FlexNet Operations 2021 R1 On Premises Release Notes

November 2021

Introduction

This Release Notes document summarizes the FlexNet Operations 2021 R1 On Premises release and it subsequent point releases.

- Features and Enhancements

- System Requirements

- Resolved Issues

- Known Issues

- Special Notes

- Legal Information

Note ▪ For additional details about the changes, contact Revenera support.

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.

- 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 FlexNet Customer Growth	Customer growth concepts and configuring notifications for expiring entitlements and expired entitlements.

Features and Enhancements

Features and enhancements were added to the following areas of FlexNet Operations On Premises in the 2021 R1 release:

- Account and User Management Enhancements

- Device Management Enhancements

- Download Package Management Enhancements

- Electronic Software Delivery Enhancements

- Email Notification System Enhancements

- Entitlement Management Enhancements

- Export and Import Enhancements

- License Management Enhancements

- SOAP and REST Web Services Enhancements

- System Administration Enhancements

- User Experience Enhancements

- General FlexNet Operations Enhancements

Account and User Management Enhancements

This section describes the enhancements introduced in 2021 R1 for managing accounts and users:

- Configurable Display of "Created By" Column for Accounts in the End-User Portal

- New Permissions to Control Producer-Management of Other Users

- Allowing Additional Users on Self-Registered Accounts

- Control Over Editing Account ID and Account Name in the End-User Portal

- Control Over Creating Customer and Partner Accounts in the End-User Portal

Configurable Display of "Created By" Column for Accounts in the End-User Portal

Revenera Support can now help you hide the **Created By** column on the **Accounts** page in the End-User Portal. (By default, the column is visible.) Contact them if you need to hide (or later redisplay) this column.

New Permissions to Control Producer-Management of Other Users

This enhancement enables Producer users to manage Customer and or Partner users, independently of managing other Producer users. Previously with the single **View and Manager Users** permission, Producer users had access to modify all User types in the system, and could not be constrained to just Partners or Customers. In this release, the following user-management permissions have been added to define a Producer role:

- **View and Manage Customer Users**—Enables the Producer user to create and manage only Customer users.

- **View and Manage Partner Users**—Enables the Producer user to create and manage only Partner users.

These new permissions provide a control for the types of users that a Producer user can manage. (This might be necessary, for example, to comply with internal security measures.)

If the Producer user is assigned the **View and Manage Users** permission, the other two permissions are ignored since they are folded into the **View and Manage Users** permission. However, if the Producer user is configured with either or both of the new permissions, but not with the **View and Manage Users** permission, the producer can manage the only type of users specified by the selected permission(s); the producer cannot manage other Producer users.

*Important ▪ The Producer user also requires the **View and Manage Accounts** permission to manage users using any of these three user-management permissions. Without this "umbrella" permission, the Producer user cannot create users or save updates, view transaction histories (updates, deletes, or so forth), or reset passwords for those user types that the producer has permission to manage.*

Allowing Additional Users on Self-Registered Accounts

At initial login, End-User Portal users have been able to self-register themselves and the organization to which they belong as long as they have an entitlement or activation ID. This dual registration of the organization and the user is performed from the **Register for Account** page, available through the **Register** option on the End-User Portal login screen. However, in previous releases, a user could not self-register with an existing self-registered account.

In this release, a user can now self-register with an existing self-registered account at initial login. A new option, **Register for existing Account**, has been added to the **Register for Account** page to allow this type of registration. The user is automatically added to the self-registered account identified by the entitlement or activation ID.

Additionally, to control the availability of this new option on the **Register for Account** page, a system administration option, **Enable Self-Registration for an existing Account**, has been added to the **System > Configure > End-User Portal Setup** page.

Control Over Editing Account ID and Account Name in the End-User Portal

The End-User Portal allows users to edit their account ID and account name. However, for some sites, this capability is not desirable. To address this issue, a new system administration option has been added in the Producer Portal to enable or disable the end users' ability to update the account ID and name. The option, **Prevent editing of Account ID and Account Name**, is available in the **Manage Accounts & Users** section of the **End-User Portal Setup** configuration page in **System > Configure**. This option is disabled by default to maintain the behavior of previous releases.

Control Over Creating Customer and Partner Accounts in the End-User Portal

The End-User Portal allows users to create customer or partner accounts. Some sites prefer not having end users create accounts. However, they still want these users to assign account users and perform other account management tasks. Disabling the end-user permission to manage accounts prevents users from creating accounts but also prevents them from performing other account management tasks. To address this issue, a new system administration option has been added in the Producer Portal that enables or disables the end users' specific permission to create customer and partner accounts in the End-User Portal. The option, **Hide Create an Account**, is available in the **Manage Accounts & Users** section of the **End-User Portal Setup** configuration page in **System > Configure**. This option is disabled by default to maintain the behavior of the previous releases.

Device Management Enhancements

This section describes the enhancements introduced in 2021 R1 for managing devices.

Site Name Now Editable After Device Creation

The **Site Name** property for a standalone or server device enables the user to identify a sub-section of a company account, such as the location to which a device is delegated. Previously, this field was available when creating the device. However, once the device was created, users could no longer edit this value.

In this release, the **Site Name** field is now editable after a device is created in either the Producer Portal or the End-User Portal. To allow editing of this field in the End-User Portal, the system administrator must select the new configuration setting, **Allow site name editing**, under **System** > **Configure** > **End-User Portal Setup** > **Devices Page**.

This setting is processed only when the **Display Site Name in device pages** is also selected.

Package Downloads Now Enabled from the "Device Details" Page for Standalone Devices

The **Device Details** page for a standalone device, which currently shows tabs for the **Overview** and **Updates** information relating to the device, has been enhanced to add a third tab, **Downloads**, for displaying the downloads available to the device. This new tab enables Producers and Customers to determine in a single view what software downloads in Electronic Software Delivery can be installed on the device and to navigate to any of the **Download Package** details pages in order to download specific files.

Optionally, a button can be displayed on the **Downloads** tab that allows all files for selected download packages to be downloaded in a single archive directly from the tab.

The new **Downloads** tab is not visible by default, but is enabled by means of a new system configuration setting, **System** > **Configure** > **End-User Portal Setup** > **Devices Page** > **Show Downloads Tab**.

Similarly, the button to download all files for selected packages directly from the **Downloads** tab is enabled by a separate system configuration setting, **System** > **Configure** > **End-User Portal Setup** > **General Options** > **Show Download Button**. This setting is applied only if the previously described **Show Downloads Tab** setting is enabled.

Ability to Remove Accounts from a Device

You can now disassociate an account from a device so that the device can be assigned to another account. Previously, you could not obsolete or reset a device because you could not remove its account.

Customer Account Now Optional for Devices

Previously, associating a standalone device with a customer account was required when creating (that is, registering) the device in the Devices UI in the Producer Portal. In this release, customers now have the option to create a standalone device without associating it with an account. This type of device is known as an *anonymous device* (a term used to describe this kind of device type but not actually used in the UI).

> *Note ▪ Associating a device with a customer account has always been optional in SOAP Web Services. However, anonymous devices cannot be created in nor are visible in the End-User Portal.*

Download Package Management Enhancements

The following enhancements to the management of download packages were added in the 2021 R1 release.

SHA2 Checksum Available for Uploading Files

Previously, when preparing to upload a file for association with a download package, producers could provide the file's expected MD5 value on the **Upload File** page. This value was then compared with the MD5 of the file once it was uploaded to ensure that the file had not changed during the upload.

