



FlexNet Operations 2016 Release 4 Release Notes

November 2016

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Introduction

These release notes summarize FlexNet Operations 2016 R4 On-Premises and Cloud updates delivered in November 2016; changes apply to both installation types unless stated otherwise. The updates affect users of these modules:

- [FlexNet Entitlement Management](#)
- [FlexNet Advanced Lifecycle Management](#)
- [FlexNet Electronic Software Delivery](#)



Note • For additional details about the changes, contact Flexera Software support.

FlexNet Operations “Getting Started” Videos

These brief, informative videos walk you through the exercises in FlexNet Operations getting started guides. We recommend that you first read a guide, in full, to gain an understanding of the concepts it covers, then click the guide in the table below to view the video.

Guide	Topics
Getting Started Guide for Entitlement Management	Creating an organization, a user, a product, and an entitlement.
Getting Started Guide for FlexNet Embedded Licensing	Setting up a publisher, identity, and a licensed product. Creating a device and activating its license. Creating and provisioning FlexNet Embedded license servers.
Getting Started Guide for Electronic Software Delivery	Creating a producer and download packages, associating download packages with a product, creating files, associating files with download packages, and viewing and downloading files from the End-User Portal.
Getting Started Guide for Usage Management	Creating a usage-based license model, a feature, a product, and an entitlement. Obtaining the license server URL to which the usage data is sent. Running a usage-capture client. Viewing usage information graphs and gauges.
Getting Started Guide for FlexNet Publisher License File-Based Licensing	Activating and returning a certificate license.
Getting Started Guide for Cloud Licensing Service	Creating a cloud-hosted license server.

Critical Information

These important announcements apply to certain FlexNet Operations users. Please review them carefully.

FlexNet Embedded Customers

It is critical that producers using FlexNet Embedded review user permissions to verify that they are set correctly to enable users to perform activations. See the “About Device Ownership” section of the *Producer Portal Help Guide* for details.

FlexNet Operations 2016 Release 2 and Release 3 On-Premises Customers

It is critical that FlexNet Operations 2016 Release 2 and Release 3 On-Premises customers upgrade to FlexNet Operations 2016 Release 4 if they are using Electronic Software Delivery, FlexNet Embedded, or Usage Management or they may encounter higher than usual CPU usage.

FlexNet Entitlement Management

Enhancements and modifications to FlexNet Entitlement Management were made in these categories:

- [User Experience](#)
- [System Infrastructure](#)
- [System Administration](#)
- [Entitlement Upgrades](#)
- [Web Services](#)

User Experience

New Features and Enhancements

New FlexNet Operations user experience features and enhancements include:

User Interface Improvements

To improve consistency between the Producer Portal and the End-User Portal, the following menu and page name changes were made.

Producer Portal Entitlements

One **Entitlements** menu item was renamed:

- **Entitlements > Entitlements** changed to **Entitlements > List Entitlements by Order**

One **Licenses** menu item was moved to the **Entitlements** menu and renamed:

- **Licenses > Activatable Entitlements** moved to **Entitlements > List Entitlements**
- The **Activate Licenses for Customers** page was renamed **List Entitlements**, and its **Activatable Line Items** subtitle was removed

End-User Portal Activation and Entitlements

To reduce the number of menus, the **Entitlements** and **License Activation** menus were merged, leading to a number of menu changes, including:

The **License Activation** menu was renamed **Activation & Entitlements**. Menu item and page title changes are:

- **License Activation > Activatable Entitlements** changed to **Activation & Entitlements > List Entitlements**
- The **Activatable Entitlements** page was renamed **List Entitlements**, and **Manual activation** was removed from its **Action** drop-down menu



Note • *Manual activation is still available as **Offline Trusted Activation** on the **Activation & Entitlements** menu (refer to the bullet below).*

- **License Activation > Trusted Activation** changed to **Activation & Entitlements > Offline Trusted Activation**
- The **Trusted Activation** page was renamed **Offline Trusted Activation**
- **License Activation > Map Activation IDs** changed to **Activation & Entitlements > Claim Activation IDs**
- The **Map Entitlement or Activation IDs** page was renamed **Claim Activation IDs**

The **Entitlements** menu was removed, and its menu items were consolidated with activations on the **Activation & Entitlements** menu:

