



# **FlexNet Manager Suite 2018 R2**

Release Notes

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# 1

## 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.

This document contains information about FlexNet Manager Suite, covering:

- FlexNet Manager for Clients
- FlexNet Manager for Datacenters
- FlexNet Manager for SAP Applications
- Service Life Data Pack.

The following products in the suite have their own separate release notes:

- FlexNet Manager for Engineering Applications
- Workflow Manager.

### Updates

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

- [English](#)
- [French](#)
- [German](#)
- [Japanese](#)
- [Spanish](#)

## 2

# New Features

## New ServiceNow Integration Application Certified

FlexNet Manager Suite has updated its ServiceNow integration application (FlexNet Manager Suite for Enterprises) to v4.0 (available by applying update 2018R2-01 to your implementation of FlexNet Manager Suite 2018 R2). The application, which has received ServiceNow certification, adds the following new and improved functionality:

- **Support for ServiceNow versions Jakarta, Kingston, and London** — The FlexNet Manager Suite ServiceNow integration application v4.0 supports ServiceNow versions Jakarta, Kingston and London.
- **Removed requirement to use the Software Asset Management Foundation plugin** — Prior to integration application v4.0, application records were stored into Software Asset Management (SAM) Foundation plugin tables. With v4.0, you now have the option to store imported application records into Configuration Management Database (CMDB) tables, SAM tables, or both. A new integration property, **Use CMDB and/or SAM tables for installation**, has been added to the Integration Properties page. As a result of this enhancement, the SAM Foundation plugin is no longer a requirement for using the integration application.
- **Hardware inventory exports from FlexNet Manager Suite now create virtual machine records giving a better picture of your hardware estate** — Additional classification details are included with data exported from FlexNet Manager Suite to ServiceNow. Computer records are further classified as Virtualization Server (Hyper-V/ESX) and Linux, Unix (Solaris, AIX, HP-UX) and Windows Server. A new integration property, **Updating inventory class name (sys\_class\_name)**, lets you choose whether FlexNet Manager Suite or ServiceNow is to be used as the source of truth when updating the inventory class name.
- **Hardware inventory exports from FlexNet Manager Suite further classify Computer records for more accurate reporting** — Additional classification details are included with data exported from FlexNet Manager Suite to ServiceNow. Computer records are further classified as Virtualization Server (Hyper-V/ESX) and Linux, Unix (Solaris, AIX, HP-UX) and Windows Server. A new integration property, **Updating inventory class name (sys\_class\_name)**, lets you choose whether FlexNet Manager Suite or ServiceNow is to be used as the source of truth when updating the inventory class name.

- **Database views can now be easily customized** — Database views used in exporting contracts and assets from ServiceNow to FlexNet Manager Suite can now be easily customized to export additional—or remove existing—fields. A new integration property, **Exclude virtual machine assets**, has been added to allow you to easily exclude virtual machine assets when exporting data from ServiceNow.
- **Reduced import times and faster loading of Import Transaction views** — Multiple data chunk imports (**Import Transactions**) can now be processed simultaneously, reducing overall import time. In addition, imported chunks of data are now cleared after they are successfully imported, which reduces storage usage and significantly optimizes the loading of **Import Transactions** views.
- **Redesigned integration application menu provides more intuitive navigation** — The FlexNet Manager Suite integration application menu in ServiceNow has been reordered into a more logical grouping of options resulting in easier and more intuitive navigation.
- **Added new views to provide quick access to integrated records** — New views have been added under **FlexNet Manager Suite > Imported Records** to provide a quick view of integrated records for: **Computers**, **Virtual Machine**, **Software Installed**, and **Contracts**.
- **Greatly reduced processing times when importing to ServiceNow using a full export from FlexNet Manager Suite** — When you perform a full export in FlexNet Manager Suite (on the **ServiceNow** tab in **System Settings**), the only records that are now exported are active records. Previously, a full export sent deleted records as well, resulting in an unnecessarily large exported dataset as well as long processing times in ServiceNow. With the optimization of the full export to only include active records, it is now easier to keep data synchronized between FlexNet Manager Suite and ServiceNow.

## Installation Information

To use ServiceNow integration application v4.0, you must use either of the following update packages:

- On-premises updates: **FlexNet Manager Suite Update 2018R2-01** — Contains two updates delivered in the download package (one for the batch server, and one for ServiceNow). **Note:** Both updates are required in order take full advantage of the new features included in the v4.0 integration application.
- Cloud updates: **FlexNet Manager Suite Update 2018R2-01 (cloud)** — Contains two updates delivered in the download package (one for the business adapter on your inventory beacon, and one for ServiceNow). **Note:** Both updates are required in order take full advantage of the new features included in the v4.0 integration application.

# Important pretest before database migration



**Tip:** If you are using a cloud implementation of FlexNet Manager Suite, skip this topic, as this work is already managed on your behalf.

If you are upgrading your on-premises implementation from an earlier release of FlexNet Manager Suite to 2018 R2, it is important to note that any data currently in your FlexNet databases that violate underlying database constraints will now cause your database migration to *fail*, bringing your upgrade to a halt. This increased rigor is

being applied because, after previous upgrades, cases were found of customer data that had been inserted in violation of constraints, and these produced compliance errors in subsequent operations. All of the following databases are now subject to this constraints check, which also reactivates any disabled constraints:

- Compliance database (default name FNMSCompliance)
- Inventory database (default name FNMSInventory)
- Data warehouse database (default name FNMSDataWarehouse).

In order to avoid such failures during migration, it is important first to run a new database script against each of these databases in turn. The script identifies constraints that must be honored, and outputs an SQL statement for each case. You then copy the SQL statements and run those customized statements against your databases. If there are any database constraint violations, an alert is output that looks like this:

```
Data exists in dbo.tableName which will break foreign key FK_name
```

Hopefully, in your databases there are no such cases, and you can proceed with the database upgrade. However, if you do see such alerts in this test, on any of the above databases, the errors *must* be corrected before you can proceed with the upgrade. Your database administrators may wish to check the *FlexNet Manager Suite 2018 R2 Schema Reference* for further insights into the constraints; but in general, best practice is to raise a support ticket to have Flexera experts assist in cleaning up any problematic data.

The necessary database script to run as an advance check on your current databases is available:

- In the *FlexNet Manager Suite 2014 Rx (or later) to 2018 R2 Upgrade Guide*, which is available through the Flexera Customer Community portal (and will also be available through the title page of online help *after* your upgrade, but that presents something of a chicken-and-egg problem!)
- In knowledge article 000027104 [Database Validation Before Upgrading to FlexNet Manager Suite 2018 R2](#), also accessible through the Flexera Customer Community portal.

## Ability to remove personal information stored within FlexNet Manager Suite

To meet your obligations under the General Data Protection Regulation (GDPR), you need to be able to remove personal information stored within FlexNet Manager Suite. To assist, we have developed a SQL script which can be run against your compliance database to remove all personal information associated with a given operator within FlexNet Manager Suite. This script is useful for on-premises installations, managed service providers, or on our hosted SaaS instances (in cooperation with Flexera Operations personnel).

The SQL script, together with instructions for removing personal information stored within FlexNet Manager Suite, can be found in knowledge article 000026756, *Remove Personal Information from Within FlexNet Manager Suite* in the Flexera Customer Community portal (login required). For additional information about GDPR compliance, refer to knowledge article 000026388, *Is Flexera GDPR Compliant?*.



