



VOSS

Release and Upgrade Notes for VOSS Automate 21.4-PB5

Release 21.4-PB5

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Release Overview

These are the official release notes for:

- Product: VOSS Automate
- Release Version: 21.4 Patch Bundle 5

Highlights

Release 21.4 PB5 is the fifth Patch Bundle release for the 21.4 release and contains the following highlights and enhancements:

2.1 Microsoft Exchange Integration for User Onboarding and Offboarding

This release delivers [enhanced Microsoft Exchange user mailbox integration](#) to expand the scope of user mailbox settings that can be managed as part of subscriber MACDs (move, add, change, delete), allowing admins to manage a range of additional mailbox settings. VOSS Automate supports the provisioning of user mailbox settings as part of onboarding and offboarding using Quick Subscriber and Quick Offboard Subscriber. Support for Exchange has been streamlined to include automation that addresses high-volume use cases, saving time and effort for previously unsupported scenarios.

Exchange settings can now be seamlessly configured during user setup, and are automatically adjusted when a user is offboarded. When onboarding, [Automate Quick Add Subscriber](#) seamlessly stamps mailboxes with templated settings to update Exchange. When offboarding, Exchange settings are automatically adjusted. For example, an offboarded user's mailbox can now be automatically converted to a shared mailbox, allowing admins continued access to that mailbox even if the user's license is no longer available and their mailbox is purged. Retention policies, email forwarding settings, automatic replies, mailbox archiving, and custom attributes can now be included in the automated integration templates and workflows, and can be managed in Automate. Custom attributes can also be used for filtering in a sync. Automate also ships with example templates that can be used with Exchange mailboxes for onboarding or offboarding.

This integration complements Automate's support for other Microsoft services to provide admins with a cohesive experience.

2.2 Enhanced Microsoft Entra Sync Controls and Settings

This feature delivers more granularity and control for providers and enterprises around key use cases, enabling further automation benefits in a Microsoft environment:

- Partitioning of the tenant data in the system - easier to separate pools of users out of the overall tenant into different hierarchies in Automate for administration domains, such as divisions or agencies.
- Providing additional mechanisms to identify a subset of users to sync into the system, for example, when a provider is only managing part of the Tenant, or in an Enterprise when an IT Team only has responsibility for some agencies or divisions within the organization.
- Additional user data, which can be used for driving Auto Move and Flow through Provisioning logic. For example, to identify a site to move the user to, or a profile to apply during automated onboarding.

We've extended support on the Microsoft user record to include the extended attributes, and include support for custom attributes. This provides a wide range of extra settings to use across syncs, moves, and flow through. You can apply [model instance filters](#) on these fields to filter your syncs so that only users matching the criteria you define - for example, users with extendedattribute5 value of "VOSS Managed". Additionally, you can use the fields in your [model filter criteria](#) for moving users and for initiating onboarding through flow through provisioning. For instance, you could have a custom attribute containing the user type/profile to the user for onboarding to match the appropriate services for automated onboarding. Find out more around the setup and suggested use cases for this feature in the [Best Practices Guide](#).

2.3 Simplified License Audit Reporting

Automate 21.4-PB5 improves the VOSS Automate license audit process so that it's easier to understand and provides greater visibility of license consumption from within the Admin Portal. You'll be able to see two views of the license information - an overall license count by hierarchy (same as the file), and you can see which users in the system are consuming a license. The license count and user consumption is updated daily so that you have regular access to this information, instead of just once a month. Automate's user management view also makes it easier to see all of a user's related services, providing clarity around why a user is or is not consuming a license. Additionally, the format of the generated monthly audit file is far simpler, and uses the already calculated values visible via the GUI. This means that the file is simply a reporting mechanism to VOSS rather than a primary means of viewing your license consumption (as was previously the case). You can find out more about this feature in the [Licensing and Subscriber Data Export Guide](#)

2.4 Optional Decoupling from Cisco HCM-F

This release allows you to decouple Automate from Cisco HCM-F. By installing an optional patch after completing the upgrade to 21.4-PB5, you can remove all HCM-F data Automate. Once installed, any further provisioning from Automate - for example, of entities such as Customers, Sites, and CUCM/CUCxn clusters - will no longer provision the data to or from Cisco HCM-F.

Existing data on the Cisco HCM-F as well as license integration with the UC Apps won't be affected. For installation details, refer to the guide, [MOP-VOSS-1094-21.4-PB5_patch.pdf](#), available in the Download directory for the patch.

2.5 Enhanced Layouts for Cisco Subscriber Management

We've improved the user experience for Cisco-only Subscriber Management to enable the user of the specific list view as well as the custom subscriber details layout. If you're only using Cisco UC, this means you now have the option for a customized, Cisco-specific list view combined with the card-based service layout when choosing a user to view their details. This provides the best overall user experience and is the recommended path for Cisco-only customers who aren't leveraging the Multi Vendor Subscriber feature.

