FlexNet Operations 2023 ALM Release Notes

November 2023

Introduction

This Release Notes document summarizes the features, enhancements, and updates delivered with FlexNet Operations 2023.11 in November 2023. The document includes the following information:

- Resources

- Features and Enhancements

- System Requirements

- Resolved Issues

- Known Issues

- Special Notes

- Legal Information

Resources

These resources are available for more information about FlexNet Operations and other Revenera products:

- Revenera Resources

- FlexNet Operations Videos

- Previous FlexNet Operations Release Notes

Revenera Resources

The following resources can help you stay up to date with FlexNet Operations news and product knowledge:

- In addition to providing case management, the Revenera Community site can help you quickly find answers to your questions by searching content from other customers, product experts, and thought leaders. You can also post questions on discussion forums for experts to answer. For each of Revenera's product solutions, you can access forums, blog posts, and knowledge base articles. You can also access the Product and License Center from the Community's **Other Resources** menu to download Revenera products.

- You can find documentation for FlexNet Operations and all other Revenera products on the Revenera Product Documentation site.

  Note that any FlexNet Operations documentation published for UAT is subject to finalization until the Production release.

- The Revenera Learning Center offers free, self-guided, online videos to help you quickly get the most out of your Revenera products. You can find a complete list of these training videos in the Learning Center.

- Customers who have purchased a maintenance contract for their product(s) can submit a support case or check the status of an existing case by making selections on the **Get Support** menu of the Revenera Community:

  https://community.revenera.com

FlexNet Operations Videos

These brief, informative videos walk you through the getting-started exercises found in the FlexNet Operations User Guide (online help or PDF version). We recommend that you first read the appropriate "Getting Started" section in the *User Guide* to gain an understanding of the concepts it covers, and then click the section title in the table below to view the video.

Guide	Topics
Getting Started with Entitlement Management	Creating an account, a user, a product, and an entitlement.
Getting Started with 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 with 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 FlexNet Operations End-User Portal.
Getting Started with 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 with FlexNet Publisher License File-Based Licensing	Activating and returning a certificate license.
Getting Started with Cloud Licensing Service	Creating a cloud-hosted license server.
Getting Started with FlexNet Customer Growth	Customer growth concepts and configuring notifications for expiring entitlements and expired entitlements.

Previous FlexNet Operations Release Notes

To view the release notes associated with FlexNet Operations ALM releases from previous years, access https://docs.revenera.com/?product=FlexNet%20Operations and select the appropriate year from the **VERSION** list.

Features and Enhancements

The following sections describe the new features and enhancements added to FlexNet Operations in 2023:

- Features and Enhancements in 2023.11
- Features and Enhancements in 2023.10
- Features and Enhancements in 2023.09
- Features and Enhancements in 2023.08
- Features and Enhancements in 2023.07
- Features and Enhancements in 2023.06
- Features and Enhancements in 2023.05
- Features and Enhancements in 2023.04
- Features and Enhancements in 2023.03
- Features and Enhancements in 2023.02
- Features and Enhancements in 2023.01

Features and Enhancements in 2023.11

Features and enhancements were added to the following areas of FlexNet Operations in the 2023.11 release:

- License Management Enhancements in 2023.11

License Management Enhancements in 2023.11

The following enhancement for the management of licenses was added in the 2023.11 release.

Skipping Confirmation Capability Request for Reducing Licenses for Specified Product Lines

A new option **Skip Confirmation for Product Line** (under **System** > **Configure** > **Embedded Devices** > **License Generation**) has been introduced which controls whether producers are allowed to reduce the number of copies of a license for certain product lines without requiring a confirmation capability request.

Producers specify the product lines for which licenses can be reduced without requiring a confirmation in the **Skip Confirmation** column on the **Package Products | Product Lines** page (available under **Products** > **Product Lines**).

The option **Skip Confirmation for Product Line** complements the existing **Skip Confirmation** configuration option, which applies to *all* devices or entitlements mapped to devices. By contrast, **Skip Confirmation for Product Line** lets producers select specific products that require or do not require a confirmation when reducing licenses.

By default, the option **Skip Confirmation for Product Line** is disabled (reducing the number of licenses for specific product lines requires a confirmation capability request, as in previous releases).

Features and Enhancements in 2023.10

Features and enhancements were added to the following areas of FlexNet Operations in the 2023.10 release:

- Entitlement Management Enhancements in 2023.10
- Account and User Management Enhancements in 2023.10
- User Experience Enhancements in 2023.10

Entitlement Management Enhancements in 2023.10

The following enhancements to entitlement management were added in the 2023.10 release:

- New Configuration Option for Sorting Items on List Entitlements by Order Page
- New Configuration Option to Control Line Items Displayed on the "Support Licenses and Maintenance" Page for Renewal Case

New Configuration Option for Sorting Items on List Entitlements by Order Page

This release introduces a new configuration option **Sort items on List Entitlements by Order page by creation date** (under **System** > **Configure** > **FlexNet Operations** > **General Options**). The new option enables producers to change the sort order of items displayed on the **List Entitlements by Order** page.

If selected, the items on the **List Entitlements by Order** landing page are sorted by the date they were created. Producers who want items on the **List Entitlements by Order** landing page to be sorted by their last modified date (the default behavior) should leave the option unselected.

The configuration option does not affect the way items are sorted when clicking a column header (Entitlement or State) on the **List Entitlements by Order** page.

New Configuration Option to Control Line Items Displayed on the "Support Licenses and Maintenance" Page for Renewal Case

A new configuration option entitled **Show Renew Line Items Related to the License** has been added to enable producers to control which line items are displayed on the **Support Licenses and Maintenance** page in the FlexNet Operations Producer Portal and End-User Portal. The option is located under **System** > **Configure** > **FlexNet Operations** > **General Options**.

The behavior is as follows:

- **Unselected**—(Default) During a renewal operation, the **Support Licenses And Maintenance** page lists all renewal line items that belong to a specified activation ID. This is the default behavior.

- **Selected**—During a renewal operation, only child line items that are related to the activation ID that is being renewed are displayed on the **Support Licenses And Maintenance** page in the Producer Portal and End-User Portal.

Account and User Management Enhancements in 2023.10

The following features and enhancements involving the management of accounts and users were added in the 2023.10 release:

- Ability to Send Welcome Email to a Specified Admin Account

- Ability to Disallow Use of [[Password]] Merge Tag in Welcome Emails

Ability to Send Welcome Email to a Specified Admin Account

Instead of having the welcome email sent to a new end user who was newly created in FlexNet Operations, producers can now opt to have the welcome email sent to a generic administrator account. This administrator can then trigger the end user's registration in their company's enterprise system and email the end user their login details for accessing FlexNet Operations. This process streamlines the registration process and avoids an end user being present in FlexNet Operations without being registered in the enterprise system.

This behavior is controlled by a new flag, **Send Welcome Email to designated email address**, which can be set by Revenera support. By default, the flag is set to No (meaning that welcome emails are sent to the new user, as in previous releases). Producers who require the modified behavior (flag set to Yes) should contact Revenera Support to have the necessary modification made.

Producers specify the email address for the generic administrator's account in the **To** field of the **Welcome Email for End Users** template.

The following table shows the behavior resulting from combinations of the flag setting and the email template's **To** field:

Flag Value	Template "To" Field Set	Welcome Email Sent to End User?	Welcome Email Sent to Admin?
No	No	Yes	No (same behavior as in previous releases)
No	Yes	Yes	Welcome email is sent to the address in the "To" field of the Welcome Email template
Yes	No	No. The error message "The To field in the Welcome Email Template is missing" is displayed.	No
Yes	Yes	No	Welcome email is sent to the address in the "To" field of the Welcome Email template

Ability to Disallow Use of [[Password]] Merge Tag in Welcome Emails

A new configuration option entitled **Display Password in Welcome Email Template** has been added to give producers greater control over the use of the [[Password]] merge tag in the **Welcome Email Template for Producer** and **Welcome Email Template for End User** email templates. The option is located under **System** > **Configure** > **FlexNet Operations** > **General Options**.

For security reasons, the welcome email should not contain a plain text password. Instead, it should contain a URL which enables the user to set (or reset) their password.

When this option is enabled, the merge tag section in the welcome email templates displays the [[Password]] merge tag and allows the use of the merge tag. When a welcome email containing the [[Password]] merge tag is sent, the merge tag is substituted with the password, which poses a security risk if the email is intercepted by an attacker.

When this option is disabled, the [[Password]] merge tag is not displayed in the merge tag section of the welcome email templates. In addition, if the [[Password]] merge tag is manually added to the welcome email, the merge tag is not substituted by the password.

By default, the option **Display Password in Welcome Email Template** is enabled. Producers who do not want to allow use of the [[Password]] merge tag in welcome emails should disable the option.

User Experience Enhancements in 2023.10

The following user experience enhancement was added in the 2023.10 release.

New Configuration Option for Extract Dates/Times in ISO 8601 Format

A new configuration option **Use ISO 8601 time format in extracts** (under **System** > **Configure** > **FlexNet Operations** > **General Options**) has been introduced for producers who want to present the date/time information for data extract jobs in the ISO 8601 time format and UTC timezone.