# Import cloud service provider data for AWS EC2

The new **Discovery & Inventory > Cloud Service Provider Inventory** page (located in the **Virtual Devices** group), displays data for devices hosted in Amazon Web Services (AWS) EC2, with links to matching inventory device records, if any. This data is collected using a new inventory connector that automatically identifies devices hosted in AWS EC2, and imports the associated metadata into FlexNet Manager Suite. Detailed inventory can be collected in other ways, such as by including the FlexNet inventory agent in the image used to instantiate virtual machines in AWS.

## Prerequisites

A FlexNet Manager Suite administrator must create a connection on an inventory beacon to import data. The inventory beacon requires:

- FlexNet Beacon version 13.1.x.x (2018 R2) or later
- PowerShell 3.0 or later
- AWS Tools for Windows PowerShell version 3.3.283.0 or later.

The account that is used for the AWS EC2 connection must have the following permissions, set by policies in the AWS console:

- DescribeInstances
- DescribeHosts
- DescribeReservedInstances
- GetUser.

Full details are included in the online help, under *Inventory Beacons > Inventory Systems Page > Connecting to External Inventory Systems > Managing PowerShell Connections > Managing AWS EC2 Connections*.

# Proxy support added to PowerShell adapters

Proxy support has been added to PowerShell adapters. If your enterprise has a locked-down environment (for example, if your enterprise uses a proxy server to enable Internet access), you can use the new **Proxy Settings** section of a PowerShell adapter dialog to configure the proxy server connection to access the Internet. Currently, Office 365, Salesforce, and AWS connections utilize PowerShell adapters.

For more details, navigate to *Inventory Beacons > Inventory Systems Page > Connecting to External Inventory Systems > Managing PowerShell Connections* in the online help and then choose your connection type.



# SAP S/4Hana Business Suite Migration

Increasing numbers of SAP's customers are migrating from SAP's Classic Business Suite (R/3) to the newer S/4Hana Business Suite.

To meet this need, a new **S/4Hana Migration** section is available on the **Create New SAP System** page which enables you to define an SAP system as either **Classic Business Suite** or **S/4Hana**. Migration of **Classic Business Suite** systems can then be defined as **Not planned**, **Planned**, **In progress** or **Complete**. These fields can then be updated as your migration progresses by editing the SAP system. This allows you to assess the composition of your landscape and review the status of the migration of your systems to S/4Hana.

There is also a new **License Surplus/Deficit** section (located on the **License Position > Current Position** page) which provides an overview of any license surplus that can be negotiated with SAP as credits towards your S/4Hana migration. The section contains fields that calculate a surplus (or a deficit) based on the current consumption of the Named User and Package licenses that your organization has purchased. Essentially, a surplus is calculated if you are over-licensed and a deficit if you are under-licensed. The surplus is shown as a count of surplus licenses as well as a monetary value which can potentially be used as S/4Hana credits. A deficit is displayed in red to distinguish it from a surplus and serves only as a reminder that the organization is under-licensed.

## Spanish user interface released

Translation of the user interface for FlexNet Manager Suite into Spanish has been completed and is available from this release. To change the displayed language, select **My Preferences** from the drop-down under your operator name in the title bar of the web interface.

## Status of inventory beacon uploads

Known or potential issues with files uploading from each inventory beacon to the central application server are simple to identify following the addition of a range of new fields that display in the following locations of the FlexNet Manager Suite web interface:

- The **Beacon status** widget (previously titled **Beacons with issues**) in the **System Health Dashboard** page summarizes known issues with inventory beacons and highlights problems with file uploads such as connectivity issues, the count of blocked files, data pending upload and the longest time a file has been unable to upload.
- The new **Total to upload** column in the **Beacons** page shows the total file size (in megabytes) of all files that are currently on the inventory beacon awaiting upload to the central application server, and the new **Oldest pending upload** column displays the longest time a file has been unable to upload.
- In the **General** tab of the properties for each inventory beacon, the **Beacon location** section now shows the **PowerShell version** installed on the inventory beacon, and **.Net Framework** reported by the inventory beacon which enables you to check whether minimum requirements are met. The **OS version** running on this inventory beacon is also shown which may be helpful information when you are deciding which inventory beacons to upgrade.

- The new **Upload status** tab of the same properties, helps to identify any issues with the upload of files from this inventory beacon to the central application server. This tab includes the **Inventory beacon upload status** grid which provides information on data that is currently uploading for each type of import including the number of files to upload (if any), the time since the first and the most recent files were queued, and the sum total of all files awaiting upload.

## Support for Unlimited license type

For cases where vendors allow you to use unlimited quantities of their software, FlexNet Manager Suite now provides a way to define a rule that characterizes the entitlement limits defined by the license agreement. The rule affects how the license is flagged if consumption exceeds the entitlement limits.

A new **Entitlement limits** section has been added to the **Compliance** tab of license properties that enables you choose a rule that appropriately characterizes the entitlement limits defined by the license agreement. The following **Entitlement limits** options are provided:

- **As purchased** — Terms of the license set the number of entitlements purchased as the cap for entitlement limit. The license is flagged as "At risk" when consumption exceeds purchased entitlements.
- **Subject to true-up** — Terms of the license allow consumption to exceed purchased entitlements as long as additional licenses are purchased at the end of the true-up period (as defined in the relevant purchasing agreement). The license remains "Compliant" when consumption exceeds purchased entitlements.
- **Unlimited** — Terms of the license allow for unlimited entitlements. Unlike "Subject to true-up" licenses, with "Unlimited" licenses you do not need to purchase additional entitlements to rectify overages, because the license does not have any limit on entitlements or consumption, and is "Compliant" at all times. As there is no relationship between the purchased entitlements and the consumption, "Shortfall/Availability" is not reported for these licenses.

For the majority of licenses and for most vendors, **Entitlement limits** is set to **As purchased**.



**Note:** The **Subject to true-up** radio button in the **Entitlement limits** section replaces the **Subject to true-up** check box that was previously included on the **Identification** tab of license Properties. In addition, the **Subject to true-up** column of various custom reports has been changed to **Entitlement limits**. Valid values that can appear in the **Entitlement limits** column are also **As purchased**, **Subject to true-up**, and **Unlimited**.

For more information about **Entitlement limits**, refer to the online help.

## Support for XenApp "Limit Visibility" functionality

FlexNet Manager Suite now supports the Citrix XenApp 7.6+ "Limit Visibility" setting which enables you to limit access to published applications to specified users or groups of users within a Delivery Group to which an application is assigned.

## Prerequisites

The latest FlexNet Manager Suite Citrix XenApp agent must be deployed.

# Tracking management of Oracle Database options

Since Oracle options may be managed either locally on the database instance where they are running, or remotely using Oracle Enterprise Manager (OEM), it can sometimes be difficult to understand why an Oracle option is shown as licensable on a particular database instance. New properties for database instances now make this easier to track:

- In the **General** tab of the properties for each database instance, the **Managing OEM** property reports which installation of Oracle Enterprise Manager most recently claims management of the database instance.
- In the **Options** tab of the same properties, the **Used** column shows which Oracle options are licensable on this database instance, and the new **Enabled by** column shows whether each option was enabled locally on This instance, or remotely by Oracle Enterprise Manager, meaning the installation identified on the **General** tab.

These new insights don't require any special configuration. It works for all methods of collecting FlexNet inventory for Oracle databases and instances, and only requires that the database instance used as a management repository by Oracle Enterprise Manager is among the database instances from which FlexNet inventory is collected.



