

FlexNet Operations 2020 R2

ALM Release Notes

May 2020

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Introduction

This Release Notes document summarizes the FlexNet Operations 2020 R2 updates delivered in May 2020. The document includes the following topics:

- [Features and Enhancements](#)
- [System Requirements](#)
- [Resolved Issues](#)
- [Special Notes](#)
- [Legal Information](#)



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

Resources

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

- To help you plan your staging activities, click **System > Latest News** in the **FlexNet Operations Producer Portal** for on-going updates to the engineering maintenance schedule.
- The [Flexera System Status Dashboard](#) provides current site availability and notifications. You can also subscribe to update notices and manage your subscription [here](#).
- In addition to case management, the [Flexera Customer Community Portal](#) has resources such as the Knowledge Base, software end-of-life information, and more.
- On the [Flexera Customer Event Calendar](#), you can register for webinars on topics such as product orientation, office hours, and others.

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.

Guide	Topics
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.

Features and Enhancements

The new features and enhancements included in FlexNet Operations 2020 R2 impact users of these modules:

- [User Experience](#)
- [Electronic Software Delivery](#)
- [Device Management](#)
- [Updates and Insights](#)

User Experience

This section describes user-experience enhancements introduced in this release.

Quick Search for Devices

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.

Electronic Software Delivery

This section describes the new features and enhancements for electronic software deliveries.

Proxy Support in the Download Manager (Windows Only)

The following options are now available in the Download Manager installation process to support the use of a proxy server in a Windows environment:

Proxy Option	Description
No proxy	(Default) Select this option to indicate that the Device Manager operates in a non-proxy environment.
Use system proxy settings	Select this option if the proxy server information has already been configured in the Windows system. The Device Manager reads the proxy host and port from the following Windows registry location: HKEY_USER\Software\Microsoft\Windows\CurrentVersion\Internet Settings
Manual proxy settings	Select this option to manually configure the proxy server information in the Download Manager installation. Provide the following: <ul style="list-style-type: none">• The proxy host and port settings in this format: <code>http://<proxy_server_hostname>:<port></code> as in the example http://proxyServerOverTCP:3128.• In the Username and Password fields, the credentials needed to log into the proxy server. If the server requires no authorization, leave these fields blank.

Device Management

This section describes the device-management enhancements introduced in this release.

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.

Updates and Insights can especially benefit from the use of anonymous devices for sending product Updates to a high volume of single-consumer devices or to devices running non-licensed software or software licensed outside of FlexNet Operations. For more information, see [Support for Anonymous Devices](#) for details.

Updates and Insights

This section describes the Updates and Insights features and enhancements introduced in this release:

- [Support for Anonymous Devices](#)
- [Edge Server Support for Device Registration](#)



Important • *Updates and Insights is a paid module.*

Support for Anonymous Devices

Previously, registration of a device in FlexNet Operations required that a customer account be specified. The requirement assumed that most devices were sold to or through a customer account. The account information was used to validate the device's eligibility to obtain licenses and Updates based on the entitlements associated with the account.

In this release, the requirement for a customer account is optional when registering a device (see [Customer Account Now Optional for Devices](#)). Devices that are registered without a customer account are called *anonymous devices* (a term used to describe this kind of device type but not actually used in the UI). Because an anonymous device is not associated with an account, it is also not associated with entitlements.

The following topics provide an overview of how anonymous devices are used in Updates and Insights. For details, see the “Getting Started with Updates and Insights” section of the *FlexNet Operations User Guide*.

- [Anonymous Devices in Updates and Insights](#)
- [Registration of Anonymous Devices](#)
- [Requests for Updates from Anonymous Devices](#)
- [Only Updates Without Entitlement Checks Returned](#)
- [Logging Status Updates](#)



Important • *Updates and Insights without entitlement management is a separately purchased module.*

Anonymous Devices in Updates and Insights

The association of a device with a customer account to validate its entitlement to receive a software Update is not always necessary nor expedient in certain supplier environments. This might be the case in an environment where a high volume of devices are sold, each device shipped to an individual consumer—thus each device would require a separate account in order to receive software updates. Alternatively, a Supplier environment might want to use Updates and Insights to update software on sold devices but not manage entitlements through FlexNet Operations.

Changes in this release, including the introduction of anonymous devices, eliminate the need for customer accounts and thus address the difficulties with issuing Updates to such devices.

Registration of Anonymous Devices

Anonymous devices must be registered in FlexNet Operations in order to properly log Update status events and view the status information on the **Devices** page in the Producer Portal. You can register an anonymous device manually on the **Devices** page in the Producer Portal by creating the device without specifying a customer account. However, best practice is for an anonymous device to self-register by using the Updates and Insights REST API `/registrations` and omitting the activation ID in the call.

Requests for Updates from Anonymous Devices

The `/updates` and `/signed-updates` REST APIs in Updates and Insights have been modified so that the `id`, `idType`, and `publisherName` parameters are now optional. Anonymous devices should request updates without specifying these fields.

Only Updates Without Entitlement Checks Returned

When an anonymous device requests a software Update, only those Updates configured with the **Entitlement check** field set to **None** in FlexNet Operations are returned. Since anonymous devices are not associated with entitlements, they do not receive Updates that require an entitlement check.