By default, as part of the upgrade, if you're using "relation/Subscriber" in your current menu setup (for the custom list view), then when selecting a user you'll see the card-based service layout instead of the classic detailed view. If you wish to retain the classic detailed subscriber view, you can change your menus and landing pages to access the "Cisco Advanced Subscriber" view. For more details on the setup, see the [Automate documentation](#).

2.6 Streamlined Overbuild

This release provides additional options for overbuild of Microsoft environments to ensure the process minimizes the time and effort to realize the benefits of automation. In many cases it's known where numbers belong in the hierarchy due to geographical or emergency purposes, so we've added the ability to move users to a site based on their assigned number. In this case, it will use the hierarchy of the number in the inventory to determine where the user assigned that number should be moved. This provides another mechanism to determine the move logic where traditional location data in Microsoft Entra ID is typically not accurate or useful - for example, "City".

2.7 Improved Webex Management

- New summary attributes have been added for updating device/spark/User in a number of Webex models, including device/spark/Location, device/spark/WorkspaceLocation, and device/spark/HuntGroupupdate. As a result, you'll have more information for the user in Automate than in Webex Control Hub, for example, you'll be able to see which Webex users have associated work numbers. We can now also add in a user's address and region details, and their first and last name.
- The Number Inventory Audit workflows now support Webex App Calling to ensure these numbers have their correct `status` set in in Automate.

2.8 Small Enhancements and Bug Fixes

In addition to the new features and enhancements in this release, we've added several small enhancements, included a number of bug fixes, and implemented a number of usability improvements to the Admin Portal. You can find further details, including links to the relevant topics, at [What's New by Feature](#).

Release Details

Delta Platform
Version : 21.4.5
Build Number : 4731
Platform Version : 21.4.5-1711462034
Release Date: 26.03.2024

Supported Upgrade Path

The supported upgrade paths for this Patch Bundle Upgrade is:

- 21.4 => 21.4-PB5
- 21.4-PB1 => 21.4-PB5
- 21.4-PB2 => 21.4-PB5
- 21.4-PB3 => 21.4-PB5

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- 21.4-PB4 => 21.4-PB5

Application Compatibility

Refer to the [Compatibility Matrix](#) for all app compatibility and browser support.

Important Information

- For release 21.5-PB5, Multivendor environments using the `data/MultivendorUsernameMappingMacros` model *at a hierarchy below ``sys`` level*, require an additional update. High level administrators with access to this model should ensure instances are updated accordingly. For detailed changes required, refer to the *Important* note in the **Configure Microsoft Tenant Connection Parameters** topic of the Core Feature Guide.

- From release 21.4-PB4 onwards, the number format in the VOSS Automate Internal Number Inventory (INI) is with prefix: \+, including a leading slash \ when the INI is in E164 format.

Verify that entries in the **Internal Number** column of the Number Inventory - also Webex Calling numbers - follow this format.

- The only supported version of Microsoft PowerShell Proxy is 5.6.0. Any earlier versions must be upgraded when upgrading to Release 21.4 PB4 and up.
- When upgrading to release 21.4-PB1 or above, all communication between VOSS Automate and the Windows PowerShell Proxy defaults to HTTPS, requiring existing configurations to be updated.

The port used for secure communication is TCP 5986 instead of TCP 5985, which is used for insecure HTTP.

For existing PowerShell configurations with transport over HTTP, the driver parameter, `winrm_transport`, can be set to `plaintext` and can be manually added to the `data/MSTeamsOnline` instance to ensure backward compatibility temporarily.

Reverting back to insecure communication is only recommended as a temporary measure while the PowerShell Proxy is being configured for secure communication. Switching to secure communication must form part of the upgrade planning process.

- Contact VOSS support to assist in the reconfiguration of your winrm driver to insecure mode if required

- Add a configuration command to WinRM on the PowerShell Proxy:

```
Set-Item -path WSMan:\localhost\Shell\IdleTimeout -Value '1800000'
```

For details, refer to the *Post-upgrade Steps for Microsoft Environments* step in the *Method of Procedure (MOP) for 21.4 Patch Bundle 5 Installation* and the *Windows Remote Management (WinRM) Service* topic in the Core Feature Guide.

- Customers who wish to install or enable FIPS that supports Ubuntu Pro should upgrade to release 21.4-PB4.
- Two key features in Automate 21.4 require specific planning:
 - Admin portal evolution and the deprecation of the Business Admin Portal
 - VOSS Automate license enforcement

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- SSO Identity Provider configurations that set the Relay State parameter to `/portal` must be updated to make use of `/portal/` (including the trailing slash).

Upgrade Overview

There are a number of changes in a new release that could relate to exposing new features or capabilities in the system. The default, out-of-the box system would expose these. However, on a system where the configuration around the user experience has been applied, this might mean some changes to configured menus, display policies, and so on to expose the new features in your setup.

If you've customized any role-based access control (RBAC) elements (that is, other than default elements at sys/hcs level), such as custom menus, field display policies (FDPs), and access profiles, it is strongly recommended to review these for potential impacts due to the introduction of new or modified models and settings in the new release.

Where relevant, we have included this information with the feature information to assist in planning for configuration changes as part of the upgrades, for example, new or deprecated models. This setup could vary.