- **Entitlements > Bulk Entitlements** moved to **Activation & Entitlements > Bulk Entitlements**

The system configuration setting (in the Producer Portal, click **System > Configure > End-User Portal Setup > Portal Navigation**) changes associated with these End-User Portal improvements are:

- The **Hide License Activation menu** setting was removed
- The **Hide Entitlements menu** setting changed to **Hide Activation & Entitlements menu**, the description of which changed to **Select to hide the Activation & Entitlements menu of the top-level navigation**
- The **Hide Map Activation IDs link** setting changed to **Hide Claim Activation IDs link**, the description of which changed to **Select to hide Claim Activation IDs link of the Activation & Entitlements menu**

Use of the Term *Add-On*

Based on usability studies and feedback from our customers, we are replacing *add-on* with *product*, *entitlement*, or *license*, depending on the context. The following user interface changes were made.

In the Producer Portal:

- On the **Devices > Search Devices > View Device** page, the **Licenses** drop-down menu items were renamed from **Map Add-Ons** and **Remove Add-Ons** to **Map Entitlements** and **Remove Licenses**, respectively
- On the **Devices > Search License Servers > View Server** page, the **Licenses** drop-down menu items were renamed from **Map Add-Ons** and **Remove Add-Ons** to **Map Entitlements** and **Remove Licenses**, respectively
- On the **View Devices** and **View Servers** pages, the table's **Add-On** column was renamed **Product**

In the End-User Portal:

- On the **Devices > Search Devices > View Devices** page, the table's **Add-On** column was renamed **Product**
- On the **Devices > Search License Servers > View Server** page, the table's **Add-On** column was renamed **Product**

Producer Portal Download Packages and Files

To make it easier to identify which download packages are associated with which particular product, two new methods were added.

- A **Download Package** tab was added to the **Create a Product** page. Under this tab is a table listing the associated download packages. Click the ID to open the **View Download Package** page.
- An **Export** menu was added to the **Search Results: Download Packages** page to download all download package data into the Download Package template. Click **Export > Data Import Template** to trigger a job that runs in the background. Navigate to the **Export & Import Job Status** page (**Administer > Import/Export Status**) to check job status and to download the exported file when the job is completed.
- An **Export** menu was added to the **Search Results: Files** page to download all file data into the Download Package template. Click **Export > Data Import Template** to trigger a job that runs in the background. Navigate to the **Export & Import Job Status** page (**Administer > Import/Export Status**) to check job status and to download the exported file when the job is completed.

Producer Portal Users and Organizations

To make it easier to copy users and organizations from one environment to another, the ability to export this data was added. Export functionality works with the data import template, which can also be used to import data. Export was added to two pages in the user interface:

- An **Export** menu was added to each tab of the **Manage Users** page (**Users & Orgs > All Users**) to download all users regardless of type. On the **All Users** landing page, click **Export > Data Import Template** to trigger a job that runs in the background. Navigate to the **Export & Import Job Status** page (**Administer > Import/Export Status**) to check job status and to download the exported file when the job is completed.

- An **Export** menu was added to each tab under the **Manage Organizations** page (**Users & Orgs > All Organizations**) to download all organizations regardless of type. On the **All Organizations** landing page, click **Export > Data Import Template** to trigger a job that runs in the background. Navigate to the **Export & Import Job Status** page (**Administer > Import/Export Status**) to check job status and to download the exported file when the job is completed.

Modifications

FlexNet Operations user experience modifications include:

- On the **Export & Import Job Status** page (**Administer > Import/Export Status**), the **Error** column no longer reports the number of failed or passed transactions. The number reported only the type of transactions, not the total number of transactions. To avoid confusion, the number of pass/fails was removed.
- The **Organization** control on the End-User Portal's **Upload Capability Request** page was removed. Offline capability requests do not take a user's organization into account, so the organization is not required. As with online capability requests, offline capability requests validate activation IDs against a device's organization hierarchy. When the device does not exist and the request does not provide an activation ID, the device is created without assigning an owner. When activation IDs are provided and the device does not exist or has no owner, the owner is assigned the organization based on the first activation ID in the request.

