB881264	During migration the db connections are not released and the data collector can keep running in memory space
Persistence	PRB734968	ESS user is unable to open incident form and gets the error 'Syntax Error or Access Rule Violation detected by database' (ORA-00932: inconsistent datatypes: expected - got CLOB)
Persistence	PRB753399	Oracle JDBC buffer cache can consume large amounts of memory
Persistence	PRB756253	When a task column is moved into the offrow storage, it breaks certain database views that include tables that extend tasks
Persistence	PRB673305	On-Premise Only > sys_user user ID field accented characters are not considered unique (Unique Key violation)
Persistence	PRB719141	The record watcher fails upon a predicate pair between <x>ISEMPTY and <x>ISNOTEMPTY
Persistence	PRB745208	If the UI transaction quota kills a table modification submission via sys_dictionary.do, the scenario exists were we leave the fast lock in place and the tmp table. This will prevent further online alters.
Persistence	PRB718448	GroupBy on double dot-walked fields does not work correctly
Platform Performance	PRB885076	Node-specific sys_status entries recorded on startup have an "UNKNOWN" node ID
Platform Performance	PRB945880	Clicking View Map on a Service Mapping Business Service form triggers cache flush and instance becomes unusable
Platform Performance	PRB705025	After upgrading to Helsinki, downloading attachments is slower than in Fuji
Platform Performance	PRB713689	Slow transaction for pm_project.do due to PmPlannedTask: All Tasks Query
Platform Performance	PRB825703	AMB Transaction throws exception
Platform Performance	PRB710461	Schedule duration computations can cause a CPU loop and OOM if start/end values are unintentionally far off in the past or future

Problem category	Number	Short description
Platform Performance	PRB650039	'Stats.do' shows running jobs which are not running as confirmed by reviewing 'threads.do'.
Platform Runtime	PRB739334	Recursive scripting error - circular relationships are running nodes out of memory
Platform Security	PRB752083	Upon login, users are redirected to banner image/product icon instead of a homepage
Platform Security	PRB731078	Role Management V2: No data displays in the 'Audit Roles > Granted by Group' related list on sys_user_group
Platform Security	PRB651161	String containing "://" in any url for navpage.do will cause a redirect
Platform Security	PRB632899	In Fuji, the Script for add_to_list for ACL always evaluates to true
Platform Security	PRB712129	Role inheritance behavior with nested roles in Fuji leads to the loss of system roles.
Platform Security	PRB904608	fix_sys_user_has_role fix script should not run during upgrade
Platform Security	PRB817351	In Lists and Reports, values from dot fields on a reference field are repeated in empty rows
Platform Security	PRB691031	For HR application, Scoped Admin - Error messages appear when navigating to a group that grants a scoped role
Platform Security	PRB700770	RoleRecursiveTester script include runs into an infinite loop if there is an existing loop
Platform Security	PRB684605	Role delegation functionality is broken when using the new role management plugin if using more than 1 group
Platform Security	PRB718580	Decryption of £ character
Platform Security	PRB713505	Wrong inform message used in Role Management Handler causing UI message not to be translated
Procurement	PRB730207	Error in business rule "Update Asset Work Notes" on Transfer Order Line table creates new records in alm_asset when it should only update them
Procurement	PRB732780	Low or out of memory triggered by procurement_processor.do
Procurement	PRB931634	Destination stockroom in add transfer order returns no values if glide.invalid_query.returns_no_rows is set to 'true'
Project Management	PRB676446	Resource Plan Allocated State
Project Management	PRB708985	When the Project template is used, attachments do not stay on the project task
Project Management	PRB713902	Date calculations on related list "Project Tasks" are not functioning. Date calculations are not functioning when altering 'Planned start date', 'Planned end date' or 'Planned duration' from the related list titled 'Project Tasks' on dmn_demand

Problem category	Number	Short description
Project Management	PRB736303	Planning console issues in indent/delete tasks/pagination
Project Management	PRB901722	Planning Board does not load the previously view release
Project Management	PRB906741	Same number is shown in the form when Portfolio information is added (IE only)
Project Management	PRB753112	Unable to use project template to set state to anything other than 'Pending' (-5).
Project Management	PRB791541	Adding 'Additional Assignee List' (or any Glide List) to the Planning Console displays the user sys_id instead of Display Value.
Project Management	PRB729041	PMO Director Dashboard-Active projects count displays the count of closed project
Project Management	PRB716844	The selected baseline resets to no baseline on planning console list view after navigating back from viewing a record
Project Management	PRB721813	Updating a Project record state to 'Work in Progress' is saved as two updates
Project Management	PRB712967	Clicking on the 'Document' button on the Gantt chart page redirects to an invalid resource
Project Management	PRB879123	The planning console displays inactive choices on the state field.
Project Management	PRB811214	Planning console for custom sys_classes
Project Management	PRB682203	Copy project inserts records into the copied project in random order
Project Management	PRB718116	Project-related list on release form does not display 'Edit' button for use with it_project_manager role
Project Management	PRB713408	Applying a copied template to a project record, which already has a value saved for calculation type, empties the field calculation type.
Project Management	PRB713554	Total resource and total estimated cost do not match up
Project Management	PRB661813	Rolling up effort to a parent task does not check to see if the parent has any effort of its own
Project Management	PRB714525	Adding or deleting project tasks in the Planning Console can corrupt the WBS and wbs_order values
Project Management	PRB909603	Project work bench does not encode scandic letters correctly
Project Management	PRB759186	Updating percent complete in the planning console of sub-task is not updating percent complete in parent task
Project Management	PRB726874	RP undefined error on new button for pm_program and pm_program_task records

Problem category	Number	Short description
Project Management	PRB818202	Planning console breaks if the value for the property 'glide.invalid_query.returns_no_rows' is set to true
Project Management	PRB671592	'Copy Partial Project' does not copy values for 'Assignment group' and 'Assigned to'
Project Management	PRB680116	After instance upgrade, the related list 'Group Resource' of project reverts to the base system list layout configuration
Project Management	PRB720354	Duplicate 'Expected Start' date fields on Demand table records
Project Management	PRB741219	rm_scrum_task record creates duplicate work notes in activity stream when changing states
Project Management	PRB621566	When enabling the project_management_v3 plugin, script to populate the "Resourced effort" field reference to the table that is not present on the instance
Project Management	PRB647442	Timeline visualization translation issue
Project Management	PRB747979	Actual cost on Program is not deleted when the project is deleted from the program.
Project Management	PRB731676	In Portfolio Workbench during action Tick or Untick "Budget" checkbox the system sometimes returns an error "Contact System Administrator"
Project Management	PRB827016	Planned End Date is not getting updated when changing the planned start date if there is a Finish-to-Start predecessor and setting com.snc.project.allow_start_on_relations to true
Project Management	PRB733468	On an upgraded instance to Istanbul, the project form shows incorrect number for resource plans
Project Management	PRB606630	Printing Gantt chart is not possible and users have to browser print page by page
Project Management	PRB712408	Planning Console - The green vertical line showing current date does not expand and grow when tasks are expanded
Project Management	PRB713603	Under the Project management application, when changing the planned start date the time is moved 1 hour ahead
Project Management	PRB741140	'Create Sprints' UI action does not work on Oracle instances
Project Management	PRB716372	Non-admin users cannot see data for Project Task Link (pm_project_task_link)
Project Management	PRB665887	Field error message "The task start date cannot be earlier than the project start date" is no longer displayed
Project Management	PRB748409	Changing the planned duration of a project task does not trigger roll up to update its parent project percentage complete
Project Management	PRB754483	Projects created from Demands with 'Requirements' are treated as having children, which prevents users from modifying the planned end date.

Problem category	Number	Short description
Project Management	PRB761373	Project Template: Projects created via template is not showing up in the slushbucket when trying to add project to the portfolio.
Project Management	PRB710090	Scroll focuses to the top when certain changes are made to a task via the planning console
Project Management	PRB743947	Schedule calculation is incorrect if the schedule is set for 8.5 hours
Project Management	PRB733957	Planning Console: unexpected behavior when users drag tasks to the new start date.
Project Portfolio Management	PRB720499	PPMFundManager script needs to be corrected
Project Portfolio Management	PRB898451	When demand is converted to a project, attachments on demand should get copied to project
Project Portfolio Management	PRB828824	Dashboard reports query issues
Project Portfolio Management	PRB720842	When changing the portfolio budget with the UI Action Portfolio Budget in the portfolio, the budget is stored incorrectly
Project Portfolio Management	PRB888296	Demand manager is not able to delete stakeholder
Project Portfolio Management	PRB725647	Timeline Visualization - Several cards are not sorted in time order
Project Portfolio Management	PRB822117	OOB *.* save_as_template ACL is deleted by timeline visualization plugin
Project Portfolio Management	PRB720206	Field Styles not working on 'Cost' field on Status Report form
Project Portfolio Management	PRB741739	Removing a sub-project from a parent project does not reset the 'Top task' value the child project
Project Portfolio Management	PRB826964	Inactive choices are activated on dmn_demand table after upgrades
Release Management	PRB706675	Release Management Gantt Charts generate invalid URL with page not found error or stays frozen in 'Loading' state
Reporting	PRB683905	Issues with the legend on the homepage for reports in Hebrew
Reporting	PRB734745	ERROR: No response from the server Loading report... / map report. Map Report, using Drenthe Map in a map shows with an error
Reporting	PRB744547	The daily trend aggregation option on report charts is backwards compared to the other trend aggregations
Reporting	PRB747427	report_group users cannot 'insert and stay' on a shared report, and the message 'report does not exists' pops up

Problem category	Number	Short description
Reporting	PRB836556	System Admin unable to view reports on System Diagnostics portal page and MID Server Status report on the MID Server Dashboard page
Reporting	PRB715524	Element type "javascript:gs.daysAgoStart" error when users have a query condition with specific attributes
Reporting	PRB715796	Heatmap Report: drill down on dot walked field returns no results when field is a Date field - however when timezone is GMT, the drill down works.
Reporting	PRB682210	Bubble chart axes display values instead of labels for negative values in a choice list
Reporting	PRB690082	Translation missing for 'Number of records' for bubble chart report
Reporting	PRB719822	On the Report Designer, single score reports do not pass the report source filter when drilling down to the default list
Reporting	PRB707418	Grouping on a variable added as Add as an additional Groupby does not work on List reports
Reporting	PRB648661	Additional GroupBys with 'None' option do not use the color palette on the additional GroupBys
Reporting	PRB924759	Drilldown to list is broken for Speedometer and Dial report types when a table is used as the report source.
Reporting	PRB722299	If a group report loses all of its users and groups, even the user who created the report cannot see it
Reporting	PRB652317	Bar chart colors do not reflect 'Chart Colors = use chart colors' choice when setting 'Group by' to a dot-walked field
Reporting	PRB714174	org.mozilla.javascript.EcmaError: "sysparm_owner" is not defined.
Reporting	PRB920986	"gs.beginningOfNExtWeek()" Typo in "Get Date Filter Options for Date Filters" BR for 'Next Week' filter option
Reporting	PRB748719	"Omit if no records" is not honored for Scheduled reports created on "Report Sources"
Reporting	PRB756355	The language of the "Other" text in reporting is not always the correct language
Reporting	PRB724617	The link to the list to help fixing the wrong data contains sys_id's of cmdb_location and not incident sys_id's
Reporting	PRB819944	Platform components in reporting UI do not have labels
Reporting	PRB716393	Prefixes in variable names make selecting items from the Reporting slushbucket difficult
Reporting	PRB682181	'More' option while clicking the help icon(?) near Type field while creating a report is not visible in French
Reporting	PRB716895	Related lists in exported PDF do not match the web in domain-separated instances

Problem category	Number	Short description
Reporting	PRB697412	View not respected in list for pie, donut, or funnel report with a view defined
Reporting	PRB718174	When using the MAP type, incorrect data and indexes can result in performance issues
Reporting	PRB718881	Multipivot is getting extra text in the top right of the screen under certain conditions when publishing the report
Reporting	PRB711159	When exporting a form/list that includes an image field/column, the image can overflow out of the PDF width if it has a larger width than the PDF page
Reporting	PRB713365	Stacking by variables can break the report
Reporting	PRB748609	When a report is on a homepage and display grid is turned on, the report takes the size of the grid and can potentially be very large
Reporting	PRB799484	The field name is not translated for the aggregated field on the Y-axis of a chart, for other labels where field is printed, and aggregate function shown in non-translated short format, e.g. AVG
Reporting	PRB716888	When adding a title to the single score, it does not size properly on the canvas
Reporting	PRB697145	Color Charts do not work when you specify chart colors
Reporting	PRB859348	ESS user not able to view reports they have access to
Reporting	PRB742622	Side content panel is displayed if dashboard URL is invoked with (sysparm_editable=true) when user has only view permission for dashboard
Reporting	PRB729948	When adding a date/time additional groupBy to reports, it gets itself on the additional stack, which throws an error
Reporting	PRB715965	Additional GroupBy and stackBy field inconsistencies/issues with chart color field in Report Designer
Reporting	PRB716887	glide.ui.report_expand_header setting the value of this to anything other than public will break report builder for users
Reporting	PRB711653	Reports home page does not grab focus when opened
Reporting	PRB742213	Report with multiple dataset does not display data after changing date format OOTB
Reporting	PRB710704	The description panel should properly reflect the status of sharing a report
Reporting	PRB711073	For map type reports where the set map is set to Michigan, display results are not included in the map
Reporting	PRB879683	During upgrades, sys_report_map_source_mapping and sys_report_map are reset to their original values
Reporting	PRB839486	Drill down views in reports do not inherit permissions from the parent report.

Problem category	Number	Short description
Reporting	PRB674589	PDFReportPivot causes high node memory when exporting PDF with many rows (may include columns)
Reporting	PRB711370	Some reports on "Date" field do not display records from "Today"
Reporting	PRB741934	Changing language from English affects the monthly order in reports containing three data sets.
Reporting	PRB754960	Report designer does not load in French
Reporting	PRB759278	When sharing a dashboard with new users, email message is not sent in email
Resource Management	PRB713516	Empty rows are shown in resource availability reports when there are more than 1000 data points
Scheduled Job Processing	PRB732745	GlideSchedulerWorker occasionally throws NullPointerException
Scheduled Job Processing	PRB709043	ASYNC business rules on task with no condition can clog worker queues
Scheduled Job Processing	PRB710171	Changing timezone of "Run as user" from any timezone with daylights savings to GMT/UTC causes sysauto_* to run twice
Schedules	PRB745251	Schedule entries for last weekdays of December are not appearing on schedule
Schedules	PRB676922	[Timeline Pages] If one of the records fails the ACL authorization, it stops showing the rest records
Schedules	PRB734961	"ScheduleTimeSpan update" business rule does not check "All day" rule when inserting schedule entry
Security Access Control Lists	PRB860372	Searching for incident tags fails because the ACL for incident.* is blocking access to sys_tags, even though the incident.sys_tags ACL is evaluated as 'true'
Security Access Control Lists	PRB675500	ACL framework to auto-create "table.*" ACL if a new "table.field" ACL is created (only for the 'read' operation)
Security Incident Response	PRB888214	Upon upgrade, customized choices in the 'State' field on the 'sn_si_request' table are overwritten
Security Incident Response	PRB945182	Upgrade resetting custom configuration on Security Incident group and knowledgebase
Security Incident Response	PRB887711	Property 'The security application is unlocked for admin to access' [sn_si.unlocked] listed twice in Security Incident Response Properties page after upgrade to Istanbul
Security Incident Response	PRB747783	Opening a security incident template from a list takes longer than 1000 seconds
Server Side Scripting	PRB818882	current.deleteRecord() will cascade delete all references to NULL if used in an onBefore insert business rule
Server Side Scripting	PRB677472	Global business rules not enclosed in a function execute in scope rhino.temp rather than rhino.global, making other global variables and scripts not available

Problem category	Number	Short description
Server Side Scripting	PRB646188	Query business rule corrupts sys_choice cache
Server Side Scripting	PRB662310	Server-side code of UI Actions set to active=false can be triggered when using gsftSubmit()
Server Side Scripting	PRB709246	IdentificationEngineScriptableApi is not available to scoped applications
Server Side Scripting	PRB721218	Variable listEditRefQualTag is not available in reference qualifier scripts in a scoped app
Server Side Scripting	PRB713785	Evaluator: com.glide.script.fencing.MethodNotAllowedException: Function _query is not allowed in scope
Server Side Scripting	PRB676595	Unable to add view field from global table to view table on scoped application database view, even though table has "Accessible from" set to "All application scopes"
Server Side Scripting	PRB639321	Unexpected variable scoping from Calculated Field
Server Side Scripting	PRB899364	Inconsistent issues with ScriptableObjects which contain a static and a non-static method with the same name
Server Side Scripting	PRB700320	The size awareness code should be updated to provide a better estimate of the size of our Glide objects, namely GlideRecord and GlideElement
Server Side Scripting	PRB652837	Improper variable declaration in ArrayUtil script include
Service Analytics	PRB762704	SA HASH table - Duplicate records cause the impact to stop working
Service Catalog	PRB715832	Setting <tablename>.autocomplete.contains to false does not work correctly for variables in Service Catalog
Service Catalog	PRB717058	Unable to set the value of a list collector
Service Catalog	PRB702368	When configuring user criteria in a domain separated environment, the user criteria is ignored
Service Catalog	PRB705073	Unable to select text in read-only variables using Firefox
Service Catalog	PRB711484	ignore_price field is not automatically set or cleared
Service Catalog	PRB724387	g_form.clearValue('variable name') works in Catalog Client Scripts in the Catalog, but not on Request Item and Catalog Task forms
Service Catalog	PRB691890	Forms do not display correctly in list or form view when hovering over some reference icons
Service Catalog	PRB718193	Excessive memory utilization from shared cache due to catalog item categories
Service Catalog	PRB870176	Service Catalog category title links do not load the correct pages

Problem category	Number	Short description
Service Catalog	PRB748180	After clicking the up arrow several times, some users receive the error "Cannot read property 'indexOf' of undefined"
Service Catalog	PRB749868	Record producers variables are unable to map if the table name is longer than 40 characters
Service Catalog	PRB756366	GlideRecord does not work if RITM variable which is inactive gets updated
Service Catalog	PRB759200	Jelly page which uses "com.glideapp.questionset.DefaultQuestionEditor" can not be opened as a GlideDialogWindow from a UI action
Service Catalog	PRB728966	Reject UI action for approval is missing ";" in the script
Service Catalog	PRB732117	Date validation script for date variables in variable set causes script issue because of double text escaping
Service Catalog	PRB717752	On the Approval Summarizer of Catalog tasks, the 'Assigned To' field shows the Sys ID of the assignee instead of the name
Service Catalog	PRB708931	Workflow search in Catalog items page shows inactivated workflows along with active workflows
Service Catalog	PRB710524	Available slushbucket loses items when all items are moved to selected bucket
Service Catalog	PRB712163	Semicolons are missing in OOB UI action script field
Service Catalog	PRB734672	List collector (glide_list) breaks when used in the requested item
Service Catalog	PRB884515	Lookup select box has slower response times in Istanbul vs. Helsinki
Service Catalog	PRB723447	SC Catalog Get API returning java.lang.NullPointerException if the "Data Lookup and Record Matching Support for Service Catalog" plugin is not active
Service Catalog	PRB828139	When searching in Service Catalog, a warning message "Your text query contained only common words or ambiguous wildcards, please refine your search and try again" appears frequently as you type
Service Catalog	PRB715061	Service Catalog page is not rendering correctly on Microsoft EDGE
Service Catalog	PRB715761	When there are more than 3 banner steps in the wizard the last arrow does not render properly, i.e. it does not resize and is overlapping with the text for the preceding text
Service Catalog	PRB715988	Lookup select box reference qualifier and/or attribute is breaking 'Lookup Price' field
Service Catalog	PRB718537	Variable alignment issue for sysapproval for sc_task
Service Catalog	PRB706335	Safari: In record producer, variable value is not passed from catalog form into underlying script if a user is not admin.
Service Catalog	PRB648158	On a new Catalog Item form, the default value in Catalogs field is broken if language is not English

Problem category	Number	Short description
Service Catalog	PRB712746	Catalog check box variables are not vertically aligned on the form when container layout is '2 column wide, alternating sides'
Service Catalog	PRB713552	Incorrect hint on the instructions label in the execution plan task table
Service Catalog	PRB668162	When "Standard: Select from available pre-approved change templates. These changes do not require approval. " is created from related list of an incident, the CHG does appear in the Change Request Related Lists of the incident.
Service Catalog	PRB868312	Category on Service Catalog that contains a content item will not be visible to non-admin user on Self-Service homepage
Service Catalog	PRB741799	Reference qualifier returns undefined when there is 'create roles' on a service catalog variable
Service Catalog	PRB742300	Empty values of variable's lookup label is getting displayed as 'null' in shopping cart page
Service Catalog	PRB742631	'Do not select the first choice' does not work for numeric scale type variables in items in Order Guides
Service Catalog	PRB748048	ExecutionPlan.java load method does not check to see if plan is null - causing an infinite recursion when sc_req_item_stageGetChoices business rule global function is called
Service Catalog	PRB722198	Macro functionality issue - getNibox('macro_variable') function is not working in Helsinki
Service Catalog	PRB758335	Administrators are able to view the variables and variable set tabs within the execution plan form
Service Catalog	PRB759487	Preview item link could not be found on content item - External Content type
Service Catalog	PRB716159	Adding a new item to the request changes the order of the displayed variables
Service Catalog	PRB716386	Typo in macro 'sc_order_item_buttons'
Service Catalog	PRB687412	Read-only list collector is not word wrapping
Service Catalog	PRB691559	Only one of Shipping Location & Shipping Address should be selectable from cart layout > Cart Preview Screen (Two Step)
Service Catalog	PRB720735	'Requested For' field in checkout view in Order Guide does not honor 'display' field, and shows 'User ID' instead
Service Catalog	PRB712139	Content item categories related list is not automatically populating via the business rules when running via transform maps
Service Catalog	PRB714140	Field "Reference qual" is not showing for many List collector variables
Service Catalog	PRB908570	Catalog item variable set is moved upwards when selecting a multiple choice variable value within it (Chrome/IE + Windows only)

Problem category	Number	Short description
Service Catalog	PRB752532	Instructions value in a label variable above check box is not visible
Service Catalog	PRB754710	'Copy' UI action button on catalog items maintains the protection policy value on the new catalog item
Service Catalog	PRB759319	saveProducer() function does not work when using in a onLoad client script.
Service Catalog	PRB726577	Java exception occurs after node upgrade to Java 1.8
Service Catalog	PRB821172	Issue with use of GlideAjax script in catalog client script and behavior of catalog UI policy
Service Catalog	PRB718160	The getKeySequence API from the prepVariables function on the Cart Script-Include can cause the variables to be displayed in the incorrect order.
Service Catalog	PRB719689	Catalog data lookup fails when source variable type is multiple choice
Service Catalog	PRB651878	Chrome browser back button in Service Catalog does not work as expected
Service Catalog	PRB891896	Using the two-step checkout and having '&' in the special instructions field cause an error
Service Catalog	PRB749179	If a catalog search term has an apostrophe, and does not match any items, a backslash escape symbol '\' is wrongly displayed
Service Catalog	PRB723308	Combination of comments outside function stops Service Catalog client script
Service Catalog	PRB759031	Record producer variable with roles set on create on write prevents non-role users mapped field with default value from being sent to incident
Service Catalog	PRB716108	Need to apply "onchange" client scripts and UI policies on some variables on variable editor
Service Catalog	PRB717431	Scoped Variable Sets are scoped in 'Global' on client side
Service Catalog	PRB710145	When GlideappCalculationHelper().addItemToExistingRequest() is called at the same time for different requests it creates duplicate RITMs.
Service Catalog	PRB713145	Stage field on the Requested Item form does not represent the current open Catalog task
Service Catalog	PRB741672	After upgrading from Express to Enterprise, adding an attachment for Change Requests via a record producer does not work if the attachment was added before submitting
Service Catalog	PRB904025	Macros do not work in Printer-Friendly view
Service Catalog	PRB744763	Hidden container variables become visible when their visibility is set to true in a different UI policy
Service Catalog	PRB717926	Catalog admin is not able to modify currencies for items in a multi-currency environment