Important: When upgrading to release 21.4-PB5, refer to the detailed steps in the *Method of Procedure (MOP) for 21.4 Patch Bundle 5 Installation*.

Note: For release 21.4-PB4 a new upgrade note has been added:

EKB-17625: Change the Refresh action on Multi Vendor Subscriber to be a non-cached GET. This enhancement now updates (refreshes) local data from external data sources in Multi Vendor Subscriber, when refreshing via the Refresh quick action.

Upgrade Notes - EKB-17625

Access Profiles

Review and remove all access profiles for permissions to the following model type - used for the **Refresh** Quick Action:

`view/UpdateUserDetailsSubscriber`

In all access profiles, add access profiles permissions to the model type:

`view/MVS_Refresh`

Upgrade Notes - VOSS-1261

For Licensing version 5.0.0, a simpler license audit logic is implemented. For details, refer to the Licensing and Subscriber Data Export Guide.

Upgrade/install to Release 21.4-PB5 will change the system to use the new Licensing version 5.0.0 audit method. The calculation of the licenses is run on its own schedule *separate from writing the file*. Calculation runs daily 1AM UTC. This ensures the current license consumption can be viewed in the system at any time. The calculation can also be run manually via CLI as needed outside the schedule – with the option to choose a hierarchy to run it for (e.g just part of the system) - refer to the “License Counting process commands” section in the Licensing and Subscriber Data Export Guide.

A schedule also runs to build and write the data export file on a monthly basis as before, after the latest calculation is run. This schedule runs monthly at 3AM UTC.

The file handling will work as per old file as setup today – build the file and send the file based on the delivery configuration.

License consumption can now be viewed in the portal from the **About > License Counts** menu – per latest calculation run. The model is `data/LicenseAuditCounts` - showing an overall view of license consumption per customer with the counts per user. This is also shown on the **User** menu (`data/User`) as a field – both in list view or when viewing an individual user. It is therefore easy to see if a user in the system is consuming a VOSS license and the `data/User` page should show why, as you can see the linked services.

Features: Summary

6.1 Automate Admin GUI

- *EKB-19308*: Add summary header in GUI rule for device/cucm/PhoneButtonTemplate.
- *EKB-18590*: Set focus to be on Filter field when opening Organization Selector.
- *EKB-17614*: Add ability to display fieldsets in panels.
- *EKB-16260*: Change relation/Subscriber to show MultiVendorSubscriber layout on form open.

6.2 Automate Core

- *VOSS-1363*: Add additional file in License audit zip that includes the count of Microsoft license usage.
- *VOSS-1313*: Enhance Filtering option for logic to determine Microsoft users to sync and move.
- *VOSS-1261*: Implement Simpler License Audit Logic Across the Insights and Automate Products.
- *EKB-19074*: Increase Generic Driver Maximum Device API Response from 9MB to 100MB.

6.3 Automate Templates

- *VOSS-1314*: Extended Exchange User mailbox management and onboarding/offboarding scenarios.
- *EKB-9361*: Allow input of custom values for Online PSTN Gateway List field in Microsoft Voice Routes.
- *EKB-19517*: Webex Location Queue - Field name change - sendToVoicemailEnabled > destination-VoicemailEnabled.
- *EKB-19489*: Check PowerShell session availability after connection.
- *EKB-19380*: Update Webex Location Calling Details fails for PSTN Access Network Info (pAccessNetworkInfo) and Connection settings.
- *EKB-19325*: Add Spark User (device/spark/User) fails - displayName required by the Webex API.
- *EKB-19155*: Create a model type list to exclude device/cuc/ImportUser.
- *EKB-19137*: Add "Location Name" field to Webex devices.
- *EKB-19098*: Remove UserMailbox from MicrosoftSubscriber relation.
- *EKB-19075*: The Number Inventory audit stops when it encounters a duplicate number.
- *EKB-19056*: Move Microsoft user during sync/overbuild based on the hierarchy of their assigned number.
- *EKB-19026*: Update FDP for relation/SparkUser.
- *EKB-19022*: Update FDPs for relation/MultiVendorSubscriber.
- *EKB-19014*: Update FDPs for relation/User.
- *EKB-18991*: Update FDPs for device/msteamsonline/CsOnlineUser.
- *EKB-18837*: Update summary attributes for Webex models.
- *EKB-18796*: Allow the Webex Bulk Action tool to execute at Intermediate and Site hierarchies.
- *EKB-18788*: Update MVS-WebexApps-LP and MVS-EnhancedProviderAdmin-AP.
- *EKB-18787*: Update FDP for relation/MicrosoftSubscriber.
- *EKB-18746*: Add Microsoft PowerShell driver parameter for setting the Temp directory path.
- *EKB-18736*: Update FDP for CsTeamsMeetingPolicy.
- *EKB-18673*: Update the Webex device and workspace models to accommodate Cisco's API breaking change on Feb 2nd, 2024.
- *EKB-18365*: Support spaces in DisplayName for Exchange shared mailboxes.
- *EKB-17952*: Template work to handle additional Exchange settings.
- *EKB-17836*: Number inventory audit, include Webex Calling Hunt Groups, Pickup Groups, etc.
- *EKB-17693*: Implement mechanism to kill persistent PowerShell sessions to avoid cascading failures.
- *EKB-14978*: Implement complete license checking logic in Microsoft Quick Subscriber to ensure accurate onboarding or staging messages.