System Infrastructure

Modifications

FlexNet Operations system infrastructure modifications include:

- Updated instructions for customizing the Wildfly data source XML configuration files

System Administration

New Features and Enhancements

New FlexNet Operations system administration features and enhancements include:

Controlling a Producer User's Data Export Options

To prevent inexperienced users from exporting large amounts of data and negatively impacting system performance or causing an outage, the existing **Export and Import** permission was modified to control user access to data export options. Producer users without **Export and Import** permission see only data export options with low impact, such as **Selected Items**, on an entity's **Export** drop-down menu.

Producer users with **Export and Import** permission see the complete list of entity data export options, including those with high impact, such as **All Items** and **Data Import Template**, as shown in the entitlements export menu below.



Batch Data Import, Export and Edit

FlexNet Operations 2016 Release 2 introduced the concept of data templates, which enable producers to load data using structured Excel data import templates. This mechanism can also be used to export data and then re-import it to another environment. These functions have been added to the **Administrator > Import Data Objects** page:

Under the Import Settings Tab

- Import download package and file data using the Download Packaging Template
- Import user and organization data using the Organization and User Template

Under the Data Import Templates Tab

- Download a blank Download Packaging Template to create or update download packages, files and other data associated with download packages
- Download a blank Organization and User Template to create or update organizations and users

Entitlement Upgrades

New Features and Enhancements

New FlexNet Operations features and enhancements for entitlements include:

Improved Display of Upgrade Entitlements in the End-User Portal

FlexNet Operations 2016 Release 3 features the ability to easily add upgrades for customers on maintenance. With this release, users will have an easier time finding the most recent versions of their products. The default views for the End-User Portal's **List Entitlements** page and **Map Entitlements** pages now show the latest upgrade line items for the products to which the user is entitled.

<input type="checkbox"/>	Type	Activation ID	Entitlement ID	Sold to	Product	Version	Available quantity	Total quantity	Expiration	Order ID
<input type="checkbox"/>	E	child_I2	jr_emb_ent11	Acme Software Corporation. Type: End Customer	jr_emb_2 , Version 2	2	111	111	Jul 7, 2022	
<input type="checkbox"/>	E	jmEC-d3f8-8d6F-5Ab9-751	jr_emb_ent11	Acme Software Corporation. Type: End Customer	jr_emb , Version 1	1	11	11	PERMANENT	

End users can still expand the list under the most recent upgrade to reveal related, prior versions. Prior versions appear in order based on the start-date of the underlying product or the create date of the product (when start-date is not defined).

<input type="checkbox"/>	Type	Activation ID	Entitlement ID	Sold to	Product	Version	Available quantity	Total quantity	Expiration	Order ID
<input type="checkbox"/>	E	child_I2	jr_emb_ent11	Acme Software Corporation. Type: End Customer	jr_emb_2 , Version 2	2	111	111	Jul 7, 2022	
<input type="checkbox"/>	E	parent_I1	jr_emb_ent11	Acme Software Corporation. Type: End Customer	jr_emb , Version 1	1	106	111	Feb 3, 2017	

The new views for the **List Entitlements** and **Map Entitlements** pages are shown by default for the end users; however, producers can deactivate this feature by un-selecting the **System > Configure > FlexNet Operations > General > Highlight latest upgrade line items** setting.

Web Services

New Features and Enhancements

New FlexNet Operations Web Services features and enhancements include:

Create/Update opType Added to createEntitlementLineItem Web Service

The integration system uses the create/update opType to reduce the amount of Web Service calls. The responses of both the entitlement and the line item determine the success or failure of the request, and a line item request cannot succeed in the absence of an entitlement request.

If the opType is set to CREATE_OR_UPDATE, and either the entitlement or line item does not exist, it is created, otherwise it is updated. If the opType is CREATE_OR_IGNORE and the line item is present, the system ignores the line item and proceeds to the next line item. If the line item is not present, it is created. Both the entitlement and line item requests must succeed for the final result to be a success. If either one is a failure or partial failure, the result is a failure.

If the opType is set to CREATE_OR_UPDATE for an entitlement line item request and if the line item identifier exists, the system attempts to handle the request as an update. Updates to attributes associatedLineItems and LineItemType are ignored.

If the opType is set to CREATE_OR_UPDATE and the entitlement already exists, after the line item create/update portion is finished and if the update of the entitlement is requested but returns an error, then the entire entitlement request fails. However, updates to the line items that have been completed are not rolled back.

