

FlexNet Manager Suite 2018 R1 Release Notes

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Updates

The latest publication of the Release Notes, can be accessed from the following links:

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Introduction

FlexNet Manager Suite provides software asset, hardware asset, and contract management for enterprises across over 16,000 publishers and more than 225,000 applications. It reports detailed information for installed software, application usage, purchases, and reconciles these to provide a license position. It inventories virtual environments and Oracle databases, imports inventory from Microsoft System Center Configuration Manager (SCCM) and other inventory tools through configurable adapters, and seamlessly integrates with Enterprise Resource Planning (ERP), Human Resources (HR), Active Directory (AD), and Purchase Order (PO) systems. With its built-in library of more than 1,380,000 Stock Keeping Unit numbers (SKUs), for automated reconciliation of purchases with inventory, and support for the latest license models, FlexNet Manager Suite is used by enterprises to gain control of their software estate and optimize their software spend.

These release notes contain information about FlexNet Manager Suite, covering:

- FlexNet Manager Suite
- FlexNet Manager for IBM
- FlexNet Manager for Microsoft
- FlexNet Manager for Oracle
- FlexNet Manager for SAP Applications
- FlexNet Manager for Symantec
- FlexNet Manager for VMware
- Service Life Data Pack

The following products in the suite have their own separate Release Notes:

- FlexNet Manager for Engineering Applications
- FlexNet Manager for Cloud Infrastructure
- Workflow Manager

New Features

Local inventory from Oracle pluggable databases

Requires **2018 R1 Hotfix 02**

In the previous release, FlexNet Manager Suite could collect inventory from Oracle pluggable databases only by using direct inventory collection managed by an inventory beacon. In this **2018 R1 Hotfix 02** release, this functionality is expanded, and is now also supported using all forms of the FlexNet inventory component locally installed on the Oracle server:

- The full FlexNet inventory agent, whether deployed by 'adoption' or by third-party tools
- The lightweight FlexNet Inventory Scanner
- Zero-footprint inventory gathering, where an inventory beacon temporarily installs the inventory component on the target server, runs it, and removes it again (leaving zero installation footprint).

Pluggable databases were introduced in Oracle 12c.

Tip: *Inventory is gathered from pluggable databases whether they are in read-only or read/write mode. Only the container database instance can be inventoried when it is in standby mode (mounted, but not running).*

No special configuration or credentials are required for this additional functionality (provided that you are using version 13.0.1 or later of the FlexNet inventory agent). The enhanced functionality is distributed through an updated `InventorySettings.xml` file. If you have manually deployed your inventory solutions, be sure to update this file to version 27 or later. A simple method is to allow automatic update of an inventory beacon, and then collect the `InventorySettings.xml` file from there for redistribution with your preferred tool (for details, see the *System Reference* PDF, available through the title page of online help).

License management for cloud service providers

If your enterprise deploys applications to virtual machines hosted by cloud service providers, you may use your existing licenses to authorize these installations. This is often called "bring your own software license" (BYOSL).

The first phase of support for BYOSL management is included in this 2018 R1 release:

- Well-known cloud service providers are included by default in FlexNet Manager Suite; and you may add as many more as you need.
- For cases where software publishers mandate separate points rules for software running in the cloud, you may define custom points rules. Each points rule may be linked

to one or more cloud service providers, where the publisher specifies differences - for example, in the same way that Oracle has different points rules for software hosted in Amazon Web Services (AWS) than in Microsoft Azure; or a single points rule may apply to 'any' cloud service provider - including those you may define in future. For this release, FlexNet Manager Suite includes a default points rule for IBM PVU licenses that applies to the default set of cloud service providers.

- As well as being linked to the appropriate points rules, individual licenses may be set to allow (or disallow) consumption for inventory devices in a given environment, such as:
 - In a specified cloud service provider, or any selection of them
 - In *any* cloud service provider, current or future
 - Hosted on-premises on your own server
 - An appropriate combination of the above.
- An individual inventory device which, for Infrastructure as a Service (IaaS) / Platform as a Service (PaaS), is always a virtual machine - can be linked to the cloud service provider where it is hosted.

When applications running on the virtual machines are linked to the appropriate licenses, and the licenses can be consumed only by devices from the appropriate context, and (for points-based licenses) the points consumed are from a points rule specific for the context – then the consumption against the license for each permitted inventory device is calculated and automatically included in each license compliance calculation.

This feature is delivered with FlexNet Manager Platform.

SaaS Inventory Framework

Organizations are rapidly adopting Software as a Service (SaaS) applications. Management of these applications requires new approaches to discover usage information. With the introduction of the SaaS Inventory Framework, customers, partners, and Flexera can use a common platform to create integrations with any SaaS application that support APIs for usage and compliance management.

The SaaS Inventory Framework is designed to allow anyone with programming knowledge to create a connection with a SaaS vendor and map incoming data into the FlexNet Manager Suite. The integration will execute based on a customer-defined schedule from the FlexNet Beacon, ensuring up-to-date data is available for users of FlexNet Manager Suite.

SaaS Inventory Framework:

- Leverages industry standard PowerShell scripting language to create integrations with SaaS APIs
- Creates integrations with network management, single sign-on, financial management, and other solutions that can discover and provide insight into usage of SaaS applications

- Defines imported data mappings for software consumption
- Tracks user-based SaaS licensing in FlexNet Manager Suite
- Manages and optimizes costs of user-based SaaS licenses
- Normalizes email IDs with corporate directory.

This feature is delivered with FlexNet Manager Platform.

Salesforce subscription management

The benefits of Salesforce subscriptions come at a significant cost for large organizations and licensing is complex. FlexNet Manager Suite provides you with ways to stay in charge of your Salesforce licensing and consumption. FlexNet Manager Suite provides an inventory adapter so that you can import Salesforce license allocations and usage data so that you can leverage FlexNet Manager Suite's tools to help you manage Salesforce licensing and consumption costs. With FlexNet Manager Suite's integration with Salesforce, you can easily see unused Salesforce subscriptions, thereby helping you strategize how to reduce costs at subscription renewal. FlexNet Manager Suite:

- Imports Salesforce license information and creates one SaaS User license for each instance of Salesforce that is connected
- Shows consumption information for each user in your organization that is accessing Salesforce
- Supports multiple Salesforce instances
- Provides a SaaS Usage Summary report that displays accessing and non-accessing users for each Salesforce instance, thereby helping you to reduce costs at subscription renewal.