Features: Detail

7.1 Automate Admin GUI

- **EKB-19308: Add summary header in GUI rule for device/cucm/PhoneButtonTemplate.** This enhancement improves the display of Unified CM Phone Button Templates in the Admin Portal.
- **EKB-18590: Set focus to be on Filter field when opening Organization Selector.** This enhancement now allows focus on the filter input of the Hierarchy popup when opened.
- **EKB-17614: Add ability to display fieldsets in panels.** This enhancement now allows for the ability to include fieldsets within groups in field display policies.
- **EKB-16260: Change relation/Subscriber to show MultiVendorSubscriber layout on form open.** This feature changes the behavior of the existing Subscriber feature, relation/Subscriber, to show the new MultiVendorSubscriber layout on form open in the Admin Portal. This change does not affect the Classic Admin. A new relation/CiscoSubscriber model type has also been added to retain the existing advanced view of the Cisco Subscriber on form open. This new relation/CiscoSubscriber model type will need to be added to the relevant menus. Both relation/Subscriber and relation/CiscoSubscriber will use the same Access Profile permission granted to relation/Subscriber. Its not possible or required to add relation/CiscoSubscriber to the Access Profiles. There is no change to the API or BulkLoaders so any Bulk Loaders for relation/Subscriber will continue to function and should not be changed to relation/CiscoSubscriber. Any API integrations with relation/Subscriber will continue as before and should not be changed to relation/CiscoSubscriber.

7.2 Automate Core

- **VOSS-1363: Add additional file in License audit zip that includes the count of Microsoft license usage.** This allows system administrators to generate a report, which details the license usage for Microsoft-enabled users.
- **VOSS-1313: Enhance Filtering option for logic to determine Microsoft users to sync and move.** Provides support for syncing extended attributes and custom attributes from Entra as part of the O365 syncs. These additional fields can be used for filtering which users are pulled into Automate giving additional flexibility where partial tenant syncing or partitioning is required. Additionally, the fields are also available to the auto move and flow through provisioning logic giving further flexibility and control over those processes to fit your needs.
- **VOSS-1261: Implement Simpler License Audit Logic Across the Insights and Automate Products.** Provides a simpler audit process while improving visibility of the license consumption via the admin portal.
- **EKB-19074: Increase Generic Driver Maximum Device API Response from 9MB to 100MB.** Increases Generic Driver Maximum Device API Response from 9MB to 100MB to avoid an error when importing large MS Graph Tenants “[device/msgraph] External response exceeded memory limit”.

7.3 Automate Templates

- **VOSS-1314: Extended Exchange User mailbox management and onboarding/offboarding scenarios.** This feature expands our Exchange management capabilities to incorporate additional User Mailbox settings. It also integrated the mailbox settings into the onboarding and offboarding features to enabled the deployment of templated settings automatically within those processes.
- **EKB-9361: Allow input of custom values for Online PSTN Gateway List field in Microsoft Voice Routes.** This enhancement updates device/msteamsonline/CsOnlineVoiceRoute, allowing the ability to add a new list at the Online PSTN Gateway List drop-down.
- **EKB-19517: Webex Location Queue - Field name change - sendToVoicemailEnabled > destinationVoicemailEnabled.** The Webex API value for sendToVoicemailEnabled is being changed to destinationVoicemailEnabled. The schema and jinja templates have been updated in the course of this work to use the new value.
- **EKB-19489: Check PowerShell session availability after connection.** This enhancement improves the handling of busy PowerShell sessions.
- **EKB-19380: Update Webex Location Calling Details fails for PSTN Access Network Info (pAccessNetworkInfo) and Connection settings.** This enhancement updates the configuration template and workflow, and adds conditional checks to verify supported countries and existing connections.
- **EKB-19325: Add Spark User (device/spark/User) fails - displayName required by the Webex API.** This enhancement updates the device/spark/User schema and the GUI rules (for relation/SparkUser and Webex QAS) to set the displayName.
- **EKB-19155: Create a model type list to exclude device/cuc/ImportUser.** This enhancement adds a default model type list ("CUCXN Exclude ImportUser"), which can be used to exclude the "devic/cuc/ImportUser" model. This should be used on Cisco Unity Connection data syncs.
- **EKB-19137: Add "Location Name" field to Webex devices.** This enhancement adds support for a "Location Name" (locationID) field for Webex devices.
- **EKB-19098: Remove UserMailbox from MicrosoftSubscriber relation.** This enhancement removes the UserMailbox model from the MicrosoftSubscriber relation to improve performance.
- **EKB-19075: The Number Inventory audit stops when it encounters a duplicate number.** Improves the robustness of Number Audit feature for certain Microsoft use-cases (to skip instead of failing and rolling back when it encounters a duplicate number).
- **EKB-19056: Move Microsoft user during sync/overbuild based on the hierarchy of their assigned number.** This enhancement adds the ability to move Microsoft user data to a site based on their assigned LineURI matching with the number inventory in Automate.
- **EKB-19026: Update FDP for relation/SparkUser.** This enhancement adds extra field names under Account Details & Calling Type for relation/SparkUser, updates the Roles title name to "Roles & Address", and adds new field names.
- **EKB-19022: Update FDPs for relation/MultiVendorSubscriber.** This enhancement updates two FDPs for relation/MultiVendorSubscriber, MultiVendor_MS_Only_FDP and MultiVendorFDP, to expose additional fields and add field overrides to disable fields.
- **EKB-19014: Update FDPs for relation/User.** This enhancement updates the field order in the field display policies (FDPs) for relation/User.
- **EKB-18991: Update FDPs for device/msteamsonline/CsOnlineUser.** This enhancement re-orders the field names and override fields to update the device/msteamsonline/CsonlineUser FDPs.