The create/update opType is included in version v1 of the **EntitlementOrderService** Web Service.

Searching for a Download Package by Product Name and Version

The **getDownloadPackageQuery** of the **downloadPackagingService** was updated to accept product name and version to enable searching for a specified product via Web Services.

The response was updated to include the system ID, version, and availability—ARCHIVE, CURRENT, or FUTURE—of the download package.

Exporting Download Packages and Download Files into Excel

To export download packages into Excel, product association information is included in the response of the **getDownloadPackageQuery** method. When an existing download package ID is passed and ReturnContainedObjects is set to TRUE, associated product names and the versions (if any) are returned per download package result.

Similarly, to export download files into Excel, the download packages each file is associated with must be populated. This information is included in the response of the **getFileQuery** method. When an existing file ID is passed and ReturnContainedObjects is set to TRUE, associated download package IDs (if any) are returned per download file result.

See the *FlexNet Operations Web Services Guide* and the *FlexNet Operations Web Services Integration Guide* for more information.

Modifications

FlexNet Operations Web Services modifications include:

- In the **EntitlementOrderService**, the **entitledProducts** attribute has been removed from **updateBulkEntitlement** for the v1 version of the web service. The endpoints to connect to the v1 **EntitlementOrderService** are:
 - Default – `http://host:port/flexnet/services/v1/EntitlementOrderService`
 - Default with SSL – `https://host:port/flexnet/services/v1/EntitlementOrderService`
- In the **FlexNetAuthentication** service, the **getUserToken()** has been removed for the v1 version of the web service. The endpoints to connect the v1 **FlexNetAuthentication** service are:
 - Default – `http://host:port/flexnet/services/v1/FlexNetAuthentication`
 - Default with SSL – `https://host:port/flexnet/services/v1/FlexNetAuthentication`
- A new error condition was added to the **deleteHost()** Web Service. If usage events for the host you are trying to delete are still being processed, the delete host operation will not be able to complete and a `BackOfffi ceError: fl xBotErr. pendin gSyncRecords` error is returned. You will have to try the delete host operation again later, after the usage events are completely processed.

Known Issues

Known FlexNet Entitlement Management issues include:

User Experience

- On the End-User Portal's List Entitlements and Map Entitlements pages, parent entitlements are not shown when a child entitlement has is in draft, inactive, or obsolete status. This is an issue only for manual upgrade cases or when a child is deliberately set to be obsolete or inactive.

Web Services

- ACPI Generation ID use in Repair Requests: Default behavior differs between the FlexNet Operations UI and web services when evaluating a repair request. In particular, this difference centers on whether or not the ACPI (Advanced Configuration and Power Interface) generation ID is used when deciding whether to permit or deny the repair request:
 - FlexNet Operations UI: By default, the FlexNet Operations UI takes the ACPI generation ID into account when evaluating repair requests.
 - Web services: When a repair request is initiated via web services, the default behavior is to ignore the ACPI generation ID. (`useACPI Generati onI d` is false, by default.)

Web service clients can be made to match the FlexNet Operations UI by explicitly setting `useACPI Generati onI d` to true.

System Infrastructure

Known system infrastructure issues apply to FlexNet Operations On-Premises only and include:

- The uninstaller that is packaged with the FlexNet Operations installer does not clean up FlexNet Operations application files properly.
- Producers are expected to perform FlexNet Operations 2016 On-Premises configuration and server management from within the FlexNet Setup web application (except where expressly noted in Flexera Software documentation). However, the site configurator console application, used in earlier versions of FlexNet Operations, is still shipped with FlexNet Operations 2016. If configuration changes are made in the console application, those changes are not captured by the current FlexNet Setup session and can lead to configuration problems. For the best results, use only FlexNet Setup to configure your FlexNet Operations installation.
- If the Wildfly server's port number is changed to a non-default value after initial installation and start-up, then the License Fulfillment Service, Usage Analytics Service, and End-User Portal URLs are not updated with the new port number.
- Only the `Install as a Service` option is available for Linux. The ability to run the service using the local system or to run using a specified username/password/domain are not supported.