The configuration option applies to all data extract jobs with the exception of usage data extracts and device data extracts. Date and time for those two extracts are presented in Pacific Standard Time (PST), even if **Use ISO 8601 time format in extracts** is enabled.

Note that a known issue exists for entitlement data extracts. For more information, see FNO-69766: Issue With Configuration Option "Use ISO 8601 time format in extracts" in Entitlement Data Extract.

Features and Enhancements in 2023.09

Features and enhancements were added to the following areas of FlexNet Operations in the 2023.09 release:

- Security Enhancements in 2023.09

Security Enhancements in 2023.09

Revenera would like to make you aware of the following planned security enhancement:

Early Security Announcement

To prevent Cross-Site Scripting (XXS) attacks, Revenera will be rolling out Content Security Policy (CSP) header content in the FlexNet Operations Producer Portal and End-User Portal in the new AWS environment.

An initial policy will be configured in the FlexNet Operations UAT environments of the Producer Portal and End-User Portal for the 2023.10 release. This policy will affect access to every page and how the content of every page is rendered. During the month following the 2023.10 UAT deployment, if you find that some pages are not accessible or not rendered correctly, please report these pages and the Web browser that was used to Revenera support.

Revenera will implement the same policy in the FlexNet Operations Production environments in the 2023.11 release.

Features and Enhancements in 2023.08

Features and enhancements were added to the following areas of FlexNet Operations in the 2023.08 release:

- SOAP and REST Web Services Enhancements in 2023.08
- User Experience Enhancements in 2023.08

SOAP and REST Web Services Enhancements in 2023.08

The following enhancements were added to the SOAP Web Services module in the 2023.08 release:

- ManageDeviceService Web Service Returning License State
- ManageDeviceService Web Service Returning Site Name
- Mass Entitlement Search in EntitlementOrderWebservice Web Service
- Notification Email When Reactivating a User Via SOAP Web Services
- Status Page for Event Notification Service REST API

ManageDeviceService Web Service Returning License State

The **searchDevices** operation of the ManageDeviceService web service now returns the **licenseState** attribute value, if the **responseConfig.addOnCounts** in the request is set to true.

This change applies to all versions of the ManageDeviceService web service, including the new version 6 (introduced for the enhancement ManageDeviceService Web Service Returning Site Name, see the description below).

ManageDeviceService Web Service Returning Site Name

This release introduces version 6 of the ManageDeviceService web service. In version 6, the **getDevice**, **getDevicesQuery** and **searchDevices** operations can return the **siteName** attribute value. You can use <responseConfig> to include or exclude the site name in the response.

In addition, in version 6, **siteName** is available as a search parameter for the **getDevicesQuery** and **searchDevices** operations.

Mass Entitlement Search in EntitlementOrderWebservice Web Service

This release introduces version 6 of the EntitlementOrderWebservice web service. Version 6 enables producers to perform a mass entitlement search using the **getActivatableItemsQuery** operation, which can now return a large number of entitlements and line items that match specified criteria.

To achieve this, the parameter tag `<urn:activationIds> ... </urn:activationIds>` was added, which accepts multiple activation IDs as input parameters to retrieve all line item details in a single request.

Note ▪ In v6 of the EntitlementOrderWebservice web service, the parameter tag ‹urn:activationId› ... ‹/urn:activationId› is now wrapped inside the new parameter tag ‹urn:activationIds› ... ‹/urn:activationIds›. To search for a single activation ID, pass the activation ID in ‹urn:activationId› ... ‹/urn:activationId›.

Notification Email When Reactivating a User Via SOAP Web Services

When a user is reactivated—that is, the user's state is changed from Inactive to Active—using the Producer Portal UI, a user activation email is automatically sent to the user, informing them about the change of state.

To maintain parity of behavior between the Producer Portal UI and SOAP web services, a new configuration option **Send email when user is reactivated via web services** has been introduced (under **System** > **Configure** > **FlexNet Operations** > **General Options**). This configuration option lets producers choose whether an email should be automatically triggered when a user is reactivated using the SOAP web services **updateUser** or **createUser** operation.

By default, the configuration option is disabled; that is, no email is sent when a user is reactivated through web services.

Producers who enable the configuration option should ensure that the **User Enabled** email template contains appropriate content, that it is active and that its Send Indicator is set to `true`.

Status Page for Event Notification Service REST API

Version ▪ The Event Notification Service REST API is applicable only to customers on Amazon Web Services (AWS) instances of FlexNet Operations.

The Event Notification Service REST API includes a new **/health/status** endpoint (method: GET), which can be used to monitor the status of the Event Notification Service.

The response returns the status; possible responses are as follows:

- 200: OK. Includes the status as UP or DOWN.
- 503: Service Temporarily Unavailable. Returned if the service itself is offline or unreachable.

User Experience Enhancements in 2023.08

The following user experience enhancement was added in the 2023.08 release.

Redesigned Wizard on Package Products Pages

The wizard-like set of bullet points at the bottom of the **Package Products** pages has been redesigned. The new design makes it easier for users to understand which tasks they can perform on the current page, and which tasks can be performed at a later stage in the wizard.

Features and Enhancements in 2023.07

Features and enhancements were added to the following areas of FlexNet Operations in the 2023.07 release:

- SOAP Web Services Enhancements in 2023.07
- Entitlement Management Enhancements in 2023.07

SOAP Web Services Enhancements in 2023.07

The following enhancements were added to the SOAP Web Services module in the 2023.07 release:

ProductPackagingService Returning Details For Products Using Specified Product Line

A new optional parameter **productLine** has been added to the ProductPackagingService web service (version 2). The new parameter can be used in the **getProductsQuery** operation for the requests **getProductsQueryRequest** and **getProductCountRequest** to return details of all products that are linked with a particular product line.

Ability to Filter By Line Item State in getEntitlementLineItemPropertiesQuery

In the EntitlementOrderService web service (version 5), the optional element **lineItemState** is now available as a query parameter for a **getEntitlementLineItemPropertiesQuery** operation. The new element enables producers to filter requests by the line item state (Deployed, Inactive, Obsolete, or Draft).

This improvement is intended to increase performance by reducing the number of entitlement lines to be retrieved.

Entitlement Management Enhancements in 2023.07

The following enhancements to entitlement management were added in the 2023.07 release:

Entitlement Line Item State and Partner Available as Substitution Variables for Vendor String

The following new substitution variables are available for the vendor string:

- **EntitlementLineItem.status**—The status of the entitlement line item

- **ChannelPartner.name**—The channel partner account ID

- **ChannelPartner.displayName**—The channel partner account name.

📋

Note ▪ The variables ChannelPartner.name and ChannelPartner.displayName refer to a channel partner of type Distributor.

This enhancement enables producers to include entitlement information in their licenses and thus reduce the number of API calls to retrieve such information from FlexNet Operations.

Feature Override Changes

A new configuration option **Allow feature override changes to be published to a License Server** has been added, which enables publishers to control whether changes to feature overrides are reflected on the relevant instance of the FlexNet Cloud Licensing Service.

The configuration option is located under **System** > **Configure** > **FlexNet Operations** > **Embedded Device Settings**. By default, the option is not selected.

Feature override changes made to the following parameters on the **Package Products - Create A Feature** page are updated to the Cloud Licensing Service instance:

- Vendor String

- Notice

- Serial Number

- Counted

- Reusable

⚠

*Important ▪ If you are changing the feature override parameter **Counted** from **Yes** to **No**, you also need to unmap and remap the add-on licenses for the existing Cloud Licensing Service instances.*

The **Client Uniqueness** parameter is not used in FlexNet Embedded licensing, therefore any updates to this field do not impact the Cloud Licensing Service.

Features and Enhancements in 2023.06

Features and enhancements were added to the following area of FlexNet Operations in the 2023.06 release:

- Reporting Enhancements in 2023.06

- SOAP Web Services Enhancements in 2023.06

- Account and User Management Enhancements in 2023.06

- Entitlement Management Enhancements in 2023.06

Reporting Enhancements in 2023.06

The following reporting enhancements were added in the 2023.06 release.

Enhancements to Event Notifications Payload

The payload to webhook endpoints for entitlement events and line item events now includes the following additional information.

Additional payload items for entitlement events:

- Account ID

Additional payload items for line item events:

- Account ID
- Line item description
- Order ID
- Start date
- Expiration date
- Product name
- Product version
- License model

SOAP Web Services Enhancements in 2023.06

The following enhancement was added to the SOAP Web Services module in the 2023.06 release:

getUsersQuery Now Returns Account Name

This release introduces version 5 of the User Account Hierarchy Service. In version 5, the **getUsersQuery** method returns the **name** field in the **acctRolesList** response. This enables producers to retrieve the account ID and the account name in one SOAP call, thus reducing overhead.

Account and User Management Enhancements in 2023.06

The following features and enhancements involving the management of accounts and users were added in the 2023.06 release.