Problem category	Number	Short description
Service Catalog	PRB704645	Catalog client script execution does not honor assigned order sequence
Service Catalog	PRB707157	Self user can be added multiple times for catalog variable of type macro with label
Service Catalog	PRB713581	g_form.getValue not working on HTML variables with Create Role
Service Catalog	PRB668579	Clicking 'Back' from a checkout page for order guides takes you to an invalid page
Service Catalog	PRB900329	Catalog Item variable check box option 'Map to field' leads to blank select box
Service Catalog	PRB745469	Copy Catalog Item function does not copy the name and short description translations correctly
Service Catalog	PRB751245	Shopping Cart Widget not referencing the correct "Catalog", this causes the "Continue Shopping" button to behave inconsistently
Service Catalog	PRB756529	"Requested For" is populated incorrectly or blank with "Order Now" button, when property enable_order_now is set to true
Service Catalog	PRB722421	Question.java returns null when a RITM is being accessed, but not on the catalog item
Service Catalog	PRB757090	Running method copyRequest() (GlideappScriptHelper) multiple times at the same time always results in merging RITMs from the request record being copied.
Service Catalog	PRB723546	Problem occurs with user criteria cache if more than one locale is installed
Service Catalog	PRB731372	Slow performance when 'Reduce request price - approval change' business rule scans sc_request_item records with no sc_request value
Service Catalog	PRB732841	Order not properly set for Variable Sets when applied to an Order Guide in a Record Producer.
Service Catalog Widgets: Service Portal	PRB758708	Service Catalog Data Lookup definitions do not function in Service Portal
Service Desk: Call	PRB723241	New Call module - Contact type does not carry over if the call type is 'Request'
Service Desk: Call	PRB723401	After creating a new call of type request, the ServiceNow 'Back' button navigates to the homepage
Service Desk: Call	PRB724388	Service Request from a New Call is not created, and the screen is blank if the description is long and contains special characters
Service Level Agreement (SLA)	PRB717388	SLAConditionSimple does not work when condition_class is not added to SLA Definition form (related to PRB702983)
Service Level Agreement (SLA)	PRB879317	SLA is not triggering correctly

Problem category	Number	Short description
Service Level Agreement (SLA)	PRB830288	SLA timeline incorrectly includes holidays when represents schedule
Service Level Agreement (SLA)	PRB719779	Inactivity monitor does not trigger when there is a reset condition
Service Level Agreement (SLA)	PRB709382	Repairing SLAs does not work when SLA Definitions are in domains different than the current one
Service Level Agreement (SLA)	PRB691514	SLA escalation status and due date calculated wrong when incident is updated from different timezones.
Service Level Agreement (SLA)	PRB727421	When the system property 'com.snc.sla.run_old_sla_engine' is set to false, the made_sla field is still being updated by the Escalation engine
Service Level Agreement (SLA)	PRB679514	SLA conditions are case-sensitive
Service Level Agreement (SLA)	PRB737594	SLA update (within 10 minutes) sys_trigger job can set the breach flag unexpectedly on short duration SLAs
Service Level Agreement (SLA)	PRB898575	Displaying the 'Repair SLAs' UI action can be slow when a large number of contract SLAs is defined
Service Management Designer	PRB660605	Clicking on the 'Cancel' button on the record producer-Something is broken redirects the user to 'Page not found'
Service Mapping	PRB711681	SSRS pattern step for seems to be failing as entry_point.url is being returned as 'https://ip:port/ReportServer' instead of 'https://url/ReportServer'
Service Mapping	PRB871677	Wrong loopback connections is created from Global DNS load balancer
Service Mapping	PRB754157	Tracked files discovery log has unwanted text log
Service Mapping	PRB759202	In pattern step, file output gets truncated if we do not change the default prompt, and the default prompt gets inserted into the output stream
Service Mapping	PRB732800	Debug RunFailed: Task pattern debugger task failed : java.util.hashMap cannot be cast into java.util.String.
Service Mapping	PRB676142	Business service map hamburger menu items are not accessible
Service Mapping	PRB716444	Issues with creating policy connections in WebSEAL pattern
Service Mapping	PRB740249	Icons for host in host view are always from linux_host, should be from the original host CI type
Service Mapping	PRB741846	Process Environment variables detection is wrong when the variable value contains the '=' character
Service Mapping	PRB744478	Pattern discovery is not able to bring process environment variable in full when the size is long on AIX machines
Service Mapping	PRB691830	The identification engine can fail, and the map does not show all items

Problem category	Number	Short description
Service Mapping	PRB718906	CI Types with $ in their name cause CI type synch to fail for all the CI Types. Same goes for CI types with spaces in their names
Service Mapping	PRB719793	Missing escaping on entry point fields
Service Mapping	PRB746902	MSSQL relations are not aligned with the hosting rules and causing identification engine errors in Service Maps
Service Mapping	PRB756866	CyberArk credentials: Failure with fetching non-existing username from vault is not handled correctly, and next credentials are not used
Service Mapping	PRB730839	Under certain conditions, Service Mapping discovery fails when using SSH
Service Mapping	PRB713813	When creating manual connection using host name (and not IP), adding the manual connection in one place may remove the same connection from another place
Service Mapping	PRB756863	UI action "Map Icons Preloaded" on services list causes browser requests to broken URLs
Service Mapping	PRB703016	MID synchronization of patterns sometimes fails. When it fails, manually synching or grabbing NDL from MID also fails
Service Mapping	PRB758220	MID sync on CI type change does not work in some cases
Service Mapping	PRB833033	Service Watch fix script prolongs upgrades, and security constraints prevent selection of Service fields
Service Mapping	PRB715402	Issues with SSIS Pattern > Connection > Create Job Connections
Service Mapping	PRB716662	The com.snc.service-watch plugin overrides customizations for records in the sys_dictionary_overrides table (+ other tables)
Service Mapping	PRB704825	"Floating" CI's with no relation to any Entry point in a BS
Service Mapping	PRB706138	Exporting getHostByIP to js + makes pattern debugger go through the same flow as initial discovery task creation regarding finding host
Service Mapping	PRB708885	Service Mapping should abide by the glide.required.attribute.enabled
Service Mapping	PRB879896	Pattern Designer: Need a proper error when users populate entry point without port in case find process strategy is not 'NONE'
Service Mapping	PRB751673	Failed to communicate with WMI Collector message when MID Server is multihomed
Service Mapping	PRB755363	Hosts that initiate a connection should confirm whether to use /etc/hosts or DNS
Service Mapping	PRB798800	When two distinct CIs in different services are connected to the same clustered CI, both source hosts appear as associated with both services in svc_ci_assoc

Problem category	Number	Short description
Service Mapping	PRB824438	Performance issues while saving NAT rule due to 'Update NAT Rule' business rule
Service Mapping	PRB743008	When creating new business service and leaving the form, the business service remains with an empty name
Service Mapping	PRB745480	The SSH layer used by pattern should allow to override the shell PATH rather than append to it
Service Mapping	PRB751612	Service mapping fails to discover listening process with the PATH on the target machine, which does not contain the folder of netstat.exe (system32)
Service Mapping	PRB753564	The SSH layer used by pattern refers to SSH regular credentials as SSH key credentials, if the key field is not empty.
Service Mapping	PRB804562	Service Mapping fails to process discovery result when the payload contains fields with non printable characters
Service Mapping	PRB832402	ACL on discovered or manual (event managed or mapped) Service Configuration Item blocked from ITIL role
Service Mapping	PRB717421	Tomcat WAR pattern tries to create connection to commented lines
Service Mapping	PRB707449	Parse Command Output Operations does not return same results for powershell command as command line on MID Server
Service Mapping	PRB720596	Warning messages missing for LB discovery when CMDB is corrupted -- specifically when all LBs have discovery source = duplicate, or all LBs are passive
Service Mapping	PRB872176	Scrollbar of hamburger menu is not visible on chrome 55+
Service Mapping	PRB743000	Cloned clusters: ciTypeName of cloned CIs is overwritten with ciType field
Service Mapping	PRB752105	Business Service Map: Connecting to existing service/ creating new service is disabled on connection leading from NAT
Service Mapping	PRB826341	Client script "rewrite endpoint link" on cmdb_ci_service_discovered disables record form links for all related lists.
Service Portal	PRB717773	Form widget has option to 'Disable UI Action on Form', which leaves a primary action but disables its functionality
Service Portal	PRB712174	HTML tags in help text of Catalog and Record producer variables are not rendered in Service Portal
Service Portal	PRB713575	Ampersand characters in a fix script are not escaped correctly
Service Portal	PRB714564	Variable summarizer does not honor 'Visible on Summaries'
Service Portal	PRB741927	Reference field does not honor tablename.autocomplete.contains user preference

Problem category	Number	Short description
Service Portal	PRB742952	Image in News Ticker widget uses 'src' tag instead of 'ng-src', resulting in invalid request, causing SSO redirect issues
Service Portal	PRB748856	Simple list widget cannot order on a glide_date_time field (e.g., sys_updated_on) for ESS user
Service Portal	PRB722364	Requested Items widget throws errors when no sys_id or an invalid sys_id are passed in the URL
Service Portal	PRB725912	Unable to clone SC Categories widget in platform - invalid return thrown by script checked
Service Portal	PRB733163	Lookup Select Box does not populate correctly in the Service Portal
Service Portal	PRB715232	Formatter type variables cause the order guide eval to fail
Service Portal	PRB717754	Service Portal catalog reference field behaves strangely when search term includes a period (dot / .)
Service Portal	PRB720884	Ticket conversations widget does not render if user cannot read journal field, which should have shown helpful messages to avoid confusion
Service Portal	PRB710969	ng-controller cannot be used in a widget template
Service Portal	PRB711291	Duplicate request gets created in order guides on Service Portal
Service Portal	PRB711943	Service Portal lacks visible focus indicators for elements
Service Portal	PRB712168	Printer Friendly Version not available for Service Portal pages
Service Portal	PRB713432	Content Item which should open in a new tab no longer opens at all
Service Portal	PRB737318	Approvals for delegated users are not showing up Approvals widget
Service Portal	PRB753060	Accessibility - Knowledge Base/Categories heading has incorrect heading structure <h4>
Service Portal	PRB725049	'Maximum Entries' field on 'Data Table from Instance Definition' instance options do not modify the number of rows displayed
Service Portal	PRB828186	Accessibility: Rating stars component has accessibility issues
Service Portal	PRB710922	Glide List field on Service Portal is displaying sys_id instead of the display name
Service Portal	PRB737286	No error message is shown when users attach invalid file type (as defined by glide.attachment.extensions system property)
Service Portal	PRB740041	Help text does not show for Label variables
Service Portal	PRB741842	Submit button displays on Service Portal catalog items even if it is omitted through the ordering button.
Service Portal	PRB744313	Header Menu does not display glyph icons

Problem category	Number	Short description
Service Portal	PRB749825	Avatars in ticket-conversation widget and sessions widget appear clickable but have no effect
Service Portal	PRB754793	"Omit badges" option is not honored after being set from true to false in 'SC Categories' widget
Service Portal	PRB724097	Read-only referenced variables cannot be previewed by users who have read access to the referenced record
Service Portal	PRB730090	Catalog item quantity selector is not displayed for non-admins
Service Portal	PRB733059	Item description does not show when searching for terms using OR
Service Portal	PRB717482	sc_cat_item and sc_cat_item_guide page with missing or invalid sys_id URL parameter generates browser error
Service Portal	PRB701726	IE10: Service Portal pages do not show full content if the height is greater than the browser window
Service Portal	PRB703505	Service Portal Manage dropdown menu in header does not function at tablet and phone resolutions
Service Portal	PRB704859	SP choice list should require value or use default_value if type is set to 'must specify a default value'
Service Portal	PRB720821	Requested Items widget generates errors when added to a page (when options.secondary_fields is empty)
Service Portal	PRB714468	Non-ITIL users cannot see the record to approve on the Service Portal
Service Portal	PRB751953	A developer cannot react to the reference icon click and do something else if they want
Service Portal	PRB754778	When clicking "Edit" link in shopping cart, the resultant modal's title is "Variables" instead of the name of the catalog item (e.g., Apple iPhone 5s)
Service Portal	PRB723071	glide.knowman.show_user_feedback are set to never and does not work on Service Portal. glide.knowman.show_star_rating is not supported
Service Portal	PRB762303	Screen Reader Accessibility - Profile menu access
Service Portal	PRB726860	Redirect to Service Portal, users stuck on welcome.do page
Service Portal	PRB731678	Service Portal does not include items in order guide when order form is submitted before the items are fully loaded in the form
Service Portal	PRB825565	Header menu items are not displaying hint tooltips
Service Portal	PRB828111	Search Source name not translated
Service Portal	PRB715720	Page not displaying in Service Portal Designer when 'Internal' option selected
Service Portal	PRB715966	Service Portal incident form does not show attachments at top if table URL parameter is for the wrong table (e.g., task vs. incident)

Problem category	Number	Short description
Service Portal	PRB706317	Select box variable for catalog item/record producers displays the dictionary value rather than display value in Ticket Fields widget
Service Portal	PRB711870	Activity Stream is not visible in incidents
Service Portal	PRB714879	Currency symbol is missing from currency and price field types in form widget
Service Portal	PRB746312	Request Fields widget errors if sc_request.due_date has no value
Service Portal	PRB749235	Accessibility in Service Portal: Users are able to tab beyond pop up windows so that focus goes outside of the user profile field dialog boxes/pop up windows
Service Portal	PRB751724	Default value of "Remember me" checkbox does not honor glide.ui.remember.me.default system property
Service Portal	PRB756693	When users cannot delete attachments, Branding Editor gets stuck loading
Service Portal	PRB819500	Service Portal Accessibility - Attachments in Service Portal have accessibility issues
Service Portal	PRB830043	Accessibility: Create a new high-contrast Service Portal theme
Service Portal	PRB714983	Branding Editor needs to indicate when admin is not in the right system application and cannot edit
Service Portal	PRB717444	Customized OOB widget instance might be unexpectedly deleted in an upgrade
Service Portal	PRB717990	Reference variable attributes do not work if there is a space between them
Service Portal	PRB718453	Breadcrumbs have empty placeholder on Order Guide page if sp_instance record has no title value
Service Portal	PRB743340	The Service Portal widget KB Article Page does not correctly display KB articles of type Wiki
Service Portal	PRB745482	sys_updated_on date/time for attachment in Form widget shows server time vs. user local time
Service Portal	PRB756631	"SC Categories" Widget's "Hide XS" option is not honored when false, so widget is not shown on mobile
Service Portal	PRB724420	Approvals widget (and maybe others) uses href='#' twice which prevents form saving
Service Portal	PRB819498	Improve the accessibility of the system status page
Service Portal	PRB731414	Mandatory check box in catalog does not show the 'mandatory' indicator
Service Portal	PRB732902	Business Services Status widget can show outage on the wrong date
Service Portal	PRB715696	Service Catalog subcategories do not display when no item is on the category level

Problem category	Number	Short description
Service Portal	PRB717931	'Visible on Guides' setting is not honored within Order Guides
Service Portal	PRB718153	Form section does not show the translated caption
Service Portal	PRB702722	Helpful feedback question is not available to KB article (when glide.knowman.show_yn_rating is true, which is the default)
Service Portal	PRB719112	KB attachments are not visible for unauthenticated users
Service Portal	PRB707186	Anchor tags do not work in KB Articles. When clicking a link that brings the user to a different section of the KB article, it will go to that section and immediately reload the page
Service Portal	PRB719973	Unexpected items appear on /sp?id=sc_category page when no category ID is specified
Service Portal	PRB720598	User profile widget in the Service Portal does not display the correct number of users under 'My Coworkers'
Service Portal	PRB713602	Disabling Comments is not working for the Knowledge Articles when the article is viewed from Service Portal.
Service Portal	PRB714649	When a user creates a HR Case from the HR Service Portal, the 'is_catalog' field is not set to 'true'
Service Portal	PRB734799	Lookup Select Box variable with advanced reference qualifier breaks a catalog item with too many variables - 400 error
Service Portal	PRB857631	Knowledge rating hover text is not translated correctly
Service Portal	PRB752339	Service Portal Accessibility - Avatar menu does not collapse when pressing tab
Service Portal	PRB753212	Message alerts are too fast when creating record using the page 'form'
Service Portal	PRB757161	snRecordPicker directive should allow option of 'startswith' query (currently hardcoded to 'contains')
Service Portal	PRB824400	Ticket Conversations widget limits journal fields to 100 entries
Service Portal	PRB716080	Catalog client scripts cannot be fetched from a scoped application
Service Portal	PRB698352	List collectors do not display correctly if the referenced records' display values have commas
Service Portal	PRB719044	Files larger than 25MB cannot be uploaded and no error message is displayed
Service Portal	PRB721147	Cannot edit roles in Customer Service Management portal
Service Portal	PRB709643	Simple list widget target page is not inherited by 'View All' target list page
Service Portal	PRB907063	sys_domain field not rendered properly using form widget and instead displays the Sys_ID; read-only document_id field layout is missing padding
Service Portal	PRB748382	[UW Accessibility] Page title should come before portal title

Problem category	Number	Short description
Service Portal	PRB753563	Exporting to Excel and CSV does not honor the fields defined in the widget 'Data Table from Instance Definition'
Service Portal	PRB721885	KB news widget needs to provide a default translated title in case sp_instance.title is empty
Service Portal	PRB818900	Simple List widget does not set the table parameter in the URL to the real table when configured to show records from a base table
Software Asset Management	PRB665386	SAMCounter job executing query with large IN clause
Software Asset Management	PRB920902	Filter carried over when users create new records
Software Asset Management	PRB741085	Downgrades do not work properly when installs with valuation = 0 are present
State Flows	PRB756472	Numbering on Security incident table is not in sequence when 'Convert to Security Incident' UI action is used
Studio	PRB719365	When editing list layouts in Studio, the customized view does not persist and the user sees the default view instead
Survey Management	PRB880822	History Choice on View Scorecard does not work if there are survey responses that are 3 or more years older
Survey Management	PRB742422	Survey trigger condition does not work on migrated surveys via Update Set
Survey Management	PRB687957	The assessable record throws an error when clicking 'Preview'
Survey Management	PRB945363	Special characters in survey questions do not show properly
Survey Management	PRB909444	Ampersands in surveys submitted via portal break the response
Survey Management	PRB917405	Users with the survey_admin' role are not able to 'export assessments' and get the error message 'Security restricted when invoking processor'
Survey Management	PRB679524	Trying to publish a survey for the second time through survey designer times out when many users are associated
Survey Management	PRB925337	Need to escape messages in "my surveys" and "take survey" service portal widgets
System Applications	PRB723474	The scope from a list filter overrides the session scope when users using the 'New' button from a filtered list
System Applications	PRB745431	App installation fails on customer instance,when a scoped app within a plugin is captured as a dependency instead of capturing plugin dependency.
System Applications	PRB715493	sys_scope table should suppress 'Insert and Stay' and 'Insert' UI actions

Problem category	Number	Short description
System Applications	PRB717519	System Applications does not display list of applications present in prior to an upgrade under 'Develop/Download/ Upgrade'
System Applications	PRB650889	GlideAjax API in a scoped app blocks getXMLWait function, without any documentation/help on workaround or why
System Applications	PRB880157	Setting 'glide.ui.escape_text' property to false, displays the message 'The entity name must immediately follow the '&' in the entity reference.' on applications page
System Applications	PRB865445	Error occurs when a user executes track in update set UI action: temp tables with name starting with rep$ are created and not cleaned up
System Applications	PRB718699	AppUpload fails with password with special characters
System Applications	PRB723703	After non-admins were allowed to use update sets, when non-admins (not delegated developers) switch scopes in the application picker, the update set does not change
Tables and Dictionary	PRB725054	Schema map produces html tags and is broken
Tables and Dictionary	PRB713817	Admins can create reference columns on sys_choice, which does not work
Tables and Dictionary	PRB716677	The Table form should warn users when attempting to remove a schema attribute
Task Flattening	PRB654348	Datatype is wrongly replaced during task flattening
Team Development	PRB673926	If Team Development is turned on and too many local changes exist, performance issue occurs when adding new versions.
Team Development	PRB721443	Resolving a collision or comparing version records for a table that does not exist causes a NPE
Team Development	PRB713228	RemoteGlideRecord - two-pass query does not propagate errors to current RGR object during second pass
Team Development	PRB737918	Team Development can cause committing an update set to take a long time if the proper indexes are not present
Team Development	PRB730569	Team Development pushes appear successful, but Stage is not set to Completed
Team Development	PRB711706	Pushes can be cancelled before a mutex is acquired
Team Development	PRB673198	Team Development transactions can be cancelled by scoped quota rules
Templates	PRB714467	save_as_template' ACLs are not evaluated in standard change template 'Template value' fields
Templates	PRB714433	When opening the 'incident.itil.role' template from System Policies > Email>Templates, the table field is set to 'None' by default

Problem category	Number	Short description
Test Management	PRB721864	On a test plan, using the 'Save as Test Suite' related link does not have a character limit. Any text over 40 characters is not saved.
Test Management	PRB716155	Number of test cases (number_cases) display wrong and broken numbers when added by choice list.
Test Management	PRB705346	Test plan that has been signed-off through the 'Related Links' carries that information forward to copied test plans, and is in read only format so no way to remove or have sign-off on the copied test plan
Test Management	PRB723303	In Test Management plugin, selecting a test environment removes the colon from the URL link
Test Suite	PRB704841	'Notify Tester' link is active although testers are unassigned
Text Search	PRB634104	Text search (Zing) using wildcards does not return the expected results
Text Search	PRB752946	Index full table might cause OOM for large table (around 30M records)
Text Search	PRB760776	Index might not include variable value in variable set
Text Search	PRB707388	Text search multiple keywords (e.g a sentence), the group by count on each category was not properly populated
Text Search	PRB741168	Knowledge search using full-width Romaji characters does not return the knowledge article
Text Search	PRB707243	Breadcrumbs in table sections of global search results display query segments added by before query business rules, which is a deviation from the way the rest of the platform works
Text Search	PRB722024	Error message 'search term is to ambiguous' displays when users searching for a word with root (after stemming) as stop word
Time Card Management	PRB753932	Out of box value of "com.snc.time_sheet.max_hours_per_week" property is "--1"
Time Card Management	PRB713518	Default time_card list layout (sys_ui_list_time_card_null) configuration is reverted to OOTB after an upgrade
Time Card Management	PRB908462	Business rule update task timer creates a new task record with the same sys_id when users delete an incident
Transaction and Session Management	PRB724909	Request accessed after the transaction is over causing a UndeclaredThrowableException
UI Components	PRB715347	As long as '_123STREAMENTRY321_' is placed at the beginning of the comment line of a record, the notification (having ${comments}) being sent does not contain that comment
UI Components	PRB680820	Unable to delete templates from the template bar in any non-English language

Problem category	Number	Short description
UI Components	PRB716458	@Mention service throws NPE when @mentioning inactive user records
UI Components	PRB682226	Unexpected keyboard navigation through tab interface
UI Components	PRB697696	Activity Stream is not respecting ACL for work notes. The field appears at the activity stream for user without write access
UI Components	PRB718313	In Istanbul SLA Definitions, the Variables item is not available from the 'Show Related Fields' menu
UI Components	PRB709575	List v3 header context menu translation issue: 'Change View' is not translated
UI Components	PRB711333	Modal that appears when hovering over "i" icon on List v2 and records is not indicating user can hold "Shift" key to lock modal for scrolling
UI Components	PRB649287	The g_user object has firstName and lastName values switched on a CMS page.
UI Components	PRB651257	[Accessibility] JAWS does not recognize navigator applications as collapsed or expanded
UI Components	PRB910288	Since Istanbul, 'On Demand' choice is no longer available in 'Run' filed on the scheduled report form
UI Components	PRB914839	Tablet UI bug - Searching list fields
UI Components	PRB925313	"Loading related lists" message does not go away when "After Form Loads" related list loading option is selected
UI Components	PRB826169	Skip to main content link is occasionally inoperable
UI Components	PRB673010	TinyMCE advanced options in the html_insert_image_dialog UI page have legends that overlap field sets
UI Components	PRB683519	'Remove the Logout button' is not working correctly
UI Components	PRB651248	Certain user interface elements are not selectable via the keyboard
UI Components	PRB652482	Error text is not programmatically flagged
UI Components	PRB670619	NVDA screen reader repeats a lot of extra text due to the favorite stars that users find confusing
UI Components	PRB760834	Process Flow formatter is not level A conformant (the minimum level of conformance)
UI Components	PRB826163	After upgrading to Jakarta, an administrator is unable to change the text colors of the navigation modules
UI Components	PRB716184	Filters with condition 'more than' and 'less than' do not work as expected for v3 lists
UI Components	PRB697428	List v3: Journal Input types of fields do not store the data when saved through List edit for UI16
UI Components	PRB698978	Third box in filter builder in list v2 does not announce that it disappears, causing issues for users with screen readers