**Tip:** If you use Oracle Database 12c or later, the OEM repository may be saved in a pluggable database instance. In this case, to support inventory from pluggable database instances, you need version 13.0.1 of the FlexNet inventory agent (distributed with FlexNet Manager Suite 2018 R1 hotfix 02) or later.

Logging for the FlexNet inventory agent locally installed on the Oracle server has also been enriched to include details of options discovered on each database instance. This may assist with troubleshooting your Oracle options.

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# Changes from Previous Releases

## Better control of file evidence

The **Discovery & Inventory > Settings** page, called **Inventory Settings**, now gives significantly better control of paths searched by the locally-installed FlexNet inventory agent for file evidence and ISO-standard software identification (SWID) tags. By default, FlexNet inventory agent does not collect any file evidence, and collects SWID tags only from the ISO-defined locations. However, some kinds of application recognition can be improved with selectively-gathered file evidence.

New controls let you specify a number of search paths, separately for each of the Windows, macOS, and Linux/UNIX platform families. These are automatically shared with the installed FlexNet inventory agents on each platform through downloaded policy (and so they work for any installed agent communicating through a connected inventory beacon). Your paths are searched recursively, starting from each one you specify and continuing down through all its child folders. To better manage those search patterns, you can now similarly declare a set of paths to *exclude* from the descendent folders.

Both kinds of definitions (include and exclude paths) may include the **\*** or **?** wildcards, Windows environment variables (like `%ProgramFiles(x86)%`), and FlexNet preference variables (like `$(ProgramFiles)`), as well as plain text.

You now use the same groups of settings to manage searches for both file evidence and SWID tags. The online help contains full details.

## Core limits are now editable

The Microsoft Server/Management Core license type has two settings that specify the minimum number of cores that must be licensed for each processor and for each host (as defined by Microsoft in the license agreement). In previous releases, these were hard-coded to the typical values (8 and 16, respectively). From this release, the values are editable for special cases, but default to the same normal values. Find these settings in the **Use rights & rules** tab of the license properties, exclusively for Microsoft Server/Management Core licenses.

## Improved performance, configurability when updating content libraries on-premises

Significant improvements in performance, reliability and resilience have been achieved by modifying the process which updates content libraries within FlexNet Manager Suite. These include the ARL, PURLs, SKU library, and EOSL downloads.

If you are using a Flexera cloud-based instance, this series of improvements behind the scenes means fewer delays in weekend processing around library updates.

If yours is an on-premises implementation, the overall time taken to complete the full update process (which includes file cleanup, download of the latest libraries, and import of those libraries) is reduced typically from around 3-10 hours to less than two hours.

The reliability of the process is also improved by cleaning up old files before downloading and importing the latest libraries. This eliminates errors caused when the task attempted to cleanup file(s) that were still in use.

In addition, all content libraries are now fully downloaded before any are imported into FlexNet Manager Suite. As well, for managed service providers, each Product Use Rights Library downloads once only. The resilience of this process is enhanced by performing up to five retries for any download failure caused by external factors such as transient network issues.

However, it is important to note that if *any* download fails (despite the retries), then the subsequent import also does not proceed on this occasion. To help with any required troubleshooting, new log files are available.

Content downloads are processed on the batch server (or your equivalent server hosting that functionality), and the path for staging locations for the downloads is now configurable through a registry entry on that server.

If your batch server (or equivalent) cannot access the Internet, so that you are downloading libraries manually, you can now use the batch scheduler commands to control imports of your downloaded libraries. The batch scheduler avoids conflicts and failures by making sure that the underlying executables run only when it is safe to do so.

All details of the configurability, the log files, the download destinations, and the changed calls to the batch scheduler are included in the *FlexNet Manager Suite 2018 R2 Installation Guide* (and repeated in the *Upgrade Guide*), available through the title page of online help. Look for *Populate the Downloadable Libraries* for the process when your batch server has access to the Internet, or the following *Manual Updates of Library Data* topic when Internet access is not available.

## Improved recognition of Adobe Acrobat DC applications

Further improvements have been added for the recognition of Adobe Acrobat DC (Document Cloud) products, when using FlexNet inventory (for example, collected by FlexNet inventory agent, FlexNet Inventory Scanner, or zero footprint inventory collection). FlexNet Manager Suite now provides the ability to identify the following:

- Trial editions of Adobe Acrobat DC

- Recognize if Adobe Acrobat DC uses a "continuous" or "classic" track.



**Note:** If the edition of an Acrobat DC product cannot be recognized using the available evidence, the edition property will display *Unspecified*. Likewise, if the edition or track cannot be recognized, this additional information is not displayed. Here is an example of how the application Adobe Acrobat DC (2018) Continuous Pro will be displayed, depending on the available evidence:

- When the available evidence recognizes all information for 2018 version of Acrobat DC Continuous Pro, then the name displayed is *Acrobat DC (2018) Continuous Pro*, the version displayed is *DC (2018) Continuous*, and the edition displays *Pro*.
- If the available evidence recognizes 2018 version of Acrobat DC, but cannot recognize the track or the edition, then the name displayed will be *Acrobat DC (2018)*, with the version displayed simply as *DC (2018)*, and the edition as *Unspecified*.

## Signing of Linux RPM packages

Signing of Linux RPM (Red Hat Package Manager) packages gives you an additional layer of security if you are managing your own installation of Linux RPM packages for FlexNet inventory agent. Only RPM packages are now signed, with DEB packages unchanged.



**Tip:** The signing of the Linux packages has no effect on the automated processes of adoption or self-upgrade of FlexNet inventory agent. The additional security is beneficial only for third-party technologies, including the native RPM installer on Linux platforms.

Both Linux RPM packages for the FlexNet inventory agent (from 13.1.0) are now signed using GPG (GNU Privacy Guard).

- The private key is stored securely by Flexera.
- The public key is available from the Product and License Center as a separate download titled *Inventory agent 13-1-0+ Linux RPM installer public key.zip*. Your company password for the Flexera Customer Community is required to access this download. The fact that the key must be downloaded from a separate, password-protected source gives you some improvement in security.

The one public key can authorize either of the RPM packages for the Linux FlexNet inventory agent — one for Linux i386 and one for Linux x86\_64. Collecting and importing the public key is a one-time only operation. To download the public key:

1. Use your browser to log into the Flexera Customer Community. (Your company's password for the Customer Community is required.)
2. Select the **Downloads** tab from the row across the top of the page, identify FlexNet Manager Platform in the lists of products, and click the **Access Above Products** button that is *below* that product name. The Product and License Center site is displayed.
3. In the Your Downloads section of the Home page, click the link for FlexNet Manager Platform.
4. In the Download Packages page, click the link for FlexNet Manager Platform 2018 R2 to access the downloads.

5. Download `Inventory agent 13-1-0+ Linux RPM installer public key.zip`, and unzip it to your preferred location on a target device where you want to install the Linux version of FlexNet inventory agent.

Once the public key has been downloaded, it may be installed on each target device prior to validating or installing the signed RPM package:

```
rpm --import pathWhereSaved/RPM-GPG-KEY-FlexeraSoftwareLLC
```



**Tip:** If you choose to install a Linux RPM package without the public key in place, a warning is issued. You may choose to ignore the warning, and the installation can continue.

With the public key installed, you can validate the downloaded installation package with the normal RPM command:

```
rpm -K agentInstallationFile
```

A result of `md5 gpg OK` means the signature of the package has been verified, that the package is not corrupt, and that FlexNet inventory agent is therefore safe to install and use.