- Preventing Users from Editing Geographic Information in End-User Portal
- Access to Trusted Activation Requests For Users Without System Administrator Permissions

Preventing Users from Editing Geographic Information in End-User Portal

A new configuration option **Prevent editing geographic information** has been added to give producers greater control over who can edit a user's geographic information in the End-User Portal. The option is located under **System** > **Configure** > **End-User Portal Setup** > **Manage Accounts & Users**.

When **Prevent editing geographic information** is selected, end users and partner users are unable to edit the geographic information (**Country** field) that is displayed on the **Edit User Profile** or **Edit Account** page in the End-User Portal.

Access to Trusted Activation Requests For Users Without System Administrator Permissions

Viewing trusted activation requests in the Producer Portal (under **Administrator > Trusted Activation Requests**) no longer requires system administration permissions (specifically the **View System Information** and the **View and Manage Configurations** permissions). Instead, a new lower-level permission **Trusted Activation Requests** has been introduced in the category **Access to trusted storage licensing functionality in Producer Portal**. This permission can be used to allow users who should not have access to sensitive system configuration parameters to view trusted activation requests.

By default, the **Trusted Activation Requests** permission is enabled for the following roles:

● Super Administrator

● System Administrator

● IT Back Office Manager

● Customer Support Representative

If required, the **Trusted Activation Requests** permission can also be enabled for other roles.

Entitlement Management Enhancements in 2023.06

The following enhancement to entitlement management was added in the 2023.06 release.

● Removing Metered Licenses from CLS Instance Using Web Services

● "Specify Expiration Date" During Entitlement Creation Now Marked As Mandatory

Removing Metered Licenses from CLS Instance Using Web Services

Producers can now remove or reduce metered licenses mapped to a CLS instance using the following operations of the **ManageDeviceService** web service: **deleteAddonLineItems**, **decrementAddonLineItems**, **linkAddonLineItems**, and **generateCapabilityResponse**.

As a precondition, the configuration **Allow Removing or Reducing Metered Features From a License Server** (under **System** > **Configure** > **Embedded Devices** > **Host Options**) must be selected.

Note ▪ It is not possible to modify counts of metered licenses mapped to local license servers.

"Specify Expiration Date" During Entitlement Creation Now Marked As Mandatory

On the **Configure Line Item** page (displayed during entitlement creation), when a user selects the value **Specify Expiration Date** for the Expiration date, a red asterisk now indicates that specifying an expiration date (using the date picker) is mandatory.

Features and Enhancements in 2023.05

Features and enhancements were added to the following area of FlexNet Operations in the 2023.05 release:

- Entitlement Management Enhancements in 2023.05

- User Experience Enhancements in 2023.05

Entitlement Management Enhancements in 2023.05

The following enhancements to entitlement management were added in the 2023.05 release.

- New Configuration for Removing Metered Licenses from CLS Instance

- Custom Host Attribute Support for Data Type "Hex"

- Improved Filter for Listing Entitlements in End-User Portal

- New Merge Tag for Part Number Description in Entitlement Email Template

New Configuration for Removing Metered Licenses from CLS Instance

Previously, customers who wanted to allow the removal or reduction of metered licenses from a license server instance in the FlexNet Cloud Licensing Service had to contact Revenera Support to have this functionality enabled.

From this release onwards, producers can use the new configuration option **Allow Removing or Reducing Metered Features From a License Server** to allow the removal or reduction of metered licenses mapped to a CLS instance. The configuration option is located under **System** > **Configure** > **Embedded Devices** > **Host Options**.

By default, the configuration option is deselected; that is, removing or reducing the number of metered features on a CLS instance is not allowed.

Note that removing or reducing metered licenses from a CLS instance can be done only through the Producer Portal and the End-User Portal, not through Web Services.

Note ▪ It is not possible to modify counts of metered licenses mapped to local license servers.

Custom Host Attribute Support for Data Type "Hex"

It is now possible to create custom host attributes of type "Hex" to accommodate MAC addresses and disk IDs. A custom host attribute of type "Hex" must fulfill the following requirements:

- Minimum length: 8 characters

- Allowed characters: letters A-F (uppercase and lower case are allowed), numbers 0-9, and the special characters minus (-) and colon (:)

- Maximum length: 4000 characters

This is an example for a custom host attribute of type "Hex": AB-CD-f3-61-73-62.

Custom host attributes are created on the **Create Custom Host Attributes** page (under **Administer > Custom Host Attributes > Create**). The **Hex** option is available when selecting the attribute type **Text**.

Improved Filter for Listing Entitlements in End-User Portal

The filter on the **List Entitlements** page in the End-User Portal (accessible under **Activation & Entitlements > List Entitlements**) has been enhanced. Users can now select whether the **List Entitlements** page should show expired or unexpired line items, or both.

When clicking the Filter icon ▼, users have a choice of the following check boxes:

- **Show fulfilled line items**
- **Show expired line items**
- **Show unexpired line items**

Users *must* select either **Show expired line items** or **Show unexpired line items**, or both.

By default, the **List Entitlements** page now shows only unexpired line items.

New Merge Tag for Part Number Description in Entitlement Email Template

A new merge tag [[PartNumberDescription]] has been introduced for the Entitlement email template, which enables users to include the part number description in a user-friendly format when sending information about an entitlement.

User Experience Enhancements in 2023.05

The following user experience enhancement was added in the 2023.05 release.

New Location for Online Help

Previously, the FlexNet Operations Producer Portal and End-User Portal online help systems—which are accessed from within the application by clicking the Help icon ❓—were installed on the same server where the application is hosted.

From this release onwards, the FlexNet Operations Producer Portal and End-User Portal online help are hosted on the Revenera Documentation Server, https://docs.revenera.com, providing one central location for all FlexNet Operations documentation.

This table shows the old and new online help URLs:

Help Library	Previous URL	New URL
FlexNet Operations User Guide (Producer Portal)	https://<siteID>.flexnetoperations.com/flexnet/help/Operations	https://docs.revenera.com/fno_CURRENT/producer/
FlexNet Operations End-User Portal Help Library	https://<siteID>.flexnetoperations.com/flexnet/help/OperationsPortal/	https://docs.revenera.com/fno_CURRENT/enduser/

Features and Enhancements in 2023.04

Features and enhancements were added to the following area of FlexNet Operations in the 2023.04 release:

- Reporting Enhancements in 2023.04
- Device Management Enhancements in 2023.04
- SOAP Web Services Enhancements in 2023.04

Reporting Enhancements in 2023.04

The following reporting enhancement was added in the 2023.04 release.

Event Notifications

Version ▪ *This functionality is applicable only to Amazon Web Services (AWS) deployments of FlexNet Operations.*

A software producer's ecosystem usually involves upstream and downstream systems, with FlexNet Operations being placed between those systems. It is vital that consistent information is shared between all of these systems.

To help producers keep all related enterprise systems up to date, the 2023.04 release introduces event notifications. Whenever an event related to products or entitlements occurs, an event notification is triggered. Real-time data about the event is delivered to a specified webhook URL where the data can be consumed programmatically to update the producer's upstream or downstream systems.

Once a webhook has been created, anything can make use of this data. For example, you could use the data to feed an auditing system to keep track of changes made, when and by whom.

Producers subscribe to and configure event notifications via the Event Notification Service REST API. To receive event notifications, the producer provides the webhook endpoint URLs via the REST API. These URLs are the endpoints to which the event notifications payload (in JSON format) will be delivered.

Event Notification Service Base URL

Endpoints for the Event Notification Service REST API are available on your FlexNet Operations host:

    https://<siteID>.flexnetoperations.eu/notifications/api/v1/notificationService

where <siteID> is your organization's site ID which is supplied by Revenera.

Sample Payloads

The following subsections show a sample payload that would be delivered to a webhook endpoint when a certain event occurs.

Entitlement Event Sample Payload

```
{
    "eventHeader": {
        "event": "ENT",
        "eventType": "UPDATE",
        "userId": "1000admin",
        "tenant": "1000",
        "timeStamp": "1665588921539"
    },
    "eventBody": {
        "entitlementId": "3355",
        "entitlementName": "uk_entitlement_abc",
        "version": "1.0",
        "soldToAccount": "UNKNOWN_ORG_UNIT",
        "lineItem": null
    }
}
```

Line Item Event Sample Payload

```
{
    "eventHeader": {
        "event": "ENT",
        "eventType": "UPDATE",
        "userId": "1000admin",
        "tenant": "1000",
        "timeStamp": "1665571768393"
    },
    "eventBody": {
        "entitlementId": "3365",
        "entitlementName": "uk-ent-1",
        "version": "1.0",
        "soldToAccount": "UK-1",
        "lineItem": {
            "activationId": "uk-ent-1-ACT-1",
            "copies": "1000",
            "exactAvailableCount": "1000"
        }
    }
}
```

Product Event Default Payload

```
{
    "eventHeader": {
        "event": "PROD",
        "eventType": "UPDATE",
        "userId": "1000admin",
        "tenant": "1000",
        "timeStamp": "1665044575475"
    },
    "eventBody": {
        "productId": "1676",
        "productName": "demo-product-for-notifications",
        "version": "1.0",
        "features": [
            {
```

```
            "featureName": "2Dline",
            "version": "1",
            "count": "1"
         }
      ]
   }
}
```

Documentation

The new Event Notification Service REST API is documented in the FlexNet Operations User Guide guide that is available from docs.revenera.com, in the section Administering the Event Notifications Service REST API.