Problem category	Number	Short description
UI Components	PRB709949	Cannot read transaction timer widget with a screen reader
UI Components	PRB711669	In some UI16 themes, some elements are unreadable
UI Components	PRB711936	IE11, TinyMCE. Highlighting only part of a hyperlink's text and selecting 'Insert/Edit Link' does not display any value in the URL field.
UI Components	PRB712941	If renaming the file with more than 100 characters, an alert box is not translated
UI Components	PRB658099	Accessibility mode breadcrumbs are read incorrectly
UI Components	PRB667478	In Geneva, global search does not trim left and right spaces in the searched text like in Fuji
UI Components	PRB753457	In List v3, building a filter query with multiple conditions involving a currency2 field does not yield the proper results
UI Components	PRB762376	Accessibility - The lock button is read to the screen reader as "Lock quote button"
UI Components	PRB716698	List v3 - Cannot change the number of rows showing in the reference picker popup
UI Components	PRB683216	SLA definition for sc_task (Catalog Task) does not allow to specify the variable details for the catalog Item, and the SLA does not attach to the task record
UI Components	PRB657709	Email form does not display boundary boxes on Internet Explorer 11
UI Components	PRB664487	In the ESS portal, the 'Account Settings' menu is not accessible via the keyboard (CMS)
UI Components	PRB852940	List cell style calculation is expensive/inefficient
UI Components	PRB859369	Annotations disappear during an upgrade
UI Components	PRB740035	Display / Hide list button icon does not have an alt-text associated with it causes accessibility issues
UI Components	PRB725498	Title attributes used in tooltips are not keyboard accessible
UI Components	PRB678114	max_unit=hours attribute is not honored when list editing a duration field in UI 16
UI Components	PRB701473	The date picker widget is keyboard inaccessible
UI Components	PRB711658	Developer sidebar shows on document outline for users who have no access to it
UI Components	PRB664484	Visual focus is not provided for CMS portal header elements
UI Components	PRB666121	TinyMCE editor strips out <link> tags in Geneva
UI Components	PRB741775	No label associated with Pagination field
UI Components	PRB899508	glide.history.max_entries not working as expected
UI Components	PRB743402	Web forms have improper label and ID
UI Components	PRB732934	Web: frame issues

Problem category	Number	Short description
UI Components	PRB671386	Detail row disappears when sorting/paging/filtering using the reference lookup
UI Components	PRB673205	btn-primary, btn-success and btn-destructive do not have sufficient level of contrast
UI Components	PRB680943	The activity formatter 'show one journal field' is broken when using a custom field. It shows 2 check boxes instead of one
UI Components	PRB720620	Images and formatting do not copy over from OneNote into TinyMCE fields
UI Components	PRB640657	The Time Worked field does not show the total time when set to read-only
UI Components	PRB737140	Drop-down menus are not adequately labelled
UI Components	PRB739802	Hidden Table Headers are read out by screen reader
UI Components	PRB757209	On system properties pages, the "Yes | No" check boxes do not have good labels for screen readers
UI Components	PRB716655	setAbortAction() causes Decimal / Currency fields to be corrupted on the next form update
UI Components	PRB707753	Helsinki List v3: When approving sysapproval_approver records in list view, system takes users to the home page instead of back to the sysapproval_approver list after approval is processed
UI Components	PRB712295	Planned effort cannot add 3 numbers in a list view
UI Components	PRB743959	Navigation history shows history from other users until page is refreshed
UI Components	PRB915489	'On change' client script is executed twice when the 'on change' field is set to read only via dictionary
UI Components	PRB722019	List Controls menu does not have descriptive text (List v2)
UI Components	PRB760301	Field Dependency ListV3 . List V3 does not respect the Dependent field
UI Components	PRB724830	Charts use color to differentiate and must use another alternative way to convey information to a user.
UI Components	PRB676583	UI16: Navigator applications with ampersand show with & with glide.ui.escape_text=false
UI Components	PRB677731	Application Menus display when there is an inaccessible nested module that has "override application menu roles" checked
UI Components	PRB717583	List v3 dot-walked choice dropdown is blank
UI Components	PRB710639	When trying to upload a file where mime type does not match file content, UI does not throw an error
UI Components	PRB711057	List v3 form reference popup does not honor reference qualifiers for dot-walked reference fields
UI Components	PRB712019	Work notes are displayed out of order on Changes

Problem category	Number	Short description
UI Components	PRB651263	Visual focus does not settle on first form field upon opening
UI Components	PRB659031	"null" displayed when hovering over items on right side of slushbucket list collector variable in record producers
UI Components	PRB748956	(UI Performance) Bump angular JS version for forms to 1.5.11
UI Components	PRB723284	Users without privileges cannot save filter using condition builder
UI Policy/Client Script	PRB627317	Client-side GlideRecord has no _next() function
UI Policy/Client Script	PRB906667	"Download All" on the "manage attachments" window is not translated
UI Policy/Client Script	PRB742637	When non-English language is selected, the system settings lose the ability to change the home page or dashboard
Update Sets	PRB655182	Users get error when trying to merge update sets for an app installed from the store
Update Sets	PRB681563	Update set preview should not fail if 1 record is bad. Previewer should be able to handle an empty table for a Form layout
Update Sets	PRB674866	Reparenting of existing table via update set works when it should not
Update Sets	PRB665954	sys_ui_list elements for database views throw 'Update set preview' errors.
Update Sets	PRB714776	Update set back out deletes OOTB record if update set creates it ahead of plugin activation
Update Sets	PRB753249	HUS Commit: Committing a HUS with a table deleted for table that does not exist leaves the state as 'Committing'
Update Sets	PRB832926	Test connection button says incorrect username/password when they are correct
Update Sets	PRB653534	Update sets committed and plugins activated during upgrade can unleash chaos
Update Sets	PRB680919	Preview update set progress dialog closes automatically when the update set preview is complete
Update Sets	PRB636890	Field Label is not captured in update set if created through 'Form Layout'
Update Sets	PRB646724	Multiple update sets can be committed at the same time and thereby trigger simultaneous online alters of flattened tables
Update Sets	PRB665830	Update set preview is cancellable, so it sometimes gets cancelled by the 'scoped background transactions quota' rule
Update Sets	PRB724699	Update set back out throws exceptions when the update set contains updates for a table that does not exist
Upgrade Engine Issues	PRB753539	Upgrade failed for updating sys_properties record that has empty value on the 'sys_class_name' field

Problem category	Number	Short description
Upgrade Engine Issues	PRB731198	An upgrade will update glide.war and notify HI of a successful upgrade even when it declines to run because the system is paused
Upgrade Engine Issues	PRB724208	Loader uses display_value to find or create a view, leading to duplicate views and coalesce problems for instances in other languages
Upgrade Engine Issues	PRB897749	Revert to base system does not work for some updates after upgrading to Istanbul
Upgrade Engine Issues	PRB689850	Database upgrade runs even if dist upgrade does not upgrade the node
Upgrade Engine Issues	PRB734941	The "Run Fix Script" UI action on the fix scripts table does not run the fix script in the correct scope
Upgrade Engine Issues	PRB829971	Recurring console.log() running on the Upgrade Monitor page whenever an upgrade is in progress
Upgrade Engine Issues	PRB671262	Thread that runs the upgrade refuses to mark records as customized even though it customizes them
Upgrade Engine Issues	PRB803944	Plugin activation/upgrade sometimes writes a baseline sys_update_version record with an empty source field
Usage Analytics	PRB945829	When multiple app entries exist for the same plugin with different labels, the plugin activation check produces incorrect results
Usage Analytics	PRB752044	Release glide database dump instances are uploading usage and downloading app usage status, even though they are self-hosted
Usage Analytics	PRB900813	For licensing counts, if the count config is turned off, use ua_stats_defn to report counts
Visual Task Boards	PRB716040	Upgrading from Fuji to Geneva does not replace the script includes named 'VTBTaskSecurity'
Visual Task Boards	PRB739275	Notification emails are sent from "do-not-reply@sn.com"
Visual Task Boards	PRB710858	Visual Task Board activity streams only support comments and work notes as journal input types
Visual Task Boards	PRB715399	Visual Task Boards that point to overlapping vtb_task records can prevent non-admins from seeing cards
Web Services	PRB710625	Web Service on business rules incorrectly renders variable field boxes when JSON content variable is two word Ex 'short description'
Web Services	PRB738811	After upgrade to Helsinki, integration traffic could be routed through the API_INT pool, instead of its previously specified dedicated pool
Web Services	PRB716434	Using a SHA-2 key with WS-Security results in the SOAP request still having "SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"

Problem category	Number	Short description
Web Services	PRB664609	RESTResponseV2.getErrorMessage() does not return message from the outbound service
Web Services	PRB670554	Script error in generated JavaScript of the API explorer
Web Services	PRB623007	REST API explorer Authorization 'send as another user' saves cookie & sets up whole instance session as another user
Web Services	PRB710320	Integrations relying on deprecated SoapMessage API fail
Web Services	PRB669482	Inbound import set web services table names accept special characters and white spaces, leading to a MySQL error and the table is not created in the database
Web Services	PRB733418	SOAP insertMultipleResponse yields inconsistent results when invoked simultaneously
Web Services	PRB677911	Table API returns all records when sysparm_offset contains a negative value
Web Services	PRB693473	Enhancement request: URL parameter sysparm_query_category for query routing does not work for REST API calls
Web Services	PRB603946	Scripted Web Service: Order of output parameters is not the same as in WSDL
Web Services	PRB646918	REST API Explorer Attachment API curl snippet problems
Web Services	PRB651322	Integer fields with null values return 0 in SOAP
Web Services	PRB737653	When a URL does not exist, REST returns code 500
Web Services	PRB667809	REST API explorer has wrong description for sysparm_input_display_value
Workflow	PRB719264	When the RITM state is set to 'Closed Incomplete', the group approval stays 'active = true' and 'state = Open'
Workflow	PRB711054	'Show Workflow' UI Action does not load the workflow in ESS pages
Workflow	PRB591554	Workflow Activity "Catalog Task" Performs sc_cat_item Query and Can Cause Stack OverFlow Error
Workflow	PRB748338	Scriptable order guide causes proceeding activities such as 'Approvals' or 'Catalog Task' to not work properly
Workflow	PRB689050	When a user checks out a workflow and goes into an activity, switching the form view from "Diagrammer View" to "Default" closes the Activity Properties form
Workflow	PRB914192	All approval activities should return skipped if there are no approval records generated for the activity
Workflow	PRB707390	In Item Designer, service level agreements are not evaluated correctly on a catalog task when the task is closed
Workflow	PRB709431	If condition 'Run if no other workflows match' workflow properties does not seem to be working according to wiki definition

Problem category	Number	Short description
Workflow	PRB743553	When workflow gets cancelled, stage icon for the current stage still shows 'In Progress' and all the future stages as skipped
Workflow	PRB745401	The lock activity spins until it acquires the lock, never failing
Workflow	PRB752000	Workflow fails to attain mutex on context records in Oracle environments
Workflow	PRB810563	ITIL users can delete sysapproval_group records, causing approval group activities from the approval groups source record to be stuck in 'Running' state
Workflow	PRB709900	Approvals received before reaching Approval workflow activity is not evaluated. Workflow will still wait for approval.
Workflow	PRB711666	'Request Cancelled' stage for requested item is not translated
Workflow	PRB713671	Changing the state of a state_task record to 'Completed' generates duplicate activity entries
Workflow	PRB714910	Manual approval activity does not work if another manual approval activity is already used
Workflow	PRB743477	Timeline visualization for a workflow context does not work when using a session with non-English language
Workflow	PRB717446	The glide.ui.js_includes property set to false results in a browser error when trying to load the Workflow Canvas
Workflow	PRB657531	Scheduled Workflow Jobs fail when created in a scoped application
Workflow	PRB880021	Workflow Context UI action jumps to subflow instead of jumping to parent (Expect for Requested Item table fixed in PRB592331)
Workflow	PRB904888	Emergency changes requested for re-approval after being rejected can cause duplicate approvals
Workflow	PRB759067	Variable of Workflow Activity and its Type and Annotation are missing in "Form Design" page in 'Istanbul' & it works in Helsinki.
Workflow	PRB724983	Published Workflow Conditions gets changed when viewing the wf_workflow_version record in New Workflow view
Workflow	PRB799100	Copying workflows does not check for name uniqueness
Workflow	PRB710730	Variables on the Catalog task activity are not sorted in alphabetical order
Workflow	PRB713188	Issue with the WorkflowApprovalUtils functionality in that the WorkflowApprovalUtils().cancelAll function does not work when passing it a GlideRecord object (passing it 'current' works as expected)
Workflow	PRB752340	Approval Coordinator does not work sometimes if we have duplicate users
Workflow	PRB759309	Unable to select variables in the workflow editor condition statement for request item workflows

Problem category	Number	Short description
Workflow	PRB712709	Deleting records from 'sys_user' causes full table scans against 'wf_context'
Workflow	PRB793457	Stage Icons are not rendered if Stage text has apostrophe (')
Service Catalog	PRB901936	Express - Catalog execution plan conditions using checkbox variables interpret OR as AND

ODBC Driver 1.0.13 release notes

The ODBC Driver 1.0.13 release contains fixes to these problems.

Download the 1.0.13 version of the ODBC Driver from the HI Knowledge Base. Refer to the product documentation for *instructions on installing the ODBC driver*.

Fixed problem in the ODBC Driver 1.0.13

Problem	Short description	Description
Open Database Connectivity (ODBC) PRB1110116	ODBC driver returns non-integer fields as NTEXT where varchar is expected	Users cannot use ODBC driver 1.0.11 correctly in combination withL: SQL Version: Microsoft SQL Server 2014 (SP2-CU2-GDR) (KB3194718) - 12.0.5532.0 (X64) Oct 5 2016 20:28:25 Copyright (c) Microsoft Corporation Enterprise Edition: Core-based Licensing (64-bit) on Windows NT 6.3 <X64> (Build 9600:) (Hypervisor) "SELECT INTO" queries cause the ODBC driver to convert fields to NTEXT where varchar is expected instead.

Other ODBC 1.0.13 information

- *ODBC driver installation requirements and supported software*
- *Setting ODBC properties*
- *Configure the ODBC driver for large data sets*
-

ODBC Driver 1.0.12 release notes

ODBC driver product enhancements and updates in the 1.0.12 release.

Version 1.0.12 of the ODBC Driver uses Java 1.8. You may need to configure your Java path after installing this version. See *KB0597981* for more information.

Download the 1.0.12 version of the ODBC Driver from the HI Knowledge Base. Refer to the product documentation for *instructions on installing the ODBC driver*.

Notable Fixes

Problem	Short description	Steps to reproduce
PRB708941 *KB0597404*	Querying more than 4MB with ODBC driver creates temp files	Refer to the listed Known Error KB article for details.
PRB747962 *KB0621993*	ODBC driver outputting incorrect number of records when using LEFT JOIN ON SELECT * query	Refer to the listed Known Error KB article for details.

ODBC Driver 1.0.11 release notes

ODBC driver product enhancements and updates in the 1.0.11 release.

Version 1.0.11 of the ODBC Driver uses Java 1.8. You may need to configure your Java path after installing this version. See *KB0597981* for more information.

Download the 1.0.11 version of the ODBC Driver from the HI Knowledge Base. Refer to the product documentation for *instructions on installing the ODBC driver*.

Notable Fixes

Problem	Short description	Steps to reproduce
PRB711960 *KB0597602*	When querying a table that has a string field whose value exceeds 65535 kb, the following error occurs: [SN][ODBC ServiceNow driver][OpenAccess SDK SQL Engine]Disk cache error. Field length:93238 exceeds maximum limit of 65535	Refer to the listed Known Error KB article for details.
PRB691056 *KB0597979*	ODBC query on Display Value for a state does not return the entire Display Value	Refer to the listed Known Error KB article for details.
PRB716125 *KB0598308*	iSQL returns only 16383 bytes even if a field contains more data	Refer to the listed Known Error KB article for details.

ODBC Driver 1.0.10 release notes

ODBC driver product enhancements and updates in the 1.0.10 release.

Activation information

Download the 1.0.10 version of the ODBC Driver from the HI Knowledge Base. Refer to the product documentation for *instructions on installing the ODBC driver*.

New in the 1.0.10 release

Improvements to timer and duration fields	The display format for timer and duration fields has been improved. Queries on timer and duration fields now return the field value in the UTC timezone. You can query the field display value, as shown in the UI, by adding dv_ to the field name. The property LegacyDurationTimeZone has been added to preserve compatibility with legacy integrations.
Database schema and caching properties	The EnableDBSchema and ExtendedSchemaCache properties enable you to control how the ODBC driver queries and caches database schemas.

Notable Fixes

Problem	Short description	Steps to reproduce
PRB634397 *KB0551938*	ODBC driver fails to get data or connect when invoking multiple or parallel connections.	Refer to the listed Known Error KB article for details.
PRB637895	ODBC select query does not return columns in the defined order.	**1.** Using the ODBC driver version 1.0.9, run a select query. **2.** Note the returned column order is random.
PRB630646 *KB0549682*	ODBC driver caches schema between different connections.	Refer to the listed Known Error KB article for details.
PRB630233 *KB0549578*	The ODBC driver does not use the SOAP aggregate API for aggregate queries.	Refer to the listed Known Error KB article for details.
PRB629818 *KB0549557*	ODBC driver does not optimize select top N queries.	Refer to the listed Known Error KB article for details.

Upgrade to Jakarta

The upgrade process moves your instance to a new ServiceNow release version. Understand the difference between upgrading and patching, release definitions, rollback and backup options, and how to test your sub-production and production instance upgrades.

For an in-depth explanation of the upgrade process, refer to *Upgrade your instance* on page 424.

Before you begin the upgrade process, read the *Jakarta release notes* on page 4 and review the *upgrade and migration tasks for your applications and features*.

System upgrades can be significant projects. Each ServiceNow feature release includes major additions, and you should always consider the impact of new functionality on an instance. Upgrading implements enhancements to all features that are part of the base system or are already active, unless the feature is customized on your instance. For a list of all available plugins and whether they are active by default on the base system, see *List of Jakarta plugins*.

Careful preparation and knowledge of the available software, tools, and resources can contribute to a successful upgrade. In addition to the materials provided by ServiceNow, it is important to understand how your ServiceNow instance is currently operating and the performance level of key business functionality. Set the expectation with IT and business users that time must be dedicated to preparing for, implementing, and testing ServiceNow upgrades.

If you have any issues during the upgrade process, *contact ServiceNow Customer Support*. ServiceNow Customer Support is available 24 hours a day, 7 days a week to assist you with any questions or issues.

For additional help with upgrades, ServiceNow also offers various *Production Readiness Services*. These services specifically address challenges with instance upgradability, manageability, scalability, and performance. The reviews are performed by a ServiceNow-certified professional consultant, who provide recommendations to align customer configurations with ServiceNow best practices. Contact your ServiceNow sales representative for more details.

Upgrade durations in Jakarta

The Jakarta release introduces significantly shorter upgrade durations for in-family Jakarta upgrades. An in-family upgrade occurs when an instance moves from its current release version to another version in the same family (for example, patching from Istanbul Patch 6 to Istanbul Patch 7). To learn more about the optimized upgrade engine, see the *System upgrades release notes* on page 27.

Supported upgrades

If your instance is more than one release behind, you can still upgrade directly. ServiceNow fully supports the current and two previous family releases, as well as any interim hot fixes and patch releases. For more information about release terminology and availability phases, see the *ServiceNow Release Cycle [KB0547244]* article in the HI Knowledge Base.

Upgrades vs. patches

ServiceNow organizes its releases into families. A family is a set of releases that are named after a major city, such as Helsinki or Istanbul. Within a family, releases are further differentiated by patch and hot fix number. For example, the following releases are both part of the Istanbul family:

- Istanbul Patch 6
- Istanbul Patch 5 Hot Fix 1

Upgrading is the act of moving to a release that is in a different family than your current release. For example, a move from Helsinki Patch 7 to Istanbul Patch 6 is an upgrade because Helsinki and Istanbul are different families.

Patching is the act of moving to a release that is in the same family as your current release. For example, a move from Istanbul Patch 2 to Istanbul Patch 6, is a patch because both versions are part of the Istanbul family.

In both cases, the target release is Istanbul Patch 6. It is the difference between your current and target release family that determines whether you are upgrading or patching.

Features, patches, and hot fixes

Each release family contains features, patches, and hotfixes.

A feature provides a complete solution that customers can implement to add value to their organization. New features are generally only available as part of a feature release. Features are supported with patches and hot fixes.

Type	Scope
Feature	• Introduces new features • Includes all available fixes to existing functionality • Is production-oriented; quality and stability are of the highest priority throughout the life cycle
Patch	• Supports existing functionality with a collection of problem fixes • Generally does not include new features
Hot Fix	• Supports existing functionality with a specific problem fix for a feature release • May or may not include any previous fixes for a given release • Does not include new features

For more information about release terminology and availability phases, see the *ServiceNow Release Cycle [KB0547244]* article in the HI Knowledge Base.

Rollbacks and backups

When you plan an upgrade, remember that ServiceNow does not provide a universal rollback option. Rollbacks are available for upgrades (for example, Jakarta patch-to-patch and Jakarta patch-to-hotfix). The rollback window is 10 days by default. You can customize this window by modifying the glide.rollback.expiration_days property. To request a rollback, *contact ServiceNow Customer Support*.

Avoid restoring a production instance from backup, when possible, due to downtime and data loss. When a problem cannot be solved using other methods, restoring a production instance from backup is a final option. ServiceNow can restore an instance to any point in time, regardless of when a backup is completed. ServiceNow provides customer support 24 hours a day, 7 days a week for assistance with critical post-upgrade issues.

Note: ServiceNow does not perform on-demand backups. Instances are automatically backed up daily during non-peak business hours on schedules defined by ServiceNow. The timing of existing backup schedules is not adjusted.

Testing throughout upgrades

Testing is an integral portion that occurs after each instance is upgraded. After you upgrade an instance, test and validate it.

This instance naming convention assumes that you have three ServiceNow instances. If you have three instances, upgrade your instances in this order:

1. Development
2. Test
3. Production

If you have more or less than three instances, or if you are using *Team Development*, these instance labels will be different. In general, upgrade your instances furthest from production towards your production instance.

Instance	Type of testing required
Development	• Conduct smoke tests.
Test	• Use the ServiceNow *Automated Test Framework* to assist you in testing your sub-production instances. • For extra testing coverage, you can also conduct user acceptance testing (UAT) on your sub-production instances.
Production	• Conduct UAT. **Note:** The *Automated Test Framework* is intended for use on sub-production instances. On your production instance, conduct UAT only.

If you encounter any post-upgrade issues, document the issue's conditions, steps to reproduce the issue, and your customizations. *Contact ServiceNow Customer Support* to open an incident for each issue, and provide this information accordingly. ServiceNow Customer Support is available 24 hours a day, 7 days a week to assist you with any questions or issues.

Upgrade your instance

Upgrading and patching your instance requires planning, testing, and validation. To ensure a safe and effective upgrade, read the release notes, create upgrade plans, and test your upgrade on sub-production instances before upgrading your production instance.

These topics contain in-depth explanations about upgrades. For a step-by-step reference of upgrade steps, refer to the *Upgrade planning checklist (Jakarta)* on page 439.

Phase 1 - Read the release notes and plan your upgrade

Before you begin the upgrade process, it is essential to read the release notes for your target version so you understand the required upgrade and migration tasks. This information helps you plan a safe and effective upgrade.

1. Read the release notes for your target version. Review upgrade and migration tasks that you will need to complete before or after your upgrade.

   ServiceNow provides release notes for every release. The release notes offer valuable information about new functionality, notable changes, and fixes available in a particular version. Read the *Jakarta release notes* on page 4 to determine whether the upgrade contains functionality you need and fixes that resolve any issues affecting your instance. The release notes can also help you determine whether items you previously customized are being upgraded. For Jakarta-specific upgrade considerations, see *Upgrade and migration tasks by application or feature* on page 435.For a downloadable, sortable version of Jakarta fixed problems, see *KB0623655*.

2. Complete the preparation and planning tasks in Phase 2 of the *Upgrade planning checklist (Jakarta)* on page 439.

   The checklist contains a list of planning tasks that guide you through various aspects of upgrade preparation. You are guided through tasks such as scoping, gathering stakeholders, identifying features to disable and enable, and creating test plans to use throughout the upgrade. Follow these steps to ensure that all aspects of your organization are ready for the upgrade.
3. Create a comprehensive test plan that includes test cases for all core instance functionality and integrations, including any customizations you may have.

   To efficiently test and evaluate system functionality, create a set of detailed test scripts for your testing team to use. You will use this test plan throughout each instance upgrade.