This feature is delivered with FlexNet Manager Platform.

For additional information, refer to the *Salesforce Subscription Management* chapter in the *FlexNet Manager Suite System Reference* PDF, available through the title page of online help, and also see the *Managing Connections to Salesforce.com* topic in the FlexNet Manager Suite online help.

Integration with Data Platform

With the acquisition of BDNA by Flexera, this release of FlexNet Manager Suite brings the first step towards integration of technologies to provide the industry-leading Flexera Data Platform for application recognition and license management. This first step is a connector that allows importing normalized data from Normalize v5 into FlexNet Manager Suite. (Normalize v5 was included as a part of the BDNA Data Platform v5 solution.)

As usual with such connectors, normalized software data is first imported into FlexNet Manager Suite as evidence (in this case, installer evidence with an evidence Type of “Flexera ID”). The installer evidence is automatically matched against the Application Recognition Library (ARL), and when a match is found, the installed application record (visible in Installed Applications) is created in FlexNet Manager Suite as part of the import process. (If the installed application record already existed after an import from another inventory source, it is updated with a link to the new Flexera ID evidence imported from Data Platform.)

Records of inventory devices (for both physical servers and virtual machines) and installation records are also imported from Normalize v5, and linked to recognized applications as expected, so that these cases of recognized applications installed on your inventory devices are immediately ready for your next license compliance calculation.

Note: *Applications that are found in Technopedia only, and not yet listed in the ARL, are not recognized as applications in FlexNet Manager Suite, and remain as unrecognized installer evidence. If you find such a case that is needed in your enterprise, you can ask Flexera to prioritize its delivery through a later release of the ARL. Similarly, any application records that you may have created locally within your enterprise, using Normalize, are also imported as unrecognized installer evidence. As these cannot be matched in the ARL, they remain in the **Unrecognized Evidence** listing. If you wish, you can start from this unrecognized evidence record to re-create your local application record within FlexNet Manager Suite.*

As with all inventory sources, there are some gaps. In this case, Normalize v5 passes on data gaps found in the source inventory tools (such as Microsoft SCCM or ADDM), and further limits the data available for export. As a result, inventory gathered *only* from Normalize v5 is insufficient for:

- Oracle license calculations
- IBM server license calculations
- Any licenses that rely on details about virtual machines, such as assigned core or processor counts (for VMs, this connector can only import the virtual host, and no other details of the VM, including pools, clusters, capping and the like).

As always, the recommended best practice to remedy these shortcomings is, on target devices, to install the FlexNet inventory agent, which is optimized for collecting license-related inventory. (For example, remember that, when FlexNet Manager Suite is being used as a replacement for ILMT to calculate subcapacity consumption of IBM PVU licenses, the FlexNet inventory agent locally installed is in any case a *mandatory requirement* from IBM.) Having multiple inventory sources presents no difficulties: FlexNet Manager Suite reconciles multiple overlapping inventory sources to create unified records as appropriate.

The Data Platform connector for BDNA v5 integration will be released for:

- FlexNet Manager Suite cloud customers can access the Data platform connector from April 9, 2018.
 - The User Acceptance Test (UAT) environment will receive this update prior to April 6, 2018.

- FlexNet Manger Suite 2018 R1 on-premises customers will be able to download the connector from April 11, 2018. This will be available from the [Product and License Center](#).

Prerequisites

This first step in data integration into a cohesive Flexera Data Platform is not enabled by default after your upgrade to FlexNet Manager Suite 2018 R1. First, your implementation must meet the following requirements:

- The integration between Normalize v5 and FlexNet Manager Suite requires an updated license for BDNA Data Platform. Existing customers using the BDNA Data Platform v5 product may request an updated license from Flexera. When you receive your updated activation key, copy/paste it into the **Activation Key** field in the **Registration** tab of your **Preferences** page for BDNA Admin.
- Normalize requires a new data pack that enables the linking of application records from Normalize with those in the ARL. Once you have updated your license terms (as above), navigate to the **Technopedia** page of BDNA Admin, and click **Start Catalog Sync** to receive the data pack automatically.
- Customers with on-premises implementations of FlexNet Manager Suite need to download the **Data Platform v5** connector from the Flexera [Product and License Center](#) (password required). This download will be available from about April 11, 2018. Instructions for the simple installation process are included in the downloadable archive, and will also be available through the Knowledge Base in the Flexera Customer Community.
- For customers with cloud-based implementations of FlexNet Manager Suite, the additional functionality will be enabled on the central application servers from April 9, 2018 (subject to further announcements from Flexera). The User Acceptance Test (UAT) environment will receive this update prior to April 6, 2018.

Changes from Previous Releases

Management of roles controlling imports and reconciliation

In FlexNet Manager Suite, all rights for access, both to data and to product functionality, are controlled through *roles*. Operators then inherit the rights granted by roles to which their accounts are assigned.

In this release, changes to the structure of access rights available for roles, simplify your management of:

- Which operator roles can control data imports, and
- Which roles can trigger unscheduled license reconciliations.

As discussed below, sensible migration is also provided so that roles continue to provide the same functionality as before, using these changed settings.

All the changes are visible by navigating to the system menu (in the top right-hand corner), clicking **Accounts**, and selecting the **Roles** tab. Within the tab, when you create or edit a role, you expose an "accordion" of access rights, where you can click on headings to expand a section at a time. Within each section, choosing the Custom value from the **Privileges** drop-down list allows you to edit the additional levels of detail (with other selections from **Privileges**, the details are visible but not editable).

The changes include the following:

- In the **Administration** section, the features previously included one called Import from database sources and enterprise group files. This control is now obsolete, and is no longer available.
- A new accordion heading, at the bottom of the list covers **Data inputs: business and inventory imports**. This group includes controls for two independent features:
 - Import business data controls visibility of, and access to, the **Business Data** tab of the **Data Inputs** page (available through the system menu). "Business data" includes purchase records, enterprise group structures, and assignments of end-users to those groups.

***Tip:** Additional access rights give more fine-grained control of imports. For example, to import purchase records, you must also have the Override PO adjustments of Licenses right (in the **Purchase orders** group). These interactions mean it is often easiest to begin by copying an existing role, and then adjusting individual settings as required, rather than creating a new role from scratch.*

- Configure inventory imports to compliance database, and reconcile controls visibility and access for the **Inventory Data** tab of the same page. This right also allows operators to manage inventory connections (for example, specifying connection details for an inventory source), as well as triggering additional, unscheduled inventory imports from those connections. Importantly, only operators inheriting an **Allow** for this feature can trigger additional, unscheduled license reconciliations (on the **License Compliance > Reconcile** page).