Device Management Enhancements in 2023.04

The following enhancement to device management was added in the 2023.04 release.

Ability to View and Limit the Number of Binding Break Repairs

The 2023.04 release introduces new functionality that gives producers more control for managing the local license server's binding-break detection feature. (If activated, the binding-break detection feature locks license rights of a local license server to the machine on which the server is running.)

Producers can now limit or prohibit binding-break repairs on the local license server by setting the following configuration options (under **System** > **Configure** > **Embedded Devices** > **Host Options**):

- **Limit Binding Break Repairs for License Server**—Select or deselect to limit the number of repairs allowed. If unselected, unlimited binding break repairs are permitted.

- **Maximum Number of Binding Break Repairs Allowed for License Server**—Available if the option **Limit Binding Break Repairs for License Server** is selected. Sets the maximum number of times the local license server is allowed to repair a binding break. If set to 0, no binding break repairs are allowed. The local license server will cease to serve licenses if the number of binding break repairs exceeds the maximum number of allowed repairs, and no further repairs are allowed.

Producers can track how many times a license server's trusted storage has been reset to repair broken binding in the **Binding Break** section on the **View Server** page in the Producer Portal. The **Binding Break** section is displayed only if **Limit Binding Break Repairs for License Server** is selected.

Repairs Done shows the number of binding-break repairs since the count was last reset. The producer can click the **Reset** button to reset the count to 0 and allow further binding-break repairs.

SOAP Web Services Enhancements in 2023.04

The following features and enhancements were added to the SOAP Web Services module in the 2023.04 release:

- Enhancement to EntitlementOrderService (Version 5)
- New Configuration Option to Control Entitlement's lastModifiedDate

Enhancement to EntitlementOrderService (Version 5)

A new optional parameter called **isEmbeddedLicenseModel** has been added to the EntitlementOrderService web service (version 5). The new parameter can be used with the **getEntitlementLineItemPropertiesQuery** to return entitlement line items based on their license model type (embedded or non-embedded).

If **isEmbeddedLicenseModel** is set to `true`, the operation returns all line items with an embedded license model type. If **isEmbeddedLicenseModel** is `false`, the operation returns all line items with a non-embedded license model type.

New Configuration Option to Control Entitlement's lastModifiedDate

Previously, a change in the available license count (by mapping or removing a line item from a device) only led to the *line item's* **lastModifiedDate** being updated. However, the **lastModifiedDate** of the *entitlement* that contains the line item was not changed.

A new configuration option **Update entitlement last modified date** (under **System** > **Configure** > **FlexNet Operations** > **Embedded Device Settings**) now lets producers choose whether an entitlement's **lastModifiedDate** is updated every time the available license count changes.

By default, the new option is unselected, which means that when the available license count changes for a device, only the line item's **lastModifiedDate** is updated.

Features and Enhancements in 2023.03

Features and enhancements were added to the following area of FlexNet Operations in the 2023.03 release:

- Entitlement Management Enhancements in 2023.03

Entitlement Management Enhancements in 2023.03

The following enhancement to entitlement management was added in the 2023.03 release.

Configuration Option to Control "Qty to add" Field for Mapping Activation IDs

Producers can now choose whether the **Qty to add** field—located in the **Map by Activation IDs** page in the Producer Portal and End-User Portal—should show the maximum license count that is available to the end-user, or whether this field should be blank. Leaving the field blank requires the user to type in the desired license count.

Producers can control the behavior of the **Qty to add** field using the new configuration option **Prepopulate quantity to add with available count in Map by Activation IDs page** (under **System > Configure > FlexNet Operations > Embedded Device Settings**).

By default, the configuration option is selected, and the **Qty to add** field shows the maximum license count that is available.

Features and Enhancements in 2023.02

Features and enhancements were added to the following area of FlexNet Operations in the 2023.02 release:

- License Management Enhancements in 2023.02

License Management Enhancements in 2023.02

The following enhancements for the management of licenses were added in the 2023.02 release.

- New Configuration Option for License Start Date
- License Consolidation for Local License Server and Embedded Devices

New Configuration Option for License Start Date

When a device is activated and the activation date is equal to the current date in Pacific Standard Time (PST), the start date calculation logic applies a -1 day rollback. This is to compensate for timezones that are ahead of the database server time in PST.

A new configuration option **Use Activation start date without compensating time zone** (under **System > Configure > Embedded Devices > Host Options**) has been introduced for producers who do not want to apply a -1 day rollback to the license start date.

The following examples describe the behavior for a 2-year license with and without the configuration option enabled:

Configuration	Customer activates license on/at...	Customer can start using license on/at...*	A 2-year License expires on/at...**
Configuration disabled: -1 day rollback is applied (current behavior)	27-Jan-2023 PST (equivalent to 28-Jan-2023 GMT)	26-Jan-2023 PST (-1 day rollback from PST date)	27-Jan-2025 PST
Configuration enabled: -1 day rollback is not applied (new behavior)	27-Jan-2023 PST (equivalent to 28-Jan-2023 GMT)	27-Jan-2023 PST	27-Jan-2025 PST

* The license is valid from 00:01:00 (24-hour format) on 26-Jan-2023 PST.

** A license expires at midnight at the start of the indicated expiry date. In this example, the license is valid until 26-Jan-2025 23:59:59 PST (24-hour format).

License Consolidation for Local License Server and Embedded Devices

A new configuration option **Consolidate Licenses** has been introduced for the local license server and embedded devices. The option is located under **System > Configure > Embedded Devices > Host Options**. By default, this configuration is disabled.

When this configuration is enabled, FlexNet Operations consolidates the licenses that contain multiple line items for the same feature if the following entities are identical for all line items:

- Feature Name
- Feature Version
- Vendor String
- Notice
- Serial Number
- Expiration Date
- Issuer

This added functionality is part of an ongoing effort to improve the local license server's performance.

Features and Enhancements in 2023.01

Features and enhancements were added to the following areas of FlexNet Operations in the 2023.01 release:

- License Management Enhancement in 2023.01
- User Experience Enhancements in 2023.01

License Management Enhancement in 2023.01

The following enhancement for the management of licenses was added in the 2023.01 release.

Associating Served Clients With Multiple CLS Instances

Previously, a served client could only be associated with one parent license server instance at a time. Processing capability requests for the served client would change the parent of the served client to be whatever server instance was associated with the request, replacing ownership by any existing server.

In the 2023.01 release, it is now possible for served clients to have multiple parent license server instances concurrently.

This functionality is disabled by default but can be enabled using a new configuration option **Support multiple license servers** (under **System** > **Configure** > **Embedded Devices** > **Host Options**).

Note ▪ *This option affects all of your customers' CLS instances.*

If this functionality is enabled, both the Producer Portal and the End-User Portal show the multiple parent servers of served clients.

User Experience Enhancements in 2023.01

The following user experience enhancement was added in the 2023.01 release.

"Logout" Link in End-User Portal Positioned Last in User Menu

In the End-User Portal, the order of the **Profile** and **Logout** links (these are displayed when a user clicks on their user name in the top right corner) has been reversed. **Logout** is now the last item in the user menu, in line with the standard that most sites follow.

System Requirements

Detailed system requirements for FlexNet Operations include the following.

Requirement	Description
Web browsers	• Microsoft Edge • Mozilla Firefox 75.0 • Google Chrome 80.0.3987.163
FlexNet licensing module	• FlexNet Publisher Toolkit 11.12.0 or later • FlexNet Embedded Toolkit 2015 R2 or later *Note ▪ FlexNet Operations supports these FlexNet Embedded host ID types: ETHERNET, INTERNET, INTERNET_6, FLEXID9, FLEXID10, STRING, USER, VM_UUID, EXTENDED, PUBLISHER_DEFINED, and CONTAINER_ID.*
Vendor certificate generator	The current versions of the VCG kit are 12.11.0 and 16.2.2.0. These VCGs were tested with the following compilers: • Windows—Visual Studio 2010 Professional Edition • Linux—gcc 4.1.2 (RHEL 5.0) • Linux—gcc 4.4.4 (RHEL 6.0) *Note ▪ The 12.11.0 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.)*
High Speed File Upload	If you intend to use the **High Speed Upload** option to upload files, the following plug-in is required: Aspera Connect 3.10.0 or later

Resolved Issues

The following sections describe the issues that have been resolved in the FlexNet Operations 2023 releases to date:

- Issues Revolved in 2023.11

- Issues Revolved in 2023.10

- Issues Resolved in 2023.09

- Issues Resolved in 2023.08

- Issues Resolved in 2023.07

- Issues Resolved in 2023.06

- Issues Resolved in 2023.05

- Issues Resolved in 2023.04

- Issues Resolved in 2023.03

- Issues Resolved in 2023.02

- Issues Resolved in 2023.01

Issues Revolved in 2023.11

Issues in the following areas were resolved in the FlexNet Operations 2023.11 release:

- User Experience Issues Resolved in 2023.11

- Entitlement Management Issues Resolved in 2023.11

- License Management Issues Resolved in 2023.11

- SOAP Web Services Issues Resolved in 2023.11

- Export and Import Issues Resolved in 2023.11

User Experience Issues Resolved in 2023.11

The following issue involving user experience was resolved in the 2023.11 release.