- **EKB-18837: Update summary attributes for Webex models.** This enhancement adds missing summary attributes to update device/spark model. Added in device/spark/Location, device/spark/WorkspaceLocation, device/spark/HuntGroup the Summary attribute migration.
- **EKB-18796: Allow the Webex Bulk Action tool to execute at Intermediate and Site hierarchies.** This enhancement updates the Webex Bulk Action Tool (view/WebexBulkActions) to allow it to now also execute at the Intermediate hierarchy and the Site hierarchy. Previously, this tool was only able to execute at the Customer hierarchy.
- **EKB-18788: Update MVS-WebexApps-LP and MVS-EnhancedProviderAdmin-AP.** This enhancement refactors the MVS-WebexApps-LP and adds missing permissions to the MVS-EnhancedProviderAdminAP.
- **EKB-18787: Update FDP for relation/MicrosoftSubscriber.** This enhancement reorders the field names to update the relation/MicrosoftSubscriber field display policy (FDP).
- **EKB-18746: Add Microsoft PowerShell driver parameter for setting the Temp directory path.** This enhancement fixes an issue where the Powershell script had not been completely created on the Windows server. An investigation found that the process of chunking the encoded script and writing it via WinRM caused the last chunk to be too large. As a result, the “%Temp%” value had expanded to the full path of the service account’s temporary folder on the Windows server. The resolution was to update the “AddModMSTeamsConnParams” configuration template to specify this path manually in the driver parameters.
- **EKB-18736: Update FDP for CsTeamsMeetingPolicy.** This enhancement adds extra fields to update the default field display policy (FDP) for Microsoft Meeting Policy.
- **EKB-18673: Update the Webex device and workspace models to accommodate Cisco’s API breaking change on Feb 2nd, 2024.** This enhancement adds the “legacy=true” flag to Webex Workspace and Devices device model drivers to accommodate an API change that Cisco implemented on February 2nd, 2024.
- **EKB-18365: Support spaces in DisplayName for Exchange shared mailboxes.** This enhancement adds support for spaces in email display names in Microsoft Exchange when creating shared mailbox types (Shared Mailbox, Rooms, and Distribution Group).
- **EKB-17952: Template work to handle additional Exchange settings.** This enhancement adds support for additional fields for User Mailbox and Shared Mailbox.
- **EKB-17836: Number inventory audit, include Webex Calling Hunt Groups, Pickup Groups, etc.** This enhancement adds support for Webex App Calling numbers into the Number Audit feature.
- **EKB-17693: Implement mechanism to kill persistent PowerShell sessions to avoid cascading failures.** This enhancement adds PowerShell error handling to remove pssession and retry when session has broken connection to Microsoft Teams cloud.
- **EKB-14978: Implement complete license checking logic in Microsoft Quick Subscriber to ensure accurate onboarding or staging messages.** This enhancement ensures the transaction will never fail when running Quick Subscriber to license a Teams user, or when assigning services or license-specific numbers (such as Calling Plan numbers). Instead, the system will attempt to license the user based on the configuration templates in the Quick Add Group, either directly licensing the user, or via group membership. If unsuccessful, the user’s record is placed into staging, which will periodically attempt to sync the user’s license from the MS Entra ID Cloud, and continue the provisioning of license-specific features. Additionally, you can use Quick Subscriber to license and assign numbers to resource accounts. This is currently a three step process. First, the resource account is created, then the MSOL user is synced in for the new resource account, and finally, the new MSOL user is processed through Quick Subscriber to assign it a license, number, and policy settings.