Instance	Type of testing required
Development	• Conduct smoke tests.
Test	• Use the ServiceNow *Automated Test Framework* to assist you in testing your sub-production instances. • For extra testing coverage, you can also conduct user acceptance testing (UAT) on your sub-production instances.
Production	• Conduct UAT. **Note:** The *Automated Test Framework* is intended for use on sub-production instances. On your production instance, conduct UAT only.

Phase 2 - Prepare for the development instance upgrade

For a better understanding of your production upgrade duration, request a clone of your production instance onto a sub-production instance that has similar hardware and your full database. Confirm your current and target release versions, because you will later use this information when scheduling your upgrade in HI.

1. On your production instance, create a system clone and select your development instance as the **Target instance**.

   The clone provides you with an exact copy of production. Performing an upgrade on your clone allows you to simulate an upgrade on your production configuration in a sub-production environment. Refer to *System clone* for details.

   Important: For effective upgrade testing, use this clone to test on a system that reflects the production instance as closely as possible. If your sub-production and production instances are the same size, include the production audit log and the attachment data on your production clone. To ensure that all production data is included with the clone, make sure that you clear all the **Exclude** check boxes on the Request Clone form. On your sub-production instance, replicate typical user behaviors that occur on your production instance to enhance an estimate of your upgrade duration.

2. Confirm the current release version of your production instance.
    a) Navigate to **System Diagnostics** > **Stats** > **Stats**.
    b) Locate the **Build name**, **Build date**, and **Build tag**.
3. Confirm the target release version that you want to upgrade to.
    a) Match the build name to the release name in the release notes.
    b) Match the build date and tag to the build date and tag in the release notes.

4. Set expectations for performance during upgrades.

    During an upgrade, your performance may be impacted because your nodes initiate the distribution upgrade. All nodes are restarted during an upgrade, but your multi-node instances are available during an upgrade because ServiceNow instances operate on a multi-node system. This multi-node system staggers node distribution upgrades, ensuring that there is at least one active pair of nodes for multi-node instances during an upgrade.

    To help you set accurate expectations for performance during upgrades, be aware of the differences between the nodes on your sub-production and production instances. Instances with one node experience a short period of downtime during the upgrade, but multi-node instances do not have UI downtime. For details on your nodes and their status, see the *Upgrade Progress*.

Phase 3 - Verify your upgrade configurations and schedule the development instance upgrade in HI

Check the configuration of the Upgrade scheduled job to view how often and when it runs. Review information about timing your upgrade in coordination with the Upgrade scheduled job. Then, schedule your upgrade in HI.

Your upgrades are orchestrated out of your instance, not HI.

HI keeps records of what version you should be running, and your instance periodically queries HI to check its assigned version. When you designate a time for your upgrade, your instance begins the upgrade at that time. For example:

1. You schedule an upgrade to Helsinki Patch 2 on November 11, 2016 at 3:00pm PST.
2. HI changes its records to reflect that you should be on Helsinki Patch 2 on November 11, 2016 at 3:00pm PST.
3. HI waits for your instance to check in.
4. When your instance pings HI after November 11, 2016, HI tells your instance that it should be on Helsinki Patch 2.
5. Your instance starts the upgrade.

When you schedule an upgrade, you may also need to request an entitlement. Entitlements for new releases are granted in batches to ensure a high-quality upgrade experience. These entitlement phases also ensure that there are enough ServiceNow resources to assist customers who are upgrading to a limited-availability release. Refer to the *How to upgrade a ServiceNow instance and manage scheduled upgrades [KB0541128]* article in the HI Knowledge Base for details.

You must also check the configuration of the **Upgrade** and **Check Upgrade Script** sys_triggers, which are essential to making sure your instance upgrades to the correct target version.

sys_trigger	Function
Upgrade	• Queries HI to ask whether an upgrade is going to happen in a given time interval, which is determined by the configuration for the Upgrade scheduled job. • Asks whether the instance should be running a different version. If so, the distribution for that version is downloaded, and your instance upgrades to the target version.
Check Upgrade Script	• Runs after the distribution has been upgraded. • Performs the database upgrade.

1. Check the configuration of the Upgrade scheduled job to view how often and when it runs.

a) Navigate to **System Scheduler** > **Scheduled Jobs** > **Scheduled Jobs**.

b) In the list, find the Upgrade scheduled job.

c) View the **Next action** column to determine when the job next runs.

2. Verify that the **Upgrade** sys_trigger is set properly for upgrading.

a) Navigate to **System Scheduler** > **Scheduled Jobs** > **Scheduled Jobs**.

b) Find and click the **Upgrade** scheduled job.

c) Make sure that the **Trigger type** is set to **Interval**.

d) Make sure that the **System ID** is set to **None**.

3. Verify that the **Check Upgrade Script** sys_trigger is set properly for upgrading.

a) Navigate to **System Scheduler** > **Scheduled Jobs** > **Scheduled Jobs**.

b) Find and click the **Check Upgrade Script** scheduled job.

c) Make sure that the **Trigger type** is set to **Run at System Startup**.

4. Schedule the upgrade in HI.

a) Log in to HI.

b) Click **Version Management Dashboard**.

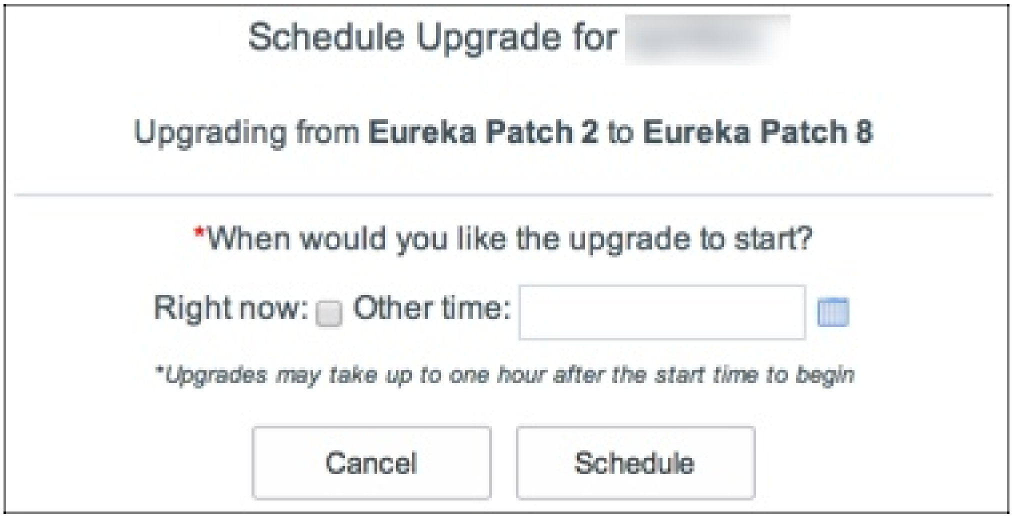
c) [Partners only] In the search box at the top of the dashboard, specify a company.

d) In the **Instance** column, locate the instance that you want to upgrade or patch.

e) In the **Upgrade Available** column for the instance you want to upgrade or patch, click the down arrow to view the versions to which you can upgrade or patch that instance.

If **Up to Date** appears in this column, no upgrades or patches are available.

f) In the **Actions** column, click **Schedule**.
If the version does not require an entitlement, this screen appears:



g) Specify a time for the upgrade or patch to take place.

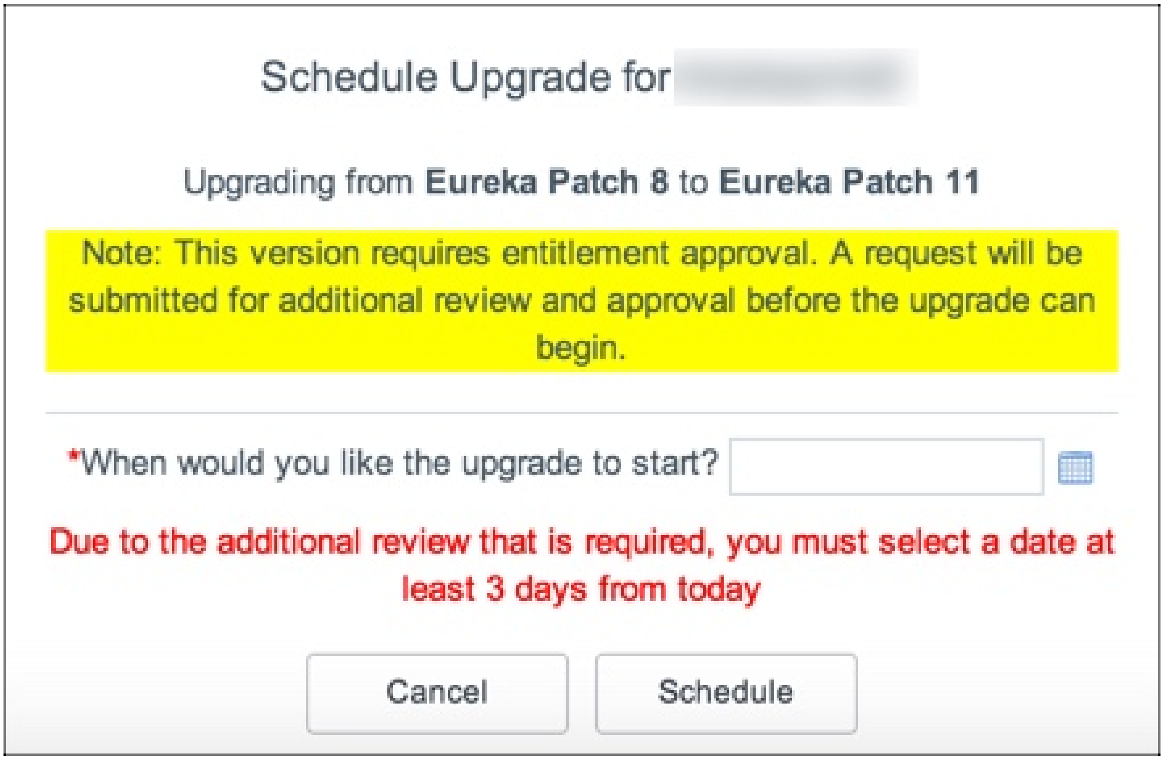
- To start the upgrade or patch when the Upgrade scheduled job runs next, select **Right now**.
- To start the upgrade or patch at a specific date and type, click the calendar icon next to the **Other time** field. Then specify a date and time for the upgrade or patch. Enter the time in the 24-hour format. For example, if you want to specify 5:00 PM, enter 17:00).

Note: Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the Upgrade scheduled job runs. This setting allows enough time for the upgrade or patch request to update HI's records about which release version your instance should be on before the Upgrade scheduled job runs.

h) Click **Schedule**.
A confirmation message appears. If you do not need an entitlement, the change request number for your upgrade or patch is included. Click the change request number to view the request.

5. If applicable, request a version entitlement.

a) In the **Actions** column, click **Schedule**.
If the version does require an entitlement, this screen appears:



b) Click the calendar icon and specify a date and time at least three days in the future.

ServiceNow entitlement managers respond to your entitlement request within three days.

> **Note:** Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the Upgrade scheduled job runs. This setting allows enough time for the upgrade or patch request to update HI's records about which release version your instance should be on before the Upgrade scheduled job runs.

c) Click **Schedule**.
A confirmation message appears. If you need an entitlement, the entitlement request number is included. Click the entitlement request number to view the request.

d) If you have any questions about your entitlement, comment on your entitlement request after you have submitted it.

Phase 4 - Upgrade and validate the development instance

Track the progress of your upgrades with the Upgrade Monitor. For your first sub-production instance upgrade (your development instance), use the Upgrade Monitor to process the skipped list of records that were not addressed in the upgrade. Then identify your update sets and perform functional testing.

The *Upgrade Monitor module: Upgrade an individual instance* helps you upgrade an individual instance. You can monitor the progress of an upgrade and resolve conflicts between the upgrade and customizations.

1. Using the Upgrade Monitor, monitor the upgrade to your instance and validate that the upgrade to your development instance is complete.
2. After the upgrade for your development instance is complete, *process the skipped records list* in the Upgrade Monitor.

As you are processing the skipped list, you may merge and revert records, *resolve conflicts for an individual record*, and make additional customizations. These changes go into the latest version, which goes into your current update set.

3. Identify your update sets.

   You need these update sets for your subsequent sub-production instances. If there are issues that must be addressed after the upgrade, make the appropriate changes and they will go into your current update set. Collect the update sets that:

   - Were created while reviewing the skipped updates list.
   - Were created while changing customizations to work with the latest release.
   - Must go live immediately after your next upgrade.

   Gathering these update sets before your upgrade expedites the process of exporting, importing, and committing them onto your other instances. After the correct update sets are identified, follow the standard process for moving and applying those update sets. Refer to *System update sets* for details.
4. Before and after upgrading, conduct smoke tests on your development instance. Use your comprehensive test plan to perform functional testing.

   After upgrading, track any defects or deviations from the pre-upgrade testing results. Defect tracking can help identify root causes and create fixes. When a fix is identified, capture the fix in a single update set. The resulting update sets hold the cumulative fixes that should be applied to the production instance.

   To help automate your testing and validation on sub-production instances, use the *Automated Test Framework*.

Phase 5 - If applicable: Upgrade and validate your other sub-production instances, such as your test instance

If you have any other sub-production instances in addition to your development instance, such as a test instance, request to upgrade these instances. Request these upgrades after you have configured and refined your development instance. Immediately after the upgrade is complete, apply the post-upgrade changes made to your development instance, including activating optional plugins, installing and upgrading applications, and applying update sets.

This instance naming convention assumes that you have three ServiceNow instances. If you have three instances, upgrade your instances in this order:

1. Development
2. Test
3. Production

If you have more or less than three instances, or if you are using *Team Development*, these instance labels will be different. In general, upgrade your instances furthest from production towards your production instance.

After you have applied your development update sets to your test instance, perform the following tasks on your test instance (and other sub-production instances, if applicable).

1. Create a system clone down from your production instance.
2. Schedule the sub-production upgrade in HI and verify your upgrade configurations.
3. Validate that the upgrade to your sub-production instance is complete.
4. Install any optional plugins that were installed on your development instance.
5. Install any custom applications and post-upgrade fix scripts that you need.

6. Install update sets.

   Use these update sets to move your initial changes into your subsequent sub-production instances.
7. Perform functional testing and monitor the performance of your instance.

   Reproduce the typical user activities that occur on your production instance. The *Automated Test Framework* can greatly assist you in testing your sub-production instances. For extra testing coverage, you can also conduct user acceptance testing (UAT).

Phase 6 - Prepare to upgrade the production instance

After you have configured and refined your test environment to be a good representation of your production environment, prepare to upgrade your production instance.

To ensure that all stakeholders in your company are prepared for the final production upgrade, complete the administrative planning tasks in Phase 6 of the *Upgrade planning checklist (Jakarta)* on page 439. When upgrading a production instance:

- Obtain confirmation from IT and management that all sub-production instance defects have been fixed, validated, and included in an update set.
- Use the change management process established by your organization to track the upgrade.
- Communicate effectively with your user community regarding changes, new features, and process updates resulting from the upgrade.
- Negotiate a suitable upgrade time for all users of the ServiceNow system.

  For example, schedule the upgrade after hours, to minimize impact to your users. Remember to schedule the upgrade to occur 15–20 minutes before the *Upgrade scheduled job* interval.
- Allow time in your change window to run all test cases and validate that all integrations, key business functionality, and system performance are acceptable. Add a time buffer for responding to errors without breaching the change window.

1. Profile the performance of your instance before upgrading.

   Pre-upgrade instance validation can provide a reliable benchmark of the current operating environment and alert you to any issues that may appear after the upgrade. For example, it sometimes appears that specific functionality is broken by an upgrade. Analysis might show that the functionality did not work properly in the production instance, even before the upgrade.

   Before performing the upgrade, analyze the current operating environment. Specifically, review:

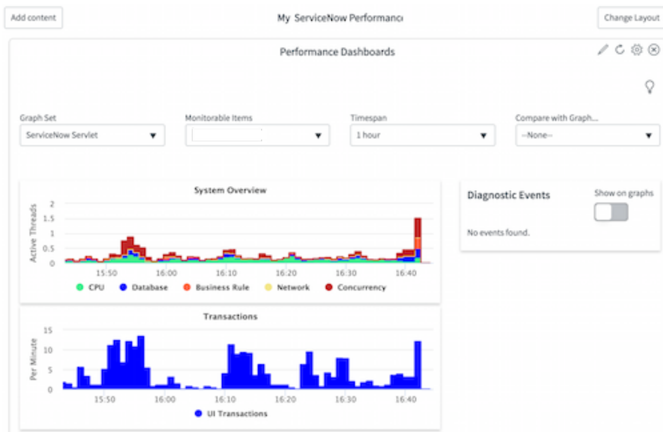
   - Key functionality
   - Integrations
   - Instance performance
2. Use the ServiceNow Performance homepage to document the performance of your instance before the upgrade.

   You will later compare and contrast this information during your post-upgrade validation and testing. Benchmarks will be different for each of your instances.

   To access the ServiceNow Performance homepage:

   a) Log in to your instance.

   b) From the list in the top left of the instance homepage, select **ServiceNow Performance**.



3. On your clone, perform functional testing and monitor the performance of your instance.

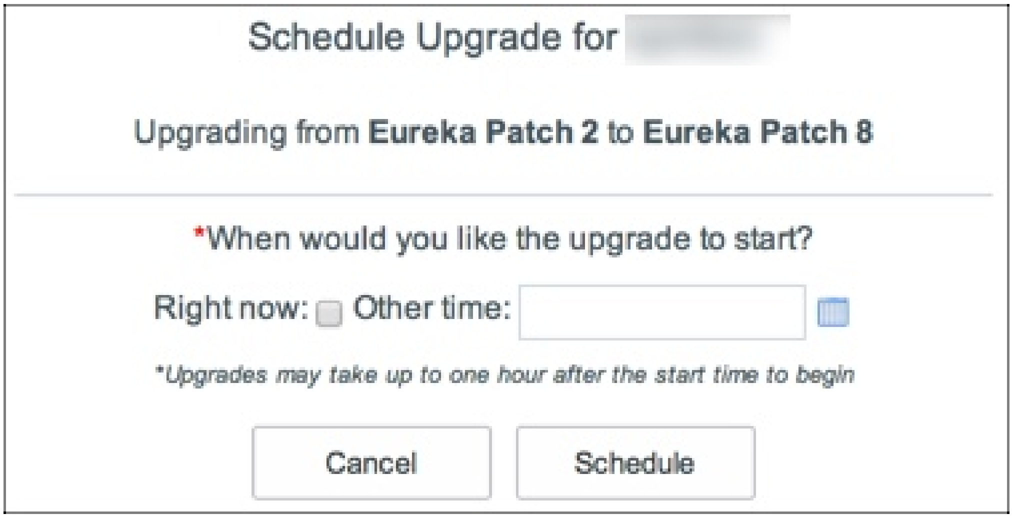
   Replicate typical user behaviors that occur on your production instance. Assign a consistent core team of power users and key stakeholders to validate important functionality in the ServiceNow instance before and after upgrades.

Phase 7 - Upgrade the production instance

After you have upgraded your development, sub-production, and test instances, upgrade your production instance last. Then validate that the upgrade was complete, apply update sets and fix scripts, and perform post-upgrade user acceptance testing (UAT).

1. Schedule the upgrade in HI.
   a) Log in to HI.
   b) Click **Version Management Dashboard**.
   c) [Partners only] In the search box at the top of the dashboard, specify a company.
   d) In the **Instance** column, locate the instance that you want to upgrade or patch.
   e) In the **Upgrade Available** column for the instance you want to upgrade or patch, click the down arrow to view the versions to which you can upgrade or patch that instance.

      If **Up to Date** appears in this column, no upgrades or patches are available.
   f) In the **Actions** column, click **Schedule**.
      If the version does not require an entitlement, this screen appears:



g) Specify a time for the upgrade or patch to take place.

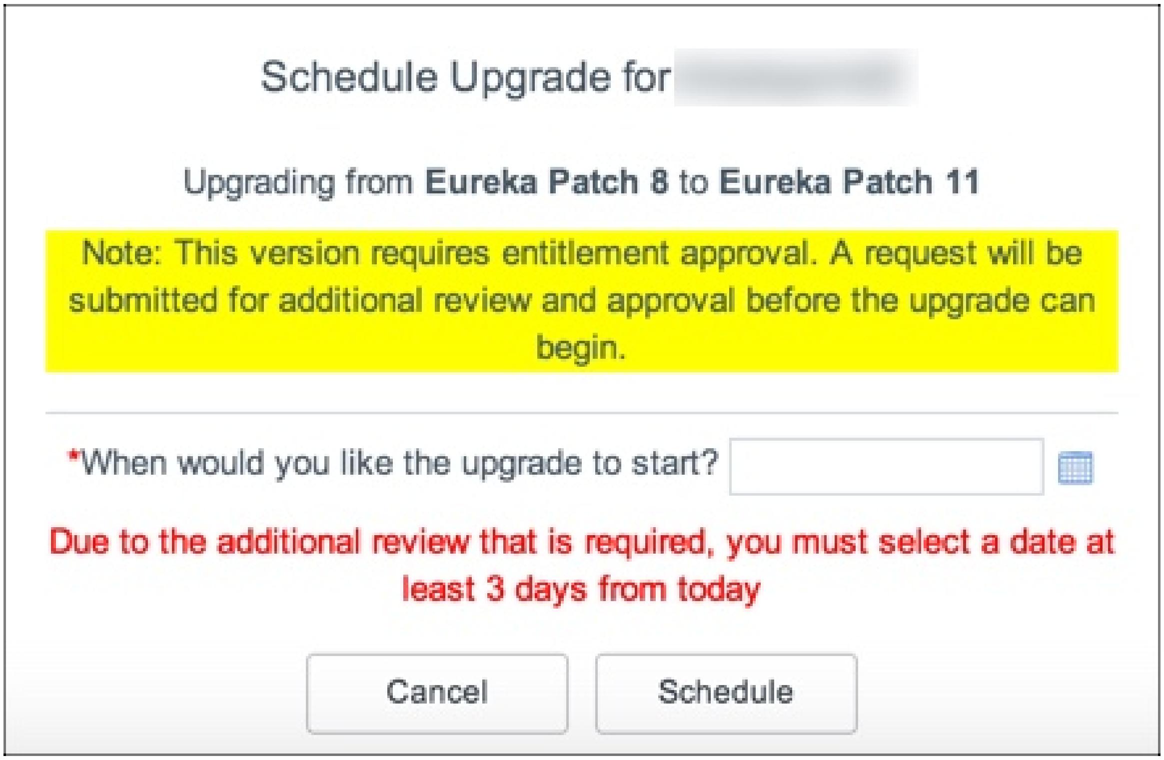
- To start the upgrade or patch when the Upgrade scheduled job runs next, select **Right now**.
- To start the upgrade or patch at a specific date and type, click the calendar icon next to the **Other time** field. Then specify a date and time for the upgrade or patch. Enter the time in the 24-hour format. For example, if you want to specify 5:00 PM, enter 17:00).

> **Note:** Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the Upgrade scheduled job runs. This setting allows enough time for the upgrade or patch request to update HI's records about which release version your instance should be on before the Upgrade scheduled job runs.

h) Click **Schedule**.
A confirmation message appears. If you do not need an entitlement, the change request number for your upgrade or patch is included. Click the change request number to view the request.

2. If applicable, request a version entitlement.

a) In the **Actions** column, click **Schedule**.
If the version does require an entitlement, this screen appears:



b) Click the calendar icon and specify a date and time at least three days in the future.

ServiceNow entitlement managers respond to your entitlement request within three days.

> **Note:** Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the Upgrade scheduled job runs. This setting allows enough time for the upgrade or patch request to update HI's records about which release version your instance should be on before the Upgrade scheduled job runs.

c) Click **Schedule**.
A confirmation message appears. If you need an entitlement, the entitlement request number is included. Click the entitlement request number to view the request.

d) If you have any questions about your entitlement, comment on your entitlement request after you have submitted it.

3. *Monitor the upgrade to your instance* and validate that the upgrade to your production instance is complete.

There are several methods of verifying that your upgrade is complete:

- Navigate to the **System Diagnostics** > **Upgrade Monitor**.
- Navigate to **System Diagnostics** > **Upgrade Log** and locate the `Notifying HI that upgrade has been completed` message.
- Navigate to **System Definition** > **System Upgrades**. Information about all system upgrades is listed.
- Navigate to **System Diagnostics** > **Upgrade History** and search for the most recent upgrade.

4. Apply any update sets and post-upgrade fix scripts that you have.

5. Validate and test your instance by conducting user acceptance testing (UAT).

Troubleshooting and other upgrade resources

Use this information to troubleshoot post-upgrade issues and learn more about other aspects of ServiceNow's upgrade process.