FlexNet Advanced Lifecycle Management

New Features and Enhancements

New FlexNet Advanced Lifecycle Management features and enhancements include:

Activations of Entitlements Across Multiple Organizations on a Single Device

With this release, producers with the FlexNet Advanced Organization module that use FlexNet Embedded licensing technology can take greater advantage of their organization hierarchies and channel partner sets during entitlement mapping operations. In addition, these changes provide additional support to producers who want end users to be able to activate entitlements on any device.

FlexNet Operations now permits organizations other than the device owner to map entitlements to a device. Producers can map entitlements from the device owner's sub-organizations on any device and End-User Portal users can map entitlements from their organization, or its sub-organizations, on any device visible to them.



Note • *A device cannot be moved from one organization to another when entitlements from multiple organizations—those in the same hierarchy or unrelated organizations—are mapped to that device.*

Optionally Omitting the Organization Check

FlexNet Operations also includes support for activating entitlements owned by unrelated organizations on a single device, but the ability to map entitlements from unrelated organizations is not enabled by default.

To allow mapping of entitlements from unrelated organizations, in the Producer Portal, select the check box for the **Skip Organization Check** system configuration setting (**System > Configure > FlexNet Operations > Embedded Device Settings**).



Note • With **Skip Organization Check** inactive—which is the default setting—FlexNet Operations always performs an organization check and prevents the activation of entitlements from unrelated organizations.

See the “About Device Ownership” section of the *Producer Portal Help Guide* for details about how **Skip Organization Check** alters the mapping and activation that FlexNet Operations permits.

Visibility and Control of Devices in the End-User Portal

This feature brings a number of behavior changes to the visibility and control of devices and license servers. In the End-User Portal, devices are visible to their owners, as usual, but also visible to any organization that has licenses on the device.



Note • In all cases, users working with devices must have the appropriate permissions in order to interact with devices and license servers. For example, users that do not have roles with the **Manage Devices** permission cannot make changes to FlexNet Embedded devices or license servers.

The following points summarize how a user’s related organizations and entitlements affect his or her ability to see and manage devices in the End-User Portal:

- **As a device owner**, you can fully manage the device and all the licenses on it.
- **As a user from an organization that has licenses on the device**, you can see the device in the End-User Portal even if the device's owner is an organization unrelated to you. (These licenses can be from your organizations or their underlying hierarchies.) You can see all the licenses on the device, but you cannot see the full activation ID for licenses from unrelated organizations. For the entitlements linked to your organizations, you can remove licenses or reduce quantities.
- **As a channel partner user that is a distribution partner for a license on the device**, you can see the device in the End-User Portal and, for those entitlements linked to your organization, remove licenses or reduce quantities. Channel partners can see the other licenses on the device, but they cannot see the full activation ID for those licenses nor can they see the owner organization for the other licenses. (In these cases, instead of the owner organization, they see **Name Withheld**.)

Map by Activation ID

Producers (in the Producer Portal) and end users (in the End-User Portal) now have the option to quickly activate multiple entitlements on a device or license server simply by locating it in their portal and entering a list of activation IDs. This new action is available on the **View Device** and **View Server** pages: **Map by Activation ID**.

See the “About Device Ownership” section of the *Producer Portal Help Guide* for details about how the organizations to which the entitlements, the device, and the user belong affect the success of the mapping operation.



Note • To see the **Map by Activation ID** action on the **View Device** or **View Server** page, a user must be assigned to a role that includes the **Map by Activation IDs** permission.

Claim and Activate in the End-User Portal

Designed for producers who want to allow users to activate entitlements on any device, the new **Claim and Activate** page allows end users who know their activation IDs and the device ID of a device to activate their entitlements on that device.

The End-User Portal now includes a new action on the **Devices** menu: **Claim and Activate**. End users that cannot see a device in the End-User Portal, but who have its device ID and one or more activation IDs to map to that device, can click **Devices > Claim and Activate**. On the **Claim and Activate** page, end users can specify the device by its device ID and list the activation IDs for the entitlements they want to map.

When claiming a device, the result of the operation depends on a number of factors, including the organization that owns the device (if any), the organizations to which the user belongs, and whether or not FlexNet Operations is configured to skip the organization check. See the “About Device Ownership” section of the *Producer Portal Help Guide* for details.