Producers can now also provide the file's expected SHA2 checksum value when performing an upload. They can provide both the SHA2 and the MD5 values or one or the other value to ensure that the pre-uploaded file and uploaded file are the same. Note that this SHA checksum option is available only when performing an HTTP or FTP upload (from the **HTTP Upload** or **FTP Upload** tab, respectively).

File Downloads Now Performed on Separate Tabs

When users click the link to download a file from the **Downloads** page in the End-User Portal, the download now opens to a new tab, enabling users to navigate between tabs during multiple downloads.

Electronic Software Delivery Enhancements

The following enhancements to Electronic Software Delivery (ESD) were added in the 2021 R1 release.

Downloads Now Visible in End-User Portal for Users Who Reset Their Passwords

Previously, if an end-user's account was deactivated due to multiple invalid login attempts and the user then reset their password, the Electronic Software Delivery module was not made aware of this account change. As a result, in the End-User Portal, the user could no longer view downloads associated with entitlements to which that user had access. Electronic Software Delivery will now be made aware of such changes, so that end users can continue to access downloads.

"Download Packages" Page Now Accessible for Multiple Selected Entitlement Line Items Belonging to Different Accounts

Prior to this release, when a user in the End-User Portal selected multiple entitlement line items belonging to various accounts and then clicked **View** > **View Download Packages**, the following error message was displayed: "The selected activation ids should belong to the same account Id." The **Download Packages** page was not opened.

Now, when the user selects this option for multiple lines items belonging to various accounts, no error message is displayed. Instead, the **Download Packages** page is opened, enabling the user to view and download packages associated with these accounts. A dropdown above the grid on the page lets the user select the account for which to list download packages.

"Download Packages" Page Now Accessible for Multiple Selected Entitlement Line Items When Some Items Have No Downloads

Previously, when a user in the End-User Portal selected multiple entitlement line items—one or more of which had no associated download package—and then clicked **View** > **View Download Packages**, the following error message was displayed: "Some of the activation ids selected do not have download packages." The **Download Packages** page was not opened.

Now, when the user selects this option for multiple lines items, some of which do not have associated download packages, no error message is displayed. Instead, the **Download Packages** page is opened, showing the download packages for those selected line items that have packages. However, if none of the selected line items are associated with download packages, the error message is displayed.

Email Notification System Enhancements

The following are enhancements were introduced for email notifications in 2021 R1 release.

- Support for Account-level Custom Attributes in Entitlement, Entitlement Certificate, and Reset Password Email Templates
- New Column to Track the Date of Last Change to an Email Template
- New Merge Tag for Email Recipients
- Single Email Notification for a Product with Multiple Line Items During Bulk Entitlement Upgrade
- Accounts and User Custom Attributes Available for Use as Merge Tags

Support for Account-level Custom Attributes in Entitlement, Entitlement Certificate, and Reset Password Email Templates

The Entitlement, Entitlement Certificate, and Reset Password email templates now support account-level custom attributes. One or more of the custom attributes can be used to define conditions in the template that control the content sent to the users of different accounts. The templates include FOR-EACH tags that can be used to iterate through the accounts to read the values of the custom attributes.

New Column to Track the Date of Last Change to an Email Template

A **Date Modified** date/time column has been added to the **List Email Templates** and **List All Versions** pages for email templates. This value reflects the date of the latest content update to a given template (active or draft version) in the list. The value does not reflect the date of the latest update to the template's definition (for example, an update to the template's variation name or any other editable attribute).

Note that the **Date Modified** column value remains blank until the content for the email template is updated for the first time *after this release*.

New Merge Tag for Email Recipients

A new merge tag **RecipientName** is available in the Entitlement and License email templates. This tag ensures that the correct name is used when addressing individual recipients in the emails triggered after the completion of a bulk entitlement operation.

Single Email Notification for a Product with Multiple Line Items During Bulk Entitlement Upgrade

When a bulk operation does an upgrade for entitlements, end users are sent a single email for each upgraded line item within a single entitlement. Previously, however, due to this system design, when the same product existed on multiple line items within a single entitlement, end users received multiple email notifications for the same product.

Now, when multiple entitlement line items for the same product within a single entitlement are upgraded during an entitlement bulk upgrade operation, users receive a single email notification is for the product, not a notification for each upgraded line item.

Note • *This update is not supported when multiple lines items for the same product within multiple entitlements in a given account are upgraded using a bulk operation.*

Accounts and User Custom Attributes Available for Use as Merge Tags

Account and User custom attributes (`[[ACCOUNT_CA]]` and `[[USER_CA]]`, respectively) can now be used as merge tags in the "Welcome" email template. Additionally, a FOR-EACH merge tag has been included to iterate through the Account custom attributes.

Entitlement Management Enhancements

This section describes the enhancements introduced in 2021 R1 for managing entitlements:

- Improved User Experience When Attempting to View Download Packages for Entitlements Without Associated Downloads

- Entitlement Search by Contact Email Address

- Multiple Package Downloads from Entitlement List in End-User Portal

- New Parameter to Control Inactivating or Obsoleting Entitlements and Line Items Currently Used by Devices

Improved User Experience When Attempting to View Download Packages for Entitlements Without Associated Downloads

Users on the **List Entitlements** page in the End-User Portal can select **View** > **View Download Packages** to view and download the download packages associated with multiple entitlement line items currently selected on the **List Entitlements** page.

Previously, if any of the selected line items were not associated with a download package, users received a error message, forcing them to deselect those line items that had no associated download packages before they could proceed to view the download packages for those items that had. (Entitlement line items that have an associated download show a `Download Now` link in the `Downloads` column on the **List Entitlements** page.)

Now, when users select to view the download packages for multiple line items, some of which do not have an associated download, the **Download Packages** window proceeds to open, listing the downloads for only those line items that have associated downloads. The previous error message that prevented users from proceeding to view the **Download Packages** window is no longer presented.

If none of the selected line items have associated download packages, a pop-up message on the **List Entitlements** page lets you know.

Entitlement Search by Contact Email Address

Users can now filter entitlements by the email address of the contact associated with the sold-to account for entitlements. The following new items are available to enable the use of this new filter:

- A new **Contact Email** option in the **Search for** field on the **List Entitlements by Order** page

- A new optional **contactEmail** parameter for the **getEntitlementsQuery** method in the V4 **EntitlementOrderService** web service

*Note ▪ For partner accounts, the search base on the contact email address works for those accounts that belong to the **endCustomer** tier type.*

Multiple Package Downloads from Entitlement List in End-User Portal

Previously, users were required to perform software downloads for entitlement line items on the **List Entitlements** page one line item at a time. In this release, users can now perform software package downloads for multiple line items selected on the **List Entitlements** page or opt to download selected files within a given download package. (All selected entitlement line items must belong to the same account and have downloads available.)

To initiate the download process, users select the new **View** > **View Download Packages** option on the **List Entitlements** page. This option opens the **Download Packages** window, enabling users to view a list of the software download packages available for the selected line items and then download selected (or all) packages. Alternatively, users can click a package link from this window to obtain a list of all the files contained in the package, and, from this list, select specific (or all) files to download. Compliance checks are performed before any download starts.

Users must have the existing **Get Downloads** permission to perform these software downloads.

The new **View Download Packages** option is not visible by default, but is enabled by means of a new system configuration setting in the Producer Portal, **System** > **Configure** > **End-User Portal Setup** > Entitlements Page> **Show View Download Packages**.