The standard process for upgrading FlexNet Manager Suite automatically makes the changes described above, and also provides the following migration so that your existing roles continue to function as always:

1. Roles previously granted the right to the obsolete Import from database sources and enterprise group files are now granted the right to Import business data.
2. In addition, if these roles were previously granted rights to *both* the obsolete Import from database sources and enterprise group files *and*

Configure FlexNet Manager Platform properties, they are now also granted the right to Configure inventory imports to compliance database, and reconcile.

This table shows each feature (or product page) affected by these changes, the new access rights required to use the feature in the current release, and the corresponding old access rights in previous releases:

Feature/page	Current access rights	Previously required right(s)
Data Inputs > Business Data	Import business data	In both cases, both of: <ul style="list-style-type: none"> • Configure FlexNet Manager Platform properties • Import from database sources and enterprise group files
Data Inputs > Inventory Data	Configure inventory imports to compliance database, and reconcile	
Reconcile	<ul style="list-style-type: none"> • Configure inventory imports to compliance database, and reconcile 	<ul style="list-style-type: none"> • Import from database sources and enterprise group files

In summary, these changes:

- Allow you to assign separate operator roles for managing business data and inventory data
- Simplify requirements so that each kind of access requires only a single right
- Make clear which right allows operators to trigger manual reconciliations
- Bring together in a practical grouping both the reconcile process and inventory import management

Improved recognition of edition for IBM products

The latest release of the FlexNet inventory agent provides improved recognition of product editions for IBM Tivoli Storage Manager™ version 7.x and IBM Spectrum Protect™ version 8.x and later (IBM implemented a name change at release 7.1.3). The following product editions are now recognized as independent of each other:

- The basic edition (known as Tivoli Storage Manager and IBM Spectrum Protect, respectively)
- The Extended edition (known as Tivoli Storage Manager Extended Edition and IBM Spectrum Protect Extended Edition, respectively)
- The Data Retention edition (known as IBM System Storage Archive Manager and IBM Spectrum Protect for Data Retention, respectively).

Two elements are necessary for this support:

- The current FlexNet inventory technologies (for example, collected by FlexNet inventory agent, FlexNet Inventory Scanner, or zero-footprint inventory collection). Versions of this FlexNet inventory agent for all supported platforms are included in the installation or upgrade of the central application server, ready for your preferred method of deployment. (The internal release number for the FlexNet inventory agent with this release is 13.0.0. In fact, the enhanced functionality is supported from a limited-availability release 12.4.2 of the FlexNet inventory agent.)
- A current edition of the Application Recognition Library (release 2212 or later). If normal processes are being followed, this version should already be in place in your environment, as it was released on December 15, 2017.

The Application Recognition Library (ARL) provides some updated application definitions, together with several new applications. These changes and additions cover the distinct editions listed above. Each of these application definitions includes new evidence rules, matching the additional evidence uploaded by the latest FlexNet inventory agent. In this way, the combination of the latest ARL and the latest FlexNet inventory agent means that the various application editions are automatically recognized during inventory import and license compliance calculations.

Tip: For ease of tracking upgrade and downgrade rights, each of these application records is named “Spectrum Protect ...”, even though the IBM name change did not occur until release 7.1.3. Therefore, if you are running (for example) Tivoli Storage Manager 7.1, use the application called “Spectrum Protect 7.1 Basic”.

One changed application definition re-labels the undifferentiated application (previously available, which did not include any edition information) as an edition “None”. Any inventory uploaded from older editions of the FlexNet inventory agent continue to trigger recognition of this application with an unspecified edition, because the older versions of the FlexNet inventory agent cannot collect the extra evidence that allows identification of editions.

You are likely to need appropriately-configured licenses, attached to each edition of these products that is recognized in your environment. During transition, while the new FlexNet inventory agent is rolling out (and conversely, some older agents may still be reporting inventory), installations will automatically switch from the “Edition: None” application (when evidence is collected by older agents) to the appropriate edition license (as the evidence from the current FlexNet inventory agent is imported and reconciled).

Action summary

1. Performing an upgrade will require the new version of the FlexNet inventory agent (see *Configure Updates to Inventory Agents* in the *Upgrading FlexNet Manager Suite to 2018 R1 on Premises* PDF). If you are using third-party deployment tools, ensure that the current FlexNet inventory agent is deployed.

Tip: For adopting new devices, no special setting is required. New installations, and adoption of new devices, automatically use the latest available version of the FlexNet inventory agent.

2. Inventory collection by inventory beacons is automatically upgraded as part of the inventory beacon refresh. Ensure that your system allows self-updates to the latest inventory beacon (**Discovery & Inventory > Settings > Beacon settings > Beacon version approved for use**).
3. Validate that an appropriate edition of the ARL is installed:
 - a. Navigate to the system menu (in the top right corner of the web interface).
 - b. Select **System Health > System Health Dashboard**.
 - c. Check that the card for the **ARL** shows 2212 or later.
4. If you use any of the IBM products listed earlier, ensure that appropriate licenses are attached to each application. Keep at least one license for each application that displays “Edition: None”, maintaining this configuration for as long as you have legacy versions of the FlexNet inventory agent in operation.
5. Monitor the migration of installation records from the “Edition: None” license to the appropriate edition license, as the latest release of the FlexNet inventory agent progressively takes over reporting inventory collected from target inventory devices.

Improved recognition for Adobe DC applications

Application recognition for Adobe DC (Document Cloud) applications has been added for customers using FlexNet inventory (for example, collected by FlexNet inventory agent, FlexNet Inventory Scanner, or zero-footprint inventory collection). Please note that this does not include recognition of trial installations of Adobe DC applications.

Credential encryption support for silent installations of Flexera Analytics

FlexNet Manager Suite on-premises customers can now install **Flexera Analytics** using encrypted credentials, instead of plain text.

These encrypted credentials can be implemented using either RSA or ECDH certificates. **Note** that the RSA certificates must allow Key Encipherment in their Key Usage extension, while the ECDH certificates must allow the Key Agreement in their Key Usage extension. Further information is contained in the **Installing FNMS 2018 R1 on Premises** guide.