Defects Fixed: Detail

8.1 Automate Admin GUI

- **EKB-19154: Cannot search and select an instance when there are more than 1000 instances in the initial drop-down.** Fixes an issue where using the magnifying glass icon to perform a ‘Starts With’ search was not allowing selection of the found instance if the instance was beyond the initial 1000 instances.
- **EKB-19120: In the Classic Admin, Call Handler Greeting does not show options for “After Greeting” action.** Fixes an issue where the options for “After Greeting” were not displaying correctly in the Classic Admin GUI on a Call Handler. The resolution was to replace the referenced macro.
- **EKB-19101: The Date Picker in device/msteamsonline/Holiday is not showing the time.** Fixes an issue where the date-time picker for device/msteamsonline/holiday was allowing a start and end date to be selected but not a start and end time. The resolution adds a time picker to the field, which allows selecting time in 15 minute intervals.
- **EKB-19087: Adding Member to Line Group on Hunt Group using “Add row” option opens two modals.** Fixes an issue where adding to an empty form table was doubling the lines added.
- **EKB-18850: Multi Vendor Subscriber details page not showing FeatureTypes and Licenses correctly.** Fixes display issues for “FeatureTypes” and “LicenseSummary” on the Multi Vendor Subscriber page.
- **EKB-18703: On a list, the option to remove multiple filters at once is no longer available.** This fix re-enables the ability to clear all list filters.

8.2 Automate Core

- **EKB-19420: Driver param overrides max_api_response_size & max_rendered_template_size do not work.** Fixes an issue where the Microsoft driver overrides for “max_api_response_size” and “max_rendered_template_size” were not taking effect.
- **EKB-19217: Adding a single Spark User triggers import of all users.** The fix was to update the code to ensure that the workflow sync step now only syncs the specified record, even if the device model does not implement filtering.
- **EKB-19102: Escape regex reserved characters in apply_filter regex search.** Fixes an issue where, when a filter value contained a regex reserved character, the regex was failing. The resolution removes string escaping and allows for the usage of regex reserved characters in filter values.
- **EKB-19078: Data Sync incorrectly shows the disable operation, “Remove”, as checked (enabled).** Fixes an issue in the GUI where the “Remove” option was always set to ‘False’ (disabled) regardless of the value set for this operation in the database. The resolution was a code update to always take the value from the database if a model instance filter is set on the data sync.
- **EKB-19063: In a multi vendor Microsoft Teams sync, the user sync source swaps between MS365 and LDAP.** Fixes an issue where, when the buildout contains LDAP-synced users that are synced with MS365/Azure and MSTEams, when an update was coming from MS365/Azure and MSTEams data syncs, the relation/User instance’s sync source would change from LDAP to MS_365 and the username would update to the UserPrincipalName.
- **EKB-19042: SyncMSTEamsOnline failure - “Macro function arguments error - This second argument must be a list”.** This fix allows successful sync of external users from Microsoft tenants.

- **EKB-18959: Importing Webex Location using Model Instance Filter with In condition doesn't work.** Fixes an issue with the application of filters to update candidates during a sync. Previously only "equals" filters worked for Webex Teams device models but now other types of filters are supported as well.
- **EKB-18917: LDAP user sync fails when username mapping is set to "mail".** Fixes an issue where importing LDAP users was failing when the User Field Mapping for username was set to a value that differed from the default value of "sAMAccountName", for example, "mail".
- **EKB-18769: Improve PowerShell logging when encountering race condition.** This fix improves the logging of PowerShell sessions in generic driver PowerShell scripts to assist with troubleshooting when encountering the race condition. The issue was found to occur where an unusable session was being selected when a race condition was present. To resolve this issue, the logging has been improved so that its possible to verify whether a race condition is present.
- **EKB-18763: Generic driver looping action should not execute if the loop_var is not found in the context.** This fix is to now only run generic driver model looping actions if the loop variable is found in context.
- **EKB-18657: Oracle device model reauthenticate on update is broken.** Fixes the reauthentication feature for Oracle device models.
- **EKB-18656: Unable to sync in users with eDirectory LDAP server.** This fix introduces support for eDirectory LDAP server using GUID as primary key.
- **EKB-18644: Improve performance of context sanitizing for generic driver models at scale.** This fix improves the performance of generic driver models.
- **EKB-18621: Http and https proxy not used for when connecting to Webex Control Hub.** Fixes an issue where http and https proxy URLs are not resolved correctly from the associated Webex Control Hub configuration.
- **EKB-18570: Generic driver device models using loop_var feature are very slow at scale.** This fix improves the import performance of certain Microsoft and Webex models, such as Microsoft Teams device/msgraph/Teams, when performed at scale.
- **EKB-18535: Previously used "Search Mode" persists browser logout but not browser restart.** This fix adds search mode to local storage.
- **EKB-18503: Sync for LDAP user ignores filters for updates.** Fixes an issue where configuring a Data Sync with a Model Instance Filter did not match the instances in the Model Instance Filter correctly resulting in unmatched instances being imported when there were updates done to the data on the external device eg: LDAP Users.
- **EKB-18459: SSO login results in a white screen after 21.4PB4 upgrade.** Fixes an issue where SSO login redirects to a blank page, due to redirecting to /portal instead of /portal/ (with trailing slash).
- **EKB-18323: Add Cisco ATA 191 Device fails: Unknown type 'float' for validator on CUCM 14.0 SU3.** This fix substitutes unrecognized 'float' type with 'number type' in JSON schemas.

8.3 Automate Phone Based Registration

- **EKB-19583: PBR Phone Service requires restart for certain Phones.** Fixes an issue where a PBR service restart is required when certain phone types are using Corporate Directory lookups.