Similarly, the button to download all files for selected packages directly from the **Download Packages** window is enabled by a separate system configuration setting, **System** > **Configure** > **End-User Portal Setup** > **General Options** > Show Download Button. This setting is applied only if the previously described **Show View Download Packages** option is enabled.

New Parameter to Control Inactivating or Obsoleting Entitlements and Line Items Currently Used by Devices

When an entitlement or line item is made Inactive or Obsolete, the licenses currently activated on a device (license server or standalone device) by that line item or entitlement remain on the device until they expire.

If this behavior is not desired, it is now possible to prevent the line item or entitlement from being made Inactive or Obsolete by setting the System Configuration option **Allow used entitlement/line item state change to Inactive or Obsolete** to **false**. An error message will then be displayed if an attempt is made to make such a line item or entitlement Inactive or Obsolete. (The option is located under **System** > **Configuration** > **FlexNet Operations** > **General Options**.)

Export and Import Enhancements

The following enhancement to the Data Export and Import functionality was added in 2021 R1.

Ability to Export a Single Entitlement into a Template for Import

Previously, to import a single or selected entitlements into a template for data import, users had to export the entire entitlement base. A new import option now makes it possible to export selected entitlements into a template for import.

License Management Enhancements

This section describes the 2021 R1 enhancements to license management and models.

New Configuration Option to Batch-Rehost All Fulfillments

Currently, during a Batch Rehost process, if a producer selects to rehost fulfillments from more than 10 line items belonging to the same entitlement, a maximum of 10 fulfillments is rehosted. This limit can cause an issue when a producer wants to rehost all fulfillments on a given host and the host is activated with an entitlement that has more than 10 line items.

The following configuration option has been added in this release to enable a producer to rehost *all* available fulfillments for an entitlement during a Batch Rehost. (The 10-fulfillment limit is not exercised.)

> **System** > **Configure** > **FlexNet Operations** > **General Options** > **Process all line items in an Entitlement during Batch Rehost**

This option applies to FlexNet Publisher fulfillments only.

New Option to Handle Multiple Tenants

A new configuration option, `multitenancy.disabled`, has been added in this release. This option is for use by FlexNet Operations On Premises customers who have more than 1 tenant configured in LFS_TENANT. By default, this option is set to `false`. It must be set to `true` by such customers to ensure that they have access to proper FlexNet Operations functionality.

Search Filters in End-User Portal Enhanced to Obtain Active Fulfillments

The **List Licenses** page in the End-User Portal now provides additional **Advanced Search** filters that can be used to obtain a list of all active license fulfillments. This can be useful, for instance, when consolidating fulfillments because all fulfillments consolidated must be active. To obtain this list, users will need to use a combination of the new fulfillment **State** filter (Active) and the new **Line Item State** filter (**Deployed**).

SOAP and REST Web Services Enhancements

This section describes the FlexNet Operations SOAP and REST Web Services enhancements introduced in 2021 R1.

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Note ▪ The SOAP Web Services are recommended for use by only producers for integration with the back office.

- Ability to Search by "Sold To" Account Name When Using "getEntitlementsQuery"
- New Property to Capture the Device Creation Date
- New Batch-size Limits in SOAP and REST Web Services
- lastModifiedDate Parameter Available in searchDevices Request

Ability to Search by "Sold To" Account Name When Using "getEntitlementsQuery"

Previously, the **getEntitlementsQuery** SOAP web service did not allow the ability to filter on the **Sold To** account name. An optional parameter, **isSearchByName**, has been added to the request type so that this filter can be carried out, without changing the way the API operates by default for existing integrations.

New Property to Capture the Device Creation Date

A new **createdOn** property showing the device creation date is now returned by the **getDevice** SOAP web service request.

This change is implemented as part of the **v4 ManageDeviceService** web service.

New Batch-size Limits in SOAP and REST Web Services

The following default batch-size maximums have been implemented for requests issued from SOAP and REST web services. Specifying a request with a batch size greater than the limit results in an error.

- All services that result in a write—such as create*Object*, update*Object*, or createOrUpdate*Object*— now have a batch size maximum of 25 records.
- All read services—that is, get*Object*Query and similar methods (for example, **getEntitlementQuery** and **searchDevices**)—now have a maximum batch size of 2000.

Note that these limits can be adjusted to address the load requirements at your site. To make adjustments, the Super Administrator accesses **Configure** > **FlexNet Platform Server** > **General Options** and updates either or both options accordingly:

- **Maximum Batch sizes for create/update Webservices requests**
- **Maximum Batch sizes for read Webservices requests**

lastModifiedDate Parameter Available in searchDevices Request

A new parameter, **lastModifiedDate**, is now available with the **searchDevices** SOAP web service to enable users to filter results by the date that devices were last modified.

System Administration Enhancements

The following FlexNet Operations system administration enhancements were included in 2021 R1.

- Custom Message on the End-User Change Password Page
- Configuration to Provide "Privacy Terms and Agreement" for Self-Registering Users
- Administrator Permission to Set CLS Password
- Localization for Certain Custom Content IDs

Custom Message on the End-User Change Password Page

Producers can now add a custom message to the **End-User Change Password** page (for example, if they want to provide more information about password requirements). The content for this message is defined using the new configuration setting, **System** > **System Configuration** > **End User Portal Setup** > **Login Page** > **Custom Message**. Currently, no size restriction is applied to the message text.

Configuration to Provide "Privacy Terms and Agreement" for Self-Registering Users

Administrators can now configure a "Privacy Terms and Conditions" link on the **Register for Account** page for self-registering users in the End-User Portal. The options to configure the link—**Enable terms and conditions panel** and **Terms and conditions URL**—are found in the **General Options** section of the **End-User Portal Setup** page in **System > Configure**.

Administrator Permission to Set CLS Password

FlexNet Operations administrators now have permission to reset the Cloud Licensing Server (CLS) producer *user* password for both existing and future Cloud License Server (CLS) instances. (A producer user password is used to obtain Authorization tokens for all instances.) Administrators can set this password using the **Enable Producer User for CLS** option and the associated **Producer User's Password for CLS** field found in the **Embedded Device Settings** section of the **FlexNet Operations** page in **System > Configure**.

Localization for Certain Custom Content IDs

Producers can now localize the following Custom Content IDs, used to display custom instructions and information on specific End-User Portal pages:

- DownloadContent
- epAnnouncements
- ForgotOrResetPassword

Custom Content IDs are defined using the **System > Custom Content** page in the Producer Portal. To localize the content associated with the IDs listed above, you must add the locale code as a suffix to the ID. For example, to localize the epAnouncements content for France, add the "-fr_FR" suffix to the ID:

    epAnnouncements-fr_FR

For more information about Custom Content, refer the online *Producer Portal User Guide*.

User Experience Enhancements

This section describes FlexNet Operations user-experience features and enhancements included in this 2021 R1 release.

- Rebranding

- Additional Language Support for End-User Portal Localization

- Quick Search for Devices from Producer Portal Home Page

Rebranding

In 2020, FlexNet Operations became a product of Revenera, a new division of Flexera Software. The product, user documentation, and related artifacts have been rebranded to display the new Revenera logo (replacing the "Flexera" logo) and to redirect links to the Revenera Community and other Revenera-related sites. The FlexNet Operations product name remains the same.

Additional Language Support for End-User Portal Localization

The following additional languages are now available for localizing the End-User Portal.