Additional URLs for revocation checks

The online help page listing URLs and port numbers needed for system operation has been updated to include details for a second, separate certificate authority that is used by the cloud instances of FlexNet Manager Suite when certain sub-domains are accessed. The page is available at *FlexNet Manager Suite Help > Inventory Beacons > Inventory Beacon Reference > Ports and URLs for Inventory Beacons*.

Updated HP DDMI adapter documentation

HP DDMI is an older technology, generally replaced by HPE Universal Discovery. However, several customers are still using HP DDMI as an inventory source, and by request the HP DDMI adapter documentation has been updated and integrated into the *FlexNet Manager Suite Adapter Reference* PDF, available through the title page of online help. It appears as a new part immediately after the part covering *Using the HPE Universal Discovery Adapter*.

Enhanced documentation of Bundles

Multi-product licenses are a challenge to understand, given both their inherent complexity and the different ways that various publishers configure them. Online help enhancements related to multi-product licenses in this release include:

- A correction that a *single* primary product installation on a device may be sufficient to trigger consumption from a multi-product license. (The previous statement that “all” primary products were required was an error.)
- Clarification that having ‘primary’ and ‘supplementary’ products is an unusual convention, and that most publishers supply bundles where all products are equal (and are therefore all primary products on the multi-product license). (The most frequent specifications of primary and supplementary products are in licenses from IBM or Oracle.)
- A new help topic called *License Compliance Calculations (Especially for Bundles)* provides a more detailed technical explanation of the license compliance calculation process.

Documentation of the inventory beacon selection process

A new chapter called *Selecting Inventory Beacons* has been added to the *Gathering FlexNet Inventory* PDF (available through the title page of online help). This covers the processes by which the locally installed FlexNet inventory agent selects which inventory beacon it will use to request any policy updates, or upload collected inventory.

As well as a full process description, coverage includes how necessary information is saved locally on the inventory device, how various preferences interact to prioritize the inventory beacons, and details of all the algorithms available to the FlexNet inventory agent to choose its preferred inventory beacon.

Note: *There is no user interface for customizing the choice of algorithm used by the NetSelector functionality, which is optimized for inventory collection processes. This information is provided for those wanting further insight into the process, or for those enterprises wanting to undertake advanced customization.*

Oracle database cloning: features and usage calculation changes

When a user clones an Oracle database that has Oracle features enabled, those features (and usage history) remain enabled on the cloned system. However, in the event that the enabled features have not been used on the new system, FlexNet Manager Suite no longer counts those features as in use. As a result, users may see a change in their Oracle license position if their situations meet these criteria.

Renaming the Software Vulnerability Management Inventory Export Tool

The Inventory Export Tool, used to import inventory from Software Vulnerability Manager has been renamed. It was previously available as FNMS-VIM.exe, and has been renamed to FNMS-SVM.exe. It can be downloaded from the [Product and License Center](#) and is documented in the in the chapter *Overview of Inventory Export Tool* from the *Systems Reference Guide*.

If you have created a Scheduled Task to automate the Inventory Export Tool, as recommended in the documentation, please remember to update the task to use the updated name of this file. A common name for this task is `Installed Software Export to VIM/SVM`.

License Agreement

If your company has purchased a license and signed a software license agreement with Flexera or an authorized Flexera reseller, the terms and conditions of that agreement govern all use of this software. Otherwise, use of this software, on either an evaluation or a fully- paid license basis, is subject to the terms and conditions of the FlexNet Manager “click-through” End User License Agreement, which can be found in the downloaded installation package.

If you do not agree with the terms of the applicable software license agreement, you may not install FlexNet Manager Suite onto any of your computers or, if already installed, you must remove it from all computers on which it is installed. You must also return or destroy all copies of the software in your possession.

License Compatibility

This release does not require an updated license when upgrading from FlexNet Manager Suite 2017 R3. Performing an upgrade from any earlier release will require an updated license to install **Flexera Analytics**.

If, for any reason, an on-premises customer requires a new license key, please contact support@flexera.com. Once the license has been created, it will be emailed to the requestor, and a copy stored in the [Product and License Center](#). The updated license must then be imported into FlexNet Manager Suite.

Installation and Upgrade Advice

If you are upgrading your on-premises implementation from FlexNet Manager Suite release 2017 R1 or later, you may follow normal upgrade procedures (using the “Upgrading” document from the list below).

If you are upgrading from any earlier release (2014 – 2016 R2), you should be sure to upgrade all components:

- Your application server(s) (for on-premises implementations, using the normal upgrade processes)
- All forms of FlexNet inventory tools, including the full FlexNet inventory agent, the lightweight FlexNet Inventory Scanner, and FlexNet core inventory components wherever you may have installed them
- FlexNet Beacon installed on all your inventory beacons.

Tip: Customers using the cloud (SaaS) implementation are also strongly advised to ensure that all FlexNet inventory tools and installed inventory beacons are updated to the latest versions.

This strong recommendation follows from the ongoing security improvements touching all these components that were released with version 2017 R1 (an earlier release).

There are four documents for on-premises customers that provide instructions for installing and upgrading to the current release, FlexNet Manager Suite 2018 R1.

- *Installing FlexNet Manager Suite 2018 R1 On Premises.* This includes the option of installing Flexera Analytics 2018 R1.
- *Installing FlexNet Manager Suite 2018 R1 for a Managed Service.*
- *Upgrading FlexNet Manager Suite from 2014 Rx to 2018 R1 On Premises.* This is designed for upgrades from FlexNet Manager Platform version 2014 or later.
- *Migrating to FlexNet Manager Suite 2018 R1 On Premises.* This covers migration from FlexNet Manager Platform 9.2 to FlexNet Manager Suite 2018 R1. Earlier versions of FlexNet Manager Platform will need to be upgraded to 9.2 before starting this migration.

These are contained in the **Installation Documentation for FlexNet Manager Suite 2018 R1** archive that is available from the [Product and License Center](#) and the [Customer Community Documentation](#) site. They are also available through the title page of online help for on-premises implementations.

Resolved Issues

The following issues have been resolved in **FlexNet Manager Suite 2018 R1** release since the release of FlexNet Manager Suite 2017 R3.