With the public key securely imported into `rpm`, all future upgrades/installations of the FlexNet inventory agent can also be verified against that key.

## Flexera Analytics upgrade to latest version of Cognos Analytics

The capability of Flexera Analytics is upgraded on both On-Premise and Cloud (SaaS) deployments to Cognos Analytics R11 (11.0.11). This upgrade provides the following noteworthy features:

- Drill through from a dashboard or story to a report
- Export dashboards to PDF
- Universal filters
- Support for HTTPS access via TLS 1.2.

For a complete list of new and changed features introduced from v11.0.7 to v11.0.11, please see the IBM Knowledge Center [New and changed features](#) page for Cognos Analytics 11.0.x.

## Flexera Analytics Procurement support

The Flexera data models that are provided as a part of Flexera Analytics now include support for contract and purchase related data providing you with the ability to build dashboards and reports pertaining to your procurement data. A new tab entitled Procurement has also been added to the existing Widget Library to showcase some of the possible ways the updated models can be used to build procurement related widgets. For more information, refer to the *FlexNet Manager Suite System Reference* PDF accessible through the home page of the online help.



## Improved database cleanup after file evidence imports

Two improvements have been made to the reader that imports file evidence, and that should clean up afterward:

- Previously, cleanups could fail if an operator was making adjustments through the web interface for FlexNet Manager Suite at cleanup time. The database method has been changed to avoid this, and also to automatically clean up records from any previous failures.
- Some cleanups of the ImportedFileEvidence table may have failed, accumulating orphaned records (meaning ones that do not have a matching record in the ImportedInstalledFileEvidence table). Cleanup functionality has been extended to remove accumulated orphans. By reducing the set of data to manipulate, this cleanup can improve future database performance.



**Tip:** These fixes were the subject of knowledge article #000026779, "Improving database cleanup after importing file evidence", available through the Flexera Customer Community (login required). With this release, the changes are incorporated within FlexNet Manager Suite, and no other action on your part is needed.

## Inventory spreadsheet templates updated

FlexNet Manager Suite provides standard templates for the import of inventory data through an inventory beacon. At each product release where the internal data model used in FlexNet Manager Suite is updated, these templates are also updated to keep them aligned with the underlying databases. Therefore it is always best practice to use the *latest* templates when editing or creating a spreadsheet for inventory import. In particular, release 2018 R2 includes a changed template for Computer imports, which means that **if you have any scheduled imports of this inventory spreadsheet, you must update these to use the latest template.**



**Tip:** It is not necessary to populate the new columns with data, since at this release all the added columns are for optional data. However, your spreadsheets must, as always, use exactly the columns, in the given order, and with the column names that are supplied in the templates.

New columns (which are all related to cloud service providers) to consider in the updated Computer template are:

- InstanceCloudID
- CloudServiceProvider
- InstanceAffinity
- ImageID
- LaunchTime
- NetworkID
- LifecycleMode
- Account

- `ThreadsPerCore`
- `InstanceType`
- `Region`
- `AvailabilityZone`
- `InstanceTenancy`.

## VMware inventory enhanced

If you have purchased the FlexNet Manager for Datacenters product, the collection of VMware inventory has been enhanced. It now automatically identifies installations of vCenter Site Recovery Manager and VMware vSAN software, and includes these in the **VMware Inventory** page.

## Improved recognition for Oracle Advanced Analytics option

When Oracle released version 12c of **Oracle Database**, it included changes to the available Oracle options. This included incorporating the previous **Data Mining** option into the new **Advanced Analytics** option. The Application Recognition Library update #2345 supported this change, along with improved inventory gathering for the new option. There is no change to the recognition of previous versions of the **Data Mining** option. You may need to validate that the **Advanced Analytics 12c** option is correctly linked to your relevant licenses, as described in knowledge base article #000028205, "Adjusting licenses for Oracle Advanced Analytics Option", in the Flexera Customer Community portal (login required).

## Oracle instance page enriched

The listing of Oracle database instances has been expanded with two new properties of the inventory device hosting Oracle Database (your "Oracle server"):

- **Device status**
- **Device role.**

These properties of the underlying device (not of the database instance) may be helpful in sorting and filtering long lists of Oracle instances so that you can, for example, hide all the backup systems, and concentrate on your operational database instances.

## Oracle Database inventory improvements

Earlier releases allowed for an inventory beacon to connect directly to an Oracle Database server and gather inventory from any container database (for Oracle 12c or later) and any pluggable databases available through your chosen discovery method (such as a `TNSNames.ora` file); and this functionality remains available unchanged.

However, a locally-executing copy of `ndtrack` (the core inventory component) running on the Oracle server could not previously discover and collect inventory from the pluggable databases.

This functionality has now been added for `ndtrack`, regardless of how the tracker is delivered to the target inventory device (the Oracle server). Thus, you can now collect inventory from pluggable databases using:

- The complete FlexNet inventory agent, whether installed automatically during 'adoption' of the inventory device, or installed by third-party tools/techniques
- The lightweight FlexNet Inventory Scanner (for UNIX-like platforms, this is packaged as the `ndtrack.sh` shell script)
- The zero-footprint method, where an inventory beacon installs `ndtrack` on the target device, executes it, and removes it immediately afterwards (leaving zero installation footprint).

After inventory upload and import to the compliance database (which typically happens overnight), the pluggable databases are displayed in the **Oracle Instances** page of the web interface for FlexNet Manager Suite:

- The container instance has `~CDB_ROOT` attached to its instance name
- Each pluggable database displays the same instance name, a tilde character, and the name of the pluggable database: `containerInstance~pluggableDBName`.

On UNIX-like platforms, collection of Oracle inventory may be configured to require the FlexNet inventory agent (which must run as root) to impersonate other trusted accounts with lower privilege levels (for details see the *Common: Child Processes on UNIX-Like Platforms* topic in the *Gathering FlexNet Inventory* PDF, available through the title page of online help). The impersonation has been improved at this release, increasing both reliability and security.

## Migration updates compliance database schema

The database migration that forms part of the upgrade to FlexNet Manager Suite 2018 R2 has direct impacts on two tables in the FlexNet inventory database:

- The `SoftwareFileProperty_MT` table, a legacy table that now (normally) contains no data, is dropped, and not replaced. (It is known to be empty for all cloud customers; on-premises, if you have prepared custom inventory adapters, check to ensure that they do not address this table, which is highly unlikely.)
- The `SoftwareFile_MT` table is replacing its `SoftwareField` column, previously an integer, with a bigint.

Depending on the number of records you have in your `SoftwareFile_MT` table, database migration may need a little extra time to regenerate all these keys. This has no direct impact on your data, but is the fastest way to complete the migration.