Language	Locale code	Language	Locale code
Bulgarian	bg-BG	Norwegian	nb-NO
Croatian	hr-HR	Polish	pl-PL
Czech	cs-CZ	Portuguese (Europe)	pt-PT
Danish	da-DK	Romanian	ro-RO
Dutch	nl-NL	Russian	ru-RU
Estonian	et-EE	Serbian	sr-RS
Finnish	fi-FI	Simplified Chinese	zh-CN
Greek	el-GR	Slovakian	sk-SK
Hungarian	hu-HU	Slovenian	sl-SI
Indonesian	in-ID	Swedish	sv-SE
Kazakh	kk-KZ	Traditional Chinese	zh-TW
Korean	ko-KR	Turkish	tr-TR
Latvian	lv-LV	Ukranian	uk-UA
Lithuanian	lt-LT	Vietnamese	vi-VN

Quick Search for Devices from Producer Portal Home Page

You can now perform a Quick Search for devices from the Producer Portal home page. Once you have selected **Devices** as your search type, use the accompanying drop-down list and text box to further refine your search.

General FlexNet Operations Enhancements

The following general enhancements to FlexNet Operations were included in the 2021 R1 release.

Third-Party Component jQuery Upgrade

The UI for the third-party component jQuery has been upgraded to 1.12.1 for both the Producer Portal and the End-User Portal to resolve any issues related to the outdated product.

System Requirements

Detailed system requirements for FlexNet Operations 2021 R1 On Premises include the following.

Requirement	Description
Supported Operating Systems	- Microsoft Windows Server 2019 - Microsoft Windows Server 2016 - Red Hat Enterprise Linux 8.4 (64-bit) - Red Hat Enterprise Linux 7 (64-bit) - Virtual appliance: Linux (64-bit) based on CentOS-7 **Important ▪** *All Linux platforms must be Linux Standard Base (LSB) compliant.*
Supported databases	- SQL Server 2019 - SQL Server 2017 - SQL Server 2016 SP2 - SQL Server 2014 SP3

Requirement	Description
Servers	**Note ▪** *For best performance, availability, and reliability, install each FlexNet Operations On Premises component on a separate host.* **For Windows servers (each)** ● Dual core ● 8 GB of RAM for each component (FlexNet Operations, Cloud Licensing Service, Usage Analytics Service) ● Minimum of 10 GB free disk space **For Linux servers (each)** ● Dual core ● 8 GB of RAM for each component (FlexNet Operations, Cloud Licensing Service, Usage Analytics Service) ● Minimum of 10 GB free disk space ● Current directory (.) must be in the path of the user who starts the FlexNet Operations On Premises server **For Virtual Appliance** ● 8 GB of virtual RAM ● 8 GB of virtual disk space ● VMware requires about three times as much hard disk space at Open Virtualization Format package deployment time
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 3.6.12 (with Erlang Version Erlang OTP 19(8.3))
Supported Java development kits	● Oracle JDK 1.8 ● OpenJDK 1.8
Supported web browsers	● Microsoft Edge ● Mozilla Firefox 75.0 ● Google Chrome 80.0.3987.163

Requirement	Description
Supported FlexNet licensing modules	- Updates and Insights Toolkits .Net 32-bit, .Net 64-bit, C XT-64, C SDK-64 - FlexNet Publisher Toolkit 11.16.1.0 or later - FlexNet Embedded Toolkit 2015 R2 or later *Note ▪ FlexNet Operations On Premises supports these FlexNet Embedded host ID types: Ethernet, FlexID 9, FlexID 10, String, VM_UUID, User, Extended, PUBLISHER_DEFINED, Internet, and Internet6.*
Supported vendor certificate generators	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 4.8.5 (RHEL 7.0) - Linux—gcc 4.1.2 (RHEL 5.0) *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.)*
Supported upgrade paths	You can upgrade from the following previous FlexNet Operations versions to the current version: 2017 R4 2018 R1 2018 R1 SP1
Supported LDAP directory servers	Windows 2012 Active Directory

Resolved Issues

Issues in the following areas were resolved in the FlexNet Operations On Premises 2021 R1:

- Account and User Management Issues Resolved

- Alert Management Issues Resolved

- Device Management Issues Resolved

- Download Package Management Issues Resolved

- Electronic Software Delivery Issues Resolved

- Email Notification Management Issues Resolved

- Entitlement Management Issues Resolved

- Export and Import Issues Resolved

- FlexNet Embedded Back-Office Issues Resolved

- FlexNet Publisher Back-Office Issues Resolved

- License Management Issues Resolved

- Product Management Issues Resolved

- Public Services Issues Resolved

- Security Issues Resolved

- SOAP and REST Web Services Issues Resolved

- Usage Management Issues Resolved

- User Experience Issues Resolved

Account and User Management Issues Resolved

The following issues were resolved for the management of accounts and users in the 2021 R1 release.

- Users from Active Directory Group Now Able to Log Into Producer Portal

- Producer Users No Longer Able to Assign Advanced Permissions

- Creation of Users with Email Address Domains Containing Four Parts Now Allowed

- Users Now View Only Those Accounts to Which They Belong

- Attempt to Delete a User Associated with Many Devices Now Completes Successfully

- Buttons on User Creation Page No Longer Disappearing

- Last Login Date for SSO User Now Updating Properly

- Proper Error Message When Producer Creates a User with Same Email as Producer

- Correct Last Login Date for Users Now Listed

- Kanji Characters No Longer Displaying

Users from Active Directory Group Now Able to Log Into Producer Portal

Previously, users from Active Directory groups were unable to access the Producer Portal even though the groups were assigned appropriate permissions and belonged to a properly defined domain in FlexNet Operations. When the users attempted to log in, they received the following error message: "The user linking with account is expired. Please contact your administrator."

This issue has now been resolved so that users from the Active Directory groups can log in to the Producer Portal successfully.

Producer Users No Longer Able to Assign Advanced Permissions

Mechanisms are in place so that Producer Portal users can no longer give themselves (and others) advanced permissions by using an URL to access the UI to edit user permissions.

Creation of Users with Email Address Domains Containing Four Parts Now Allowed

The End-User Portal now allows the creation of users whose email address contains four tokens in its domain part (such as in mary.smith**@a.b.example.com**).

Users Now View Only Those Accounts to Which They Belong

Previously, when the **Apply Manage Users...** system option was in effect, a user (for example, User 1), who belonged to the same account as another user (User 2), would be able to remove User 2 from a different account even if User 1 did not belong to the different account. This issue has now been resolved by providing a user with access to only those accounts to which the user belongs.

The **Apply Manage Users** permission to users in shared accounts option is configured through **System** > **Configure** > **FlexNet Operations** > **General Options in the Producer Portal**.

Attempt to Delete a User Associated with Many Devices Now Completes Successfully

Previously, when a user was associated with a large number of devices, a request to the FlexNet Operations UI or Web Services to delete the user occasionally failed because an internal operation timed out. The internal operation has been optimized so that it no longer times out, enabling the delete process to complete successfully.

Buttons on User Creation Page No Longer Disappearing

The **Link Account** and **Remove Account** buttons no longer erroneously disappear on the **Create a User** page when the pagination button is clicked.

Last Login Date for SSO User Now Updating Properly

The date that an SSO user last logged into the End-User Portal is now updating correctly on the **User** page in the Producer Portal.

Proper Error Message When Producer Creates a User with Same Email as Producer

A proper error message now displays when the Producer attempts to create a user account that has the same email as the Producer's account. (The duplicate emails might occur, for example, when the Producer uses a data import template to create user accounts.)

Correct Last Login Date for Users Now Listed

The **Date of Last Login** field now lists the correct date for a given user on User pages in the Producer and End-User portals.