Evaluate log data

Performance and operating information is available in the system logs, which offer an excellent source of information for evaluating the inner workings of a ServiceNow instance. Use this information to help resolve as many errors as possible. To access the log data, navigate to **System Logs** > **System Log** > **Errors**.

Note: Not all errors in the error log are results of your upgrade. Error messages are often present in pre-upgrade instances, and many of these messages do not affect users or performance.

Upgrade duration

The performance of the upgrade engine is significantly enhanced, especially for in-family upgrades. In-family upgrades are those in which the name of the release has not changed but the version number has, such as for patches and hot fixes. For example, an upgrade from Istanbul Patch 1 to Istanbul Patch 2 is an in-family upgrade but from any Istanbul release to any Jakarta release is not. The upgrade engine is only optimized for in-family upgrades in Jakarta and later releases.

Note: The performance improvement can be significant enough to cause concern that your upgrade may not have run properly. As always, test your upgrades, but do not assume that the upgrade was unsuccessful based just on the time it took to execute.

Other resources

- *Quarterly Patching Program - Customer FAQ*

Upgrade and migration tasks by application or feature

Complete the upgrade tasks where necessary to prepare an application or feature for the upgrade process, and complete appropriate migration tasks after the upgrade to protect your data and customizations from changes to the system.

Note: In Jakarta and later, Internet Explorer versions prior to IE11 are no longer supported.

Application or feature	Details
Agile Development	Installing Agile Development 2.0 replaces the existing Agile Development, if already installed. Review *Agile Development upgrade information* on page 34 before activating Agile Development 2.0.
Calendars and schedules	Starting with the Jakarta release, the Fiscal calendar is a platform feature and is no longer dependent on Financial Management.

Application or feature	Details
CMDB	CMDB content undergoes table per partition *table flattening* during upgrade. This change does not have a performance impact and is transparent to users. Customers with a large CMDB table may experience a longer upgrade duration. See *KB0635006*.
Customer Service Management	Upgrading an instance brings back demo data for the Customer Service Management Demo Data plugin (com.snc.customerservice.demo) even if the demo data was previously deleted. For more information, see *KB0634950*.
Dashboards	Review *Dashboard upgrade information* for information about *responsive canvas* and *dashboard versions of homepages*.
Discovery	*Discovery identifiers* were replaced in the Geneva release, but some systems that were upgraded from pre-Geneva versions to Jakarta might still be using legacy identifiers. A system property allows these customers to switch to the CMDB identifiers. It is important to note that if Service Mapping is active on your instance, the CMDB identifiers are always used, regardless of how this property is configured.
Edge Encryption	Because the Edge Encryption proxy server requires at least 4 GB of memory, 32-bit JREs and 32-bit operating systems are no longer supported starting with the Jakarta release. Review the *Edge Encryption system requirements and limitations* to ensure an optimal environment for your implementation. When upgrading the Edge Encryption proxy server to the Jakarta release, use the new command-line upgrade commands. • *Manually upgrade an Edge Encryption proxy server running on Windows* • *Manually upgrade an Edge Encryption proxy server running on Linux*
Financial Management	Financial Management is no longer dependent on its use of IT DataMart. The DataMart Definitions have been upgraded to Financial Management Segments in Istanbul. New segments required for cost model or budget model must henceforth be created in Financial Management Segments.
HR Service Delivery	HR data migration is recommended when you are upgrading from the global version of HR to the scoped version. The Istanbul release introduced the scoped version of HRSM. The scoped version prevents users outside of HR from accessing HR data. Customers already on the scoped version of HR do not need to migrate their data. • *Migration from Non-Scoped to Scoped HR*

Application or feature	Details
ITSM Guided Setup	A new plugin that provides a new, process-centric version of guided setup is introduced in this release. The ITSM Guided Setup plugin (com.snc.guided_setup_metadata.itsm) is active by default for new customers. Upgrading customers can activate the plugin to view the new version of guided setup. One or both versions appear as modules in the navigation pane or as links on the System Administration homepage. They appear as **ITSM Guided Setup** or **ITSM Guided Setup (Old)**. **ITSM Guided Setup (Old)** takes you to the guided setup created in the Helsinki and Istanbul releases. The administrator can hide the version that you do not want to use. **Note:** The plugin name, ITSM Guided Setup, is the same for both old and new versions, but the plugin ID is different.
Knowledge Management	Review the content in the community page for Knowledge upgrade best practices at *All things Upgrade considered on Knowledge v2 to v3*.
MID Server	• To understand how the IP range auto-assignment feature affects IP ranges defined in version prior to Jakarta, see *View automation status sets and IP range assignments*. • Customers who use network service providers must request specific SNMP access to use MID Server IP range auto-assignment. See *Required SNMP OIDs for MID Server IP range auto-assignment for details*. • In Jakarta, the MID Server can run SSH commands using either the J2SSH client or the proprietary ServiceNow® SNCSSH client. When you upgrade from Dublin or earlier, the MID Server property that controls the SSH client selection is not active in your upgraded instance, and the MID Server will use the J2SSH client by default. To enable the SNCSSH client, you must add the **mid.property.ssh.use_snc** MID Server property and set it to **true**. Instances upgraded from Eureka or later have the SNCSSH client enabled by default, and no configuration is required. For details, see *MID Server properties*.
Notifications	To enable randomized watermarks in email notifications for upgraded instances, activate the Random Watermark Support (com.glide.email.random_watermark) plugin. This plugin includes system properties for managing a watermark transition period, during which the system recognizes both randomized watermarks and non-randomized watermarks in emails created before upgrading. For details, see *Notifications upgrade information* on page 18.

Application or feature	Details
Notify	If the Legacy Notify plugin (com.snc.notifynow) is activated on the instance: • The Legacy Notify plugin and the Notify plugin (com.snc.notify) can coexist and work independently because they use different tables, properties, and API namespaces. You must also use two different Twilio accounts for both plugins to work. • The Legacy Notify plugin and the Notify plugin (com.snc.notify) can be simultaneously instantiated on the same instance. However, the applications must be configured with different Twilio accounts or subaccounts. • Notify account setup can be configured for a single number within an account (Legacy Notify) or for multiple numbers (Notify). • Conference call flow is hard-coded in Legacy Notify. Notify uses a workflow-driven conference call approach. • Legacy Notify and Notify use independent properties and schemas. • Legacy Notify modules are moved to the Notify menu in the application navigator. • Notify includes the notifynow_admin user role. • Updates the **Category** field for all workflow activity to display **Legacy Notify** rather than **NotifyNow**. If the Incident Alert Management plugin (com.snc.iam) is activated on the instance: • And Notify is activated for the first time, the appropriate scripts are installed for Notify integration. • And Legacy Notify has been previously configured with Incident Alert Management and the Notify plugin is activated, Incident Alert Management continues to use Legacy Notify properties. • To switch to the Notify plugin, configure the Twilio account and upgrade the Incident Alert Management plugin. If the On-Call Scheduling plugin (com.snc.on_call_rotation) is activated on the instance, the appropriate files related to On-Call Scheduling and Notify are installed.
Platform Security	The *Contextual Security: Role Management V2* plugin prevents duplicate entries caused by inherited roles in the User Roles [sys_user_has_role] table. This plugin is automatically installed on new instances starting with the Jakarta release and can be activated for upgrades. If upgrading to Jakarta from a previous release, you can manually *upgrade to Contextual Security: Role Management V2*.
Search administration	To enable scoring knowledge documents by inverse term frequency, regenerate the index for the knowledge table. **Note:** Regenerating an index may take a while to complete depending on table size and other factors. You may notice performance degradation or incomplete search results while the system regenerates the index.

Application or feature	Details
Security Incident Response	*Application administration* is enabled for Security Incident Response by default. Before upgrading, verify whether you have added custom tables to Security Incident Response. If so, and your custom tables rely on global ACLs, you may need to recreate those global ACLs in the Security Incident Response scope after the upgrade. If you added custom roles or custom ACLs, retest them after the upgrade and ensure the **assignable by** attribute on the roles is set correctly to allow access to application administration. After you upgrade, modify any custom integrations that write or read Security Incident observables to use the Observables table and the new m2m with Security Incident. The **Context** field in the m2m table defines the relationship of the observable to the security incident for **Observable Types**, such as IP (Source or Destination) and URL (Referrer).
Service Catalog	Before upgrading, you should be aware of changes made to the underlying service catalog data model. These changes affect that way you implement multiple service catalogs. For details, see *Upgrade to multiple service catalogs*. If you are upgrading from a version prior to the Fuji release, see *Migrate cart layouts*.
Software Asset Management	If you are using the existing Software Asset Management plugin feature (com.snc.software_asset_management) on a release prior to Jakarta, you are using a feature of the Asset Management application. After upgrading to Jakarta, you can continue to use the Software Asset Management plugin feature. To migrate to the Software Asset Management application (com.snc.samp), consult your service manager.
Time Cards	When you upgrade to the Jakarta release, some changes are made to the time cards. For details, see *Time Card upgrade information* on page 48.
Upgrades	Under certain conditions, a family upgrade to Jakarta can take an extremely long time. For those conditions, see *KB0623275*.
Workflow	The *table cleaner* for workflow context records is enabled by default. In previous releases, the default setting was disabled to improve performance, which is unnecessary in this release. If you prefer the table cleaner to not run, you can disable it manually.

Upgrade planning checklist (Jakarta)

Plan and track the activities related to your ServiceNow instance upgrade. To help ensure that you complete all the tasks for a successful upgrade, follow the step-by-step instructions in the upgrade planning checklist to track and plan the upgrade.

This topic contains step-by-step upgrade instructions. To download a PDF version of this checklist, click *here*. For in-depth explanations about upgrades, refer to *Upgrade your instance* on page 424.

Some optional steps may not be appropriate depending on the number of instances, customizations, and so forth. Mark the ones you do not need in the **N/A** column.

Note: The process for completing steps for self-hosted customers may vary (for example, requesting an instance clone or upgrades). These differences must be considered during planning.

Customer name:	
Product instance name:	https://[instancename].service-now.com
Other instance names	https://[instancename].service-now.com https://[instancename].service-now.com

	Description	Yes	No	N/A	Comments
Phase 1 - Read the release notes and plan your upgrade					
1	Review the *Jakarta release notes* on page 4 for the target ServiceNow feature release and patch, in addition to product and release documentation. For Jakarta-specific upgrade considerations, see *Upgrade and migration tasks by application or feature* on page 435.	☐	☐	☐	
Phase 2 - Complete these planning tasks.					
2	Confirm which ServiceNow instances are in-scope for upgrade.				
3	Confirm the instance hosting model. For example, ServiceNow cloud, on-premise, or off-premise.	☐	☐	☐	
4	Confirm your current release version.	☐	☐	☐	
5	Confirm your target release version.				
6	Based on the *Jakarta release notes* on page 4 and other release materials, determine new functionality or notable changes that need to be validated after the upgrade.	☐	☐	☐	

	Description	Yes	No	N/A	Comments
7	Confirm plans to enable or disable features introduced in the new product release.	☐	☐	☐	
8	Review the *supported web browsers* to determine browser prerequisites. For example, versions and types supported, and additional requirements for new UI versions. Compare these supported browsers to your corporate standard and identify any gaps.	☐	☐	☐	
9	Create a project plan for cloning, upgrading, and testing.	☐	☐	☐	
10	Identify the core team of testers, power users, and key stakeholders required to validate functionality in the ServiceNow instances before and after the upgrade.	☐	☐	☐	
11	Confirm whether there are any change freeze windows impacting the timing for environment clones or upgrades. For example, end quarter.	☐	☐	☐	

	Description	Yes	No	N/A	Comments
12	Confirm which of the following situations applies to your ServiceNow sub-production instances: **1.** Development and testing can be frozen until the production upgrade is completed. **2.** Continued development (and testing) activities need to continue in a sub-production instance while upgrade, remediation, and testing activities are performed in parallel on another instance. **3.** Once the final upgrade to your production instance is complete, the cloning of your final production instance to your sub-production instance will wait until after the production upgrade is complete.				
13	Confirm the availability of other systems required for integration testing (key resources and environments).	❑	❑	❑	
14	Confirm whether there are any restrictions in which ServiceNow instances can be used for integration testing. For example, an interfacing system is only set up to access a specific ServiceNow test instance.	❑	❑	❑	
15	Confirm the testing scope and approach.	❑	❑	❑	
16	Create a comprehensive test plan including test cases for all core instance functionality and integrations.	❑	❑	❑	
17	Confirm the method for tracking any defects identified during testing.	❑	❑	❑	

	Description	Yes	No	N/A	Comments
18	Create a high-level implementation plan that covers: • the sequence and timing to upgrade sub-production and production instances • the instances to be cloned • the instance to be used for integration testing.	❑	❑	❑	
19	Confirm whether there are any change freeze windows impacting the timing for environment clones or upgrades. For example, end quarter. *Responsible: ServiceNow or Customer*	❑	❑	❑	
20	Determine whether existing internal training materials, Knowledge Base articles in the customer instance, or other supporting documentation must be updated to align with the upgraded version. For example, changes in functionality or user interface.	❑	❑	❑	
	Optional: Schedule the *ServiceNow Configuration Review*, which provides recommendations to align the customer configurations with ServiceNow best practices. **Note:** There may be a service charge and require professional services engagement.	❑	❑	❑	

	Description	Yes	No	N/A	Comments
22	On your production instance, create a system clone and select your development instance as the **Target instance**. Notify impacted users and internal stakeholders of the scheduled date/time for cloning (from production) and upgrade of the sub-production instance. **Note:** It is important to test on a system that reflects the production instance as closely as possible. If your sub-production and production instances are the same size, include the production audit log and the attachment data, and ensure that you have deselected the exclude options.	❑	❑	❑	
Phase 3 - Verify your upgrade configurations and schedule the development instance upgrade in HI					
23	Check the configuration of the Upgrade scheduled job to view how often and when it runs.	❑	❑	❑	
24	Verify that the **Upgrade** sys_trigger is set properly for upgrading.	❑	❑	❑	
25	Verify that the **Check Upgrade Script** sys_trigger is set properly for upgrading.	❑	❑	❑	
26	Schedule the upgrade in HI.	❑	❑	❑	
27	If applicable, request a version entitlement.	❑	❑	❑	
Phase 4 - Upgrade and validate the development instance					
28	Using the Upgrade Monitor, monitor the upgrade to your instance and validate that the upgrade to your development instance is complete.	❑	❑	❑	

	Description	Yes	No	N/A	Comments
29	After the upgrade for your development instance is complete, *process the skipped records list* in the Upgrade Monitor.	❑	❑	❑	
30	Identify your update sets.	❑	❑	❑	
31	Before and after upgrading, conduct smoke tests on your development instance. Use your comprehensive test plan to perform functional testing.	❑	❑	❑	
Phase 5 - If applicable: Upgrade and validate your other sub-production instances, such as your test instance					
32	On your production instance, create a system clone and select your development instance as the **Target instance**.	❑	❑	❑	
33	Schedule the sub-production upgrade in HI and verify your upgrade configurations.	❑	❑	❑	
34	Validate that the upgrade to your sub-production instance is complete.	❑	❑	❑	
35	Install any optional plugins that were installed on your development instance.	❑	❑	❑	
36	Install any custom applications and post-upgrade fix scripts that you need.	❑	❑	❑	
37	Install update sets.	❑	❑	❑	
38	Perform functional testing and monitor the performance of your instance.	❑	❑	❑	
Phase 6 - Prepare to upgrade the production instance					

	Description	Yes	No	N/A	Comments
39	Confirm sign-off from IT and Business stakeholders that all sub-production instance defects have been fixed and validated in update sets. *Responsible: Customer*	❑	❑	❑	
40	Confirm the core team of key stakeholders required to validate functionality in the ServiceNow instance after the production upgrade. *Responsible: Customer*	❑	❑	❑	
41	Confirm coverage for Day 1 support post-upgrade. *Responsible: Customer*	❑	❑	❑	
42	Create a Production Upgrade Implementation Plan that includes all upgrade steps, roles and responsibilities, communication plans, key contacts, support coverage for Day 1, and so forth. *Responsible: Customer*	❑	❑	❑	
43	Schedule a walkthrough and sign-off of the Implementation Plan with key stakeholders and the core team. *Responsible: Customer*	❑	❑	❑	
44	Submit and obtain approvals for change records as required by the organization change process. *Responsible: Customer*	❑	❑	❑	
45	Send a communication to key stakeholders and end users with details for the production upgrade outage, new features, and so forth. *Responsible: Customer*	❑	❑	❑	
46	Profile the performance of your instance before upgrading.	❑	❑	❑	

	Description	Yes	No	N/A	Comments
47	Use the ServiceNow Performance homepage to document the performance of your instance before the upgrade.	☐	☐	☐	
48	On your clone, perform functional testing and monitor the performance of your instance.	☐	☐	☐	
Phase 7 - Upgrade the production instance					
49	Schedule the upgrade in HI.	☐	☐	☐	
50	If applicable, request a version entitlement.	☐	☐	☐	
51	*Monitor the upgrade to your instance* and validate that the upgrade to your production instance is complete.	☐	☐	☐	
52	Apply any update sets and post-upgrade fix scripts that you have.	☐	☐	☐	
53	Validate and test your instance by conducting user acceptance testing (UAT). Verify with all key stakeholders that the system is performing properly after production upgrade, and key functionality is available.	☐	☐	☐	

Upgrade to Jakarta from Helsinki

When you upgrade from the Helsinki release to the Jakarta release, understand the fixes in each release version, notable changes for the user interface, browser support, plugin updates, and each feature's upgrade and migration tasks if applicable.

Release notes for upgrade from Helsinki to Jakarta

Before you upgrade from Helsinki to Jakarta, read the release notes for information about new features, notable changes, and fixes to existing functionality.

New features and changes in Istanbul and Jakarta

Each release family contains new functionality. Read to the release notes for details on the new features and changes in Istanbul and Jakarta.

- *Istanbul release notes*
- *Jakarta release notes* on page 4

Patch and hot fix release notes

Patches and hot fixes contain security fixes as well as fixes for products and applications. These fixes are listed in each family's Available Versions.

- *Available versions (Istanbul)*
- *Available versions (Jakarta)* on page 102

Patch release notes are organized into three sections.

Release notes section	Type of information
Security-related fixes	Contains a KB article with details on the patch's fixed security bugs
Notable fixes	Lists important fixed PRBs in the patch **Important:** Examine the notable fixes in each patch and consider adding them to your upgrade testing plans. For information on how to test different instances during upgrades, refer to *Upgrade to Jakarta* on page 421.
All other fixes	Lists all other fixed PRBs in the patch

Refer to the *Known Error Portal* to quickly locate Known Error articles related to the various releases.

Upgrade instructions

After you have reviewed the release notes and patch information to understand all the changes that will be implemented in Jakarta, you can start upgrading your instance. For an overview of the upgrade process, release definitions, and upgrade testing, refer to *Upgrade to Jakarta* on page 421.

For a step-by-step guide through the upgrade process, refer to *Upgrade your instance* on page 424 and the *Upgrade planning checklist (Jakarta)* on page 439.

User interface in Jakarta

There were no significant user interface changes from Helsinki to Jakarta - both releases are displayed in UI16. List v3 was introduced in Helsinki, and it is available for use in Jakarta.

UI16

The UI16 interface provides an updated look and usability improvements.

Notable features include real-time form updates, user presence, a redesigned application navigator with tabs for favorites and history, and enhanced activity streams. UI16 is the default user interface for new instances. For upgraded instances, an administrator must activate UI16.

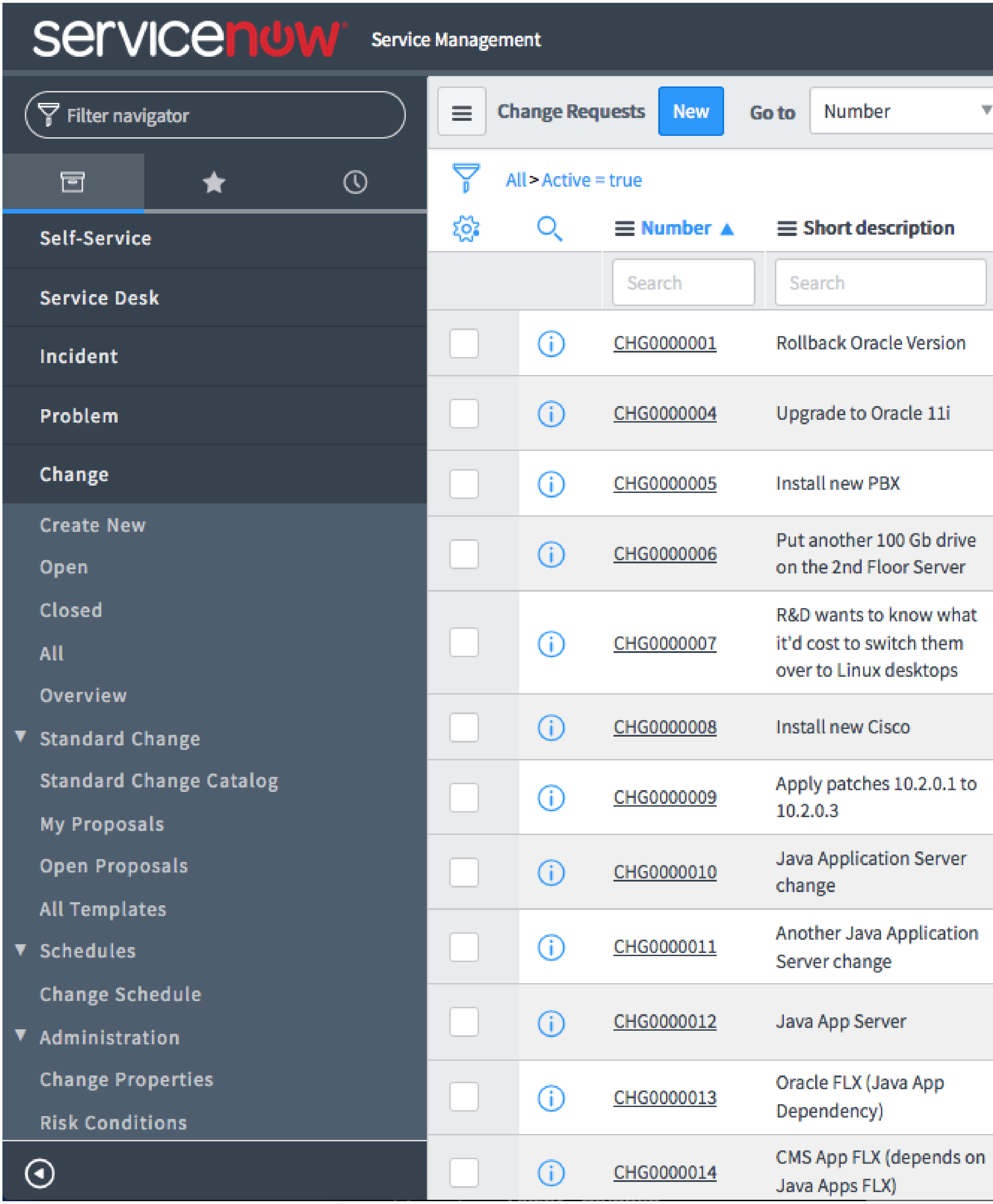


Figure 1: UI16 user interface

Table 8: UI16 components

Component	Description
Banner frame	Runs across the top of every page and contains a logo and the following information, controls, and tools. • User menu provides options to access your profile and preferences. Administrators can impersonate users and elevate their security role. • *Connect sidebar icon* ( ): Lets you begin or continue conversations. This icon is available if Connect is enabled. • *Global text search* icon ( ): Finds records from multiple tables. • Help icon ( ): Opens the help panel with embedded help, where available. If there is no embedded help, it offers help search options. • Gear icon ( ): Opens the *System settings for the user interface (UI)*.
Application navigator	Also called the left-navigation bar. Provides links to all applications and modules. See *Application navigator*.
Content frame	Displays information such as lists, forms, homepages, and wizards.
The Edge	The Edge is removed in UI16. The collapsed view of the UI16 application navigator is similar to the Edge.

List v3 in Jakarta

List v2 is the default version of lists and is supported in all versions of the UI. Users with the admin role can *activate* List v3, which is supported in UI16 only. Even when List v3 is activated, some UI16 lists may display in List v2. For details, see *List v3 compatibility*.

For details on how to activate and administer List v3, refer to *List v3 administration*.

Visual differences between List v2 and List v3

If you are unsure whether a list is v2 or v3, look for the following identifiers.

- The personalize list gear icon appears in the upper left corner of v2 lists. The personalize list option is located in the *List title menus*.