Master Issue Number	Summary
IOJ-1853520	A significant performance issue may occur in FlexNet Manager Suite 2017 R3 due to a poorly performing background task.
IOJ-1854295	FlexNet Manager Suite import may timeout due to the shape of the data in the Inventory Manager database
IOJ-1851449	'A Problem Occurred' error may happen when viewing the SAP Package Details page
IOJ-1857499	SAP Inventory Agent may fail with an exception: "Index and length must refer to a location within the string"
IOJ-1856189	Inventory importer may fail if there are 2 cluster groups with the same name
IOJ-1862424	A red bar error may occur when modifying an asset setting in System Settings > Assets

IOJ-1853015	Oracle instance users are missing from Oracle database inventory from version earlier than 12c
IOJ-1853518	Using grouping and filtering on a grid may cause exception or empty rows
IOJ-1851547	'Under Purchased' value on Compliance tab of the license calculated doesn't take into account 'Quantity per Unit'
IOJ-1860203	"Input string not in a correct format" error message occurs when a business import contains a purchase with a custom property value
IOJ-1854906	Business import of computer with custom properties resulted in SQL expression populated as property value instead of actual value
IOJ-1861443	A user login via SAML in a load balanced environment with edge TLS termination may fail due to an incorrect return address in the SAML request
IOJ-1855796	An import containing Oracle evidence may fail if there is malformed data in staging tables
IOJ-1849599	Silent install may display a successful status when it has failure.
IOJ-1850736	An import may timeout when importing Xen App inventory
IOJ-1856184	The categoryID property on the device object is not available in the Business Importer
IOJ-1846262	Running large reports may result in a timeout without a timeout setting.
IOJ-1853561	Incorrect computer matching and asset update may occur, when the wrong computer is linked to an asset that is deleted from inventory
IOJ-1812134	The "Inventory Errors on All Discovered Devices" report may take a very long time to complete.
IOJ-1857291	Performing a bulk update on licenses may remove data in custom fields.
IOJ-1853895	Installation instructions for Flexera Analytics is missing the command: '.\Config.ps1 ".\Config\FNMS Cognos Config.xml" updateConfig'
IOJ-1737692	Error displayed on filtering or sorting 'Recommended change' column in Recommend License Changes grid
IOJ-1831811	IBM RVU license consumption is not displayed in the All Licenses page
IOJ-1840569	Problem with Agent-based Oracle inventory where Oracle home path is using a symbolic link
IOJ-1839127	License alerts for unknown users don't clear even when the condition no longer exists
IOJ-1753925	Running the 'Entitlement Position History for a License' report, results in a 403 Error.
IOJ-1852800	Management View grid customizations are invalidated after upgrading to FlexNet Manager Suite 2017 R3
IOJ-1847944	Beacon Engine crashes while collecting VMware inventory from large number of ESX servers or VMs.
IOJ-1852613	Unnecessary high-frequency PVU inventory uploads may be triggered by variations in system clock speed
IOJ-1854914	Windows inventory agent may fail to collect hardware evidence and fallback to Windows API, possibly affecting the collected computers memory value.

IOJ-1840501	Attempting to use Advanced Filter 'Source Does Not Equal' in All Applications page, results in an error.
IOJ-1804275	The Vulnerability Intelligence Manager tool does not support Microsoft's Transport Layer Security (TLS) protocol 1.2
IOJ-1855237	Unable to convert hexadecimal value when collecting user data from SAP system running on SAP_BASIS 4.6C version
IOJ-1727212	'Recommended Change' column values are blank when exporting the 'Recommended License Changes' as a .csv .pdf .rtf or Excel file
IOJ-1770355	The filter "Doesn't contain" shows some strange behavior on the History tabs
IOJ-1811384	French Web UI > License Properties: the "Set Compliance status manually" label is wrapped to the second line while there's enough space to accommodate the text
IOJ-1769794	German Web UI: Asset Properties page > Documents tab > "Physical location" (Physischer Standort) is cut-off, the ending "t" is not visible.
IOJ-1851705	Custom properties do not display for assets, computers or licenses
IOJ-1852471	Values for custom properties using drop-down lists will be cleared when using multi-edit
IOJ-1862333	Red bar error displayed when generating CAL Usage inventory for access evidence
IOJ-1824242	Filtering for certain words like 'linked', 'allocated', 'unallocated' in license and application history screens does not output the correct result
IOJ-1849539	Editing an Account on the All Accounts page may fail and then display the wrong warning message
IOJ-1862597	SAP User attribute "UserLockStatus" is not imported correctly from XML file
IOJ-1771137	French Web UI: Retired or Disposed Asset Inventory > the page description is too long
IOJ-1851929	Flexera Analytics silent installation answer files, do not support encrypted credentials.
IOJ-1852682	The Vulnerability Intelligence Manager (VIM) tool does not support Federal Information Processing Standards (FIPS).
IOJ-1756897	The Purchase Order One-Off Upload does not import the Publisher field value if the publisher does not exist in FlexNet Manager Suite
IOJ-1858498	Inventory import may timeout due to the shape of the data in the Compliance database
IOJ-1854669	Oracle Legacy License Type can prevent a device from consuming other licenses if set as a Bundle
IOJ-1860969	Compliance import may fail with the error "Nullable object must have a value."
IOJ-1868548	Documentation wrongly states that changing the status of a user affects the user appear or not on the account creation page.

Hotfixes

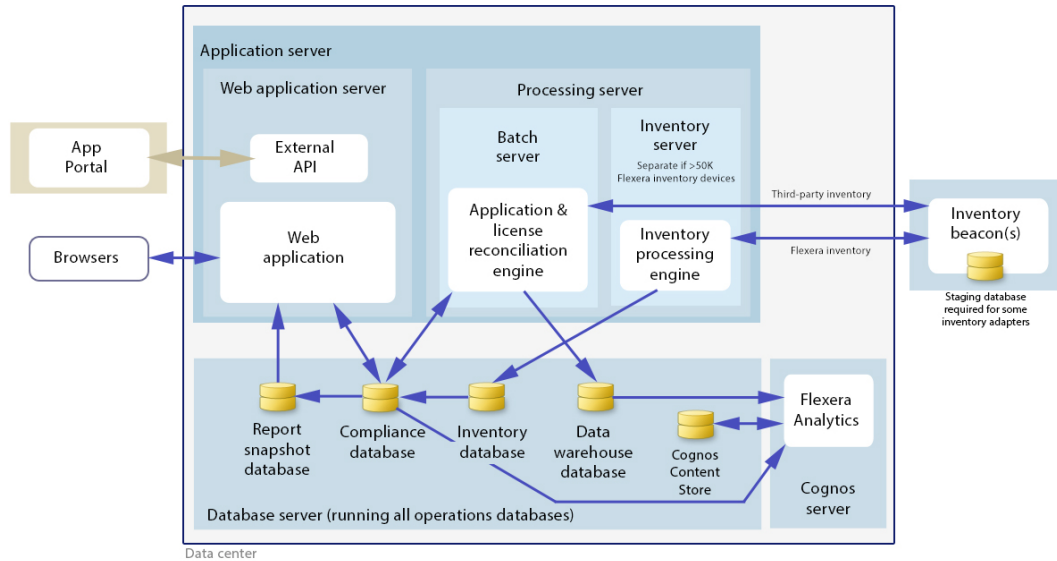
The following issues have been resolved only after installing **FlexNet Manager Suite Hotfix 2018R1-01** and **FlexNet Manager Suite Hotfix 2018R1-02**:

Master Issue Number	Summary
IOJ-1870916	Microsoft Office 365 adapter fails to execute on FlexNet Manager Suite 2018 R1 with an inventory beacon that is not upgraded to 2018 R1
IOJ-1754077	Locally-installed FlexNet inventory agent does not support inventory of Oracle 12c pluggable databases
IOJ-1845450	On SuSE 12 SP2 and later, installation of FlexNet inventory agent fails when ndtask.service cannot start
IOJ-1869700	Upgrading FlexNet inventory agent on CentOS / Oracle Linux 7.4 fails when earlier version does not support custom paths
IOJ-1836604	Agent random inventory schedule is insufficiently random
IOJ-1864471	Agent-based Oracle inventory fails when there are restricted permissions on Oracle directories
IOJ-1873202	On macOS, installation of FlexNet inventory agent fails because MGSFT_RUN_CONFIGURE is not found

System Requirements

The system requirements are based on typical implementations in the range of 10,000 to 200,000 devices. For larger implementations, it is recommended you engage the Flexera Global Consulting Services team or a Flexera partner experienced in large scale FlexNet Manager Suite deployments.

The following diagram shows the structure of a typical implementation:



Please consult the *Installing FlexNet Manager Suite 2018 R1 On Premises* guide for recommendations on how many servers are appropriate for your implementation.

Please consult the *FNM-SAP Sizing Guidelines 2018 R1* guide, available from the *Installation Documentation for FlexNet Manager Suite 2018 R1* download file, for recommendations on sizing an implementation that uses only FlexNet Manager for SAP Applications functionality.

Network Requirements

Network

Category	Requirement	
Internet Protocol version	IPv4, IPv6 and dual-stack.	Remote execution (such as remote discovery and inventory collection) requires IPv4. Communication between FlexNet Manager Suite Cloud and the top-level inventory beacon server(s) requires IPv4. Microsoft CAL device license calculations require IPv4 for CAL evidence collection and computer inventory.
Ports	80 & 443	Note that optional inventory sources may require additional ports. Refer to the topic 'Ports and URLs for Inventory Beacons' in the online help, for further information.
Transport Layer Security (TLS) - Cloud	1.1, 1.2	Required for communication between the FlexNet inventory beacons and the Application Server
Transport Layer Security (TLS) – On premises	1.0, 1.1, 1.2	Flexera Analytics, powered by Cognos version 11.0.6, is limited to TLS 1.0

Cloud

Category	Requirement	
DNS hostname cloud production	www.flexnetmanager.com www.flexnetmanager.eu	
DNS hostname cloud User Acceptance Testing (UAT)	uat.flexnetmanager.com uat.flexnetmanager.eu	

Category	Requirement	
Required IP ranges for Cloud customers who are not using DNS hostname	US Domain:	It is recommended to use DNS hostnames for network configuration of firewalls between inventory beacons and FlexNet Manager Suite Cloud. IP addresses can change without or with limited notice.
	Production - 64.14.29.0/24	
	DR - 64.27.162.0/24	
	EU Domain:	
	Production - 62.209.49.0/24	
	DR - 162.244.221.0/24	

Hardware Requirements

Application Server

Category	Requirement
Processors	4 cores, with up to 8 cores if more than 100 operators
Memory	8 GB
System drive	40 GB
Data drives	DataImport +Temp folders require 2GB each for Content library updates

Database Server

Category	Requirement	
Processors	4 cores per 100 operators	
Memory available for SQL Server	16 GB per 50,000 devices	
System drive	40 GB	
Data drives (Typical figures based on “simple” database recovery model)	Compliance database data	Per 10,000 devices: 25 GB in first year + 15 GB growth per year
	Compliance database logs	20 GB per 10,000 devices
	Inventory database data	20 GB per 10,000 devices with FlexNet Inventory
	Inventory database logs	10 GB per 10,000 devices with FlexNet Inventory
	Report snapshot database data	10 GB
	Report snapshot database logs	10 GB
	Data warehouse database data	20 GB (based on 1,000 licenses)

Category	Requirement
Data warehouse database logs	20 GB
tempdb data	5 GB per 10,000 devices
tempdb logs	1 GB per 10,000 devices
Cognos content store data + logs	1 GB
<u>Total</u>	60 GB + 80 GB per 10,000 devices
<u>Annual Growth Rate</u>	15 GB per 10,000 devices

Flexera Analytics (Cognos) Server

Category	Requirement
Processors	4 cores
Memory	16 GB+ recommended
System drive	100 GB

FlexNet Beacon

Category	Requirement
Processors	2 cores
Memory	4GB minimum, 8GB or higher recommended
Minimum free disk space	1GB per 10,000 devices

FlexNet Inventory Agent

Category	Requirement
Processors	1 core
Memory	512MB minimum, 2GB or higher recommended
Minimum free disk space	25MB installation + 100MB workspace

Prerequisite Software

The table below describes the supported operating systems and software prerequisites of FlexNet Manager Suite 2018 R1 at the time of release. Unless otherwise noted, support for a release includes support for all official service packs issued against the same release.