## Other documentation improvements

The following have been added to or changed in the online help and associated PDF files:

- The inventory beacon shares ManageSoftREA\$, mgsREA\$, ManageSoftRET\$, and mgsRET\$ have been added to the online help under **FlexNet Manager Suite Help > Inventory Beacons > Inventory Beacon Reference > File Paths for Inventory Beacon**.
- The list of standard Oracle users that do not consume license entitlements has been extended in the Oracle chapter of the *FlexNet Manager Suite System Reference* PDF.
- In the same chapter, the topics under *Troubleshooting Agent-Based Collection of Oracle Inventory* have been completely rewritten for more logical use, with several inaccuracies corrected. (Similar topics for troubleshooting *other* forms of Oracle inventory collection are scheduled for rework for future releases.)
- Help for blacklisted serial numbers on inventory devices is revised.
- A new first chapter has been incorporated in the *Gathering FlexNet Inventory* PDF, drilling down into the differences between data sources and what information may be missing from one or other source.
- Documentation for various adapters and connectors has begun a process of rationalization and expansion. Stage 1 is collecting together all content related to inventory adapters and connectors in one volume, and similarly collecting together content related to business adapters:
  - The previous *FlexNet Manager Suite Adapters Reference* is renamed to *FlexNet Manager Suite Inventory Adapters and Connectors Reference*, or *Adapters and Connectors* for short!
  - Supported version for XenApp and the XenApp Agent have been updated in *Adapters and Connectors*.
  - Three parts have been added by moving sections across from the *System Reference* to *Adapters and Connectors: Managing Microsoft Office 365 Licenses*, *Salesforce Subscription Management*, and *The Inventory Adapter Studio*. This collects content focused on using or making inventory adapters into one reference.
  - In parallel, the previous *Using FlexNet Business Importer* is renamed to *Using FlexNet Business Adapters*. All the previous content on the Business Importer remains, and has now been united with *The Business Adapter Studio*, moved across from the *System Reference*.

## 4

# General Information

## 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 Suite "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 or later. 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](mailto:support@flexera.com). Once the license has been created, it will be emailed to the requester, and a copy stored in the [Product and License Center](#). The updated license must then be imported into FlexNet Manager Suite.

## Resolved Issues

The following issues have been resolved in FlexNet Manager Suite 2018 R2 release since the release of FlexNet Manager Suite 2018 R1.

Issue Number	Summary
IOJ-1884784	XenApp Server Agent import step CopyingAllUserstoTemptable times out with many AD group memberships
IOJ-1861640	Japanese characters are garbled in Oracle NDI file (direct collection via Beacon)

Issue Number	Summary
IOJ-1870025	Unable to access Flexera Analytics via SAML with certain identity providers
IOJ-1846909	Agent getting stuck after collecting Oracle inventory on AIX servers
IOJ-1850832	Inherited location for an inventory device from an asset is lost when any manual change is made in the inventory device's properties
IOJ-1871365	An inventory file may fail to import when another inventory file, for the same device, is imported with different custom property values
IOJ-1849587	Error message — System.ArgumentException: An item with the same key has already been added (Custom Property issue)
IOJ-1869174	FlexNet Inventory Manager import will fail when Sum of Hard Disk size for a device is greater than 9,223,372,036,854,775,807 bytes
IOJ-1869799	Error occurs when adding/editing a custom consumption exemption reason
IOJ-1881590	Arithmetic overflow due to bigint into int during FlexNet Manager Suite license check
IOJ-1879369	Large CSV exports perform poorly with high CPU usage on presentation server
IOJ-1882282	mgsDatabaseUpdate can incorrectly increment the migration step number when a step fails
IOJ-1824740	ActiveDirectory writers fail if information from one domain is imported from multiple sources
IOJ-1887327	FNMS presentation server CPU utilization goes to 100% as a result of SAP license reconciliation operations
IOJ-1882494	SAP GUID is truncated by staging monitor since 2016R1
IOJ-1878688	Removing an application which is linked to a license that has upgrade/downgrade rights can cause the license to fail to open
IOJ-1864895	Some assets cannot be linked to an inventory device
IOJ-1865851	Linked Assets and Licenses may be deleted from a Contract when saving Contract properties
IOJ-1827746	Oracle licenseable options from OEM instance for remote instances left unmanaged in IM
IOJ-1889730	Imports from BMC ADDM may fail if multiple last logged on users are reported by ADDM
IOJ-1884928	Business adapter imports which fail may cause assets to be created which can never be linked to inventory devices
IOJ-1723893	Environment variables cannot be entered to include file path scan

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-1867650	Microsoft Server/Management Core license, a license consumption calculation of the virtualization rights for Microsoft CIS 2016 Standard is incorrect
IOJ-1852886	File evidence that is no longer imported from the inventory source is not removed
IOJ-1859881	'Product use rights & rules', 'Upgrade rights', and 'Upgrade until' date functionality do not work when the 'Upgrade until' date is supplied from the 'End of Service Life' product
IOJ-1754077	Locally-installed FlexNet inventory agent does not support inventory of Oracle 12c pluggable databases
IOJ-1724376	SQL Tuning Set causes Real Application Testing and Oracle Tuning Pack to be marked as installed
IOJ-1864172	ActiveDirectoryImport.exe is called by BeaconEngine.exe using plain text passwords in command line
IOJ-1737107	AD import may fail if AD includes CNF replication conflicts
IOJ-1847984	Unused Oracle Options consume if no Database Instances are reported
IOJ-1818015	Oracle Server Worksheet does not exclude non-licenseable installations
IOJ-1870174	SCCM reader does not import domains where the domain flat name exists in another source
IOJ-1885840	Used value for applications is set incorrectly for oracle instances managed by OEM
IOJ-1764318	IBM Information Server: Development VMs consuming 'Production' license
IOJ-1836717	Oracle EBS should be cleaned as a part of Stale Oracle Cleanup
IOJ-1885962	Oracle options enabled by OEM with different version would not consume
IOJ-1816129	Compliance and Business imports fail when FlexNet Manager Suite is waiting for a ServiceNow export to complete
IOJ-1857917	FlexNet Manager Suite cannot differentiate between usage of the Oracle Spatial and Locator options
IOJ-1874887	Inaccurate license consumption for Oracle Compression Advisor option after option fails



Issue Number	Summary
IOJ-1842842	Oracle 11g and later: Real Application Testing should not be calculating Installation/Usage based on SQL tuning set
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-1866549	User Assignments and Enterprise Groups one-off uploads accordions are missing for newly created and cloned roles
IOJ-1844320	Incorrect core factor used for Itanium processor purchased before Dec 1, 2010
IOJ-1748348	Unable to Save when multi-editing Inventory devices or Assets Status are different values
IOJ-1759887	Renamed windows device does not update following inventory import
IOJ-1871171	Error when expanding the 'License - Has maintenance' section in the 'License and Maintenance Expiry' page
IOJ-1867384	Location may get overridden on virtual machine multi-edit
IOJ-1779956	SAPReader Fails to Import With Error 'Violation of UNIQUE KEY constraint 'UQ_SAPActivityCheckWorkTime''
IOJ-1879110	'Active Data Guard' is detected as installed from Oracle Database Express Edition
IOJ-1733057	Edit icon incorrectly displays when the 'Rename an existing role' option for a Role is restricted
IOJ-1764278	View Only Operator receives "problem 403 unauthorized" error when accessing Oracle Instances
IOJ-1836604	Agent random inventory schedule is insufficiently random
IOJ-1712211	For non-mandatory field validation errors, the tab with the error is not highlighted
IOJ-1719453	Sites displayed in the Subnets page are not sorted
IOJ-1700807	If LastKnownActivityTime is Null, beacon status update does not update LastKnownActivityTime
IOJ-1873202	On macOS, installation of FlexNet inventory agent fails because MGSFT_RUN_CONFIGURE is not found