8.4 Automate Platform

- **EKB-18946: Improve memory consumption of large MS Teams sync.** This fix improves high memory usage during Microsoft Teams sync.
- **EKB-18849: eDirectory LDAP import fails to update user with ‘specified resource could not be found’.** Fixes an issue where data sync from a eDirectory LDAP server fails to update user information due to a malformed GUID in the LDAP query.
- **EKB-18383: SNMP trap messages in inconsistent format.** This fix makes the format SNMP trap messages more consistent.

8.5 Automate Self Service

- **EKB-19593: SelfService - RBAC Info is not set on password change.** Fixes an issue in Self Service where the logout buttons and company phones were not displaying for a user logging in with “Change password on Next Login”.
- **EKB-18433: “Your Company Phones” doesn’t load and Logout option not shown on initial login when resetting password.** Fixes an issue in Self Service where the logout buttons and company phones were not displaying for a user logging in with “Change password on Next Login”.

8.6 Automate Templates

- **EKB-19403: AddSubscriberFromProfile does not show Microsoft Profiles if Hybrid is Disabled in Global Settings.** Fixes an issue where the list of Microsoft type Subscriber Profiles were not displaying in the drop-down on the view/AddSubscriberFromProfile form, when “Cisco Microsoft Hybrid” had not been enabled in the Global Setting, Enabled Services.
- **EKB-19294: Microsoft License configuration template does not perform evaluation of macros.** Fixes an issue where the macros in the configuration templates were not evaluated properly for Microsoft Group Add/Remove templates.
- **EKB-19262: Dependant import for device/Spark/User and UserConfig returns all instances, driver work.** Fixes an issue where adding a Webex Teams User that exists on the Control Hub resulted in all device/spark/User and device/spark/UserConfig instances being imported instead of just the single user record.
- **EKB-19230: Webex Quick Subscriber, add user fails for a user that exists in Automate (data/User) and on the Control Hub but not in device/spark/User.** This fix adds a filter to the workflow sync step for Webex App Quick Subscriber to prevent it incorrectly attempting to create a Spark user that already exists on the Control Hub.
- **EKB-19225: Delete subscriber with Webex App fails on INI update.** Fixes an issue where adding or updating phone numbers other than work type does not persist for a Webex App User.

- **EKB-19177: In Multi Vendor Subscriber, add Add Extension Mobility fails with error, “You do not have permission to perform this action. Required permission: Create operation on view/AddExtensionMobility”.** The fix was to add View/AddExtensionMobility in the access profiles and to set permissions.
- **EKB-19138: Removing a pilot number from an Auto Attendant doesn’t make the number available.** Fixes an issue on Auto Attendant where removing the pilot number was not making the number available again.
- **EKB-19118: Adding a Microsoft Teams Meeting Policy fails when “Meeting Recording” is False.** Fixes an issue where adding a Microsoft Teams Meeting policy was failing. When “Meeting Recording” is False then “Store recordings outside of your country or region” must also be False.
- **EKB-19041: Reset UC Password fails on password reset step of CUC User when LdapType is 3.** Fixes an issue where Reset UC Password was failing for an LDAP-integrated CUC User when Unity Connection is set up for LDAP Authentication.
- **EKB-19002: Webex schedules are not moved to correct site on import.** Fixes an issue where Webex schedules were not being moved to the correct site when imported.
- **EKB-18911: Webex Location, management of Latitude, Longitude, and Notes.** Fixes an issue in Webex Location management where Latitude, Longitude, and Notes were not being properly managed when adding/updating Webex Locations. The resolution was to update the related schema, workflows, configuration templates, and GUI rules.
- **EKB-18893: Quick Add Group drop-down choices do not filter configuration templates with “system_resource:false”.** Fixes an issue in Quick Add Groups where system configuration templates display in the drop-down selection. A syntax error in the choices GUI rule was preventing the macro from fetching configuration template choices. The code was updated to remove a comma that was being added at the end of the model types.
- **EKB-18877: User delete transaction partially failed using Subscriber (Multi Vendor) option.** Fixes an issue that was occurring when doing a Multi Vendor delete, where the data/User was not being deleted when the relation/SparkUser was directory synced.
- **EKB-18846: Webex - Email Address drop-down fails to populate on relation/SparkUser if users exist that do not have email addresses.** Fixes an issue where the Email Address choices drop-down in relation/SparkUser fails to populate if data/User instances exist at the same location, which did not have an email address value set.
- **EKB-18840: Webex user, add/update user details does not persist for Spark and Data user.** Fixes an issue where some User Detail fields were not being set in Add Spark User. The resolution was to update related device models, configuration templates, workflows, and field display policies to add all valid user detail fields.
- **EKB-18834: Webex, update sync order in Webex (Spark) MTLs.** This fix updates the sync order in the following Webex (Spark) MTLs by adding the correct MTL to sync in the correct order for the Spark Webex models:
 - SparkDataSyncOrder
 - SparkDataDeviceMTL
 - SparkDataSyncOrderDevices
 - SparkDataUsersMTL
 - SparkDataWorkspacesMTL
- **EKB-18832: Webex Users - Deletion of relation/User (with Webex User and no CUCM user) should remove the WebexUser.** Fixes an issue where deleting a local VOSS Automate user was not removing the Webex App user.