Component	Operating System	Prerequisite Software
Application Server	<ul style="list-style-type: none"> • Windows Server 2016 • Windows Server 2012 R2 • Windows Server 2012 • Windows Server 2008 R2 x64 SP1-SP2 • Windows Server 2008 x64 SP1-SP2 	<ul style="list-style-type: none"> • .NET Framework v4.5.x or later • Internet Explorer 10.0 to 11.0 • Microsoft Internet Information Services 7.0 to 10.0 • Microsoft Message Queuing (MSMQ) • Microsoft Access Database Engine (32-bit) • SQL Server features: Client Tools Connectivity, Management Tools

Component	Operating System	Prerequisite Software
Database Server (Including Cognos Database Server)	• Windows Server 2016	• SQL Server 2016 SP1 *
	• Windows Server 2012 R2	• SQL Server 2014
	• Windows Server 2012	• SQL Server 2012
	• Windows Server 2008 R2 x64 SP1	• SQL Server 2008 R2 SP3
	• Windows Server 2008 SP1-SP2	• SQL Server Client Tools, of the same version
	• Windows Server 2008 x64 SP1-SP2	

Notes

- Microsoft SQL CLR integration must be enabled.
- * All FlexNet Manager Suite databases, including the Cognos content store database, should be run with compatibility level set to SQL Server 2012 (110) or SQL Server 2014 (120) when running on SQL Server 2016 SP1 or later. Also ensure that at least SP1 has been applied, as this update repaired a fatal error in SQL Server 2016.
- Multi-tenant installations require the Enterprise Edition of SQL Server. Single-tenant installations can use any edition of SQL Server.
- Customers using the legacy Contracts Portal may want to enable full-text indexing to permit searching within documents.
- **Flexera Analytics** requires that Microsoft SQL Server be configured to have the TCP/IP protocol enabled, and has network permissions to communicate with the database server (this may be prevented by Firewall restrictions).

Component	Operating System	Prerequisite Software
Flexera Analytics / Cognos Server	<ul style="list-style-type: none"> Windows Server 2012 R2 Windows Server 2012 	<ul style="list-style-type: none"> .NET Framework v4.5.x or later Registration of ASP.NET: C:\Windows\Microsoft.NET\Framework64\v4.0.30319\aspnet_regiis.exe -i) <p>Notes</p> <ul style="list-style-type: none"> When Flexera Analytics is installed on a server other than the database server running the content store database, Microsoft SQL Server Native Client must be installed on the server hosting Flexera Analytics. Flexera Analytics server is not supported in Multi-tenant installations.
Admin Module Transport for FlexNet Manager for SAP Applications	<ul style="list-style-type: none"> SAP Basis release between 7.0 and 7.4 	<ul style="list-style-type: none"> The SAP GUI matching the SAP release must be installed. ActiveX must be installed.
Satellite Transport for FlexNet Manager for SAP Applications	<ul style="list-style-type: none"> SAP Basis release between 4.6C and 7.5 	
Web Browser	<ul style="list-style-type: none"> Microsoft Internet Explorer 10 - 11 Microsoft Edge for Windows Google Chrome 56 - 64 Mozilla Firefox 51 - 58 Apple Safari 9 - 11 <p>Some Flexera Analytics menu options are not available in the Chrome browser. For further information refer to this IBM Knowledge Center article.</p> <p>Support for future web browser releases cannot be verified, however there are no anticipated issues for future releases.</p>	<p>Flexera Analytics is not compatible with Microsoft Edge.</p> <p>A minimum screen resolution of 1024 horizontal pixels is required.</p>

Component	Operating System	Prerequisite Software
FlexNet inventory agent	<ul style="list-style-type: none"> • Windows Server 2016 • Windows Server 2012 R2 SP1 • Windows Server 2012 R2 • Windows Server 2012 • Windows Server 2008 R2 x64 Server Core • Windows Server 2008 R2 x64 • Windows Server 2008 Server Core • Windows Server 2008 x64 Server Core • Windows Server 2008 x64 • Windows Vista • Windows Vista x64 	

FlexNet inventory agent
(continued)

- Windows 7
- Windows 7 x64
- Windows 8
- Windows 8 x64
- Windows 10
- Windows 10 x64
- Ubuntu 12 - 16 and 17.04 (only on x86, 32-bit and 64-bit)
- Debian 7 – 8.6 (only on x86, 32-bit and 64-bit)
- Red Hat Enterprise Linux 5, 6, 7.0–7.3 (only on x86, 32-bit and 64-bit). Version 7.4 and later are not compatible
- CentOS 6, 7 (only on x86, 32-bit and 64-bit), 7.4(only on x86-64 bit)
- Fedora 25, 26 (only on x86, 32-bit and 64-bit)
- Oracle Linux 4.5 – 7.0 (only on x86, 32-bit and 64-bit), 7.4(only on x86-64bit)
- OpenSUSE Leap 42.2, 42.3 (only on x86, 32-bit and 64-bit)
- SuSE Enterprise Server 11 and 12 and 12 SP1 (only on x86, 32-bit and 64-bit), Version 12 SP2 and later are not compatible
- Solaris 9, 10, 11 (x86), Zones for versions 10 & 11
- Solaris 8, 9, 10, 11 (SPARC), Zones for versions 10 & 11
- Mac OS X 10.6 Snow Leopard, 10.7 Lion
- macOS 10.8 Mountain Lion, 10.9 Mavericks, 10.10 Yosemite, 10.11 El Capitan (Gatekeeper needs to be disabled), 10.12 Sierra, 10.13 High Sierra
- AIX 7.1, 7.2, LPARs
- HP-UX 11i v3, vPars/nPars

Component	Operating System	Prerequisite Software
FlexNet Beacon	<ul style="list-style-type: none"> Windows Server 2016 Windows Server 2012 R2 Windows Server 2012 Windows Server 2008 R2 x64 Windows Server 2008 Windows Server 2008 x64 Windows 7 Windows 7 x64 Windows 8 Windows 8 x64 Windows 10 Windows 10 x64 	<ul style="list-style-type: none"> .NET Framework v4.5.x or later Any supported web browser Oracle OLE DB Provider (32-bit), version 10.2.0.3 or later (for Oracle Database inventory) IBM OLE DB Provider (32-bit or 64-bit) (for connections to import data from DB2 databases). Whether the driver is 32-bit or 64-bit is determined by the operating system, for 64-bit operating systems the 64-bit drivers are required. PowerShell 3.0+ The following are required for Office 365: <ul style="list-style-type: none"> 64-bit server operating system .NET Framework v4.5.x or later Microsoft Online Services Sign-in Assistant (64-bit version) Windows Azure Active Directory PowerShell Module Skype for Business Online PowerShell Module

Compatibility with Other Products

This section describes the compatibility of FlexNet Manager Suite 2018 R1 with other Flexera products at the time of release.