Issue Number	Summary
IOJ-1865807	Large native inventory files fail to upload from the Beacon in complex network environments
IOJ-1871486	Uploads to inventory servers are not load balanced evenly
IOJ-1864471	Agent-based Oracle inventory fails when there are restricted permissions on Oracle directories
IOJ-1854740	Least privilege credentials for O365 connector are incorrect
IOJ-1881510	Citrix server agent adapter may not report remote usage when installer evidence is not present
IOJ-1869873	Oracle instance properties shows incorrect 'Last inventory date'
IOJ-1858647	IsUsed flag set to No despite reporting a recent LastUsedDate
IOJ-1863274	Performance issue with DeviceSummary SQL view
IOJ-1864277	One-off upload can hang if values have word wrapping
IOJ-1858518	Sort is not working properly on some columns of the All Application page
IOJ-1887292	ActiveDirectoryImport.exe tool is incorrectly importing conflict site/subnet AD objects
IOJ-1883146	Contract management portal giving a 500 error while trying to open a contract detail
IOJ-1875506	BMC Discovery (ADDM) adapter import fails when HostKey field is null
IOJ-1881737	Oracle instance should show license able options with mismatching version
IOJ-1764212	FlexNet Manager Suite does not show correct export status
IOJ-1875008	ARL update fails in the environment when SQL Server is configured with an Availability Group
IOJ-1883935	Large Active Directory imports with many OUs will fail to import due to timeouts
IOJ-1864193	Save inventory settings fail if include directory path is longer than 256 characters
IOJ-1868151	CAL License in All License grid, consumed, raw consumption and used counts not updated when server computer is deleted
IOJ-1869118	Release Information in Admin Module shows 2016 version when using FNMS 2017 R2 for SAP
IOJ-1835633	ServiceNow export does not check for instance while performing delta exports

Issue Number	Summary
IOJ-1879689	Inventory imports from Salesforce may hang at the Get-Users step
IOJ-1871488	Database caching on inventory server does not expire/evict objects under memory pressure
IOJ-1860143	OracleLMSAuditEvidence has incorrect value for the 'Total logical cores' column
IOJ-1867017	The SaaS Usage report may fail to run
IOJ-1873541	DirectoryBinder caches are not multi-tenant
IOJ-1806425	Oracle LMS audit evidence export should not include ignored devices
IOJ-1864955	XenApp import can fail when there is a hyphen in the database name
IOJ-1759941	Cognos does not authenticate using https
IOJ-1827137	Compliance import may take an inordinately long time at ApplicationAlerts and EvidenceAlerts
IOJ-1860095	/LICMAN/SAPLSD_COLLECT when running Staging database monitor - Invalid access to a string (offset and length too big)
IOJ-1885938	Sorting by an alphabetic column does not work after 3 pages.
IOJ-1871748	Custom property values are lost when AssetType is changed via a business adapter
IOJ-1851934	Status filter cannot be removed from the "Rule Execution Details" page
IOJ-1715775	In IE11, some strings in a drop-down box are longer than the width of the drop-down box
IOJ-1818825	Timeout occurring on GetAppV5UserAccess function (SMS installer evidence adapter)
IOJ-1892657	Null reference exception on Citrix 6.5 when no data is gathered.

## Known Issues

A list of known issues for the FlexNet Manager Suite 2018 R2 release is available from the Flexera support site at the time of release. Please refer to Knowledge Base article [Known Issues for FlexNet Manager Suite 2018 R2](#) for details.

## Documentation

Documentation for FlexNet Manager Suite 2018 R2 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 PDF documents	English German — for FlexNet Manager for SAP Applications user and installation guides.

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

## More Information

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

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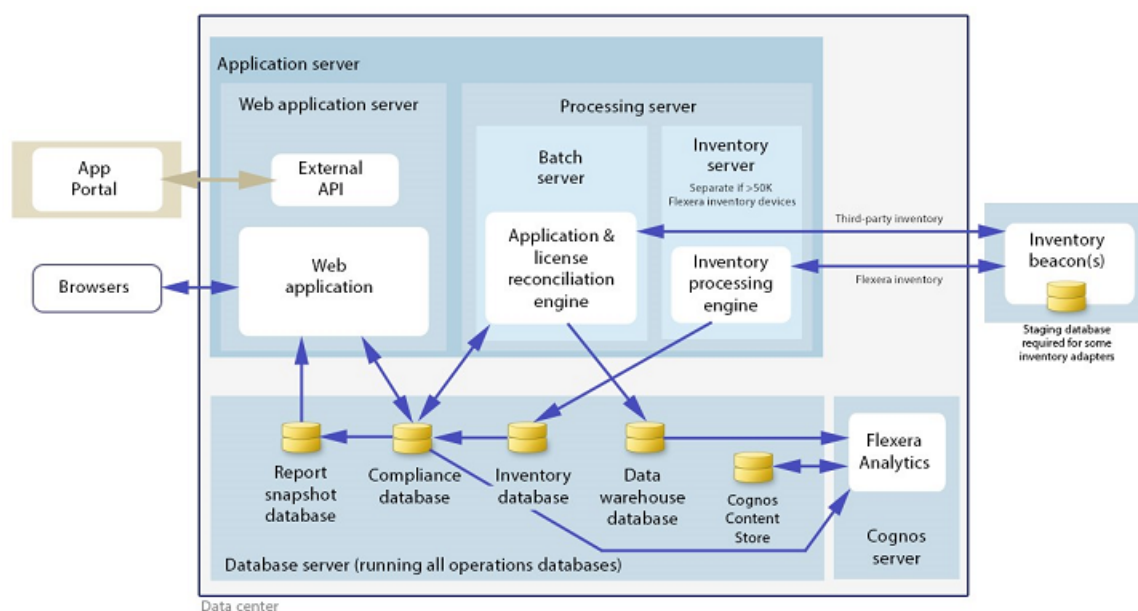
## 5

# 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:

**Figure 1:** Structure of a typical implementation



See the *Installing FlexNet Manager Suite 2018 R2 On-Premises* guide for recommendations on how many servers are appropriate for your implementation.

Please consult the *FNM-SAP Sizing Guidelines 2018 R2* guide, available from the *Installation Documentation for FlexNet Manager Suite 2018 R2* download file, for recommendations on sizing an implementation that uses only FlexNet Manager for SAP Applications functionality.

# Cloud

These connection details are relevant only if you are using the Software as a Service (SaaS, or cloud) edition of FlexNet Manager Suite.

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
Required IP ranges for Cloud customers who are not using DNS hostname	<div> US domain:  Production — 64.14.29.0/24  Disaster recovery — 64.27.162.0/24  EU domain:  Production — 62.209.49.0/24  Disaster recovery — 162.244.221.0/24 </div> <div> 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. </div>

## Hardware Requirements

### Application Server

Category	Requirement
Processors	4 cores, with up to 8 cores if more than 100 operators
Memory	8 GB
System drive	60 GB This includes an allowance of 8GB for the DataImport folder used for ARL, PURLs, SKU library, and EOSL 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



Category		Requirement
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)
	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
	<b>Total</b>	60 GB + 80 GB per 10,000 devices
	<b>Annual Growth Rate</b>	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	4 GB minimum, 8 GB or higher recommended
Minimum free disk space	1 GB per 10,000 devices

*FlexNet inventory agent*

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

## Network Requirements

Category	Requirement
Internet Protocol version	<p>IPv4, IPv6 and dual-stack</p> <p>Remote execution (such as remote discovery and inventory collection) requires IPv4.</p> <p>Communication between FlexNet Manager Suite Cloud and the top-level inventory beacon server(s) requires IPv4.</p> <p>Microsoft CAL device license calculations require IPv4 for CAL evidence collection and computer inventory.</p>
Ports	<p>Minimally, 80 (for HTTP) or 443 (for HTTPS) to access the central application server(s).</p> <p> <b>Note:</b> Other optional inventory sources may require additional ports. For further details, refer to the topic <i>Ports and URLs for inventory beacons</i> in the online help.</p>

## Compatibility with Other Products

This section describes the compatibility of FlexNet Manager Suite 2018 R2 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 R2 application server.