Reduced Column Width on "Entitle Customers To Licenses" Page

On the **Entitle Customers To Licenses** page in the Producer Portal, the width of the columns **Type** and **Total quantity** in the **Line Items** section has been reduced.

Producers who require the column width to be the same as in releases prior to 2023.11 should contact Revenera Support to have the necessary modification made.

Entitlement Management Issues Resolved in 2023.11

The following issues were resolved for entitlement management in the 2023.11 release.

- Error Message When Mapping Expired Activation IDs

- Updated Merge Tag Descriptions and Preview Values in Entitlement Email Template

Error Message When Mapping Expired Activation IDs

Previously, creating or mapping an expired license to a device using a .NET toolkit did not trigger an error message. This has now been resolved, and FlexNet Operations displays a meaningful error message when attempting to map an expired license to a device.

Updated Merge Tag Descriptions and Preview Values in Entitlement Email Template

This release introduces changes to the [[OrgName]], [[Name]], and [[AcctId]] merge tag descriptions and preview values, to better differentiate the merge tags and the information they return.

The following table lists the changes that have been made to merge tags used in the Entitlement template (under **Administer** > **Templates** > click **ID** for template of type "Entitlement" > **Edit** > **Edit Active Content** | **Edit Draft Content**):

Merge Tag	Old Description	New Description	Old Preview Value	New Preview Value
[[OrgName]]	Org Name	Account ID	MYORG	ACME
[[Name]]	Name	Account Name	Some Name Here	ACME Corporation
[[AcctId]]	Acct Id	Account ID	MYORG	ACME

Note ▪ The merge tags [[OrgName]] and [[AcctId]] are functional duplicates that are retained for backward compatibility.

License Management Issues Resolved in 2023.11

The following issue involving license management has been resolved in the 2023.11 release.

Bulk Upgrade No Longer Failing After License Activation

In previous releases, a bulk upgrade for FlexNet Publisher entitlements with the **Auto Fulfill** option set to **Yes** failed to process the upgrade and fulfill the upgraded line item. This issue no longer occurs and bulk upgrade operations are completed without error even when they are performed after the licenses have been activated and **Auto Fulfill** is set to **Yes**.

SOAP Web Services Issues Resolved in 2023.11

The following issues related to FlexNet Operations Web Services were addressed in the 2023.11 release.

updateUser Operation in User Account Hierarchy Service Web Service Now Case Insensitive

From the 2023.10 release onwards, the **updateUser** operation in the User Account Hierarchy Service Web Service no longer allows a mismatch between a user's user name and their email address (see updateUser Operation in User Account Hierarchy Service Web Service No Longer Allows Mismatch Between User Name and Email Address). However, when comparing the user name to the email address, case sensitivity was taken into account (for example, an email address such as MyName@mycompany.com and a user name like myname@mycompany.com would erroneously trigger an error message). In the 2023.11 release, the case of the user name and email address is ignored.

Export and Import Issues Resolved in 2023.11

The following issue related to the Data Export and Import functionality was resolved in the 2023.11 release.

Data Import Using Data Import Template No Longer Fails

Version ▪ This issue and its fix are applicable only to customers on Amazon Web Services (AWS) instances of FlexNet Operations.

Previously, exporting a set of entities as a Data Import Template file failed. This issue no longer occurs.

Issues Revolved in 2023.10

Issues in the following areas were resolved in the FlexNet Operations 2023.10 release:

- SOAP Web Services Issues Resolved in 2023.10

- Export and Import Issues Resolved in 2023.10

SOAP Web Services Issues Resolved in 2023.10

The following issues related to FlexNet Operations Web Services were addressed in the 2023.10 release.

- updateUser Operation in User Account Hierarchy Service Web Service No Longer Allows Mismatch Between User Name and Email Address

- searchDevices Operation in Manage Device Service Returning "hosted" Value

updateUser Operation in User Account Hierarchy Service Web Service No Longer Allows Mismatch Between User Name and Email Address

Using the **updateUser** operation of the User Account Hierarchy Service web service, it was possible to update the email address with a value that is different from the user name. This mismatch between the user name and the email address meant that affected users could not access downloads in the End-User Portal. This issue no longer occurs.

In the 2023.10 release, when a mismatch is detected, an error message "`The Email and UserName of the user must be the same`" is displayed.

searchDevices Operation in Manage Device Service Returning "hosted" Value

The following issue has been resolved for the **searchDevices** operation of the Manage Device Service web service.

Previously, even though the response configuration had the `<hosted>` parameter set to `true` in the request, the response did not return the `<hosted>` value. This issue no longer occurs.

Export and Import Issues Resolved in 2023.10

The following issue related to the Data Export and Import functionality was resolved in the 2023.10 release.

Importing Line Items with Custom Activation ID Format

Producers can now import entitlement line items where the activation ID has been generated using a custom format. If there is no custom format available, then the activation ID is generated using the default FlexNet Operations format.

Issues Resolved in 2023.09

Issues in the following areas were resolved in the FlexNet Operations 2023.09 release:

- Entitlement Management Issues Resolved in 2023.09
- User Experience Issues Resolved in 2023.09

Entitlement Management Issues Resolved in 2023.09

The following issues were resolved for entitlement management in the 2023.09 release.

- Substitution Variables Now Supported by Bulk Operation
- Bulk Operation Email Job No Longer Failing
- Entitlement Now Saved Correctly When Selecting Multiple Products Across Pages in the "Select Product" Section

Substitution Variables Now Supported by Bulk Operation

Previously, when using a bulk operation to upgrade an activated entitlement to a different product, the substitution variables **EntitlementLineItem.status**, **ChannelPartner.name**, and **ChannelPartner.displayName** (introduced in 2023.07, see Entitlement Line Item State and Partner Available as Substitution Variables for Vendor String) were not populated into the new license that is generated.

This issue has been resolved. From release 2023.09 onwards, the substitution variables for **EntitlementLineItem.status**, **ChannelPartner.name**, and **ChannelPartner.displayName** are populated correctly into the new license when the licenses are upgraded using the Bulk Operations job.

Bulk Operation Email Job No Longer Failing

When a bulk operation included a large number of line items, the email job for that bulk operation could fail due to a transaction timeout.

This issue has been resolved.

Entitlement Now Saved Correctly When Selecting Multiple Products Across Pages in the "Select Product" Section

Previously, while configuring an entitlement line, when multiple products were selected across the pages in the **Select Product** section and the line item was saved without proceeding with the remaining steps to configure a line item, the line item was not saved. This issue has been resolved.

User Experience Issues Resolved in 2023.09

The following issue involving user experience was resolved in the 2023.09 release.

Recent Entitlements Widget in End-User Portal Now Displaying Up to Three Products per Activation ID

When an end-user logs in to the End-User Portal, the **Recent Entitlements** widget now shows up to three entitled products per activation ID. Previously, only one product per activation ID was shown. If there are more than three products mapped to an activation ID, a **... more** button is displayed which opens the **Entitlement Details** panel with detailed product information.

Issues Resolved in 2023.08

Issues in the following areas were resolved in the FlexNet Operations 2023.08 release:

- User Experience Issues Resolved in 2023.08

- SOAP Web Services Issues Resolved in 2023.08

User Experience Issues Resolved in 2023.08

The following issue involving user experience was resolved in the 2023.08 release.

Added "Account ID" Column on Expiring Entitlements Page

Previously, in the End-User Portal on the **Expiring Entitlements** page (available from the **Activation & Entitlements** menu), the filter included the option **Account ID**, but there was no equivalent "Account ID" column in the table on the page. To resolve this discrepancy, an **Account ID** column (which is non-sortable) has now been added to the table. In addition, the **Account** column has been renamed to **Account Name** for clarity.

These column changes are also reflected in the CSV file listing expiring entitlements that can be downloaded from the **Expiring Entitlements** page. The CSV file now includes the following columns:

● Total quantity

● Days remaining

● Expiration

● Product

● Version

● Activation ID

● Type

● Account ID

● Account Name

SOAP Web Services Issues Resolved in 2023.08

The following issue related to FlexNet Operations Web Services was addressed in the 2023.08 release.

Calling createUniformSuite Operation No Longer Fails

Previously, calling the **createUniformSuite** operation of the ProductPackagingService web service failed with a stack overflow error. This error no longer occurs, and the **createUniformSuite** operation adds suites as expected.

Issues Resolved in 2023.07

Issues in the following areas were resolved in the FlexNet Operations 2023.07 release:

● Account Management Issues Resolved in 2023.07

● Electronic Software Delivery Issues Resolved in 2023.07

● Entitlement Management Issues Resolved in 2023.07

● Export and Import Issues Resolved in 2023.07

● SOAP Web Services Issues Resolved in 2023.07

Account Management Issues Resolved in 2023.07

The following issues involving the management of accounts were resolved in the 2023.07 release.