- **EKB-18831: WebexUser ‘Work’ telephone number is not updated in the Webex Control Hub.** Fixes an issue where adding or updating phone numbers other than work type does not persist for a Webex App User.
- **EKB-18814: Unity Connection, recording or playback of a greeting fails when performed at the Customer level.** This fix resolves an issue where, when a Call Handler was being added with Playback or Record at the Site level, then subsequent Playback or Record was failing at the Customer level. The resolution was to always add or update data/GuiCuc at the level of the Unity server. When multiple Unity servers are configured, the device lookup is now device-specific so that data/GuiCuc is always created or updated at the server level.
- **EKB-18813: Import of Webex Call Pickup Group says successful, but fails silently.** This fix resolves an issue where the import transaction of Webex Call Pickups Groups appeared to be successful, but no Call Pickup Groups were being imported. The resolution was to change the lookup so that it uses the correct object and is able to retrieve the expected data.
- **EKB-18735: Add Emergency Location fails for country-specific requirements.** Fixes an issue in MS Emergency Location where the StreetName, City, StreetSuffix, Latitude, Longitude fields are not mandatory.
- **EKB-18681: Update Cisco Auto Attendant fails for second Unity Connection server at Customer.** This fixes an issue where GUI rules were referencing a different Unity server when multiple servers were configured with Call Handlers.
- **EKB-18668: Microsoft subscriber only shows the first 100 groups the user is assigned to.** This fix improves paging support when dealing with Microsoft elements with more than 100 instances.
- **EKB-18658: GUI Rule fixes on Consolidate User feature.** Fixes several issues in the Consolidate Users feature (view/ConsolidateUsers).
- **EKB-18620: Add Webex Room Bar and Webex DX 80 Phone fails “Vendor Configuration is not in correct format”.** This fix adds xPrivate tag to vendor config if configurationControl exists in the vendor config.
- **EKB-18597: relation/User add workflow should only try and add a CUCM user when it’s called from a Cisco onboarding workflow.** Fixes an issue where Cisco User creation is attempted for sites with auto push to CUCM when provisioning a MS or Webex subscriber via MS QAS or Webex QAS.
- **EKB-18501: User Management > Users: Push To LDAP quick action fails for new LDAP Users.** This fix resolves an issue with “Push to LDAP” for non-LDAP users.
- **EKB-18474: Group assignment in Quick Add Subscriber does not work if VOSS username does not equal Azure User UPN.** Fixes an issue that occurred when provisioning a Microsoft Quick Subscriber user with a Microsoft groups, Quick Add Group, where data.User.username != UserPrincipalName.
- **EKB-18434: Import or Add of MS Teams Call Queue fails on scale environment with large amount of Groups.** Fixes an issue where adding or import of Microsoft Call Queues was failing where there were hundreds of groups.
- **EKB-18219: Microsoft Teams Online import fails with deserialized object size of the data exceeded maximum object size.** This fix implements paging for msteamsonline CsOnlineUser.
- **EKB-17919: Site Build Macros for line CSS to support multi-cluster.** Fixes an issue where Site Build creation fails in multi-cluster setups when setting the Default Calling Search spaces as per Site Defaults Doc configuration.
- **EKB-16836: Multi vendor move of MS-Only-Hybrid (with an existing CUCM User only) creates line at new site.** This fix resolves an issue where a Microsoft-only hybrid user with a CUCM user instance was moved, and the system was incorrectly creating a CUCM line.

- **EKB-16156: Microsoft Quick Subscriber does not create data/User against the user lookup rules.** This fix adds a data/User instance when adding a Microsoft Quick Subscriber if a data/User is not found using the “getvossusername” workflow.
- **EKB-15881: User data fields should be read only for Microsoft users.** Fixes an issue where the User fields, such as “First Name” and “Last Name”, were not read-only for a Microsoft user.
- **EKB-15843: Phone activation codes are not imported immediately when adding new phones if the CUCM is under load or slow to respond.** This fix adds a limited phone retry refresh step in order to update the phone activation code when CUCM is slow to respond.
- **EKB-15188: In a Microsoft overbuild, support Username != UserPrincipalName and Move to Linked Sites.** This will ensure that the overbuild process will use the username mapping macros to match to an existing data/User and move services to that location. This enables overbuild to work when the services username does not match the data/User username exactly.
- **EKB-14624: CUC Auto Attendant only allows a single Call Handler Owner.** Fixes an issue where multiple owners cannot be managed (viewed, added, updated or removed) on a Callhandler.

8.7 Portal

- **EKB-19097: MultiVendorSubscriber “Services” are not loading when there is no CUCM at Customer.** Fixes an issue where existing multi vendor subscriber services were not loading for Webex-only users. To resolve this issue, checks have been added to ensure a device exists before using its attributes.