Component	Version that can be installed on the same server as FlexNet Manager Suite 2018 R2
FlexNet inventory agent	2018 R2
FlexNet Beacon	2018 R2
Flexera Analytics	2018 R2

## 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	Version that can be imported from
App Portal	2013 R2-2017 R2
BDNA Normalize (Data Platform)	5
BMC Atrium CMDB	8.1–18.05 together with Atrium Integrator version 8.1–18.05
	 <b>Note:</b> Only available for FlexNet Manager Suite On-Premises
BMC BladeLogic Client Automation (Marimba)	8.2
BMC Discovery (ADDM)	9.0, 10.0-10.2, 11.0-11.3
BMC Remedy ITSM Applications	7.6.04 SP4 through 9.1
	 <b>Note:</b> Only available for FlexNet Manager Suite On-Premises
Citrix XenApp EdgeSight	5.4, 7.6, 7.14.-7.16 (requires a Platinum license), 7.17, 7.18
Citrix XenApp Server	6.0, 6.5, 7.5-7.9, 7.11-7.18
Citrix XenDesktop	5.6, 6.0, 6.5, 7.5, 7.6, 7.8, 7.9, 7.11-7.18
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, 11
IBM BigFix Platform (previously Tivoli Endpoint Manager) on Microsoft SQL Server	8.2, 9.5
	 <b>Tip:</b> Do not confuse the individual IBM BigFix products. IBM BigFix Platform (often referred to as simply "BigFix") and IBM BigFix Inventory are quite distinct. You may import inventory from IBM BigFix Platform if this is your only IBM BigFix product. However, if you also have IBM BigFix Inventory, you normally need import inventory only from IBM BigFix Inventory (see below).


Product/Component	Version that can be imported from
IBM License Metric Tool (ILMT) <i>or</i> IBM BigFix Inventory on IBM DB2	<ul style="list-style-type: none"> <li>IBM BigFix Inventory was previously known as IBM Software Usage Analysis (SUA), and SUA is supported (on IBM DB2) for versions 9.0, 9.1.</li> <li>Rebranded from version 9.2.1, IBM BigFix Inventory on IBM DB2 is supported for versions 9.2.3-9.2.12</li> <li>ILMT on IBM DB2 is supported for versions 9.0, 9.1, 9.2.3-9.2.12.</li> </ul>
IBM License Metric Tool (ILMT) <i>or</i> IBM BigFix Inventory on Microsoft SQL Server	<ul style="list-style-type: none"> <li>IBM BigFix Inventory on Microsoft SQL Server: 9.2.3-9.2.8.</li> <li>ILMT on Microsoft SQL Server: 9.0, 9.1, 9.2.3-9.2.8.</li> </ul>
IBM Passport Advantage	as of November 2014
Microsoft App-V Integration Server	4.6, 5.0, 5.1
Microsoft Exchange ActiveSync	2010
Microsoft Hyper-V	<p>Running on:</p> <ul style="list-style-type: none"> <li>Windows Server 2016</li> <li>Windows Server 2012 R2</li> <li>Windows Server 2012</li> <li>Windows Server 2008 R2 x64 Server Core</li> <li>Windows Server 2008 R2 x64</li> <li>Windows Server 2008 x64 Server Core</li> <li>Windows Server 2008 x64.</li> </ul>
Microsoft SCCM (previously SMS)	2007, 2012, 2012 R2, 1511, 1602, 1606, 1610, 1702, 1706, 1710, 1802, 1806
Oracle Database	<p>8i, 9i, 10g, 11g, 11g Release 2, 12c</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>8i — requires a direct inventory beacon connection</li> <li>9i — requires a named account on Windows or a direct inventory beacon connection</li> <li>12c — the Oracle Multitenant option is not supported using a local agent.</li> </ul>


Product/Component	Version that can be imported from
Oracle Enterprise Manager	12.1-13.2
Oracle VM Server for x86	3.2-3.4.3
ServiceNow	<ul style="list-style-type: none"> <li>• Jakarta</li> <li>• Kingston</li> <li>• London.</li> </ul>
Symantec IT Management Suite (Altiris)	6.5, 7.1, 7.5
VMware vSphere/vCenter/ESXi	5.0-6.7
	 <b>Note:</b> Remote inventory is not possible on the free license versions of ESXi.
Workflow Manager	2014-2016

 **Note:** Further detail is available from the *Gathering FlexNet Inventory* guide, listed in the opening page of the online help.

## 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 R2.

Component	Compatible versions
FlexNet inventory agent (Windows)	8.5-9.2, 2014-2018 R2
FlexNet inventory agent (Linux)	 <b>Note:</b> Earlier versions are compatible in that they receive default policy and collect inventory on schedule. They cannot support more recent agent functionality, such as: <ul style="list-style-type: none"> <li>• Internet Protocol version 6 (IPv6)</li> <li>• Control of usage tracking through UI settings (rather than .ini files and registry controls), from 2014 (R1)</li> <li>• Settings targeted by IP addresses, from 2014 (R1)</li> <li>• CAL inventory, from 2016 R1.</li> </ul>
FlexNet inventory agent (Solaris)	
FlexNet inventory agent (Mac OS X)	
FlexNet inventory agent (AIX)	
FlexNet inventory agent (HP-UX)	
Citrix XenApp server agent	2014 R3-2018 R2

Component	Compatible versions
FlexNet Beacon	2017 R2-2018 R2
	<hr/>  <b>Tip:</b> Older inventory beacons continue to function with this release, but Flexera strongly recommends that you update to at least the range shown. <ul style="list-style-type: none"> <li>• Citrix XenApp inventory requires FlexNet Beacon 2014 R2 or later.</li> <li>• AWS EC2 connector requires FlexNet Beacon 2018 R2 (13.1.x) or later.</li> </ul> <hr/>

## Prerequisite Software

The table below describes the supported operating systems and software prerequisites of FlexNet Manager Suite 2018 R2 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"> <li>Windows Server 2016</li> <li>Windows Server 2012 R2</li> <li>Windows Server 2012</li> <li>Windows Server 2008 R2 x64 SP1-SP2.</li> </ul>	<p>The following three prerequisites apply to <i>each</i> server in a multi-server implementation:</p> <ul style="list-style-type: none"> <li>Microsoft .NET Framework 4.5-4.7.2 (registration of ASP.NET is documented in <i>Configure .NET and IIS</i>, in either the <i>Installation</i> or <i>Upgrading</i> PDF files)</li> <li>Microsoft Internet Information Services 7.0-10.0</li> <li>Microsoft Message Queuing (MSMQ).</li> </ul> <p>The following additional prerequisites apply <i>only</i> when the batch server components are installed.</p> <hr/> <p> <b>Important:</b> <i>There must be one and only one batch server in your environment. The batch server may be installed on its own server; or it may be co-located on either your web application server or your inventory server; or all components may be installed on a single application server. Wherever the batch server is installed, the following additional prerequisites apply.</i></p> <ul style="list-style-type: none"> <li>Microsoft Access Database Engine (32-bit)</li> <li>SQL Server features: Client Tools Connectivity, Management Tools.</li> </ul>