Kanji Characters No Longer Displaying

Kanji characters were displaying in the **Country** field on the **Create Account** page even though Kanji was not the character set of the currently selected locale. Now a value using the appropriate character set persists in the **Country** field.

Alert Management Issues Resolved

The following issue was resolved for the alert management in the 2021 R1 release.

Issues with Untimely Entitlement Alerts Resolved

In previous releases, users were receiving alerts about entitlements that were not yet near expiration or were long past expired. To address this issue, the **Expired/Expiring Entitlements** job has been deprecated and replaced with two new jobs, **Expiring Entitlement** and **Expired Entitlement**. When producers configure these jobs, users receive timely alerts about entitlements about to expire or have expired.

Device Management Issues Resolved

The following issues were resolved for the management of devices in the 2021 R1 release.

- Trailing or Leading Spaces in Feature Names No Longer Failing Device Series Updates
- Device Permissions Now Properly Enforced Based on Its Account
- Now Only Electronic Software Delivery License Required for Availability of Downloads Tab for Devices
- Initial Attempt to Self-Register a Device No Longer Failing
- Configuration to Allow or Disallow Registration of Unknown Devices Now Working Properly
- Unknown Device Registration Now Succeeds on First Attempt
- Return of Devices Successful with or without Destination Devices
- Device No Longer Created with Licenses from Two Different Accounts
- Device Searches No Longer Failing
- Improved Loading Time for Devices Page
- Search and Filter Issue for Device Updates Resolved

Trailing or Leading Spaces in Feature Names No Longer Failing Device Series Updates

Previously, when producers attempted to update a device series for FlexNet Embedded, any trailing or leading spaces around a feature name prevented the series from being updated. Starting in this release, trailing or leading spaces around feature names are ignored during the update process.

Device Permissions Now Properly Enforced Based on Its Account

Previously, a user who belonged to multiple accounts—one or more of which had full device-management permissions—would have full device-management permissions on devices that belonged to any of these accounts, even those accounts in which the user had no or limited device-management permissions.

A new configuration option in the Producer Portal, **System** > **Configure** > **End-User Portal Setup** > **Devices Page** > **Enforce device management permission across accounts**, now enforces device management permissions across all accounts in the End-User Portal. When the option is selected, all devices are listed on the **Devices** page (as in previous release), no matter the account with which a given device is associated. However, when a device link is clicked, the capabilities available on the **Device Details** page are based on the specific account to which the device belongs. Consequently, if a user belongs to multiple accounts, the user's device-management permissions are now determined on an account-by-account basis, depending on the account with which the currently selected device is associated. If a user lacks permissions to return or generate licenses, but can otherwise edit a device, these specific restrictions are also enforced strictly for each account.

By default, this option is unselected so that the previous behavior remains in effect.

Now Only Electronic Software Delivery License Required for Availability of Downloads Tab for Devices

The **Downloads** tab is visible on the **Device Details** page for a standalone device in the End-User Portal as long as the end user has an Electronic Software Delivery license (and the Administrator has set the appropriate System Configuration options for the End-User Portal). Previously, the visibility of this tab was erroneously dependent on an Updates and Insights license as well.

Initial Attempt to Self-Register a Device No Longer Failing

Previously, when an unknown device attempted to register using an activation ID for an entitlement owned by only a partner account, the first capability request failed with the message: "The activation ID was denied." Consequently, the device was not able to self-register. However, a subsequent request would then succeed, and the device was ultimately registered.

This issue has been resolved so that device registration succeeds with the first registration request.

Configuration to Allow or Disallow Registration of Unknown Devices Now Working Properly

The **Allow Adding Unknown Hosts** and **Allow Server Without Activation IDs** system configuration settings are now working correctly to ensure that unknown standalone and server devices can be properly registered or disallowed registration depending on this configuration. Additionally, appropriate error messages are now displayed when registration is denied.

Unknown Device Registration Now Succeeds on First Attempt

Previously, the first capability request sent by an unknown device was denied if that device was attempting to self-register with an activation ID for an entitlement owned by a partner account only. The self-registration failed, showing the following error in the capability request: `The activation ID was denied`. However, a subsequent capability request would succeed.

This issue has been resolved so that device registration succeeds with the initial registration request.

Return of Devices Successful with or without Destination Devices

The Return Device feature now supports the return of devices with or without a destination device ID. Previously, device returns were erroneously requiring a destination device.

Device No Longer Created with Licenses from Two Different Accounts

Previously, when a capability request was sent containing activation IDs for two or more different accounts, a device was created with licenses from all accounts. Now, when such a capability request is sent, it is rejected. However, the request is accepted if it has one or more activation IDs for the same account.

Device Searches No Longer Failing

Previously, if an illegal character was present in the device dictionary, an attempt to view details on the **View Device** or **View Server** page for a selected device failed. This issue has been resolved.

Improved Loading Time for Devices Page

Changes have been applied to improve the time required to load the **Devices** page.

Search and Filter Issue for Device Updates Resolved

The search and filter functionality on the **Device Updates** tab in the End-User portal is now working properly. Previously, when using this functionality, users received a gateway timeout error.

Download Package Management Issues Resolved

The following issues were resolved for the management of download packages in the 2021 R1 release.

- Size of Files in Download Packages Now in Binary Format

- Issue with Downloads Incorrectly Tagged as "anonymous user" Downloads Resolved

- Extended File Descriptions with Anchored Tags Now Properly Displaying

- Column Sort Issue on File Download Page Resolved

Size of Files in Download Packages Now in Binary Format

Previously, the size of files in a download package on the **Downloads** > **List Downloads** page did not match the size of the downloaded files. In this release, file sizes in the End-User Portal are now calculated using a binary conversion so that the raw byte size is divided by a power of 2 rather than a power of 10, as used previously. For example, with this conversion 1 KB now represents 1024 bytes, rather than the 1000 bytes previously calculated. As a result, the **Downloads** > **List Downloads** page now shows the size of files in the download package in binary format, the same format used for downloaded-file sizes, thus eliminating the file-size discrepancies.

Issue with Downloads Incorrectly Tagged as "anonymous user" Downloads Resolved

Previously, downloads that were not "anonymous user" downloads were logged as such if an end user used the **Download Now** link from the **List Entitlements** page on the End-User Portal. This issue has been resolved.

Extended File Descriptions with Anchored Tags Now Properly Displaying

When an **Extended Description** for a file in a download package was defined with anchor tags (such as tags to create an HTML link) in the Producer Portal, the description was not displaying properly on the **Downloads** page in the End-User Portal. The description is now displaying correctly.

Column Sort Issue on File Download Page Resolved

(End-User Portal) Clicking the **File Size** or **File Added** column header in the **Download Selected Files** grid on the **Downloads** page did not properly sort the entries in the grid. These sort techniques are working.

Electronic Software Delivery Issues Resolved

The following Electronic Software Delivery issue has been resolved in the 2021 R1 release.

"List Entitlements" Page Now Showing Download Package Links for Re-identified Entitlement

Previously, if an entitlement that had an associated download package was re-identified with an auto-generated entitlement ID, the **List Entitlements** did not show the package-download link in the End-User Portal. This issue has now been resolved.

Email Notification Management Issues Resolved

The following issues involving email notifications have been resolved in the 2021 R1 release.

- Issues with Account Keywords and Merge Tags Resolved
- Title Length Errors for Template Variations Now Properly Handled
- Issue with Incorrect First Names Used in Emails Resolved
- Email Template Now Localizing Characters Correctly
- Emails No Longer Being Sent in Draft Status

Issues with Account Keywords and Merge Tags Resolved

Previously, the Entitlement and Entitlement Certification email template had the following issues:

- The *Account* keyword was not retrieving account-related merge tag details.
- The merge tag *[[AcctName]]* retrieved no information, resulting in a blank in the generated email or certificate.