Note • **Claim and Activate** is only available to users with the right permission. In this case, a user must have a role that includes the **Claim Device and Activate** permission.

Restricting an End-User’s Ability to Map Entitlements and Return Licenses

This enhancement changes the permissions that control which end users can map entitlements to, and remove licenses from a device. In earlier FlexNet Operations releases, these functions were controlled together by the FlexNet Embedded **Manage Devices** permission on the Producer Portal’s **Edit Role** page.

With this enhancement, these functions are controlled separately. For the user with a **Portal Admin User** or **Portal User** role:

- **Generate License** permission is required to:
 - see **Map Entitlements** on the End-User Portal device **Licenses** menu
 - map new entitlements or increase count via the **ManageDeviceService** Web Service
- **Return** permission is required to:
 - see **Remove Licenses** on the End-User Portal device **Licenses** menu
 - remove licenses or decrement count via the **ManageDeviceService** Web Service



When an end-user's logged in role has **Generate License** permission, the end user sees **Map Entitlements** on a device's **Licenses** menu. When an end-user's logged in role has **Return** permission, the end user sees **Remove Licenses** on a device's **Licenses** menu.

Automatic Handling of Device and Server Upgrades

This release introduces automatic handling of part of the entitlement upgrade lifecycle for devices or servers using FlexNet Embedded licensing. To decrease a producer's workload, the FlexNet Embedded license generator automatically reduces older-version features when adding newer version features.

When mapping an upgrade entitlement to a device that already has copies of the related pre-installed entitlement mapped, FlexNet Operations now automatically reduces the copies of the pre-installed entitlement by the number of copies of the upgrade entitlement being mapped. This is particularly helpful as the copies are shared between the pre-installed and the upgrade entitlements, and frequently the upgrade cannot be mapped until copies of the pre-installed entitlement are unmapped (to free up available copies).

The automatic return of pre-installed copies also allows for an upgrade to be applied to an entitlement that would normally not be unmappable (for example, because it uses a duration for the expiration). The return of the pre-installed copies skips the normal confirmation process, as the returned copies are immediately consumed by the upgrade being mapped.

Limitations:

- If there are no copies currently available for an upgrade entitlement, the **Map Entitlements** page does not show the upgrade entitlement as an option to map, even if there are copies of the pre-installed entitlement mapped to the device being acted on (that could be automatically returned to enable the operation to succeed). Activation via capability request does not have this limitation.
- If both pre-installed and upgrade entitlements are specified in a capability request, the order in which they are listed matters. If the pre-installed entitlement is listed first, the copies mapped are unmapped by the upgrade item listed second (if the upgrade copies requested are greater or the same; some are left if the pre-installed request is for more copies). If the pre-installed entitlement is listed second, it is successfully mapped in addition to the upgrade listed first. When the same is done from the user interface, the result is not well defined.
- If a device has a device series limiting the copies of a feature in the upgrade/pre-installed entitlement, the feature-limiting logic does not properly take into account the copies being returned in the pre-installed entitlement and may prevent mapping via the user interface.

Mapping an Activation to a FlexNet Operations Device via Capability Request

To enable sharing of devices across organizations, the FlexNet Embedded license generator validates the match between the entitlement's organization and the device's organization unless the **Skip organization check** setting (in the Producer Portal, click **System > Configure > FlexNet Operations > Embedded Device Settings**) is selected.

The screenshot shows the 'System Configuration' interface for 'FlexNet Operations'. The left sidebar contains a navigation menu with items: FlexNet Platform Server, User Interface, Validators, Updates, FlexNet Operations, Trusted Storage, End-User Portal Setup, Licensing, Import, Export, and Embedded Devices. The main content area is titled 'FlexNet Operations' and contains the following settings:

- General Options**
- External Services Configuration**
- Embedded Device Settings**
 - Allow Adding Backup Server for Producer**: Select to allow adding of backup servers via web services or Producer Portal
 - Server deployment choice**: BOTH Select the server deployment choice values
 - Skip organization check**: If selected, allows a host to have line items belonging to other organizations also. (This setting is highlighted with a red arrow in the original image)
 - Auto-provision error email recipient(s)**: Comma separated email IDs that will receive any error emails related to auto-provisioning.
- Custom Tags**

At the bottom of the settings area, there are two notes: '* required' and 'requires restart' (with a refresh icon). A 'Save Configs' button is located at the bottom left of the main content area.