Installation on the Same Server

The following table lists the supported versions of components that can be installed on the same server as a FlexNet Manager Suite 2018 R1 application server.

Component	Version that can be installed on the same server as FlexNet Manager Suite 2018 R1
FlexNet inventory agent	2018 R1

Component	Version that can be installed on the same server as FlexNet Manager Suite 2018 R1
FlexNet Beacon	2018 R1
Flexera Analytics	2018 R1

Integration with Other Products

FlexNet Manager Suite integrates with the following products and components. Support for third party products is based on the original software vendors publicly stated support dates. If an environment is no longer supported by the original software producer, Flexera will provide “as is” support; meaning troubleshooting issues, without committing to any defect fixes or enhancements.

This table details the currently supported versions:

Product / Component	Versions that can be imported from
App Portal	2013 R2 to 2017 R2
BladeLogic Client Automation (Marimba)	8.2
BDNA Normalize (Data Platform)	5
BMC Atrium CMDB	8.1 through 9.1 together with Atrium Integrator version 8.1 through 9.1
BMC Discovery (ADDM)	9.0, 10.0, 10.1, 10.2, 11.0 to 11.3
BMC Remedy ITSM Applications	7.6.04 SP4 through 9.1
Citrix XenApp EdgeSight	55.4, 7.6, 7.14.1, 7.15, 7.16 (requires a Platinum license)
Citrix XenApp Server	6.0, 6.5, 7.5, 7.6, 7.8, 7.9, 7.11 - 7.16
Citrix XenDesktop	5.6, 7.5, 7.6, 7.8, 7.9, 7.11 - 7.16
FlexNet Manager Suite	9.2, 2014, 2015, 2016, 2017, 2018
FlexNet Manager for Engineering Applications	15.5, 2016 R1, 2016 R2, 2016 R2 SP1
HP Discovery and Dependency Mapping Inventory (DDMI)	9.30
HPE Universal Discovery (HP-UD)	10.10, 10.11, 10.33

Product / Component	Versions that can be imported from
Hyper-V	Running on: <ul style="list-style-type: none"> • Windows Server 2016 • Windows Server 2012 R2 • Windows Server 2012 • Windows Server 2008 R2 x64 Server Core • Windows Server 2008 R2 x64 • Windows Server 2008 x64 Server Core • Windows Server 2008 x64
IBM BigFix Platform (previously Tivoli Endpoint Manager) on Microsoft SQL Server	8.2, 9.5
IBM License Metric Tool and IBM BigFix Inventory on IBM DB2	9.0, 9.1, 9.2.3 - 9.2.11
IBM License Metric Tool and IBM BigFix Inventory on Microsoft SQL Server	9.2.3 - 9.2.8
IBM Passport Advantage	as of Nov 2014
IBM Software Usage Analysis (SUA)	9.0, 9.1 (when running on an IBM DB2 database)
Microsoft App-V Integration Server	4.6, 5.0, 5.1
Microsoft Exchange ActiveSync	2010
Microsoft SMS/SCCM	2007, 2012, 2012 R2, 1511, 1602, 1606, 1610, 1702, 1706, 1710, 1802
Oracle Database	8i, 9i, 10g, 11g, 11g Release 2, 12c Notes: <ul style="list-style-type: none"> • 8i - requires a direct inventory beacon connection • 9i - requires a named account on Windows or a direct inventory beacon connection • 12c - the Oracle Multitenant option is not supported using a local agent.
Oracle Enterprise Manager	12.1 to 13.2

Product / Component	Versions that can be imported from
Oracle VM Server for x86	3.2 to 3.4.3
ServiceNow	Istanbul, Jakarta and Kingston
Symantec IT Management Suite (Altiris)	6.5, 7.1, 7.5
VMware vSphere/vCenter/ESXi	5.0 to 6.5 <i>Note: Remote inventory is not possible on the free license versions of ESXi.</i>
Workflow Manager	2014 to 2016

Inventory Components

The following table lists the versions of the FlexNet Beacon and FlexNet inventory agent that can be managed by FlexNet Manager Suite 2018 R1.

Component	Compatible Versions
FlexNet Beacon	2014 to 2018 R1 Citrix XenApp inventory requires FlexNet Beacon 2014 R2 or later.
FlexNet inventory agent (Windows)	8.4 to 9.2 and 2014 to 2018 R1
FlexNet inventory agent (Linux)	<i>Note: Earlier versions are compatible in that they receive default policy and collect inventory on schedule. They cannot support more recent agent functionality, such as:</i> <ul style="list-style-type: none"> Internet Protocol version 6 (IPv6) Control of usage tracking through UI settings (rather than .ini files and registry controls), from 2014 (R1) Settings targeted by IP addresses, from 2014 (R1) CAL inventory, from 2016 R1.
FlexNet inventory agent (Solaris)	
FlexNet inventory agent (Mac OS X)	
FlexNet inventory agent (AIX)	
FlexNet inventory agent (HP-UX)	
Citrix XenApp server agent	2014 R3 to 2018 R1

Known Issues

A list of known issues for the FlexNet Manager Suite 2018 R1 release are available from the Flexera support site at the time of release. Please refer to Knowledge Base article [Known Issues for FlexNet Manager Suite 2018 R1](#) for details.

Documentation

Documentation for FlexNet Manager Suite 2018 R1 is provided as online help. From the web user interface, click the question mark icon to launch the help. Additional documents are available from the title page of the online help. Note that both the online help and additional documents are customized for their different contexts, so that appropriate differences exist between the on-premises and cloud versions of all documentation. On-premises customers can also access the additional documentation files from the [Documentation Center](#).

Documentation Component	Language
Online help	English German French - for FlexNet Manager for SAP Applications functionality.
Additional documents	English German - only for FlexNet Manager for SAP Applications user and installation guides.
All other additional documents	English

For installation and upgrade documentation, please refer to the section in this document called [Installation and Upgrade Procedures](#).

More Information

Item	Description
Flexera website	Information about Flexera http://www.flexera.com
Flexera System Status Dashboard	Displays the current availability information for Flexera's cloud products https://status.flexera.com
Support	Support website, including the Knowledge Base https://flexeracommunity.force.com/customer
Product downloads	Flexera Product and License Center https://flexera.flexnetoperations.com/flexnet/operationsportal/startPage.do
Email sign-up for product announcements	For notification of FlexNet Manager Suite software updates, including hot fixes http://learn.flexerasoftware.com/SLO-FMS-Software-Content-Library-Updates