Logging Status Updates

Anonymous devices are able to log the status of Updates. However, it is strongly recommended to register the device with FlexNet Operations before logging statuses.



Edge Server Support for Device Registration

The Updates and Insights Edge Server now supports the Updates and Insights REST API `/registrations` used to register devices in FlexNet Operations.

System Requirements

Detailed system requirements for FlexNet Operations 2020 R2 include the following.

Requirement	Description
Web browsers	<ul style="list-style-type: none">● Microsoft Edge● Microsoft Internet Explorer 11● Mozilla Firefox 75.0● Google Chrome 80.0.3987.163

Requirement	Description
FlexNet licensing module	<ul style="list-style-type: none"> FlexNet Publisher Toolkit 11.12.0 or later FlexNet Embedded Toolkit 2015 R2 or later  <hr/> <p>Note • <i>FlexNet Operations 2020 R2 supports these FlexNet Embedded host ID types: Ethernet, FlexID 9, FlexID 10, String, VM_UUID, User, Extended, PUBLISHER_DEFINED, Internet, and Internet6.</i></p>
Vendor certificate generator	<p>The current versions of the VCG kit are 12.11.0 and 16.2.2.0.</p> <p>These VCGs were tested with the following compilers:</p> <ul style="list-style-type: none"> Windows—Visual Studio 2010 Professional Edition Linux—gcc 4.1.2 (RHEL 5.0) Linux—gcc 4.4.4 (RHEL 6.0)  <hr/> <p>Note • <i>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.)</i></p>

Resolved Issues

The following issues have been resolved:

- [Issue with Lost Entitlement Counts Resolved](#)
- [Improved Download-Retry Mechanism in Download Manager](#)
- [Search and Filter Issue for Device Updates Resolved](#)
- [Column Sort Issue on File Download Page Resolved](#)
- [Correct Last Login Date for Users Now Listed](#)
- [Kanji Characters No Longer Displaying](#)

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 ALM pages that were affected by this issue include the following:

- Devices
- Entitlements

- Line items
- Device map add-on
- Map by activation ID

Improved Download-Retry Mechanism in Download Manager

The Download Manager has implemented an improved internal download-retry mechanism for files that might become corrupt during the download process. This improved mechanism helps to increase the chances that such files are downloaded successfully during a download session. However, should a file still fail to download properly after a number of attempts by the retry mechanism, the download results show the file as downloaded but with an MD5 mismatch (the status normally given to such files by the Download Manager).

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.

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.

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.

Special Notes

This section contains special information pertaining to FlexNet Operations:

- [Communication Between Download Manager and FlexNet Operations](#)
- [Download Manager Post-Installation Recommendation](#)
- [Best Practice for Uploading New File Versions for Electronic Software Delivery](#)

Communication Between Download Manager and FlexNet Operations

The NetSession-based Akamai download manager has been replaced with a Flexera solution. Using the Flexera Download Manager requires that the port 45786 is open, as the Download Manager will use this port. (The Akamai download manager also required an open port, but the port number was different.) The following topics provide more information about the communication between the Download Manager and FlexNet Operations:

- [Technical Details](#)
- [Communication Using JSON Web Token](#)
- [Process](#)
- [Summary](#)

Technical Details

The following provides some background information.

- The Download Manager is a Node.js Express application that is installed and runs on the client machine. A Node web server is created on the client machine; the Download Manager process runs on this web server listening on port 45786.
- The Download Manager uses port 45786 (<https://127.0.0.1:45786>) for communication with a client and FlexNet Operations server components. Port 45786 was chosen predominantly because it is currently listed as “Unassigned” in the Service Name and Transport Protocol Port Number Registry, indicating that it is not widely used.

Communication Using JSON Web Token

Information between the Download Manager and FlexNet Operations is exchanged using the JSON Web Token (JWT) standard. Information is securely transmitted between the parties as a JSON object. JWTs are digitally signed using a public/private key pair. FlexNet Operations signs the JWT using the private key, and the Download Manager verifies the digital signature using the public key. Once secure communication has been established, files can be downloaded. Communication between FlexNet Operations server components and the Download Manager is unicast only.

Process

The communication between FlexNet Operations and the Download manager can be broken down into the following phases:

Phase 1: FlexNet Operations performs the following steps:

1. Prepares a list of URLs that the Download Manager needs to download
2. Calculates the MD5 digest of the URLs
3. Using the MD5 digest, prepares a JWT and signs it with the corresponding private key
4. Securely sends the signed JWT to the Download Manager

Phase 2: On receiving the list of URLs, the Download Manager does the following:

1. Recalculates the MD5 digest and validates it against the JWT using the public key
2. If it finds the JWT to be valid, proceeds with the download

Phase 3: The Download Manager reports the status of the download progress back to FlexNet Operations.

Summary

Port 45786 is used for both inbound and outbound communication between the Download Manager and FlexNet Operations server components. Information exchanged between the Download Manager and FlexNet Operations can be verified and trusted because it is digitally signed, using the JSON Web Token standard. Port 45786 is an integral part of the client-server architecture and must be open to enable communication between FlexNet Operations and the Download Manager.

Download Manager Post-Installation Recommendation

After you install the Download Manager, best practice is to restart the browser in which the Download Manager runs before you begin to perform file downloads.

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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