"Trusted Activation Requests" Page Accessible Only With Adequate Permission

Users who do not have the permission "Trusted Activation Requests" can no longer erroneously access the **Trusted Activation Requests** page when navigating directly to the page via its URL.

Restricting Role Type Change

Changing the role type—from **Portal** to **Publisher** or from **Publisher** to **Portal**—of a role is now only allowed if the role whose type is being changed is not currently assigned to a user.

Producer Portal Rejecting Email Format Without Top-Level Domain

Previously, it was possible to create a user in the Producer Portal with an invalid email address of the format abcd@ef (that is, an email address consisting of a recipient name, @ symbol and domain name but without top-level domain). This invalid email address format is no longer accepted.

Email addresses with the following invalid formats are now rejected:

- @domain.com
- name@domain
- @.com
- name@.com
- name@@@domain.com
- name@domain..com

Electronic Software Delivery Issues Resolved in 2023.07

The following issues were resolved for Electronic Software Delivery (ESD) in the 2023.07 release.

Data Now Sorted Correctly in End-User Portal for Non-English Locales

In the End-User Portal on the **Downloads** page, data in the **File Size** and **File Added** columns was not sorted correctly. This issue only occurred in locales other than English. In the 2023.07 release, the data is sorted as expected for all locales.

EULA in Japanese Now Displaying Correctly

Previously, the EULA agreement in Japanese contained incorrectly rendered characters. This issue has been fixed and the EULA is now rendered correctly in the End-User Portal.

Entitlement Management Issues Resolved in 2023.07

The following issues were resolved for entitlement management in the 2023.07 release.

Import No Longer Fails When Activation ID Is Linked to Multiple Maintenance Line Items

The entitlement export template is used to export an entitlement or entitlements (on the **List Entitlements By Order** page). The template aggregates rows for a line item linked to multiple maintenance line items. Previously, reimporting the data using the template resulted in an error because the aggregated data was in the last row for a set of lines. The sequence of aggregation has now been changed to support an import process that relies on the data to be present in the first row.

Additional License Consolidation Criterion "Version Date"

In release 2023.02, license consolidation functionality was introduced for local license servers and embedded devices (see License Consolidation for Local License Server and Embedded Devices). When the configuration option **Consolidate Licenses** is selected, FlexNet Operations can consolidate the licenses that contain multiple line items for the same feature if certain entities are identical for all line items.

In 2023.07, the additional license consolidation criterion **Version Date** has been added. This means that line items are only consolidated if they share the same version date (in addition to the other license consolidation criteria introduced in 2023.02).

Export and Import Issues Resolved in 2023.07

The following issues related to the Data Export and Import functionality were resolved in the 2023.07 release.

Resolved Maintenance Date Update Issue

Previously, the maximum maintenance date of a line item was not updated in the ESD service when linking a new maintenance by importing the **Create_Update MaintenanceLine** Excel worksheet, which is part of the Entitlement Management template (downloadable from **Administer** > **Import Data Objects** > **Data Import Templates** in the Producer Portal). This issue no longer occurs.

Changing Product Line Using Import Template

It is now possible to use the Product Packaging import template (downloadable from **Administer** > **Import Data Objects** > **Data Import Templates** in the Producer Portal) to change the product line for a product or maintenance even if the product or maintenance is mapped to an entitlement. This enables producers to make mass updates using an import template.

Note that the values in the following columns in the import template cannot be updated along with the product line for a product or maintenance if the product or maintenance is mapped to an entitlement:

- **AllowUpgrades**
- **AllowUpsells**
- **AllowRenewals**

SOAP Web Services Issues Resolved in 2023.07

The following issue related to FlexNet Operations Web Services was addressed in the 2023.07 release.

createUser Operation in User Account Hierarchy Service Web Service No Longer Allows Mismatch Between User Name and Email Address

In previous releases, it was possible to have different values for the user name and the email address in the **createUser** operation of the User Account Hierarchy Service web service. This mismatch resulted in users not being able to access downloads in the End-User Portal.

From the 2023.07 release onwards, an error is returned when there is a mismatch between user name and email address when creating a user using the **createUser** operation. This behavior applies to all versions of the User Account Hierarchy Service web service.

Issues Resolved in 2023.06

Issues in the following areas were resolved in the FlexNet Operations 2023.06 release:

- Electronic Software Delivery Issues Resolved in 2023.06

- Device Management Issues Resolved in 2023.06

- SOAP Web Services Issues Resolved in 2023.06

- User Experience Issues Resolved in 2023.06

- Export and Import Issues Resolved in 2023.06

Electronic Software Delivery Issues Resolved in 2023.06

The following issues were resolved for Electronic Software Delivery (ESD) in the 2023.06 release.

- "Download Now" Link Now Displayed in End-User Portal

- Removed "Export" Button

"Download Now" Link Now Displayed in End-User Portal

Previously, when a line item linked to maintenance was transferred to a different account via the Producer Portal or using SOAP web services, the **Download Now** link for downloading the associated download package was not displayed in the End-User Portal on the **List Entitlements** page. This issue no longer occurs.

Removed "Export" Button

The **Export** button has been removed from the following pages in the Producer Portal where it had no underlying functionality:

- **File Downloads** page, **Download History** section

- **View Download Package**, **File** list

- **Associate this Download Package to Products where other Download Packages are found** (available from the **View Download Package** page > **Associate Where**)

- **Associate this File to Download Packages where other Files are found** (available from the **View File** page > **Associate Where**)

Producers who want to export a set of files as a Data Import Template file can do so on the **Search Results: Files** page (available from **Products** > **Search Files**).

Device Management Issues Resolved in 2023.06

The following issue with device management was resolved in the 2023.06 release.

- Binding Break Repair Requests Now Denied After "Repairs Allowed" Value Change

- Illegal Characters in "Alias" in Capability Request No Longer Cause "Devices" Page Error

Binding Break Repair Requests Now Denied After "Repairs Allowed" Value Change

When the option **Maximum Number of Repairs Allowed** (in the Producer Portal on the **View Server** page) was set to a new value that was less than the value for **Repairs Allowed**, and a subsequent repair was requested that would exceed the maximum number of repairs allowed, the repair request erroneously succeeded. This has now been fixed, and any repair request that exceeds the maximum number of repairs after a change of the **Repairs Allowed** value allowed fails as expected.

Illegal Characters in "Alias" in Capability Request No Longer Cause "Devices" Page Error

Previously, when the **Alias** field in the capability request contained multiple control characters (see note below), the **Devices** page did not load as expected. This issue no longer occurs.

Note ▪ Control characters are characters that do not represent a printable character but instead serve to initiate a specific action. A control character is entered using a combination of the Ctrl key and a letter. The caret symbol (^) is used to indicate the Ctrl key. Example: ^A represents Ctrl+A.

The following control characters are not allowed in device names or the device ID:

^B ^D ^E ^G ^N ^O ^P ^Q ^R ^S ^T ^U ^W ^X ^Y ^[^\ ^]

SOAP Web Services Issues Resolved in 2023.06

The following issue related to FlexNet Operations Web Services was addressed in the 2023.06 release.

- Resolved Issue with Expiration Date Updates in Entitlement Order Service

- Web Service Request No Longer Accepts Strings Without @ Symbol and Domain As Valid Email Address

Resolved Issue with Expiration Date Updates in Entitlement Order Service

Using the **CreateEntitlementLineItem** web service request, the entitlement line expiration date was not updated in ESD with the maintenance expiration when the maintenance line item was created and linked in the same request. This has been fixed and the expiration date is updated with the maintenance expiration date.

Web Service Request No Longer Accepts Strings Without @ Symbol and Domain As Valid Email Address

Previously, when creating a user using the **createUser** request from the User Account Hierarchy Service, an email address that only consisted of the recipient name—for example, a string such as abcd, without @ symbol and a domain—was accepted as a valid email address. This has now been fixed. When a string like abcd is specified as the user's email address, the following error message is displayed: `20409:The email address <email address input value> is not valid`.

This change applies to all versions of the User Account Hierarchy Service.

User Experience Issues Resolved in 2023.06

The following issue involving user experience was resolved in the 2023.06 release.

Filter Setting Now Persisting

Previously, in the End-User Portal, the filter settings on the **List Entitlements** page were cleared when navigating through the pages of entitlements by entering a number into the page number text field. This issue no longer occurs; the filter settings now persist as expected.

Export and Import Issues Resolved in 2023.06

The following issue related to the Data Export and Import functionality was resolved in the 2023.06 release.

Feature Version Now Marked As Mandatory in Import Template

The Product Packaging Template (available under **Administer** > **Import Data Objects** > **Data Import Templates**) now indicates that specifying a feature version is mandatory. This is to avoid that producers attempt to create a product without a feature version, which would fail.

Issues Resolved in 2023.05

Issues in the following areas were resolved in the FlexNet Operations 2023.05 release:

- Account Management Issues Resolved in 2023.05

- Device Management Issues Resolved in 2023.05

- Electronic Software Delivery Issues Resolved in 2023.05

- Entitlement Management Issues Resolved in 2023.05

Account Management Issues Resolved in 2023.05

The following issue involving the management of accounts was resolved in the 2023.05 release.