- Page controls appear in the list title bar of v2 lists.
- The list mode toggle appears in the list title bar of v3 lists. You can switch between the standard list mode, called **Grid** mode, and a **Split** list and form mode.
- Avatars appear by user names in v3 lists.
- Page controls appear in a footer at the bottom of the page for v3 lists.
- The response time indicator does not appear on the bottom, right of v3 lists. You can create a property to display the response time in milliseconds (ms) on the lower left in the List v3 footer.

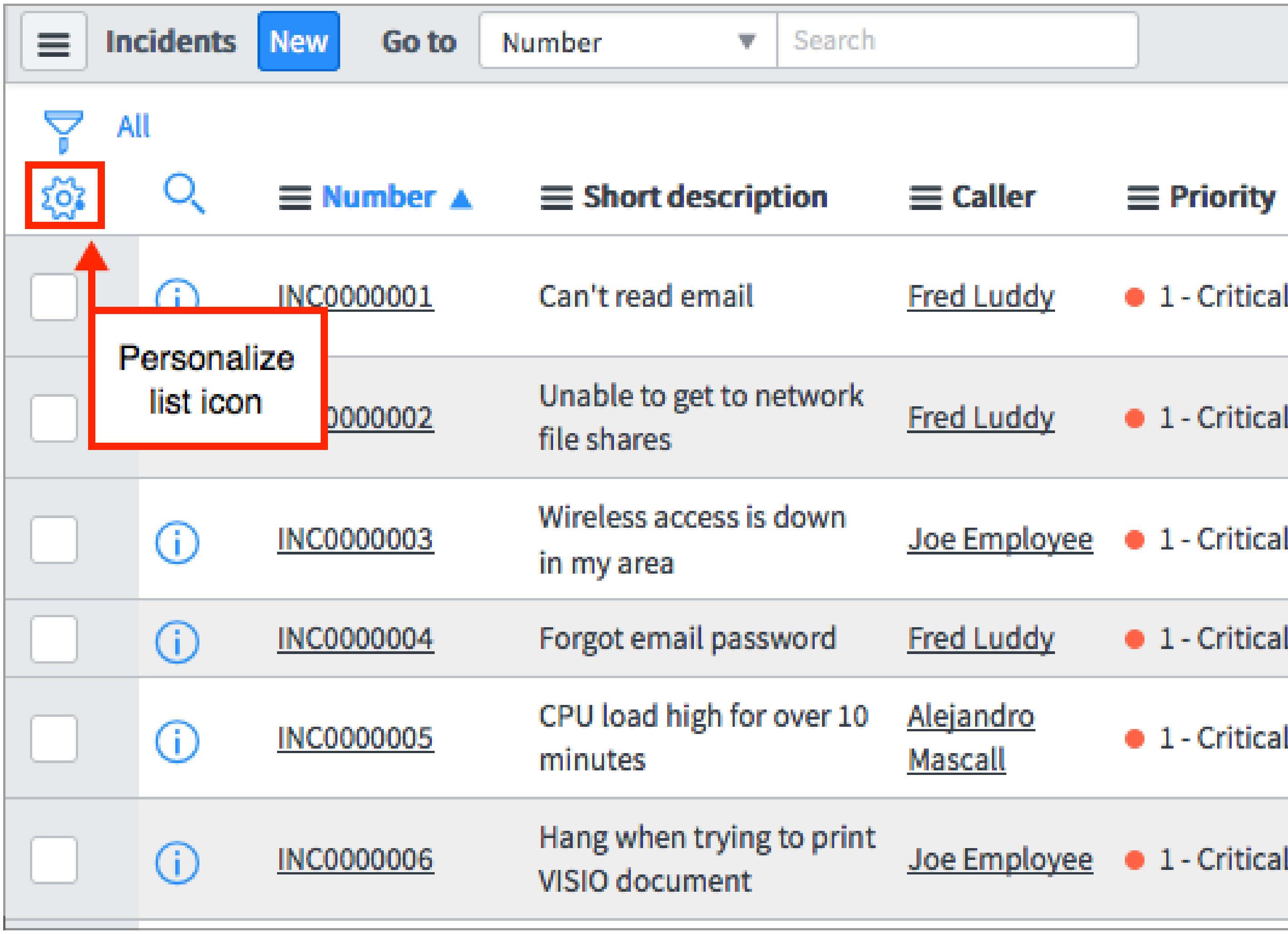


Figure 2: List v2 identifiers

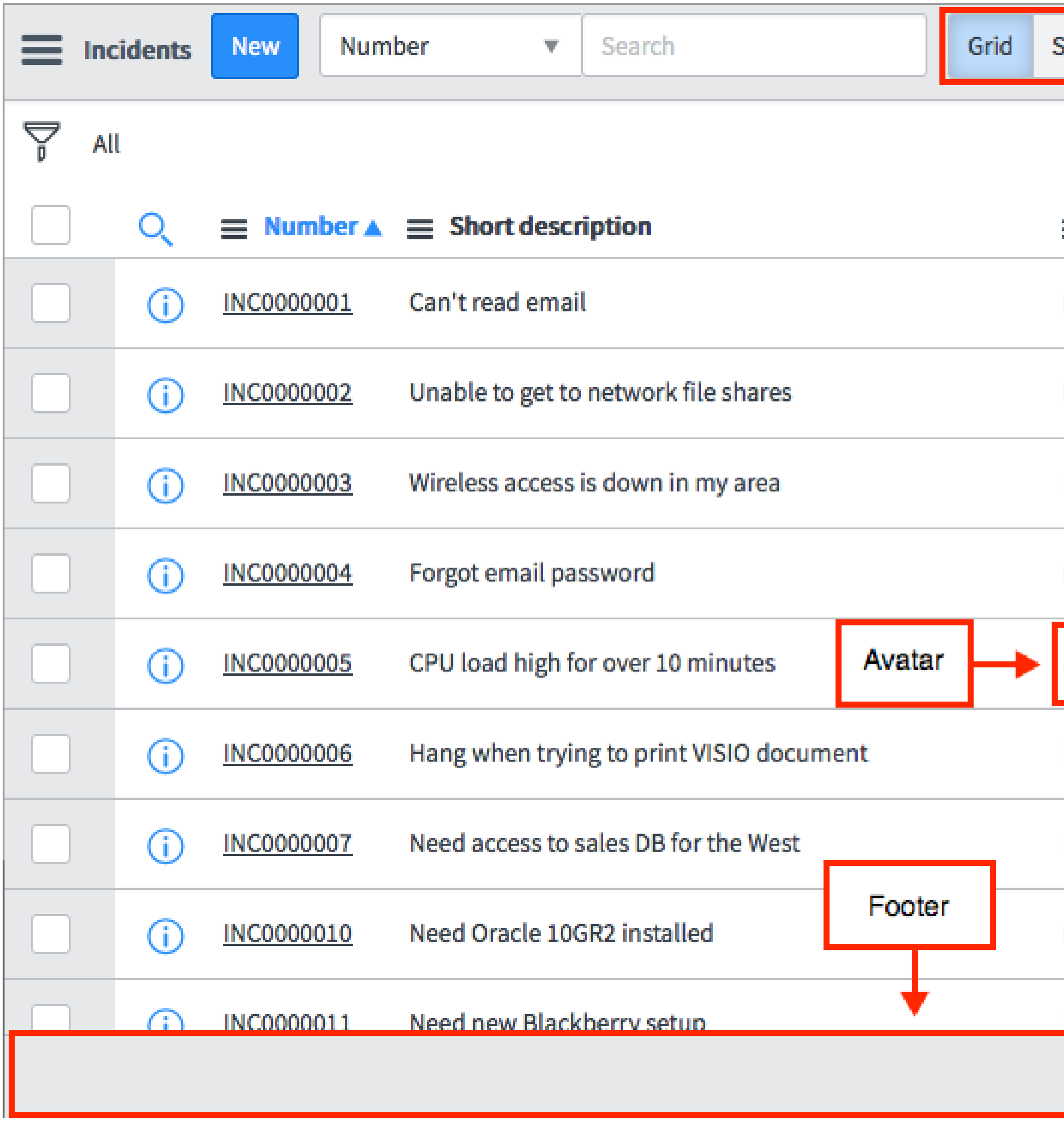


Figure 3: List v3 identifiers

For more information on the differences between List v2 and v3, see the *comparison of List v2 and List v3*.

Notable changes in Jakarta

Complete the upgrade tasks where necessary to prepare an application or feature for the upgrade process, and complete appropriate migration tasks after the upgrade to protect your data and customizations from changes to the system.

Notable changes to applications and features

Note: In Jakarta and later, Internet Explorer versions prior to IE11 are no longer supported.

Application or feature	Details
Agile Development	Installing Agile Development 2.0 replaces the existing Agile Development, if already installed. Review *Agile Development upgrade information* on page 34 before activating Agile Development 2.0.
Calendars and schedules	Starting with the Jakarta release, the Fiscal calendar is a platform feature and is no longer dependent on Financial Management.
Change Management	If you are upgrading from a release prior to Geneva, you can choose to activate Change Management core, State Model, Standard change catalog, and Mass updates CI plugins. After you activate the Change Management core plugin you must perform specific tasks to ensure that change types and customizations are updated. For details, see *Migrate Change Management from releases prior to Geneva*.
Computer Telephony Integration (CTI)	The requirements for the sys_cti_rule parameter have changed. See the *Computer telephony integration release notes* for details. In preparation for your upgrade to Istanbul, ensure that you have a working CTI integration. Make and test the changes on an upgraded non-production instance before using the feature in production. For instructions, see *KB0620953*.
CMDB	CMDB content undergoes table per partition *table flattening* during upgrade. This change does not have a performance impact and is transparent to users. Customers with a large CMDB table may experience a longer upgrade duration. See *KB0635006*.
Connect	If you are currently using the legacy chat feature to provide help desk support, close any open help desk chats before activating Connect Support. Legacy chat and Connect Support cannot be used concurrently. When you activate Connect Support, the system automatically sets the state of all Chat Queue Entry [chat_queue_entry] records to Closed Complete. This ends any open help desk chats.
Customer Service Management	Upgrading an instance brings back demo data for the Customer Service Management Demo Data plugin (com.snc.customerservice.demo) even if the demo data was previously deleted. For more information, see *KB0634950*.
Dashboards	Review *Dashboard upgrade information* for information about *responsive canvas* and *dashboard versions of homepages*.

<table>
<tr><th>Application or feature</th><th>Details</th></tr>
<tr><td>Dashboards</td><td>Review Dashboard upgrade information for information about responsive canvas and dashboard versions of homepages.</td></tr>
<tr><td>Discovery</td><td>The VMware - vCenter probe that discovered all vCenter objects in previous releases is deprecated in the Istanbul release and replaced by multiple probes. For details about the new probes and steps you need to take to protect your customizations, see vCenter probe upgrade.
When you upgrade to Istanbul from a pre-Geneva release, you can still use the legacy identifiers provided with your instance or switch to the new CMDB identifiers by setting a system property. It is important to note that if Service Mapping is active on your instance, the CMDB identifiers are always used regardless of the property value. For details, see Discovery identifiers.
Upgrades to versions prior to Istanbul Patch 5 can take an excessive amount of time if the Discovery Log [discovery_log] or TCP Connection [cmdb_tcp] table contains a very large number of records. Upgrade performance issues occur when the sys_domain and sys_domain_path fields, used by domain separated systems, are added and populated in these tables. To improve performance, reduce the number of rows in the discovery_log or cmdb_tcp table prior to upgrading to ensure they contain somewhat less than 1 million rows.

Important: If you remove records from the TCP Connection [cmdb_tcp] table, be sure to run any required Discovery after the upgrade to repopulate the table.</td></tr>
<tr><td>Discovery</td><td>Discovery identifiers were replaced in the Geneva release, but some systems that were upgraded from pre-Geneva versions to Jakarta might still be using legacy identifiers. A system property allows these customers to switch to the CMDB identifiers. It is important to note that if Service Mapping is active on your instance, the CMDB identifiers are always used, regardless of how this property is configured.</td></tr>
<tr><td>Edge Encryption</td><td>Because the Edge Encryption proxy server requires at least 4 GB of memory, 32-bit JREs and 32-bit operating systems are no longer supported starting with the Jakarta release. Review the Edge Encryption system requirements and limitations to ensure an optimal environment for your implementation.

When upgrading the Edge Encryption proxy server to the Jakarta release, use the new command-line upgrade commands.
Manually upgrade an Edge Encryption proxy server running on Windows
Manually upgrade an Edge Encryption proxy server running on Linux</td></tr>
<tr><td>Event Management and Service Analytics</td><td>During an upgrade to the Istanbul release, a script converts and moves Event Management rules and events for the release. Even though this script runs automatically, there are configuration tasks you must complete after the upgrade. For more information, see Upgrade tasks for Event Management.</td></tr>
</table>

Application or feature	Details
Financial Management	Financial Management is no longer dependent on its use of IT DataMart. The DataMart Definitions have been upgraded to Financial Management Segments in Istanbul. New segments required for cost model or budget model must henceforth be created in Financial Management Segments.
GRC: Policy and Compliance Management	The GRC: UCF Import (com.snc.ucf_import_add_on) plugin was deprecated and replaced by the new GRC: Compliance UCF (com.sn_comp_ucf) plugin. See *Policy and Compliance UCF upgrade instructions* on page 40. **Note:** If your GRC entitlement date is before December 1, 2016, you are entitled to a free UCF CCH account for the period of December 1, 2016 through November 30, 2018. For customers on Helsinki (Patch 7 and above), or Istanbul and whose effective GRC entitlement date start on Dec 1, 2016 or after, you need to sign up for a *UCF CCH* account and customize your basic subscription to include API Access. For more information about establishing a UCF CCH account, see *Unified Compliance*.
HR Service Delivery	HR data migration is recommended when you are upgrading from the global version of HR to the scoped version. The Istanbul release introduced the scoped version of HRSM. The scoped version prevents users outside of HR from accessing HR data. Customers already on the scoped version of HR do not need to migrate their data. • *Migration from Non-Scoped to Scoped HR*
ITSM Guided Setup	A new plugin that provides a new, process-centric version of guided setup is introduced in this release. The ITSM Guided Setup plugin (com.snc.guided_setup_metadata.itsm) is active by default for new customers. Upgrading customers can activate the plugin to view the new version of guided setup. One or both versions appear as modules in the navigation pane or as links on the System Administration homepage. They appear as **ITSM Guided Setup** or **ITSM Guided Setup (Old)**. **ITSM Guided Setup (Old)** takes you to the guided setup created in the Helsinki and Istanbul releases. The administrator can hide the version that you do not want to use. **Note:** The plugin name, ITSM Guided Setup, is the same for both old and new versions, but the plugin ID is different.

Application or feature	Details
Knowledge Management	Review the content in the community page for Knowledge upgrade best practices at *All things Upgrade considered on Knowledge v2 to v3*. Some of the key differences between Legacy Knowledge and Knowledge v3 are: • Multiple knowledge bases (instead of one knowledge base) • Separate customizable workflows available for each knowledge base (instead of a single lifecycle shared by all articles) • Category structure that supports any number of levels (instead of a two-level organizational structure using Topic and Category) • Permissions defined per knowledge base and article, using user criteria (instead of per article, using roles and ACLs) For additional upgrade considerations, see the links under *Migrate*.
Knowledge Management	Review the content in the community page for Knowledge upgrade best practices at *All things Upgrade considered on Knowledge v2 to v3*.
MID Server	• To understand how the IP range auto-assignment feature affects IP ranges defined in version prior to Jakarta, see *View automation status sets and IP range assignments*. • Customers who use network service providers must request specific SNMP access to use MID Server IP range auto-assignment. See *Required SNMP OIDs for MID Server IP range auto-assignment for details*. • In Jakarta, the MID Server can run SSH commands using either the J2SSH client or the proprietary ServiceNow® SNCSSH client. When you upgrade from Dublin or earlier, the MID Server property that controls the SSH client selection is not active in your upgraded instance, and the MID Server will use the J2SSH client by default. To enable the SNCSSH client, you must add the **mid.property.ssh.use_snc** MID Server property and set it to **true**. Instances upgraded from Eureka or later have the SNCSSH client enabled by default, and no configuration is required. For details, see *MID Server properties*.
Notifications	To enable randomized watermarks in email notifications for upgraded instances, activate the Random Watermark Support (com.glide.email.random_watermark) plugin. This plugin includes system properties for managing a watermark transition period, during which the system recognizes both randomized watermarks and non-randomized watermarks in emails created before upgrading. For details, see *Notifications upgrade information* on page 18.

Application or feature	Details
Notify	If the Legacy Notify plugin (com.snc.notifynow) is activated on the instance: • The Legacy Notify plugin and the Notify plugin (com.snc.notify) can coexist and work independently because they use different tables, properties, and API namespaces. You must also use two different Twilio accounts for both plugins to work. • The Legacy Notify plugin and the Notify plugin (com.snc.notify) can be simultaneously instantiated on the same instance. However, the applications must be configured with different Twilio accounts or subaccounts. • Notify account setup can be configured for a single number within an account (Legacy Notify) or for multiple numbers (Notify). • Conference call flow is hard-coded in Legacy Notify. Notify uses a workflow-driven conference call approach. • Legacy Notify and Notify use independent properties and schemas. • Legacy Notify modules are moved to the Notify menu in the application navigator. • Notify includes the notifynow_admin user role. • Updates the **Category** field for all workflow activity to display **Legacy Notify** rather than **NotifyNow**. If the Incident Alert Management plugin (com.snc.iam) is activated on the instance: • And Notify is activated for the first time, the appropriate scripts are installed for Notify integration. • And Legacy Notify has been previously configured with Incident Alert Management and the Notify plugin is activated, Incident Alert Management continues to use Legacy Notify properties. • To switch to the Notify plugin, configure the Twilio account and upgrade the Incident Alert Management plugin. If the On-Call Scheduling plugin (com.snc.on_call_rotation) is activated on the instance, the appropriate files related to On-Call Scheduling and Notify are installed.
On-Call Scheduling	Upgrading from previous versions is automatic, and all events are recorded in the upgrade logs (**System Diagnostics** > **Upgrade History**). • The existing On-Call plugin has been changed. When you upgrade, the plugin changes are applied automatically (this action is not optional). • The group device functionality is deprecated in favor of a **Catch All** person. • On-call Scheduling replaces the existing business rules for escalations with escalations based on Graphical Workflow. • The workflow uses Notification Activities, so it sends emails and not SMS messages. It must be modified to use Create Events activities to send SMS messages. See *Upgrade to on-call scheduling* for links to other changes that you should be aware of as you as you transition to on-call scheduling.

Application or feature	Details
Platform Security	The *Contextual Security: Role Management V2* plugin prevents duplicate entries caused by inherited roles in the User Roles [sys_user_has_role] table. This plugin is automatically installed on new instances starting with the Jakarta release and can be activated for upgrades. If upgrading to Jakarta from a previous release, you can manually *upgrade to Contextual Security: Role Management V2*.
Project Portfolio Suite with Financials	When you upgrade to Istanbul release, some changes are made to the resource plans. For details, see *Project Portfolio Suite with Financials upgrade information*.
Reporting	Report Charting v2 is automatically used, and Reporting v1 can no longer be used after an instance is upgraded. The Report Charting v2 plugin uses the Highcharts charting library to generate reports on the client. This plugin generates all the reports in the ServiceNow report set. **Note:** Scheduled reports, custom charts, and reports saved as PDF are generated on the server using the Highcharts charting library. As a result, these types of reports sometimes appear differently than reports generated on the client side.
Search administration	To enable scoring knowledge documents by inverse term frequency, regenerate the index for the knowledge table. **Note:** Regenerating an index may take a while to complete depending on table size and other factors. You may notice performance degradation or incomplete search results while the system regenerates the index.
Security Incident Response	After you upgrade, modify any custom integrations that write or read Security Incident observables to use the Observables table and the new m2m with Security Incident. The **Context** field in the m2m table defines the relationship of the observable to the security incident for **Observable Types**, such as IP (Source or Destination) and URL (Referrer).
Service Catalog	Changes in the underlying service catalog data model affect the way you implement multiple service catalogs. These changes are automatic, but might impact your instance if you have made customizations, such as changes to the data model. For more information, see *Upgrade to multiple service catalogs*.
Service Catalog	Before upgrading, you should be aware of changes made to the underlying service catalog data model. These changes affect that way you implement multiple service catalogs. For details, see *Upgrade to multiple service catalogs*. If you are upgrading from a version prior to the Fuji release, see *Migrate cart layouts*.

Application or feature	Details
Service Mapping	For instances upgraded from earlier versions to Istanbul, Service Mapping uses a legacy algorithm to choose a MID Server for a discovery request. For instructions about configuring a MID Server in an upgraded instance, see *MID Server configuration for Service Mapping in upgraded deployments* and *Configure a default MID Server for Service Mapping for upgraded deployments*.
Software Asset Management	If you are using the existing Software Asset Management plugin feature (com.snc.software_asset_management) on a release prior to Jakarta, you are using a feature of the Asset Management application. After upgrading to Jakarta, you can continue to use the Software Asset Management plugin feature. To migrate to the Software Asset Management application (com.snc.samp), consult your service manager.
Time Cards	When you upgrade to the Jakarta release, some changes are made to the time cards. For details, see *Time Card upgrade information* on page 48.
Upgrades	Under certain conditions, a family upgrade to Jakarta can take an extremely long time. For those conditions, see *KB0623275*.
Workflow	The *table cleaner* for workflow context records is enabled by default. In previous releases, the default setting was disabled to improve performance, which is unnecessary in this release. If you prefer the table cleaner to not run, you can disable it manually.

Changes to plugins in the Jakarta release

This table lists new plugins in the Jakarta release and existing plugins that were deprecated, renamed, or changed in some way.

Plugin	Status	Description	Details
Agile Development [com.snc.sdlc.scrum.pp]	Activation Change	Provided a formal process over the core SDLC-SCRUM offering.	• Not available for new independent deployments. • Available as part of Project Portfolio Suite with Financials [com.snc.financial_planning_pr • **Replaced by**: Agile Development 2.0 [com.snc.sdlc.agile.2.0] for new customers. • **Activation**: Requires ServiceNow personnel support.
Agile Development 2.0 [com.snc.sdlc.agile.2.0]	New	The Agile Development 2.0 plugin provides enhanced functionality on top of Agile Development. If you already have a customized version of Agile Development, delete the customizations before activating "Agile Development 2.0" to ensure that all features work properly. Please refer the documentation for detailed steps to delete the customizations.	**Activation**: Requires subscription
Apply Once APIs [com.glide.system_apply_once]	New	APIs for altering the behavior of any 'apply_once' update in a plugin during plugin activation/ upgrade.	**Activation**: Active.
Benchmark Client [com.sn_bm_client]	New	Benchmark Insights for Customers	**Activation**: Requires subscription

Plugin	Status	Description	Details
Benchmark Common [com.sn_bm_common]	New	Common code for Benchmark Insights	**Activation**: Requires subscription
Chat [com.glideapp.live]	Planned for deprecation in Release K	Provides real-time communication via instant messaging between users in an instance.	
Change Management Best Practice - Jakarta [com.snc.best_practice.change.jakarta]	New	Provides alignment with proven service level management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Cloud API [com.snc.cloud.api]	New	Provides an application-level interface for the Cloud Management application to interact with third-party cloud providers.	**Activation**: Requires subscription
Cloud Management [com.snc.cloud.mgmt]	New	Provides access to cloud resources, publish cloud offerings to a catalog, and manage the usage of those resources.	**Activation**: Requires subscription
Cloud Management Core [com.snc.cloud.core]	New	Enables core functionality used by other applications to discover cloud resources and manage resource blocks.	**Activation**: Activated with Cloud Management.
Cloud Config Management [com.snc.config.mgmt]	New	Enables configuration features in the Cloud Management application.	**Activation**: Activated with Cloud Management.
CMDB Group Dashboard [com.snc.cmdb.group.dashboard]	New	Provides visibility to CMDB Group healthiness.	**Activation**: Active.