Component	Operating System	Prerequisite Software
Database Server (including Cognos Database Server)	<ul style="list-style-type: none"> <li>Windows Server 2016</li> <li>Windows Server 2012 R2</li> <li>Windows Server 2012</li> <li>Windows Server 2008 R2 x64 SP1.</li> </ul>	<ul style="list-style-type: none"> <li>SQL Server 2016 SP1 *</li> <li>SQL Server 2014</li> <li>SQL Server 2012</li> <li>SQL Server 2008 R2</li> <li>SQL Server Client Tools, of the same version.</li> </ul>

**Note:**

- *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) 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   <b>Note:</b> Flexera Analytics Server is not supported in <b>multi-tenant</b> installations.	<ul style="list-style-type: none"> <li>Windows Server 2016</li> <li>Windows Server 2012 R2</li> <li>Windows Server 2012.</li> </ul>	<ul style="list-style-type: none"> <li>.NET Framework 4.5-4.7.2 (registration of ASP.NET is documented in <i>Configure .NET and IIS</i>, in either the <i>Installation</i> or <i>Upgrading</i> PDF files)</li> </ul>  <b>Important:</b> When Flexera Analytics is installed on a server other than the database server running the content store database, Microsoft SQL Server Native Client 2012 must be installed on the server hosting Flexera Analytics (this 2012 version of the Native Client interoperates successfully when the remote database is SQL Server 2016 SP1 with the correct compatibility mode set, as noted above).
Admin Module Transport for FlexNet Manager for SAP Applications	<ul style="list-style-type: none"> <li>SAP Basis release between 7.0 and 7.5.</li> </ul>	<ul style="list-style-type: none"> <li>The SAP GUI matching the SAP release must be installed.</li> </ul>
Satellite Transport for FlexNet Manager for SAP Applications	<ul style="list-style-type: none"> <li>SAP Basis release between 4.6C and 7.5.</li> </ul>	No prerequisites.
Web Browser	<ul style="list-style-type: none"> <li>Microsoft Internet Explorer 10-11</li> <li>Microsoft Edge for Windows</li> <li>Google Chrome 64-68</li> <li>Mozilla Firefox 57-61</li> <li>Apple Safari 9-11.</li> </ul> <p>Some Flexera Analytics menu options are not available in the Chrome browser. For further information refer to this <a href="#">IBM Knowledge Center article</a>.</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"> <li>Windows Server 2003 SP1 and SP2, 2008 R2 x64, 2012, 2012 R2, 2012 R2 SP1, 2016</li> <li>Windows Server Core 2008, 2008 R2 x64, 2012, 2012 R2, 2016</li> <li>Windows Vista x64, 7 x64, 8 x64, 10 x64</li> <li>Windows Vista, 7, 8, 10.</li> <li>AIX 7.1 LPARs, 7.2</li> <li>Amazon Linux 2</li> <li>CentOS 6–7.5 (x86, 32-bit and 64-bit)</li> <li>Debian Linux 7–9.5 (x86, 32-bit and 64-bit)</li> </ul> <div>  <p><b>Note:</b> For Debian Linux 9.4 and 9.5 (both 32-bit and 64-bit), minimal installations of the OS core omit the <code>ifconfig</code> command. This prevents collection of the IP address and MAC address in inventory. The root user can use the following command to restore this functionality:</p> <pre>apt-get install net-tools -y</pre> </div> <ul style="list-style-type: none"> <li>Fedora Linux 25, 26 (x86, 32-bit and 64-bit); 28 (x86 64-bit only)</li> <li>HP-UX 11i v3, vPars/nPars</li> <li>Mac OS X 10.6–10.10; 10.11–10.14 (Gatekeeper needs to be disabled)</li> <li>OpenSuSE Leap 42.2, 42.3 (x86, 32-bit and 64-bit); 15 (x86 64-bit only)</li> <li>Oracle Linux 4.5–7.3 (x86, 32-bit and 64-bit); 7.4, 7.5 (x86 64-bit only)</li> <li>Red Hat Enterprise Linux 5–7.3 (x86, 32-bit and 64-bit); 7.4, 7.5 (x86 64-bit only)</li> </ul>	No prerequisites.

Component	Operating System	Prerequisite Software
	<ul style="list-style-type: none"><li>• Red Hat Linux 8–9 (x86 only)</li><li>• Solaris 8–11 (SPARC), Zones for versions 10–11</li><li>• Solaris 9–11 (x86), Zones for versions 10–11</li><li>• SuSE Linux Enterprise Server 12.3 (x86 64-bit only); 11 and 12 (x86, 32-bit and 64-bit)</li><li>• Ubuntu 12–17.04 (x86, 32-bit and 64-bit); 18.04-18.10 (x86 64-bit only).</li></ul>	

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Component	Operating System	Prerequisite Software
FlexNet Beacon	<ul style="list-style-type: none"> <li>Windows Server 2016, 2012 R2, 2012, 2008 R2 x64</li> <li>Windows 10 x64, 8 x64, 7 x64</li> <li>Window 10, 8, 7.</li> </ul>	<ul style="list-style-type: none"> <li>.NET Framework versions 4.5.2–4.7.2.</li> <li>Any supported web browser.</li> <li>For Oracle Database inventory, Oracle OLE DB Provider (32-bit), version 10.2.0.3 or later.</li> <li>For connections to import data from DB2 databases, IBM OLE DB Provider (32-bit or 64-bit). Whether the driver is 32-bit or 64-bit is determined by the operating system, so that for 64-bit operating systems the 64-bit drivers are required.</li> <li>PowerShell 3.0+.</li> <li>For connection to AWS, you also require AWS Tools for PowerShell version 3.3.283.0 or later.</li> <li>For connection to Microsoft Office 365 Online Service, the following are also required: <ul style="list-style-type: none"> <li>64-bit server operating system</li> <li>PowerShell 5.1 or later</li> <li><a href="#">Microsoft Online Services Sign-in Assistant</a> (64-bit version)</li> <li><a href="#">Microsoft Azure Active Directory Module for Windows PowerShell</a></li> <li><a href="#">Skype for Business Online PowerShell Module</a></li> <li>Microsoft Visual C++ 2017 Redistributable (note that this is installed automatically by the above PowerShell modules).</li> </ul> </li> </ul>

## 6

# 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) (naturally only 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.

This strong recommendation follows from the ongoing security improvements touching all these components that were released from version 2017 R1 and later versions.



**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, for the same reasons.

There are four documents for On-Premises customers that provide instructions for installing and upgrading to the current release, FlexNet Manager Suite 2018 R2.

- *Installing FlexNet Manager Suite 2018 R2 On-Premises*. This includes the option of installing Flexera Analytics 2018 R2.
- *Installing FlexNet Manager Suite 2018 R2 for a Managed Service*.
- *Upgrading FlexNet Manager Suite from 2014 Rx to 2018 R2 On-Premises*. This is designed for upgrades from FlexNet Manager Suite, version 2014 or later.
- *Migrating to FlexNet Manager Suite 2018 R2 On-Premises*. This covers migration from FlexNet Manager Platform 9.2 to FlexNet Manager Suite 2018 R2 On-Premises. 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 R2** 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.

## 7

# Documentation

Documentation for FlexNet Manager Suite 2018 R2 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 PDF documents	English
	German — for FlexNet Manager for SAP Applications user and installation guides.

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

## 8

# More Information

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

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