Accounts With Expired Users No Longer Fail to Update

In previous releases, when an account included an expired user, the account could not be updated and FlexNet Operations returned an error message.

This issue has now been resolved. Accounts can be updated regardless of whether they include any expired users.

Device Management Issues Resolved in 2023.05

The following issues with device management were resolved in the 2023.05 release.

- Devices Page Now Loading Correctly When Device Name Includes Invalid Control Characters
- Corrected Default Value for Binding Break Limit

Devices Page Now Loading Correctly When Device Name Includes Invalid Control Characters

Previously, when a device was created using a capability request and the "Device ID" or "Alias" field contained an invalid character, the **Devices** page did not load as expected.

In this release, when a device is created using a capability request, invalid characters in the "Device ID" or "Alias" field are replaced with an empty string (for example, the device name Test^BName is saved as TestName). As a result, the **Devices** page loads without errors.

As a side effect, when an invalid character is used in the "Device ID" or "Alias" field and subsequently removed by FlexNet Operations, the license will not be processed by the FlexNet Embedded toolkit. Revenera aims to address this issue in a future release of the FlexNet Embedded toolkit.

The following control characters are invalid and are replaced with an empty string. They should not be used when creating a device using a capability request: ^B, ^D, ^E, ^G, ^N, ^O, ^P, ^Q, ^R, ^S, ^T, ^U, ^W, ^X, ^Y, ^[, ^\, ^]

New Configuration Option

The behavior—whether invalid characters are replaced with an empty string—is controlled by a new configuration option **Retain Non-Printing Characters in Device ID and Alias** (located under **System** > **Configure** > **Embedded Devices** > **Host Options**). By default, this option is unselected and invalid characters are replaced with an empty string.

Customers who want to retain the original behavior (where invalid characters are *not* removed) are advised to select the new configuration. Customers should note that in this case, if the "Device ID" or "Alias" field contains an invalid character, the **Devices** page will not load correctly.

Corrected Default Value for Binding Break Limit

Previously, the configuration option **Maximum Number of Binding Break Repairs Allowed for License Server** (available when selecting **Limit Binding Break Repairs for License Server**, under **System** > **Configure** > **Embedded Devices** > **Host Options**) had an incorrect default value of 0. This has now been corrected, and the default value is 3.

Electronic Software Delivery Issues Resolved in 2023.05

The following issue was resolved for Electronic Software Delivery (ESD) in the 2023.05 release.

Resolved Issue with Entitlements Transfer

In previous releases, when an entitlement for a product associated with a download package was transferred to a different account, the End-User Portal did not display the download link for the package.

This issue has now been resolved. Download links are displayed as expected, and users can download the download packages for transferred entitlements that they are entitled to.

Entitlement Management Issues Resolved in 2023.05

The following issue was resolved for entitlement management in the 2023.05 release.

Fixed Regression With Mapping Expired Activation IDs to Device

In the previous release, a regression was introduced where an expired activation ID could be mapped to a device. This has now been fixed, and attempting to map or activate an expired activation ID on a device results in an error message.

Issues Resolved in 2023.04

Issues in the following areas were resolved in the FlexNet Operations 2023.04 release:

- SOAP Web Services Issues Resolved in 2023.04
- Export and Import Issues Resolved in 2023.04

SOAP Web Services Issues Resolved in 2023.04

The following issue related to FlexNet Operations Web Services was addressed in the 2023.04 release.

ManageDeviceService Web Service Returning User Information

In previous releases, some queries from the ManageDeviceService web service (v4 and v5)—**getDevice**, **getDevicesQuery** and **searchDevices**—returned a "Transaction Failure" error when the configuration option **Device User Option** was set to **On with validation** (under **System** > **Configure** > **FlexNet Operations** > **Embedded Device Settings**).

This issue has now been resolved and queries return user information as expected.

Export and Import Issues Resolved in 2023.04

The following issue related to the Data Export and Import functionality was resolved in the 2023.04 release.

Data Import Template Now Successfully Updates Product Status

Previously, attempting to change the state of an existing product from "Draft" to "Deployed" using the Data Import template—either by setting the value of the **DeployState** column to **Deployed** or leaving it blank—resulted in an error. This issue no longer occurs.

Issues Resolved in 2023.03

Issues in the following areas were resolved in the FlexNet Operations 2023.03 release:

- Export and Import Issues Resolved in 2023.03
- License Management Issues Resolved in 2023.03
- SOAP Web Services Issues Resolved in 2023.03

Export and Import Issues Resolved in 2023.03

The following issue related to the Data Export and Import functionality was resolved in the 2023.03 release.

Exported Feature Bundles Now Include New Features

Previously, when new features were added to an existing feature bundle, and this feature bundle was then exported into a .jar file and imported into another instance of FlexNet Operations, the new features were not imported. This issue has now been resolved and features are imported as expected.

License Management Issues Resolved in 2023.03

The following issues involving license management have been resolved in the 2023.03 release.

- Fixed Incorrect Escape Character in FlexNet Publisher Activation Requests
- Meaningful Error Message Displayed for Bulk Upgrades Exceeding 1048 Line Items

Fixed Incorrect Escape Character in FlexNet Publisher Activation Requests

Manual activation files saved in the End-User Portal or the Producer Portal now contain the correct escape character for &.

Meaningful Error Message Displayed for Bulk Upgrades Exceeding 1048 Line Items

Bulk upgrades for embedded devices with the **Select All Line Items** option (on the **Entitle Customers To Licenses** | **Bulk Upgrade - Select Line Items** page) are supported for a maximum of 1048 line items.

If the number of selected line items exceeds 1048, the bulk upgrade operation does not complete and the **Notes** column (on the **Entitle Customers To Licenses** | **Bulk Operations** page) displays an error message similar to the following.

```
'Bulk operation upgrade-100: cannot auto-fulfill because the number of line items
selected with 'Select All Line Items' exceeds 1,048'
```

Previously, the bulk upgrade failed repeatedly and no error message was displayed.

SOAP Web Services Issues Resolved in 2023.03

The following issue related to FlexNet Operations Web Services was addressed in the 2023.03 release.

Resolved Hibernate Error for searchDevices Operation

In the ManageDeviceService web service version 5, the **searchDevices** operation was throwing a hibernate error when searched by a combination of **addOnExpirationDate** and **soldTo** fields. This issue no longer occurs.

Issues Resolved in 2023.02

Issues in the following area were resolved in the FlexNet Operations 2023.02 release:

- SOAP and REST Web Services Issues Resolved in 2023.02

SOAP and REST Web Services Issues Resolved in 2023.02

The following issue related to FlexNet Operations Web Services was addressed in the 2023.02 release.

- EntitlementOrderService Returning Line Item Information
- Products Extract Report Includes Details for Products Related to Suites

EntitlementOrderService Returning Line Item Information

Previously, using the **getEntitlementLineItemProperiesQuery** to request an entitlement line item with an empty custom attribute didn't return the line item information. This issue no longer occurs.

Products Extract Report Includes Details for Products Related to Suites

The Product Packaging Data Extract job (part of the Data Extract REST APIs) has been updated to include details about the product if the product is part of a suite. Previously, the Products Extract report did not indicate which products were part of a suite.

In addition, the Products Extract report now includes the following new fields: **SuiteProductName**, **SuiteProductVersion**, **SuiteProductState**, **SuiteProductQty**.

Issues Resolved in 2023.01

Issues in the following area were resolved in the FlexNet Operations 2023.01 release:

- Entitlement Management Issues Resolved in 2023.01
- SOAP Web Services Issues Resolved in 2023.01
- Electronic Software Delivery Issues Resolved in 2023.01

Entitlement Management Issues Resolved in 2023.01

The following issues were resolved for entitlement management in the 2023.01 release.

- New Configuration to Control Line Items Displayed on "Support Licenses and Maintenance" Page

- New Fields Showing Line Item Description

New Configuration to Control Line Items Displayed on "Support Licenses and Maintenance" Page

A new configuration **Show upgrade/upsell line items related to the license (activation ID)** enables producers to control which line items are displayed on the **Support Licenses And Maintenance** page in the Producer Portal and End-User Portal. The option is located under **System > Configure > FlexNet Operations > General Options**.

The behavior is as follows:

- **Unselected**—During an upgrade or upsell operation, the **Support Licenses And Maintenance** page lists all upgrade or upsell line items that belong to a specified activation ID. This is the default behavior.

- **Selected**—During an upgrade or upsell operation, only child line items that are related to the upgraded or upsold activation ID are displayed on the **Support Licenses And Maintenance** page. This is the modified behavior.

New Fields Showing Line Item Description

The Producer Portal and End-User Portal now include a field to display the line item description in the **Entitlement Details** window and the **Line Items Details** window, respectively.

SOAP Web Services Issues Resolved in 2023.01

The following issues related to FlexNet Operations Web Services were addressed in the 2023.01 release.