These issues have been resolved in the current templates.

Title Length Errors for Template Variations Now Properly Handled

Previously, when users created an email template variation with a title that exceeded the maximum 25 characters, FlexNet Operations did not handle the error in a helpful way. A meaningful error message is now provided.

Issue with Incorrect First Names Used in Emails Resolved

Previously, when an account had multiple users, a notification email sent to any of these users could contain the first name of any of the account's users in the greeting. This issue has been resolved so that the correct first name of a given recipient is used in that recipient's email.

Email Template Now Localizing Characters Correctly

The issue with the email templates not displaying characters in other languages correctly in email subject lines and other locations has been resolved.

Emails No Longer Being Sent in Draft Status

Email notifications could be inadvertently triggered when the email template was in draft status. The logic behind when email notifications are sent has been updated to prevent their being sent when the template is still in draft status.

Entitlement Management Issues Resolved

The following issues were resolved for entitlement management in the 2021 R1 release.

- Activation ID Link Now Properly Opening Entitlement Details Window

- Bulk Upgrades with Embedded Licenses Successful

- Correct Available Count Showing on Entitlement Transfer Page

- Attempts to Reduce Entitlement Quantities Now Successful

- Removal of Source Account in Entitlement Merge Now Successful

- Users with Italian Locale Now Able to Perform Entitlement Transfers

- Returned FlexNet Publisher Licenses Now Reflected in Line Item Counts

- Correct "Available Quantity" Values Now Show in Line items in End-User Portal

- Changes to Line Items Now Shown on License Server

- Bulk Entitlement Issue with User-Supplied Web Register Keys Resolved

- Licensing Issue with Vendor-Defined Hostid of "Any" Resolved

- Appropriate Distribution Tier Now Displaying

- Batch Rehost Error for Producer Users Resolved

- Merge Entitlements Now Properly Working

- Improved Error Message for Out-of-Range Start Date

- Improved Performance for Loading Entitlements Pages

- Auto-Provisioning Failures Addressed

- Correct License Count After Certificate License Returned

- Issue with Lost Entitlement Counts Resolved

Activation ID Link Now Properly Opening Entitlement Details Window

In the End-User Portal, clicking an activation ID on the **List Entitlements** page resulted in an error message. This issue has been resolved. Now, clicking an activation ID link opens the **Entitlement Details** window, which lists the activation details.

Bulk Upgrades with Embedded Licenses Successful

Bulk upgrade jobs complete without errors with embedded licenses.

Correct Available Count Showing on Entitlement Transfer Page

The **Transfer Entitlement Line Item** page now displays the correct available count for the transfer of an entitlement line item from a source to a target account in both the Producer Portal and the End-User Portal.

Attempts to Reduce Entitlement Quantities Now Successful

In some cases previously, producers were not able to reduce the quantity of a line item for a FlexNet Embedded entitlement even though the entitlement had no active fulfillments or still had some line items yet to be fulfilled. (The issue was related to FlexNet Embedded entitlements created before December 3, 2020.) This issue has now been resolved.

Removal of Source Account in Entitlement Merge Now Successful

Previously, after the entitlements for an account belonging to one organization had been merged with the entitlements of another account for a different organization on the same host, an attempt to delete the source account for the merge could fail. The deletion of the source account now completes successfully.

Users with Italian Locale Now Able to Perform Entitlement Transfers

Previously, users with the locale value **Italian (it_IT)** were unable to transfer entitlements in the End-User Portal. This issue has been resolved.

Returned FlexNet Publisher Licenses Now Reflected in Line Item Counts

Previously, counts for returned FlexNet Publisher licenses were not being updated to the associated entitlement line items. This issue has been resolved.

Correct "Available Quantity" Values Now Show in Line items in End-User Portal

Line items for FlexNet Embedded entitlements on the **List Entitlements** page in the End-User Portal now display correct values for **Available Quantity** (for example, when compared with the correct **Qty Remaining** value on the **Entitlement Details** pop-up). This issue was found in those FlexNet Embedded entitlements that were created and fulfilled before December 3, 2020.

Changes to Line Items Now Shown on License Server

Previously, in some cases when an entitlement line item was updated (for example, to extend an expiration date), the changes to the line item were not displaying on the relevant license server. The situations that caused this issue have now been resolved.

Bulk Entitlement Issue with User-Supplied Web Register Keys Resolved

Previously, when a user attempted to create a bulk entitlement using an imported xml file to generate user-supplied Web register keys, the bulk entitlement job succeeded. However, emails and alerts were not triggered, and the Web register keys were not generated. This issue is now resolved so that, when a bulk entitlement is created as such, the Web register keys are generated and the emails and alerts are triggered.

Licensing Issue with Vendor-Defined Hostid of "Any" Resolved

Previously, users could create a license using the **VENDOR_DEFINED** keyword with a hostid of **ANY**. The resulting license file contained the keyword **HOSTID=ANY**, enabling the license to be used on any device. For some producers, the ability to use the license on any device created the potential for license leakage.

Now, if users attempt to generate a license using a hostid of **ANY** for the **VENDOR_DEFINED** keyword, an error is thrown along with a message stating that the hostid is invalid. However, existing license files created in this manner prior to 2020 R3 SP2 continue to work as before.

Appropriate Distribution Tier Now Displaying

When you add an account to an entitlement, the Distribution Tier value on the End Customer and Channel Partners window now shows the correct tier as you toggle between the Partners and Customers tabs. This fix ensures that the entitlement is created with the correct tier for the selected account type.

Batch Rehost Error for Producer Users Resolved

Previously, a batch rehost failed with an "unexpected error" for those Producer users who did not have product line **ALL** assigned to them. In this release, batch rehost succeeds for all Producer users.

Merge Entitlements Now Properly Working

Previously, when you attempted to merge entitlements that were activated on the same host, the merge failed. You can now perform this merge scenario successfully.

Improved Error Message for Out-of-Range Start Date

A more helpful error message now displays when a user attempts to create an entitlement with an out-of-range or unacceptable start date.

Improved Performance for Loading Entitlements Pages

Changes have been applied to improve the time required to load the **List Entitlements** and **List Entitlements by Order** pages in the Producer Portal and End-User Portal.

Auto-Provisioning Failures Addressed

Auto-provision could fail if an entitlement creation coincided with restarting an FlexNet Operations component. This issue has been resolved so that the auto-provision re-try is now successful.

Correct License Count After Certificate License Returned

The **List Entitlements** view in the End-User Portal was not showing the correct license count when a FlexNet Publisher certificate license was returned. The correct license count is now displayed.

Issue with Lost Entitlement Counts Resolved

Previously, a "missing counts" issue occasionally occurred that affected the accuracy of the counts of available licenses for those entitlements using embedded license models. With the fixes in this release, the figures displayed in the UI for the available and consumed licenses are now always correct, reflecting the actual usage at any given time. The pages affected by this issue include the following:

- Devices

- Entitlements

- Line items

- Device map add-on

- Map by activation ID

Export and Import Issues Resolved

The following issues involving export and import have been resolved in the 2021 R1 release.

Downloads Now Available to End Users for Entitlements Created with Data Import Template

Previously, when entitlements were created using a data import template, an Electronic Software Delivery download link would be available in the End-User Portal for only the last line item of each entitlement. This issue has been resolved so that links to all items in the entitlement are available.