The following rules apply to Web Service activations, capability requests with new activation IDs, and offline activations.

Skip organization check is not selected.

- The FlexNet Embedded license generator executes the activation request when:
 - the device is owned by the same organization as the activation ID
 - the device is owned by a parent organization of the organization that owns the activation ID
- The FlexNet Embedded license generator produces an error when:
 - the device and the activation ID are owned by unrelated organizations
 - the activation ID is owned by a parent organization and the device ID is owned by a child organization

Skip organization check setting is selected.

- The FlexNet Embedded license generator always executes the activation request.

End-User Portal Device and Server Menu Improvements

To support activations of entitlements across multiple organizations on a single device, these improvements were made to the FlexNet Operations End-User Portal menus:

- **Devices > Register Device** changed to **Devices > Create Device** (and the **Register Device** page it opens was renamed **Create Device**)
- The **Claim and Activate** action was added to the **Devices** menu (refer to [Claim and Activate in the End-User Portal](#) for details)
- The **Map by Activation ID** action was added to the **View Device** and **View Server** pages (refer to [Map by Activation ID](#) for details)

Entitlement IDs Removed from End-User Portal Device Pages

To help prevent software theft, entitlement IDs have been removed from all FlexNet Embedded device and server pages in the FlexNet Operations End-User Portal.

Customized License File Name Generation for FlexNet Licensing Technology Available in FlexNet Operations Cloud

For producers who use FlexNet Operations Cloud, it is now possible to implement an external service to generate file names for individual license files and for consolidated license files, based on FlexNet licensing technology, and to identify that external service using the **Generator Service End Point** setting on the **Create a License Technology** page. (The external service must implement the filename generator methods of the **LicenseGeneratorService**.)



Version • Producers who use FlexNet Operations On-Premises instead use the provided Java callout for custom license filenames and specify that service in Filename Generator, as they have in prior releases. This enhancement simply introduces a way for cloud-hosted users to get the same functionality on-premises users have already had.

For more information, see the “Using External Services with License Technologies” section in the *FlexNet Operations Administration Guide*.

Known Issues

Known FlexNet Advanced Lifecycle Management issues include:

- The **Map Entitlements** page for a FlexNet Embedded Device may take 5 to 10 minutes to load when the number of entitlements with no end customer organizations assigned is large.
- Reporting: The ETL process for pre-installed licenses (formerly “pre-built licenses” or “base products”) is not working. The data related to pre-installed licenses is not being successfully captured for reporting during the reporting transformation process.

These FlexNet Advanced Lifecycle Management issues apply to FlexNet Operations On-Premises only:

- The name of the VCG executable is incorrect for producers installing FlexNet Operations 2016 R2 into a Red Hat Enterprise Linux environment. To correct this, on the FlexNet Operations Producer Portal menu, click **Administrator > License Generator** to access the **License Generator Configurations** page. Then, click on the **demo** license generator configuration and change the name of the demo VCG file from demo_vcg.exe to demo_vcg.

- The **Map Entitlements** user interface for FlexNet Embedded devices and license servers returns errors when there are 1000+ entitlement line items for the organization. This behavior is observed only when the FlexNet Operations databases run on Oracle.
- A device search in the End-User Portal causes an internal server error when the user filters devices by selecting all organizations. This behavior occurs only when there are multiple customer sub-organizations and 1000+ devices per entitlement. The user interface functions normally when the user runs the search for one organization. This behavior is observed only when FlexNet Operations runs on an Oracle database.

FlexNet Electronic Software Delivery

New Features and Enhancements

New FlexNet Electronic Software Delivery features and enhancements include:

Download Packages Available for Active Maintenance

The latest download packages are only available to customers on active maintenance. If there is no maintenance plan, the visibility is based on the expiration date of the line item. If there is a maintenance plan, the visibility is based on the expiration of the maintenance line item.

Known Issues

Known FlexNet Electronic Software Delivery issues include:

- Producer users logging in with LDAP directory service cannot access the FlexNet Electronic Software Delivery module.
- On the FlexNet Operations End-User Portal's self-registration page, users are required to enter their company name to use the FlexNet Electronic Software Delivery module. Applies to FlexNet Operations On-Premises installations only.