- Resolved Entitlement Order Web Service Issue

- Parameter "lastModifiedDate" Now Considers Timezone

Resolved Entitlement Order Web Service Issue

Previously, calls to the **createSimpleEntitlement** API did not return any line items that were updated using the CREATE_OR_UPDATE **opType**.

This issue has now been resolved, and the response for calls to **createSimpleEntitlement** includes the updated line item details.

Parameter "lastModifiedDate" Now Considers Timezone

Previously, the search parameter **lastModifiedDate** that is available for the **/manageDevice/2.0/devices** REST API only considered timezone information in GMT (as in the default request format) included in the search request.

This has now been resolved and **lastModifiedDate** can filter results based on the last modified timestamp for any timezone.

When including a time zone in the request, the time zone should be specified as offset from GMT (for example, 2022-09-13T15:00:34+02:00). If no timezone is provided in the request, the search is carried out in GMT.

Electronic Software Delivery Issues Resolved in 2023.01

The following issue was resolved for Electronic Software Delivery (ESD) in the 2023.01 release.

Fixed Link for Aspera Connect

High-speed uploads require the Aspera Connect high-speed plug-in. The link provided for downloading the Aspera Connect plug-in became invalid, but has been now updated to point to the correct location (https://www.ibm.com/products/aspera/downloads).

Known Issues

The following describes known issues in the current FlexNet Operations release.

FNO-69836: Variables in Vendor String Causing License Activation Issues

License activation fails for product upgrades or normal license activation when the product to be upgraded or activated is associated with a feature that has a vendor string which contains substitution variables that are enclosed in double quotes (for example, "activationId":"{EntitlementLineItem.activationId}").

FNO-69766: Issue With Configuration Option "Use ISO 8601 time format in extracts" in Entitlement Data Extract

The configuration option **Use ISO 8601 time format in extracts** (see New Configuration Option for Extract Dates/Times in ISO 8601 Format) currently has no effect on the **VersionDate** field for entitlement data extracts.

FNO-69338: Navigation in Package Products Pages Skipping Review Features Page

When the user navigates through the Package Products pages (under **Products** > **Features**) using the **Next** button at the bottom of each page, the Review Features and Review Feature Bundles pages are erroneously skipped.

As a workaround, users who want to review the features and feature bundles that they just added can click the **Review Features** and **Review Feature Bundles** links, respectively, in the Packaging Guide section at the bottom of the page to access the Review Features page.

SWM-15870: Mismatch Between User Name and Email Address Causing Issues with ESD (UserOrgHierarchyService)

When creating a user via the UserOrgHierarchyService web service (the predecessor of the User Account Hierarchy Service web service), it is possible to have different values for user name and email address. However, users whose user name and email address do not match cannot access downloads in the End-User Portal.

Producers who use the UserOrgHierarchyService should use the methods from the User Account Hierarchy Service web service to avoid a mismatch between the user name and email address.

Note ▪ *The following changes have recently been made to the User Account Hierarchy Service web service:*

- *From the 2023.07 release onwards, it is not possible to create users with a mismatched user name and email address. See* createUser Operation in User Account Hierarchy Service Web Service No Longer Allows Mismatch Between User Name and Email Address*.*
- *From the 2023.10 release onwards, users cannot update their email address to be different from their user name. See* updateUser Operation in User Account Hierarchy Service Web Service No Longer Allows Mismatch Between User Name and Email Address*.*

FNO-69182: Incorrect Email Format Accepted When Creating User Via Import Template

It is possible to create or update a user with an invalid email address format by importing user information using the Account and User import template (downloadable from **Administer** > **Import Data Objects** > **Data Import Templates** in the Producer Portal). Email addresses of the format abcd@ef (that is, an email address consisting of a recipient name, @ symbol and domain name but without top-level domain) are erroneously accepted.

FNO-68962: Invalid Characters in Device ID Causing Issues

When the FlexNet Embedded toolkit creates a device ID that contains an invalid character, an error occurs.

The following control characters are not allowed in device names or the device ID:

^B ^D ^E ^G ^N ^O ^P ^Q ^R ^S ^T ^U ^W ^X ^Y ^[^\ ^]

SWM-10701: Search Functionality in End-User Portal Erroneously Displays Download Link

In the End-User Portal, users who should be denied access to a file based on their geographical location are able to display the download link for a restricted file when searching for the file name (using the Search function with the **Files** option on the **Download Search** page). However, users are not able to download the restricted file.

SWM-6755: Attempts to Export All Entitlements From End-User Portal Unsuccessful

An attempt by a producer user to export all entitlements from the End-User Portal can fail.

SWM-8779: Feature Names With "SERVER" Truncated in Trusted Storage

Feature names containing the string "SERVER" are truncated when the features are activated in trusted storage.

FNO-66018: Errors in UI Updated for Download Package Selection Across Multiple Pages

In 2021.09, the **Download Packages** window was updated to allow package selection across multiple pages. The following errors currently exist for the updated UI.

- Incorrect error message for EULA license on Review & Resolve page

- Search string not properly clearing

- No option to return to full (unfiltered) Download Package list when "failed validation" message displays

- Failed validation error displayed for search results

- Pagination control fields not showing correct information

- Inappropriate message displayed for already downloaded packages

Incorrect error message for EULA license on Review & Resolve page

When you attempt to download packages that fail validation, the following message is displayed: "Some of the selected packages failed validation. You need to review and resolve the validation errors." Then, on the **Failed Packages** window that is displayed if you click the "review and resolve" link in the message, the error for an unaccepted EULA incorrectly shows the following:

 "EULA has not been accepted. To accept EULA, click on the Download package ID."

Instead of "click on the Download Package ID", the message should instruct the user to "...click 'I Agree'".

Search string not properly clearing

After you filter the package list on the **Download Packages** window, the message "Results for Download package name: <name>" is appropriately displayed. However, if you then click the **Clear** link at the end of message, the search string used to filter the package list remains, the list remains filtered (even if you move to the next page), and the "Results for the Download package name..." message is still displayed. You must manually delete the search string and click **Search** to clear the filter.

No option to return to full (unfiltered) Download Package list when "failed validation" message displays

If the "failed validation" message is displayed after you attempt to download packages from a filtered list on the **Download Packages** window, no mechanism exists to clear the filter to display all packages. You must manually delete the search field contents and click **Search**.

Failed validation error displayed for search results

After searching for and attempting to download a package containing an unaccepted EULA, the expected message "Some of the selected packages failed validation..." is displayed on the **Download Packages** window. However, if you then search for a package that does not contain an EULA (but do not attempt to download the package), you received the "failed validation" message instead of the correct message describing the filter results: "Results for Download package name: <name>".

Pagination control fields not showing correct information

The pagination control fields on the **Download Packages** window are not displaying the correct totals for a filtered list of packages.

Inappropriate message displayed for already downloaded packages

When you select an entitlement line item whose packages have already been downloaded, the **Download Packages** window is displayed with incorrect message "Files sent for download. Please monitor the download manager pop up". The message should be removed altogether or displayed only as package files are being sent to the Download Manager (before the actual **Download Manager** window is displayed).

SWM-7952: Not All Applicable Download Links Available on "List Downloads" Page in End-User Portal

When end-users are logged in with an activation ID for an entitlement line item that is associated with multiple products, the **Downloads** page (accessed from **Downloads > List Downloads**) in the End-User Portal does not always show links to all applicable product downloads.

SWM-7786: SHA2 Checksum Value of Previous File Shown

If a user has provided a file's expected SHA2 checksum value for an upload and the file image is subsequently deleted, the **Upload File** page, when opened again, might show the SHA2 checksum value of the previously loaded file image.

FNO-65909: Download Files Not Visible For Self-registered And Trial Users

Download files might not be visible in the End-User Portal for self-registered users and those users registered through the "Try Before You Buy" registration.

FNO-61266: Translation Issues with Localization

Per a previous enhancement in 2020 R3 to add more language support for End-User Portal localization, certain strings—such as alerts and validation messages—are not being translated properly when localization is in effect. These issues will be addressed in an upcoming release.

Special Notes

This section contains special information pertaining to FlexNet Operations.

Plug-in Upgrade Needed for High-Speed File Uploads

If you intend to use the high-speed upload option to upload files, upgrade the Aspera plug-in to Aspera Connect 3.10.0 or later.

Best Practice for Uploading New File Versions for Software Delivery

The following practice helps to prevent the delivery of "stale" file content to your customers.

When you upload a new version of a file (or package) whose previous version exists in the Software Delivery system, best practice is to give the new file version a unique name, different from the name of the existing file version. (For example, use a version number in the file name.) Try to avoid uploading a file using the same name as the existing file so that the existing file is overwritten.

If you must upload a new file using the same name as the existing file, delete the existing file and wait 10-15 minutes before uploading the new version. This process will reduce the probability of re-caching the old content.

Handling UI Conflicts When Using a Custom CSS for the End-User Portal

When you use your own CSS to customize the look of the End-User Portal, sometimes your custom CSS code conflicts with existing Revenera CSS code that is used to define certain buttons, pages, and other UI elements. When conflicts occur, handle each case individually, determining the basis of the conflict and adjusting the custom CSS as needed. If you require assistance, contact Revenera Technical Support (see Revenera Resources).

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