Exported Expiration Date for Entitlement Lines No Longer Incorrect

During an export, the entitlement line expiration date was off by one day. This issue has been resolved.

FlexNet Embedded Back-Office Issues Resolved

The following FlexNet Operations issue related to FlexNet Embedded was addressed in the 201 R1 release.

Borrow Interval Now Handled Correctly with Specified Granularity

The issue of the borrow interval not always working properly in combination with the borrow granularity has been resolved.

FlexNet Publisher Back-Office Issues Resolved

The following FlexNet Operations issues related to FlexNet Publisher were addressed in the 2021 R1 release.

Errors Resolved in Creation of Local Trial ASRs

The following issues in the creation of local trial ASRs have been resolved:

- Previous attempts to create local trial ASRs could result in a hibernation error if the ASR requested features with long names or a large number of features. This issue has now been resolved.

- Previous attempts to create a local trial ASR in the Producer Portal could fail with unexpected error. The error is resolved, and the creation of a local trial ASR now completes successfully.

Searches on ASR Pages Now Working

A search by Product or Part Number from any ASR page now functions properly. Previously, searches based on either criterion could erroneously return empty results.

License Management Issues Resolved

The following issues involving license management and models were resolved in 2021 R1 release.

Feature Names with "SERVER" No Longer Truncated in Trusted Storage

In previous releases, a feature name that contained the string "SERVER" was truncated when the feature was activated in trusted storage. This is issue has been resolved so that the full feature name is now retained in trusted storage.

Spaces at Beginning or End of License Model Names Removed

FlexNet Operations now trims any spaces located at the beginning and end of license model names to avoid potential processing errors.

Correct Available License Counts Displayed

Previously, in certain cases an incorrect data source was being used to calculate available license counts, resulting in incorrect available counts being presented. This issue has been resolved so that the correct data source is used to present accurate counts.

Product Management Issues Resolved

The following issues involving product management have been resolved in this release.

- Last Modified Date Now Updated Only When Product Configuration Changes Saved
- License Model Value for Product Part Number Now Updating Properly
- Successful Product Mapping to a Product Line with a Multi-Line Attribute
- Only Product Lines Associated with User Displayed
- Partners No Longer Able to Select Non-Related Accounts on Entitlements Pages

Last Modified Date Now Updated Only When Product Configuration Changes Saved

Previously, simply navigating through the details for a product resulted in the product's **Data Modified** field to be updated. Now the field is updated only if the changes to the product's configuration have been saved.

License Model Value for Product Part Number Now Updating Properly

Previously, when a different product was associated with a part number on the **Create a Part Number** window, the License Model selected for the new product was not saved once the user clicked **Save**. This issue is now resolved.

Successful Product Mapping to a Product Line with a Multi-Line Attribute

Previously, when a product line had an attribute whose type was multi-line, users could not map products to the product line. This issue has been resolved.

Only Product Lines Associated with User Displayed

Previously, the **Product Lines** page in the Producer Portal was showing product lines not associated with the current user. Now this page shows only those product lines associated with the user.

Partners No Longer Able to Select Non-Related Accounts on Entitlements Pages

Previously, when a Partner user typed an account name directly in a source or target account field on the **Transfer Entitlement** or the **Merge Entitlements** page, an automatic dropdown listing accounts that started with the typed character sequence incorrectly allowed the user to select an account not related to the Partner account.

Now, when a Partner user types in these fields, only those accounts associated with the Partner account are available for selection.

Public Services Issues Resolved

The following issues involving Public Services were resolved in the 2021 R1 release.

Special "publicservices" REST API Now Returning Correct License Counts

The **publicservices** REST API is a special interface used by some producers to return license counts for an activation or entitlement ID.

Previously, this API could return an incorrect "remaining licenses" count for a given activation ID. If the API was called as part of an activation process, the incorrect value in the response could cause the activation to fail. The **publicservices** API is now returning the correct license counts for a given activation ID.

"EntitlementDetails" Public Service No Longer Generating Error for Missing Grace Period

A license model can designate that the value for certain attributes (such as **Grace Period**, **Renewal**, **Overdraft**) be defined at the time an entitlement line is created for any product to which the license model is assigned. Additionally, providing a value for any of the attributes is optional. When the **EntitlementDetails** public service was run against an entitlement containing entitlement lines in which a value was missing for one of these attributes, the service generated an error message similar to this: "The attribute <attribute name> days is not a valid numeric type."

This issue has been resolved so that, when an attribute that is designated as optional for an entitlement line has no value, the **EntitlementDetails** public service no longer throws an exception.

Security Issues Resolved

The following security issues have been resolved in this release.

Restricted Directory Access

As a preventative measure based on a recently announced security vulnerability, a security constraint has been implemented to restrict access to the WEB-INF directory.

Possible Security Issue Addressed in the End-User Portal

A security issue has been addressed in the End-User Portal where the URL could be compromised, giving unwarranted access to a Producer's account list to a customer or partner user.

Resolved Security Issue Detected by WhiteHat

An information-leakage issue involving the **System > About Advanced Management Lifecycle Module** page has been resolved.

SOAP and REST Web Services Issues Resolved

The following issues related to FlexNet Operations SOAP and REST web services were addressed in the 2021 R1 release.

- Appropriate Error Now Produced When Transferred Counts Exceed Available Counts
- Feature Replacement for Deployed Products Now Working Properly
- Part Number Associated with Product Now Properly Handled During Product Entitlement

- Milliseconds Separator No Longer Included in Returned Usage Data

- Last Modified Time for Line Items Now Reported Accurately

- "getActivatableItemsQuery" Web Service Results Now Show Correct Number of Copies for Line Items

- Incorrect Entitlement Data No Longer Extracted After Entitlement Updates

- Counts Now Consistent for "searchEntitilement..." Web Services

- EntitlementOrderService Issue Resolved

- Data Extracts Now Properly Encoded

Appropriate Error Now Produced When Transferred Counts Exceed Available Counts

Previously, the **transferLineItem** method in the **EntitlementOrderService** SOAP web service erroneously permitted the transfer of line item counts from one entitlement to another when the requested transfer count was greater than the number of licenses available in the source entitlement.

Now, the **transferLineItem** method throws an appropriate error when users attempt to transfer line item counts that exceed the number of licenses available in the source entitlement. (The transfer succeeds, however, when the transfer count is less than or equal to the available license count.)

Feature Replacement for Deployed Products Now Working Properly

The REPLACE operation for individual features in the **updateProduct** SOAP web service now properly replaces a given feature in a deployed project (as long as the editing of deployed products is allowed).

Part Number Associated with Product Now Properly Handled During Product Entitlement

Previously, if the part number for a product that was being entitled was not included during the creation of an entitlement through the **EntitlementOrderService** SOAP web service, the part number associated with the product was still shown in the End-User Portal. This has been fixed. Now, if the part number for a product being entitled is not included in the web service request, the part number associated with the entitled product is no longer assigned by default.

Milliseconds Separator No Longer Included in Returned Usage Data

In the data returned for the **Usage** data extract REST API, the timestamps for **Transaction Time** and **Received Time** were showing a period (.) as a milliseconds separator even though a milliseconds value was not intended to be included in either timestamp.

```
2020-08-18T02:09:28.-0700
```

The unnecessary period could cause parsing issues and has now been removed.

Last Modified Time for Line Items Now Reported Accurately

The **lastModifiedDateTime** attribute for an entitlement line item now gets updated internally with every checkout or return of a license. As a result, this value (in UTC format) is now accurately reported in the **lastModifiedDateTime** field in the response for the **getActivatableItemsQuery** SOAP web service.