Current Web Service Versions

With this release, the following Web Services introduced new versions:

- **Download Packaging Service**—Modified to support:
 - searching for a download package, based on product name and version, via Web Services (see [Searching for a Download Package by Product Name and Version](#))
 - exporting download packages and download files into Excel (see [Exporting Download Packages and Download Files into Excel](#))

The table, below, shows the current version for each service. Web Services that have not had any versions introduced are indicated by the word "base" in the current version column.

Web Service	Current Version
Product Packaging Service	v1
Entitlement Order Service	v1
FlexNet Authentication Service	v1
Manage Device Service	base
License Service	base
User Organization Hierarchy Service	v1
Electronic Software Delivery Service	base
Download Packaging Service	v2

See the *FlexNet Operations Web Services Integration Guide* for more information about Web Service versioning.

System Requirements

Supported Operating Systems	Supported Databases
Microsoft Windows Server 2012 (64-bit)	Oracle 12c R1 (12.1) Traditional Architecture
Microsoft Windows Server 2012 R2 (64-bit)	Microsoft SQL Server 2012
Red Hat Enterprise Linux 6 (64-bit)	Microsoft SQL Server 2014
Red Hat Enterprise Linux 7 (64-bit)	Microsoft SQL Server 2016

 **Important** • All Linux platforms must be Linux Standard Base (LSB) compliant.

Detailed system requirements for FlexNet Operations 2016 are listed in the table below.

Requirement	Description
Servers	<p> Note • For best performance, availability, and reliability, install each FlexNet Operations component on a separate host.</p> <p>For Windows servers (each)</p> <ul style="list-style-type: none"> • Dual core • 8 GB of RAM • At least 10 GB free disk space <p>For Linux servers (each)</p> <ul style="list-style-type: none"> • Dual core • 8 GB of RAM • At least 10 GB free disk space • Current directory (.) must be in the path of the user who starts the FlexNet Operations server
Supported operating systems	<ul style="list-style-type: none"> • Microsoft Windows Server 2012 (64-bit) • Microsoft Windows Server 2012 R2 (64-bit) • Red Hat Enterprise Linux 6 (64-bit) • Red Hat Enterprise Linux 7 (64-bit) <p> Note • The 32-bit platforms are no longer supported.</p>

Requirement	Description
Supported databases	<ul style="list-style-type: none"> Oracle 12c: Enterprise, Express, or Standard Edition (Traditional Architecture only, <i>not</i> Container Database or Pluggable Database) Microsoft SQL Server 2012, Microsoft SQL Server 2014, or Microsoft SQL Server 2016: Enterprise, Express, or Standard Edition
	 <p>Important • All databases in your FlexNet Operations installation must be of the same database type.</p>
Application server	WildFly version 8.2.0, with default configured heap space minimum of 4 GB and maximum of 8 GB
Message broker software	RabbitMQ version 3.1.0 (with Erlang version R16B)
Web browsers	<ul style="list-style-type: none"> Microsoft Edge Microsoft Internet Explorer 10 and 11 Mozilla Firefox 45 and 46 Google Chrome 50, 51, and 52
Java Development Kit	Oracle JDK 8 update 45
FlexNet licensing module	<ul style="list-style-type: none"> FlexNet Publisher 11.X or later FlexNet Embedded 3.X or later
	 <p>Note • FlexNet Operations 2016 supports these FlexNet Embedded host ID types: Ethernet, FlexID 9, FlexID 10, String, VM UUID, Extended, User, Internet, Internet IPV6, and publisher defined.</p>
Vendor certificate generator	<p>The current version of the VCG kit is 12.11.</p> <p>The 12.11 VCG was tested with these compilers:</p> <ul style="list-style-type: none"> Windows—Visual Studio 2008 Professional Edition Linux—gcc 4.1.2 (RHEL 5.0) Linux—gcc 4.4.4 (RHEL 6.0)
	 <p>Note • The 12.11 VCG is built with FlexNet Publisher 11.11.1 and shares the same minimum C compiler requirements on each supported platform. (See the FlexNet Publisher 11.11.1 release notes for C/C++ compiler support.)</p>
Supported LDAP directory servers	<ul style="list-style-type: none"> Windows 2008 Active Directory

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