Plugin	Status	Description	Details
Common ITSM Service Portal Application Components	New	Common Application Components for Service Portal	**Activation**: Active.
Configuration Automation [com.snc.configuration_automation]	Planned for deprecation in Release K	Allows you to use Orchestration, Puppet, and Chef to provision and configure individual servers or groups of servers in your network.	
Configuration Automation – Chef [com.snc.chef]	Planned for deprecation in Release K	Use configuration item (CI) data to bring Linux or Windows computers into a desired state.	
Configuration Automation - Puppet [com.snc.puppet]	Planned for deprecation in Release K	Use CMDB (CI) data to bring computers into a desired state.	
Contextual Security: Role Management [com.glide.role_management]	Updated	Provides the flexibility and power to protect information by controlling read/ write/create/delete authorization.	**Replaced**: Contextual Security [com.glide.role_management]. **Activation**: Active.
Contextual Security: Role Management V2 [com.glide.role_management.inh_count]	Updated	Prevents duplicate entries in sys_user_has_role for inherited roles based on the value of the inh_count column.	**Replaced**: Contextual Security: Role Management Enhancements [com.glide.role_management.inh_ **Activation**: Active.
Contextual Security: Role Management V2 REST API [com.glide.role_management.inh_count.rest_api]	Updated	Prevents duplicate entries in sys_user_has_role for inherited roles, based on the value of the inh_count column	**Replaced**: Contextual Security: Role Management Enhancements REST API [com.glide.role_management.inh_ **Activation**: Active.

Plugin	Status	Description	Details
Custom Charts [com.glideapp.custom_charts]	Activation Change	Allowed you to create charts when a requirement cannot be satisfied with the Reports application.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Customer Service with Field Service Management [com.snc.csm_fsm_integration]	New	Enables Account, Contact, Partner, Partner Contact, Consumer information from Customer Service to Field Service Management	**Activation**: Requires subscription
Dynamic Scheduling [com.snc.dynamic_scheduling]	New	Dynamic scheduling for Service Management Applications with support for bulk task recommendations and interval based auto assignment.	**Activation**: Requires subscription
Facilities Service Management Floor Plan Viewer [com.snc.facilities_service_automation.fpv]	Planned for deprecation in Release L	Provided a floor plan view as part of Facilities Service Management.	**Replaced by**: This feature has been replaced by the interactive facility maps application.
Field Service - Questionnaire [com.snc.wm_questionnaire]	New	Create Questionnaires for Work Orders or Work Orders Tasks.	**Activation**: Requires subscription

Plugin	Status	Description	Details
Financial Management for CSM [com.snc.financial_management_for_csm]	New	Plugins for Customer Service Management and Field Service Management provide integration with the Financial Management application. These plugins add cost allocations for the CSM and FMS applications as well as Performance Analytics dashboards and reports. Financial administrators can use these cost allocations on the Financial Management workbench to allocate, track, and report on expenses.	**Activation**: Requires subscription
GRC: Vendor Risk Management [com.sn_vdr_risk_asmt]	New	The GRC: Vendor Risk Management application allows risk management stakeholders to identify, assess, and manage risk across the vendor ecosystem.	**Activation**: Requires subscription
GRC: UCF Import [com.snc.ucf_import_add_on]	Planned for deprecation in Release K	Provided GRC: Policy and Compliance Management with the ability to download regulatory content and common controls from the Unified Compliance Framework (UCF).	**Replaced by**: GRC: Compliance UCF [com.sn_comp_ucf]
Guided Tour Designer com.glide.sn_tourbuilder	New	Provides administrators with modules in the Embedded Help application to develop guided tours.	**Activation**: Active.

Plugin	Status	Description	Details
Human Resources Scoped App: Lifecycle Events [com.sn_hr_lifecycle_events]	New	Activates the Lifecycle Event module for HR. Combined with other licensed applications, this provides a full-service, onboarding experience for new hires and those managing the process.	**Activation**: Requires subscription
Human Resources Scoped App: Data Migration [com.sn_hr_migration]	New	Moves data and roles from the global version of HR to the scoped version. Data migration includes: • Tables • Columns • Choice Lists	**Activation**: Requires subscription
Human Resources Scoped App: Integrations [com.sn_hr_integrations]	New	Provides the ability to integrate with multiple third-party HR systems for the scoped version of HRSM. HR Integration pushes HR profile information from HRSM to a third-party HR application and pulls HR profile information from a third-party HR application to HRSM.	**Activation**: Requires subscription
I18N: Korean Translations [com.snc.i18n.korean]	Deprecated	Localizes content into Korean.	**Activation**: Not available

Plugin	Status	Description	Details
Incident Management Best Practice -- Jakarta [com.snc.best_practice.incident.jakarta]	New	Provides alignment with proven incident management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Index Suggestion [com.glide.index_suggestion]	New	Suggest database indexes for slow queries.	**Activation**: Active.
Integration - Altiris 2.0 [com.snc.integration.altiris2]	Planned for deprecation in Release K	Provides one direction import of the Altiris data into the CMDB.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Knowledge Advanced [com.snc.knowledge_advanced]	New	This plugin adds advanced features to knowledge management. Please use Knowledge Advanced Installer plugin to activate.	**Activation**: Requires subscription

Plugin	Status	Description	Details
Knowledge Advanced Installer [com.snc.knowledge_advanced.installer]	New	Use this plugin to install the Knowledge Advanced plugin. When you activate/upgrade this plugin, it will do validations on knowledge articles and knowledge bases to make sure that the Knowledge Advanced plugin can be successfully installed. If validation fails, look at the errors in the Plugin Activation Logs and follow instructions given to fix them. Once all the issues are fixed, please re-run this plugin to install Knowledge Advanced.	**Activation**: Requires subscription
Notification Preference User Interface [com.glide.notification.preference.ui]	New	Defines the user interface for the Notifications tab in the system settings menu.	**Activation**: Active.
Password Reset Windows App [com.glideapp.password_reset_desktop]	New	Provides password reset integration with Windows.	**Activation**: Requires subscription
Performance Analytics – Content Pack – Financial Management for Customer Service [com.snc.pa.fm.csm]	New		**Activation**: Requires subscription
Performance Analytics – Content Pack – Financial Management for Field Service Managmement [com.snc.financial_planning_pmo]	New		**Activation**: Requires subscription

Plugin	Status	Description	Details
Performance Analytics - Content Pack - Human Resources Scoped App [com.sn_hr_pa]	New	Provides Performance Analytics reports for Scoped HR. Activation of this plugin on production requires a PA Premium license. Contact ServiceNow for details.	**Activation**: Requires subscription
Performance Analytics – Content Pack – Project Portfolio Suite Dashboards [com.snc.pps_dashboards]	New		**Activation**: Requires subscription
Personal Task Management [com.flide.ui.m.pt]	Planned for deprecation in Release K		• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Problem Management Best Practice -- Jakarta [com.snc.best_practice.problem.jakarta]	New	Provides alignment with proven problem management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Random Watermark Support [com.glide.email.random_watermark]	New	Generate unpredictable watermarks, and enable matching on these watermarks in inbound emails.	**Activation**: Active for new instances.
Security Incident Response GRC Support [com.snc.security_incident.grc]	Planned for deprecation in Release K		**Activation**: Requires subscription

Plugin	Status	Description	Details
Security Incident Response Event Management support [com.snc.security_incident.itom]	Planned for deprecation.		• Not available for new deployments. • Replaced with Security Incident Response [com.snc.security_incident] and Event Management [com.glideapp.itom.snac].
Security Operations 'Have I Been Pwned?' Integration [com.snc.secops.pwned]	New	Provides the ability to submit Whois lookups on domain names and URLs to obtain context on URL observables, and to make better determination on threats. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.
Security Operations CrowdStrike Integration [com.snc.secops.crowdstrike]	New	Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.
Security Operations Elasticsearch Integration [com.snc.secops.elasticsearch]	New	Searches your Elasticsearch logs and adds relevant sighting information to your security incidents. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.

Plugin	Status	Description	Details
Security Operations Splunk Integration [com.snc.secops.splunk]	New	Searches your Splunk logs and adds relevant sighting information to your security incidents. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.
Service Level Management Best Practice -- Jakarta [com.snc.best_practice.sla.jakarta]	New	Provides alignment with proven service level management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Service Portal User Criteria Support [com.glide.service-portal.user-criteria]	New	Enables Service Portal User Criteria support. Installing this plugin will create new user criteria records for each of your widgets and pages that already have role-based permissions on them.	**Activation**: Requires subscription
Software Asset Management [com.snc.software_asset_management]	Activation Change	Systematically tracked, evaluated and managed software licenses and software usage.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.

Plugin	Status	Description	Details
Software Asset Management - IBM PVU Process Pack [com.snc.sam.ibmpvu.pp]	Activation Change	Add-on to the Software Asset Management plugin that provided the capability to manage software that is licensed under the IBM Processor Value Units licensing model.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Software Asset Management - Oracle Process Pack [com.snc.sam.oracle.pp]	Activation Change	Add-on to the Software Asset Management plugin that provided the capability to manage software that is licensed under Oracle licensing model.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Software Asset Management Premium [com.snc.samp]	New	Manages your software assets by automatically normalizing, reconciling, and reclaiming software assets.	**Activation**: Requires subscription
Subscriptions and Activity Feed Framework [com.snc.activity_subscriptions]	New	This plugin provides a generic set of artifacts to handle subscriptions for any defined subscribable object. Any entity can be defined as a subscribable object and a set of subscribers can subscribe to the objects. When a event occurs related to the subscribable object, activities can be tracked and subscribers can be notified.	**Activation**: Requires subscription

Plugin	Status	Description	Details
Threat Feeds [com.snc.threat.feeds]	New	Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires subscription
Threat Intelligence Sharing Client [com.snc.intel_sharing.client]	New	Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires subscription
Time Recording for Field Service [com.snc.wm_time_recording]	New	The time recording feature extends the functionality of the Time Card Management and Cost Management applications to Field Service Management. Field service agents record time worked on tasks and other activities. These time worked entries automatically create time cards and weekly time sheets. Managers can review and approve time sheets as well as view and create labor rate cards.	**Activation**: Requires subscription
UI11 [com.glide.ui11]	Planned for deprecation in Release K	Provided version 11 of the user interface.	**Replaced by**: UI15 and UI16.
Workflow Runtime Engine [com.glideapp.workflow]	Reduced functionality starting with Jakarta	Provided REST and SOAP Message Activities	**Replaced by**: Orchestration

Browser support

Browser support varies for each version of the user interface (UI). Most major browsers are supported.

Some features have additional browser requirements, which are noted in the appropriate documentation.

Browser versions listed in the following table are the latest public release at the time of testing.

Note: UI11 is in maintenance mode. Upgrade to UI15 or UI16.

Table 9: Browser support for each UI version

UI version	Chrome support	Firefox support	Internet Explorer support	Microsoft Edge support	Safari support	Tablet mobile browser	Phone mobile browser
UI16			11 and up • Edge mode is supported		9.1 and up	Supported	Not supported
UI15			11 and up • Edge mode is supported		9.1 and up	Supported	Not supported
Legacy: UI11			11 and up, however UI11 is in maintenance mode and does not work well with any version of IE • Edge mode is not supported		9.1 and up	Limited support	Limited support

Internet Explorer web browser notes

- Compatibility mode is not supported.
- Setting Security Mode to High (via **Internet Options** > **Security** tab) is not supported.
- Internet Explorer 11 is susceptible to memory leaks, which may impact performance, especially in Windows 7.
- In Jakarta and later, Internet Explorer versions prior to IE11 are no longer supported.

Safari web browser notes

- There is a security issue in some versions of Safari. User credentials may be disclosed to an unexpected site via auto-fill. For more information, see the *Apple security update*.

- Starting with Safari 9.1 and future versions of Safari, the leave page / stay on page pop-up message only displays once.

Exceptions to browser support

Certain applications and features in the Jakarta release have browser requirements that differ from the list of browsers generally supported by the ServiceNow platform.

Note: In Jakarta and later, Internet Explorer versions prior to IE11 are no longer supported.

Table 10: Platform browser exceptions

Platform features	Details
Accessibility release notes on page 4	Some keyboard shortcuts and tab-through are browser-specific. See your specific browser documentation for more information.
Dependency Views release notes on page 12	The Dependency Views module supports the latest version or service pack of the following browsers: • Firefox with the latest ESR • Chrome version 25 or later (latest version recommended) • Safari version 6 or later • Microsoft Internet Explorer (IE) version 9 or later
Automated Test Framework release notes on page 7	Automated Test Framework works with all browsers supported by the ServiceNow platform, but some browsers have features to throttle CPU time that can hamper automated test performance. For information on how to mitigate these issues, see *browser recommendations for ATF*.
Mobile release notes on page 15	Access the mobile web interface from the latest versions of the Safari or Chrome web browsers on your mobile device.
Notifications release notes on page 16	If you are using the Internet Explorer browser, you must use version 11 or greater to support user notification preferences in the System Settings window. You can also use any of the other *supported web browsers* .

Visual Task Boards release notes on page 28	• The latest public release of Firefox or Firefox ESR
	• The latest public release of Chrome
	• Safari version 9.1 and later
	• Internet Explorer version 11
	  • Edge mode is supported.
	  • Compatibility mode is not supported.
	  • Setting Security Mode to High (via the **Internet Options** > **Security** tab) is not supported.
	  • Internet Explorer 11 is susceptible to memory leaks, which may impact performance, especially in Windows 7.
	• Access Visual Task Boards on your mobile device using either a browser or the native mobile app. See *Mobile app supported devices* for more information.

Platform features	Details
User interface (UI) release notes on page 27	Embedding videos in Internet Explorer and Safari is not supported. Both browsers have difficulty streaming videos uploaded to the database. Attach a file rather than embedding if you intend to use one of these browsers or an unsupported file type.

Table 11: Business Management browser exceptions

	Details
Application Portfolio Management release notes on page 35	Internet Explorer version 10 and later.
Financial Management release notes on page 36	If you are using the Internet Explorer web browser, version 11 or later (including Microsoft Edge) is required to use all aspects of the workbench.
Project Portfolio Suite with Financials release notes on page 41	If you are using Internet Explorer, version 11 or later (including Edge) is required to use all aspects of the workbenches.

Table 12: IT Service Management browser exceptions

	Details
Service Portfolio Management release notes on page 82	Internet Explorer version 10 and later.

Changes to plugins in the Jakarta release

This table lists new plugins in the Jakarta release and existing plugins that were deprecated, renamed, or changed in some way.

Plugin	Status	Description	Details
Agile Development [com.snc.sdlc.scrum.pp]	Activation Change	Provided a formal process over the core SDLC-SCRUM offering.	• Not available for new independent deployments. • Available as part of Project Portfolio Suite with Financials [com.snc.financial_planning_pr • **Replaced by**: Agile Development 2.0 [com.snc.sdlc.agile.2.0] for new customers. • **Activation**: Requires ServiceNow personnel support.
Agile Development 2.0 [com.snc.sdlc.agile.2.0]	New	The Agile Development 2.0 plugin provides enhanced functionality on top of Agile Development. If you already have a customized version of Agile Development, delete the customizations before activating "Agile Development 2.0" to ensure that all features work properly. Please refer the documentation for detailed steps to delete the customizations.	**Activation**: Requires subscription
Apply Once APIs [com.glide.system_apply_once]	New	APIs for altering the behavior of any 'apply_once' update in a plugin during plugin activation/ upgrade.	**Activation**: Active.
Benchmark Client [com.sn_bm_client]	New	Benchmark Insights for Customers	**Activation**: Requires subscription

Plugin	Status	Description	Details
Benchmark Common [com.sn_bm_common]	New	Common code for Benchmark Insights	**Activation**: Requires subscription
Chat [com.glideapp.live]	Planned for deprecation in Release K	Provides real-time communication via instant messaging between users in an instance.	
Change Management Best Practice - Jakarta [com.snc.best_practice.change.jakarta]	New	Provides alignment with proven service level management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Cloud API [com.snc.cloud.api]	New	Provides an application-level interface for the Cloud Management application to interact with third-party cloud providers.	**Activation**: Requires subscription
Cloud Management [com.snc.cloud.mgmt]	New	Provides access to cloud resources, publish cloud offerings to a catalog, and manage the usage of those resources.	**Activation**: Requires subscription
Cloud Management Core [com.snc.cloud.core]	New	Enables core functionality used by other applications to discover cloud resources and manage resource blocks.	**Activation**: Activated with Cloud Management.
Cloud Config Management [com.snc.config.mgmt]	New	Enables configuration features in the Cloud Management application.	**Activation**: Activated with Cloud Management.
CMDB Group Dashboard [com.snc.cmdb.group.dashboard]	New	Provides visibility to CMDB Group healthiness.	**Activation**: Active.

Plugin	Status	Description	Details
Common ITSM Service Portal Application Components	New	Common Application Components for Service Portal	**Activation**: Active.
Configuration Automation [com.snc.configuration_automation]	Planned for deprecation in Release K	Allows you to use Orchestration, Puppet, and Chef to provision and configure individual servers or groups of servers in your network.	
Configuration Automation – Chef [com.snc.chef]	Planned for deprecation in Release K	Use configuration item (CI) data to bring Linux or Windows computers into a desired state.	
Configuration Automation - Puppet [com.snc.puppet]	Planned for deprecation in Release K	Use CMDB (CI) data to bring computers into a desired state.	
Contextual Security: Role Management [com.glide.role_management]	Updated	Provides the flexibility and power to protect information by controlling read/write/create/delete authorization.	**Replaced**: Contextual Security [com.glide.role_management]. **Activation**: Active.
Contextual Security: Role Management V2 [com.glide.role_management.inh_count]	Updated	Prevents duplicate entries in sys_user_has_role for inherited roles based on the value of the inh_count column.	**Replaced**: Contextual Security: Role Management Enhancements [com.glide.role_management.inh_ **Activation**: Active.
Contextual Security: Role Management V2 REST API [com.glide.role_management.inh_count.rest_api]	Updated	Prevents duplicate entries in sys_user_has_role for inherited roles, based on the value of the inh_count column	**Replaced**: Contextual Security: Role Management Enhancements REST API [com.glide.role_management.inh_ **Activation**: Active.

Plugin	Status	Description	Details
Custom Charts [com.glideapp.custom_charts]	Activation Change	Allowed you to create charts when a requirement cannot be satisfied with the Reports application.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Customer Service with Field Service Management [com.snc.csm_fsm_integration]	New	Enables Account, Contact, Partner, Partner Contact, Consumer information from Customer Service to Field Service Management	**Activation**: Requires subscription
Dynamic Scheduling [com.snc.dynamic_scheduling]	New	Dynamic scheduling for Service Management Applications with support for bulk task recommendations and interval based auto assignment.	**Activation**: Requires subscription
Facilities Service Management Floor Plan Viewer [com.snc.facilities_service_automation.fpv]	Planned for deprecation in Release L	Provided a floor plan view as part of Facilities Service Management.	**Replaced by**: This feature has been replaced by the interactive facility maps application.
Field Service - Questionnaire [com.snc.wm_questionnaire]	New	Create Questionnaires for Work Orders or Work Orders Tasks.	**Activation**: Requires subscription

Plugin	Status	Description	Details
Financial Management for CSM [com.snc.financial_management_for_csm]	New	Plugins for Customer Service Management and Field Service Management provide integration with the Financial Management application. These plugins add cost allocations for the CSM and FMS applications as well as Performance Analytics dashboards and reports. Financial administrators can use these cost allocations on the Financial Management workbench to allocate, track, and report on expenses.	**Activation**: Requires subscription
GRC: Vendor Risk Management [com.sn_vdr_risk_asmt]	New	The GRC: Vendor Risk Management application allows risk management stakeholders to identify, assess, and manage risk across the vendor ecosystem.	**Activation**: Requires subscription
GRC: UCF Import [com.snc.ucf_import_add_on]	Planned for deprecation in Release K	Provided GRC: Policy and Compliance Management with the ability to download regulatory content and common controls from the Unified Compliance Framework (UCF).	**Replaced by**: GRC: Compliance UCF [com.sn_comp_ucf]
Guided Tour Designer com.glide.sn_tourbuilder	New	Provides administrators with modules in the Embedded Help application to develop guided tours.	**Activation**: Active.

Plugin	Status	Description	Details
Human Resources Scoped App: Lifecycle Events [com.sn_hr_lifecycle_events]	New	Activates the Lifecycle Event module for HR. Combined with other licensed applications, this provides a full-service, onboarding experience for new hires and those managing the process.	**Activation**: Requires subscription
Human Resources Scoped App: Data Migration [com.sn_hr_migration]	New	Moves data and roles from the global version of HR to the scoped version. Data migration includes: • Tables • Columns • Choice Lists	**Activation**: Requires subscription
Human Resources Scoped App: Integrations [com.sn_hr_integrations]	New	Provides the ability to integrate with multiple third-party HR systems for the scoped version of HRSM. HR Integration pushes HR profile information from HRSM to a third-party HR application and pulls HR profile information from a third-party HR application to HRSM.	**Activation**: Requires subscription
I18N: Korean Translations [com.snc.i18n.korean]	Deprecated	Localizes content into Korean.	**Activation**: Not available

Plugin	Status	Description	Details
Incident Management Best Practice -- Jakarta [com.snc.best_practice.incident.jakarta]	New	Provides alignment with proven incident management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Index Suggestion [com.glide.index_suggestion]	New	Suggest database indexes for slow queries.	**Activation**: Active.
Integration - Altiris 2.0 [com.snc.integration.altiris2]	Planned for deprecation in Release K	Provides one direction import of the Altiris data into the CMDB.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Knowledge Advanced [com.snc.knowledge_advanced]	New	This plugin adds advanced features to knowledge management. Please use Knowledge Advanced Installer plugin to activate.	**Activation**: Requires subscription

Plugin	Status	Description	Details
Knowledge Advanced Installer [com.snc.knowledge_advanced.installer]	New	Use this plugin to install the Knowledge Advanced plugin. When you activate/ upgrade this plugin, it will do validations on knowledge articles and knowledge bases to make sure that the Knowledge Advanced plugin can be successfully installed. If validation fails, look at the errors in the Plugin Activation Logs and follow instructions given to fix them. Once all the issues are fixed, please re-run this plugin to install Knowledge Advanced.	**Activation**: Requires subscription
Notification Preference User Interface [com.glide.notification.preference.ui]	New	Defines the user interface for the Notifications tab in the system settings menu.	**Activation**: Active.
Password Reset Windows App [com.glideapp.password_reset_desktop]	New	Provides password reset integration with Windows.	**Activation**: Requires subscription
Performance Analytics – Content Pack – Financial Management for Customer Service [com.snc.pa.fm.csm]	New		**Activation**: Requires subscription
Performance Analytics – Content Pack – Financial Management for Field Service Managmement [com.snc.financial_planning_pmo]	New		**Activation**: Requires subscription

Plugin	Status	Description	Details
Performance Analytics - Content Pack - Human Resources Scoped App [com.sn_hr_pa]	New	Provides Performance Analytics reports for Scoped HR. Activation of this plugin on production requires a PA Premium license. Contact ServiceNow for details.	**Activation**: Requires subscription
Performance Analytics – Content Pack – Project Portfolio Suite Dashboards [com.snc.pps_dashboards]	New		**Activation**: Requires subscription
Personal Task Management [com.flide.ui.m.pt]	Planned for deprecation in Release K		• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Problem Management Best Practice -- Jakarta [com.snc.best_practice.problem.jakarta]	New	Provides alignment with proven problem management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Random Watermark Support [com.glide.email.random_watermark]	New	Generate unpredictable watermarks, and enable matching on these watermarks in inbound emails.	**Activation**: Active for new instances.
Security Incident Response GRC Support [com.snc.security_incident.grc]	Planned for deprecation in Release K		**Activation**: Requires subscription

Plugin	Status	Description	Details
Security Incident Response Event Management support [com.snc.security_incident.itom]	Planned for deprecation.		• Not available for new deployments. • Replaced with Security Incident Response [com.snc.security_incident] and Event Management [com.glideapp.itom.snac].
Security Operations 'Have I Been Pwned?' Integration [com.snc.secops.pwned]	New	Provides the ability to submit Whois lookups on domain names and URLs to obtain context on URL observables, and to make better determination on threats. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.
Security Operations CrowdStrike Integration [com.snc.secops.crowdstrike]	New	Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.
Security Operations Elasticsearch Integration [com.snc.secops.elasticsearch]	New	Searches your Elasticsearch logs and adds relevant sighting information to your security incidents. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.

Plugin	Status	Description	Details
Security Operations Splunk Integration [com.snc.secops.splunk]	New	Searches your Splunk logs and adds relevant sighting information to your security incidents. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires ServiceNow personnel support.
Service Level Management Best Practice -- Jakarta [com.snc.best_practice.sla.jakarta]	New	Provides alignment with proven service level management ITIL practices.	**Activation**: Active for new Jakarta customers. Customers who upgrade from a previous release must request the plugin, because activating it could break existing customizations.
Service Portal User Criteria Support [com.glide.service-portal.user-criteria]	New	Enables Service Portal User Criteria support. Installing this plugin will create new user criteria records for each of your widgets and pages that already have role-based permissions on them.	**Activation**: Requires subscription
Software Asset Management [com.snc.software_asset_management]	Activation Change	Systematically tracked, evaluated and managed software licenses and software usage.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.