"getActivatableItemsQuery" Web Service Results Now Show Correct Number of Copies for Line Items

Previously, in the response for the **getActivatableItemsQuery** SOAP web service, information for given entitlement line items could occasionally show out-of-date values for the number of remaining and fulfilled line-item copies. This issue is now resolved.

Incorrect Entitlement Data No Longer Extracted After Entitlement Updates

Previously, the Entitlement data extract could show incorrect information if the expiration date or any other entitlement field had been updated using either the SOAP web service method **updateEntitlementLineItemRequest** or an import job for update entitlement. This issue has been resolved so that the extract now presents correct data.

Counts Now Consistent for "searchEntitilement..." Web Services

Web Service calls to **searchEntitlementRequest** and **searchEntitlementLineItemPropertiesRequest** were returning different available count totals for the same activation ID. This issue has been resolved so that the counts are consistent.

EntitlementOrderService Issue Resolved

The error generated when you attempted to update or create entitlements concurrently using **EntitlementOrderService** methods has been resolved.

Data Extracts Now Properly Encoded

Previously, extracts were not being properly UTF-8 encoded. The extracts are now properly formatted in UTF-8.

Usage Management Issues Resolved

The following issue for FlexNet Usage Management (for producers) was resolved in the 2021 R1 release.

Issues with Activation ID Case Sensitivity in License Usage Searches Resolved

Previously, the case-sensitivity issues occurred with the activation IDs provided during searches for license usage information on devices. License usage searches are now case-insensitive.

User Experience Issues Resolved

The following issues involving user experience have been resolved in the 2021 R1 release.

Text in the FlexNet Operations End-User Portal Now Properly Localized

Certain error and confirmation messages, input field labels, and instructions in the FlexNet Operations End-User Portal were not being properly localized. These localization issues have now been resolved.

Misdirected Page Issue Resolved

Previously, when a user attempted to self-register through the FlexNet Operations UI running in a Firefox browser and provided an email address that exceeded the maximum size, the expected error popup was displayed; but, when the user clicked **OK** to close the popup, the UI displayed a blank page.

This issue is now resolved so that, when this error popup is closed, the user is properly directed back to the login window.

Password Issue Addressed

Previously, an encryption error was generated when resetting a password if the old password contained special characters. The old password is now properly encrypted during the reset process.

Known Issues

The following are known issues in FlexNet Operations.

Geographic Restrictions Fields Displayed But Currently Not in Use

The **Restrict Access to Selected Countries** fields, which are displayed on the **Restrict Download Package** page (accessed from the **View Download Package** page in the Producer Portal), are currently not in use. In a future release, producers will be able to use these fields to define geographic restrictions that control which download packages are available to accounts in the End-User Portal (based on an account's country/region).

SWM-7786: SHA2 checksum value of previous file shown

If a file image is subsequently deleted, and the **Upload File** page is opened again, the SHA2 checksum value of the previously loaded file image is shown.

SWM-6996: Updating device "Site name" property to blank not handled properly

If you change the **Site name** value for a device to a blank, the edited property reverts to its original value instead of maintaining the blank. This issue occurs when you make the change either through the **Devices** UI in the Producer Portal or End-User Portal or through the **updateDevice** method in the **ManageDeviceService** SOAP web service.

SWM-5894: Changes and limitations to the updateDevice SOAP method

The **updateDevice** method in the V3 and V4 **ManageDeviceService** SOAP web service has the following limitations and changes:

- Single channel partner recommended in channel partner list

- Support for only Replace operation in channel partner list

Single channel partner recommended in channel partner list

As in the previous release, the **updateDevice** method supports a list of channel partners. However, because a device is currently limited to one channel partner, the web service code, in turn, considers only one channel partner for the method. Therefore, you are strongly recommended to include only one partner in the channel partner list. If the list contains more than one channel partner, the behavior of **updateDevice** method is unpredictable.

Support for only Replace operation in channel partner list

Previously, the **opType** element, required for managing a channel partner list for the **updateDevice** method, had three possible values: **Add**, **Delete**, or **Replace**. This element now supports only the **Replace** value. If you specify **Add**, **Delete**, or **Replace** or omit the element altogether, the method will always use **Replace**. (If you attempt to specify **Add** or **Delete**, a message is returned in the response, explaining that **Replace** was used instead.)

SWM-2901: CreateContextCSV error during FlexNet Operations deployment

During the deployment of FlexNet Operations (after FlexNet Operations Setup is completed), you might see the following error in the logs:

```
ERROR flexnet.operations.reporting.talend.CreateContextCSV - /root/FlexNet-Operations/
components/wildfly/standalone/configuration/context.csv
```

This error is "benign" and will not affect the operation of FlexNet Operations in any way.

FNO-63827: Downloads sometimes not available to end users when accounts are re-identified

When a new account is set up with an account ID previously used by a different account, and a user who belonged to the original account is assigned to the new account, that user is unable to see Electronic Software Delivery download links in the End-User Portal.

FNO-62953: Installer support for UI mode only

FlexNet Operations components are installed using an Install Anywhere installer. The installer can run only in UI mode; console mode is not supported.

FNO-61266: Translation issues with localization

Per the enhancement Additional Language Support for End-User Portal Localization available in this release, certain strings, such as alerts and validation messages, in the End-User Portal are not being translated properly when localization is in effect. These issues will be addressed in an upcoming release.

FNO-60845: Size limitation for license models

A License Model definition is stored in JSON format in the database. Additionally, the definition is transformed into an internal representation, which is also stored in the database for use by the server. Currently, the Model definition or its transformation cannot exceed 8000 bytes in length.

FNO-60552: Reporting Tab not available after Super User log-in

The **Reporting** tab is not displayed when a user with the Super User role logs into FlexNet Operations.

Workaround: After logging in as a Super User, click the **Home** tab. This action causes the **Reporting** tab to display.

FNO-60241: Entities not replicated properly to Electronic Software Delivery

In some cases, entities, such as download packages and newly created entitlements, are not being properly replicated in the Electronic Software Delivery (ESD) for deployment.

Workaround: Update the entity again.

NullPointerException error generated for missing role in the updateDomainUsersRole method

The SOAP Web Service **UserAcctHierarchyService** method **updateDomainUsers**, when supplied with an **email** and **organization** value, must also have a **roles** parameter defined. Failure to add this parameter results in a "NullPointerException" error, rather than a clearly worded error.

The following shows the parameter that must be included in the XML request format to avoid this error:

```
      </urn:primaryKeys>
    </urn:domainUser>
    <!--Optional:-->
    <urn:email>fchirayath@flexera.com</urn:email>
    <!--Optional:-->
    <urn:organization>MYORG</urn:organization>
    <urn:roles>Portal User role</urn:roles>

    <urn:optIn>false</urn:optIn>
    <urn:status>Active</urn:status>

  </urn:user>
</urn:updateDomainUserRequest>
```

Special Notes

This section contains special information pertaining to FlexNet Operations:

- Special Requirement for Using High-Speed File Upload Functionality

- Support for SQL Server Database Only

- Best Practice for Uploading New File Versions for Electronic Software Delivery

Special Requirement for Using High-Speed File Upload Functionality

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.

Support for SQL Server Database Only

This version of FlexNet Operations On Premises supports the SQL Server database only. It does not support the Oracle database. See System Requirements.

Best Practice for Uploading New File Versions for Electronic 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 Electronic 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 simply 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.

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