Plugin	Status	Description	Details
Software Asset Management - IBM PVU Process Pack [com.snc.sam.ibmpvu.pp]	Activation Change	Add-on to the Software Asset Management plugin that provided the capability to manage software that is licensed under the IBM Processor Value Units licensing model.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Software Asset Management - Oracle Process Pack [com.snc.sam.oracle.pp]	Activation Change	Add-on to the Software Asset Management plugin that provided the capability to manage software that is licensed under Oracle licensing model.	• Not available for new deployments. • **Activation**: Requires ServiceNow personnel support.
Software Asset Management Premium [com.snc.samp]	New	Manages your software assets by automatically normalizing, reconciling, and reclaiming software assets.	**Activation**: Requires subscription
Subscriptions and Activity Feed Framework [com.snc.activity_subscriptions]	New	This plugin provides a generic set of artifacts to handle subscriptions for any defined subscribable object. Any entity can be defined as a subscribable object and a set of subscribers can subscribe to the objects. When a event occurs related to the subscribable object, activities can be tracked and subscribers can be notified.	**Activation**: Requires subscription

Plugin	Status	Description	Details
Threat Feeds [com.snc.threat.feeds]	New	Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires subscription
Threat Intelligence Sharing Client [com.snc.intel_sharing.client]	New	Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	**Activation**: Requires subscription
Time Recording for Field Service [com.snc.wm_time_recording]	New	The time recording feature extends the functionality of the Time Card Management and Cost Management applications to Field Service Management. Field service agents record time worked on tasks and other activities. These time worked entries automatically create time cards and weekly time sheets. Managers can review and approve time sheets as well as view and create labor rate cards.	**Activation**: Requires subscription
UI11 [com.glide.ui11]	Planned for deprecation in Release K	Provided version 11 of the user interface.	**Replaced by**: UI15 and UI16.
Workflow Runtime Engine [com.glideapp.workflow]	Reduced functionality starting with Jakarta	Provided REST and SOAP Message Activities	**Replaced by**: Orchestration

Browser support

Browser support varies for each version of the user interface (UI). Most major browsers are supported.

Some features have additional browser requirements, which are noted in the appropriate documentation.

Browser versions listed in the following table are the latest public release at the time of testing.

Note: UI11 is in maintenance mode. Upgrade to UI15 or UI16.

Table 13: Browser support for each UI version

UI version	Chrome support	Firefox support	Internet Explorer support	Microsoft Edge support	Safari support	Tablet mobile browser	Phone mobile browser
UI16			11 and up • Edge mode is supported		9.1 and up	Supported	Not supported
UI15			11 and up • Edge mode is supported		9.1 and up	Supported	Not supported
Legacy: UI11			11 and up, however UI11 is in maintenance mode and does not work well with any version of IE • Edge mode is not supported		9.1 and up	Limited support	Limited support

Internet Explorer web browser notes

- Compatibility mode is not supported.
- Setting Security Mode to High (via **Internet Options** > **Security** tab) is not supported.
- Internet Explorer 11 is susceptible to memory leaks, which may impact performance, especially in Windows 7.
- In Jakarta and later, Internet Explorer versions prior to IE11 are no longer supported.

Safari web browser notes

- There is a security issue in some versions of Safari. User credentials may be disclosed to an unexpected site via auto-fill. For more information, see the *Apple security update*.

- Starting with Safari 9.1 and future versions of Safari, the leave page / stay on page pop-up message only displays once.

Exceptions to browser support

Certain applications and features in the Jakarta release have browser requirements that differ from the list of browsers generally supported by the ServiceNow platform.

Note: In Jakarta and later, Internet Explorer versions prior to IE11 are no longer supported.

Table 14: Platform browser exceptions

Platform features	Details
Accessibility release notes on page 4	Some keyboard shortcuts and tab-through are browser-specific. See your specific browser documentation for more information.
Dependency Views release notes on page 12	The Dependency Views module supports the latest version or service pack of the following browsers: • Firefox with the latest ESR • Chrome version 25 or later (latest version recommended) • Safari version 6 or later • Microsoft Internet Explorer (IE) version 9 or later
Automated Test Framework release notes on page 7	Automated Test Framework works with all browsers supported by the ServiceNow platform, but some browsers have features to throttle CPU time that can hamper automated test performance. For information on how to mitigate these issues, see *browser recommendations for ATF*.
Mobile release notes on page 15	Access the mobile web interface from the latest versions of the Safari or Chrome web browsers on your mobile device.
Notifications release notes on page 16	If you are using the Internet Explorer browser, you must use version 11 or greater to support user notification preferences in the System Settings window. You can also use any of the other *supported web browsers* .

Visual Task Boards release notes on page 28	• The latest public release of Firefox or Firefox ESR
	• The latest public release of Chrome
	• Safari version 9.1 and later
	• Internet Explorer version 11
	  • Edge mode is supported.
	  • Compatibility mode is not supported.
	  • Setting Security Mode to High (via the **Internet Options** > **Security** tab) is not supported.
	  • Internet Explorer 11 is susceptible to memory leaks, which may impact performance, especially in Windows 7.
	• Access Visual Task Boards on your mobile device using either a browser or the native mobile app. See *Mobile app supported devices* for more information.

Platform features	Details
User interface (UI) release notes on page 27	Embedding videos in Internet Explorer and Safari is not supported. Both browsers have difficulty streaming videos uploaded to the database. Attach a file rather than embedding if you intend to use one of these browsers or an unsupported file type.

Table 15: Business Management browser exceptions

	Details
Application Portfolio Management release notes on page 35	Internet Explorer version 10 and later.
Financial Management release notes on page 36	If you are using the Internet Explorer web browser, version 11 or later (including Microsoft Edge) is required to use all aspects of the workbench.
Project Portfolio Suite with Financials release notes on page 41	If you are using Internet Explorer, version 11 or later (including Edge) is required to use all aspects of the workbenches.

Table 16: IT Service Management browser exceptions

	Details
Service Portfolio Management release notes on page 82	Internet Explorer version 10 and later.

Accessibility and compliance

The instance includes features that support several specifications in the Web Content Accessibility Guidelines (WCAG) 2.0 to make the interface accessible to users with disabilities.

ServiceNow products are developed with the goal of adhering to the following accessibility guidelines and principles.

- Section 508 Amendment to the Rehabilitation Act of 1973
- Web Content Accessibility Guidelines (WCAG) 2.0 Level A

For details on accessibility improvements in the Jakarta release, refer to the *Accessibility release notes* on page 4.

ServiceNow products are tested with the following assistive technologies.

- *JAWS*
- *NVDA*
- *VoiceOver*

The Jakarta Web Content Accessibility Guidelines (WCAG) 2.0 document describes accessibility features and limitations.

Web Content Accessibility Guidelines (WCAG) 2.0

This page details the level of accessibility support for the Jakarta release, according to the Web Content Accessibility Guidelines (WCAG) 2.0.

W3C Recommendation 11 December 2008

Date: June 21, 2017

Product Name: ServiceNow Service Automation

Product Version Number: Jakarta

Vendor Company Name: ServiceNow

Vendor Contact Name: ServiceNow Compliance

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Table 17: Summary table

Guidelines	Level of Support & Supporting Features	Remarks and Explanations
Principle 1: Perceivable	Supports with exceptions	
Principle 2: Operable	Supports with exceptions	
Principle 3: Understandable	Supports with exceptions	
Principle 4: Robust	Supports with exceptions	

Principle 1: Perceivable - Information and user interface components must be presentable to users in ways they can perceive

Table 18: Guideline 1.1 Text Alternatives: Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols, or simpler language

Criteria	Level of Support & Supporting Features	Remarks and Explanations
1.1.1 Non-text Content: All *non-text content* that is presented to the user has a *text alternative* that serves the equivalent purpose, except for the situations listed below. (Level A)	Supports with exceptions	**Dependency Views (BSM map)**: Business Service Map: Map options inaccessible without mouse scroll wheel or track pad. Dependency graph structure is not conveyed to non-visual users. **Discovery**: .NET/ Flex application control inaccessible with assistive technologies. **Service Catalog**: Some images lack appropriate text alternatives. **Service Mapping**: Build Segment Hierarchy drag and drop inaccessible without mouse. Decorative calendar icons and Service Mapping arrow icons are missing alternative text. Map tooltips contents inaccessible with screen reader. Several unlabeled **0 buttons** on the Business Service Map Toolbar dashboard. **System Properties**: Reference lookup icons on the following system properties pages do not have the correct markup and are not treated as buttons. • **System** • **System**

Criteria	Level of Support & Supporting Features	Remarks and Explanations
1.2.2 Captions (Prerecorded): *Captions* are provided for all *prerecorded audio* content in *synchronized media*, except when the media is a *media alternative for text* and is clearly labeled as such. (Level A)	Not applicable	
1.2.3 Audio Description or Media Alternative (Prerecorded): An *alternative for time-based media* or *audio description* of the *prerecorded video* content is provided for *synchronized media*, except when the media is a *media alternative for text* and is clearly labeled as such. (Level A)	Not applicable	
1.2.4 Captions (Live): *Captions* are provided for all *live audio* content in *synchronized media*. (Level AA)	Not applicable	
1.2.5 Audio Description (Prerecorded): *Audio description* is provided for all *prerecorded video* content in *synchronized media*. (Level AA)	Not applicable	
1.2.6 Sign Language (Prerecorded): *Sign language interpretation* is provided for all *prerecorded audio* content in *synchronized media*. (Level AAA)	Not applicable	
1.2.7 Extended Audio Description (Prerecorded): Where pauses in foreground audio are insufficient to allow *audio descriptions*to convey the sense of the video, *extended audio description* is provided for all *prerecorded video* content in *synchronized media*. (Level AAA)	Not applicable	

Table 19: Guideline 1.3 Adaptable: Create content that can be presented in different ways (for example simpler layout) without losing information or structure

Criteria	Level of Support & Supporting Features	Remarks and Explanations	
1.3.1 Info and Relationships: Information, *structure*, and *relationships* conveyed through *presentation* can be *programmatically determined* or are available in text. (Level A)	Supports with exceptions	**Mobile**	Mobile pages contain multiple Level 1 headings.
		Project Management	Portfolio Workbench pages missing appropriate heading markup.
		Service Catalog	Some headings missing appropriate markup on Emerging Products and ITSM CORE Service Catalog
		Service Mapping	Incorrectly structured content Markup is missing or incorrectly used.
		Service Portal	Service Portal landing page contains multiple Level 1 headings.
		Survey Management	Questionnaire template components lack appropriate markup for lists
		UI components	Fiscal Calendar tables are used for layout purposes. Some headings missing appropriate markup in Fiscal Calendar Some headings missing appropriate markup on Example SLA Definitions page Some pop-out panels are not accessible to screen readers
1.3.2 Meaningful Sequence: When the sequence in which content is presented affects its meaning, a *correct reading sequence* can be	Supports with exceptions	**Service Mapping**	Service Mapping (ITOM) pages have unexpected focus order

Table 20: Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background

Criteria	Level of Support & Supporting Features	Remarks and Explanations
1.4.1 Use of Color: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. (Level A)	Supports with exceptions	**Dependency Views (BSM map)**: Dependency Views Map not accessible for color blind users. **Field Service Management**: My Schedule page for Field Service Management relies solely on color to convey information. **Survey Management**: Questionnaire Template Designer not accessible to color-blind users. **UI components**: Error messages indicated by color alone in Fiscal Calendar Some pages have links without underlining, making it difficult for color blind users to differentiate links from regular text.
1.4.2 Audio Control: If any audio on a Web page plays automatically for more than 3 seconds, either a *mechanism* is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. (Level A)	Not applicable	
1.4.3 Contrast (Minimum): The visual presentation of *text* and *images of text* has a *contrast ratio* of at least 4.5:1, except for the following: (Level AA)	Supports with exceptions	**Change Management**: Elements may not have sufficient color contrast **Knowledge Management**: Color contrast is insufficient **Mobile**: Some mobile pages have insufficient contrast ratio **Reporting**: Color contrast is insufficient throughout Reporting page elements are not honored in Windows **Service Mapping**: ITOM Service

Criteria	Level of Support & Supporting Features	Remarks and Explanations
1.4.5 Images of Text: If the technologies being used can achieve the visual presentation, *text* is used to convey information rather than *images of text* except for the following: (Level AA)	Not applicable	
1.4.6 Contrast (Enhanced): The visual presentation of *text* and *images of text* has a *contrast ratio* of at least 7:1, except for the following: (Level AAA)	Supports with exceptions	See 1.4.3
1.4.7 Low or No Background Audio: For *prerecorded audio-only* content that (1) contains primarily speech in the foreground, (2) is not an audio *CAPTCHA* or audio logo, and (3) is not vocalization intended to be primarily musical expression such as singing or rapping, at least one of the following is true: (Level AAA)	Not applicable	
1.4.8 Visual Presentation: For the visual presentation of *blocks of text*, a *mechanism* is available to achieve the following: (Level AAA)	Not supported	
1.4.9 Images of Text (No Exception): *Images of text* are only used for *pure decoration* or where a particular presentation of *text* is *essential* to the information being conveyed. (Level AAA)	Not applicable	

Principle 2: Operable - User interface components and navigation must be operable

Table 21: Guideline 2.1 Keyboard Accessible: Make all functionality available from a keyboard

Criteria	Level of Support & Supporting Features	Remarks and Explanations	
2.1.1 Keyboard: All *functionality* of the content is operable through a *keyboard interface* without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. (Level A)	Supports with exceptions	**Application Portfolio Management (APM)**	Bubble chart bubble right-click action is not accessible by keyboard Scalable Vector Graphics tooltips not accessible without keyboard and not readable by VoiceOver in Safari.
		Configuration Management Database (CMDB)	Many controls are skipped from the tab order in CMDB Query Builder The following controls are not part of the tab order: • Dashboard Menu - CI dashboard shows health reports at CI level • Timeline slider - CI dashboard shows health reports at CI level • Form controls - CI dashboard shows health reports at CI level • Graph bars - Relationship Dashboard • Refresh icon - Relationship Dashboard Unable to create connections on the canvas via keyboard in CMDB Query Builder Unable to move items onto canvas using only keyboard in CMDB Query Builder

view and export

Criteria	Level of Support & Supporting Features	Remarks and Explanations
2.1.3 Keyboard (No Exception): All *functionality* of the content is operable through a *keyboard interface* without requiring specific timings for individual keystrokes. (Level AAA)	Not supported	See 2.1.1

Table 22: Guideline 2.2 Enough Time: Provide users enough time to read and use content

Criteria	Level of Support & Supporting Features	Remarks and Explanations
2.2.1 Timing Adjustable: For each time limit that is set by the content, at least one of the following is true: (Level A)	Supports	
2.2.2 Pause, Stop, Hide: For moving, *blinking*, scrolling, or auto-updating information, all of the following are true: (Level A)	Supports	
2.2.3 No Timing: Timing is not an *essential* part of the event or activity presented by the content, except for non-interactive *synchronized media* and *real-time events*. (Level AAA)	Not applicable	
2.2.4 Interruptions: Interruptions can be postponed or suppressed by the user, except interruptions involving an *emergency*. (Level AAA)	Not applicable	
2.2.5 Re-authenticating: When an authenticated session expires, the user can continue the activity without loss of data after re-authenticating. (Level AAA)	Supports with exceptions	Support depends on customer customization. If the instance permits the user to use the **Remember me** flag on their sessions, the whole re-authorization process is entirely invisible.

Table 23: Guideline 2.3 Seizures: Do not design content in a way that is known to cause seizures

Criteria	Level of Support & Supporting Features	Remarks and Explanations
2.3.1 Three Flashes or Below Threshold: *Web pages* do not contain anything that flashes more than three times in any one second period, or the *flash* is below the *general flash and red flash thresholds*. (Level A)	Supports	
2.3.2 Three Flashes: *Web pages* do not contain anything that *flashes* more than three times in any one second period. (Level AAA)	Supports	

Table 24: Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are

Criteria	Level of Support & Supporting Features	Remarks and Explanations
2.4.1 Bypass Blocks: A *mechanism* is available to bypass blocks of content that are repeated on multiple *Web pages*. (Level A)	Supports with exceptions	**Dependency Views (BSM map)**: Question Template Designer landmarks are not identified by screen readers. **Survey Management**: Question Template Designer landmarks are not identified by screen readers.
2.4.2 Page Titled: *Web pages* have titles that describe topic or purpose. (Level A)	Supports	
2.4.3 Focus Order: If a *Web page* can be *navigated sequentially* and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability. (Level A)	Supports with exceptions	**Automated Test Framework**: Unexpected tab order in Glide Modal. User is allowed to tab to elements outside the modal. **Dependency Views (BSM map)**: CI search box not included in tab order Dependency Views pages contain several cases where the tab order behaves in unexpected ways. Focus does not center on Dependency Views Map Tab order on BSM does not follow logical order. Tab sometimes skips both vertical and horizontal tab on Dependency Views Map **Discovery**: Focus moves outside form after the list selections in Pattern Designer **Knowledge Management**: Article rating bar not accessible via keyboard with Chrome and Safari browsers **Lists**: Date/Time field in

Criteria	Level of Support & Supporting Features	Remarks and Explanations
2.4.5 Multiple Ways: More than one way is available to locate a *Web page* within a *set of Web pages* except where the Web Page is the result of, or a step in, a *process*. (Level AA)	Supports	
2.4.6 Headings and Labels: Headings and *labels* describe topic or purpose. (Level AA)	Supports with exceptions	**Dependency Views (BSM map)**: Settings button in Relationship Formatter do not have labels **Field Service Management**: Page and iFrame titles are not sufficient to describe content on Central Dispatch page
2.4.7 Focus Visible: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. (Level AA)	Supports with exceptions	**Service Mapping**: Focus indication is inadequate **UI components**: Focus for "Display Aging Report" is not adequate for in IE11 Focus indication is inadequate Focus indication is inadequate on global header Some pages have elements that are not visible to focus indicator Some pages contain elements with visible focus indicators that are inadequate, depending on the browser and whether high contrast mode is in use
2.4.8 Location: Information about the user's location within a *set of Web pages* is available. (Level AAA)	Supports with exceptions	Not available for all pages. Breadcrumbs and workflow ribbons allow user to jump back through pages where user must go from Page A to B to C.

Criteria	Level of Support & Supporting Features	Remarks and Explanations
2.4.9 Link Purpose (Link Only): A *mechanism* is available to allow the purpose of each link to be identified from link text alone, except where the purpose of the link would be *ambiguous to users in general*. (Level AAA)	Supports with exceptions	Not all links in the system have been evaluated against this criterion.
2.4.10 Section Headings: *Section* headings are used to organize the content. (Level AAA)	Not applicable	

Principle 3: Understandable - Information and the operation of user interface must be understandable

Table 25: Guideline 3.1 Readable: Make text content readable and understandable

Criteria	Level of Support & Supporting Features	Remarks and Explanations
3.1.1 Language of Page: The default *human language* of each *Web page* can be *programmatically determined*. (Level A)	Supports with exceptions	**Dependency views (BSM map)**: Default language is not tagged for some pages.
3.1.2 Language of Parts: The *human language* of each passage or phrase in the content can be *programmatically determined*except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text. (Level AA)	Supports with exceptions	See 3.1.1 **Note:** In cases where a language switch could occur within the same page, it happens because an end-user comments in a different language than what the viewer is currently set to.
3.1.3 Unusual Words: A *mechanism* is available for identifying specific definitions of words or phrases *used in an unusual or restricted way*, including *idioms* and *jargon*. (Level AAA)	Not supported	

Criteria	Level of Support & Supporting Features	Remarks and Explanations
3.1.4 Abbreviations: A *mechanism* for identifying the expanded form or meaning of *abbreviations* is available. (Level AAA)	Not supported	
3.1.5 Reading Level: When text requires reading ability more advanced than the *lower secondary education level* after removal of proper names and titles, *supplemental content*, or a version that does not require reading ability more advanced than the lower secondary education level, is available. (Level AAA)	Not supported	
3.1.6 Pronunciation: A *mechanism* is available for identifying specific pronunciation of words where meaning of the words, in context, is ambiguous without knowing the pronunciation. (Level AAA)	Not supported	

Table 26: Guideline 3.2 Predictable: Make Web pages appear and operate in predictable ways

Criteria	Level of Support & Supporting Features	Remarks and Explanations	
3.2.1 On Focus: When any component receives focus, it does not initiate a *change of context*. (Level A)	Supports with exceptions	**Reporting**	Unexpected behavior associated with autocomplete menus
3.2.2 On Input: Changing the setting of any *user interface component* does not automatically cause a *change of context* unless the user has been advised of the behavior before using the component. (Level A)	Supports with exceptions	**Survey management**	Properties dialog box in Questionnaire Templates Designer not accessible by keyboard.

Criteria	Level of Support & Supporting Features	Remarks and Explanations
3.2.3 Consistent Navigation: Navigational mechanisms that are repeated on multiple *Web pages* within a *set of Web pages* occur in the *same relative order* each time they are repeated, unless a change is initiated by the user. (Level AA)	Supports with exceptions	Consistent as long as user is navigating the UI within the frameset at all times.
3.2.4 Consistent Identification: Components that have the *same functionality* within a set of *Web pages* are identified consistently. (Level AA)	Supports with exceptions	**Password Reset Application**: Password reset: Some headings are missing the appropriate markup **Reporting**: Report designer does not use appropriate heading markup
3.2.5 Change on Request: *Changes of context* are initiated only by user request or a *mechanism* is available to turn off such changes. (Level AAA)	Supports with exceptions	**Core platform**: Some headings are missing the appropriate markup

Table 27: Guideline 3.3 Input Assistance: Help users avoid and correct mistakes

Criteria	Level of Support	Remarks and Explanations
3.3.1 Error Identification: If an *input error* is automatically detected, the item that is in error is identified and the error is described to the user in text. (Level A)	Supports	
3.3.2 Labels or Instructions: *Labels* or instructions are provided when content requires user input. (Level A)	Supports with exceptions	**Automated Test Framework**: Fields using CodeMirror are not compatible with screen readers. **Configuration Management Database (CMDB)**: Some actions that cause a change to the UI don't announce that the changes occurred in CMDB Query Builder **Dependency Views (BSM map)**: Form controls are labeled incorrectly On clicking **Expand** and **Collapse** of Dependency Views Map, user is not informed of change **Discovery**: No notification of the new information upon save, delete or publish in Pattern Designer **Service Mapping**: Service Mapping View Map form controls are not correctly labeled **Survey Management**: Configuration and Availability panels for admin users do not have appropriate labels Instructions for WYSIWYG editor in Questionnaire Templates Designer is not accessible to assistive technology. **UI components**: Required or invalid fields are not indicated in an accessible way There is no visible label for the toggle

Criteria	Level of Support	Remarks and Explanations
3.3.3 Error Suggestion: If an *input error* is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content. (Level AA)	Supports with exceptions	Not all input error messages provide suggestions for correction.
3.3.4 Error Prevention (Legal, Financial, Data): For *Web pages* that cause *legal commitments* or financial transactions for the user to occur, that modify or delete *user-controllable* data in data storage systems, or that submit user test responses, at least one of the following is true: (Level AA)	Supports	Supported out of the box. Customization may affect support.
3.3.5 Help: *Context-sensitive help* is available. (Level AAA)	Supports with exceptions	A number of context-sensitive help features are available in the platform.
3.3.6 Error Prevention (All): For *Web pages* that require the user to submit information, at least one of the following is true: (Level AAA)	Supports	Supported out of the box. Customization may affect support.

Principle 4: Robust - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies

Criteria	Level of Support	Remarks and Explanations
4.1.1 Parsing: In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features. (Level A)	Supports with exceptions	**Knowledge Management**: Parsing errors that can hinder assistive technologies are present **Service Mapping**: Parsing errors that can hinder assistive technologies are present The slider widget within the Service Mapping (ITOM) section of the website is not fully operable using the keyboard **UI components**: IDs on some UI pages are not unique which can cause problems for assistive technologies when they are trying to interact with the page
4.1.2 Name, Role, Value: For all *user interface components* (including but not limited to: form elements, links and components generated by scripts), the *name* and *role* can be *programmatically determined*; states, properties, and values that can be set by the user can be *programmatically set*; and notification of changes to these items is available to *user agents*, including *assistive technologies*. (Level A)	Supports with exceptions	**Assessments**: Voice Over selects input content instead of input of admin role's Survey Designer configuration page when using Chrome on Mac. **Connect**: In Connect, screen readers announce placeholder text in the conversation filter and the message field. In Connect, some tooltips are not accessible via keyboard. **Dependency views (BSM map)**: Map Settings are not marked up appropriately for assistive technology. Saving success message is not

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