

# XIII

## ServiceNow Integration with FlexNet Manager Suite

Using the integration application for ServiceNow, you can exchange a limited set of data between FlexNet Manager Suite and ServiceNow to provide a consistent view of your hardware and software estate, and related contracts. FlexNet Manager Suite supports the following versions of the integration application:

- **Flexera Integration:** Version 5.x of the ServiceNow integration application, updated and renamed from the FlexNet Manager Suite for Enterprises 4.x application. The Flexera Integration app is now shared between FlexNet Manager Suite, Flexera Data Platform, and IT Visibility, and is available in the ServiceNow store.



**Note:** For any single instance of ServiceNow, only one source of Flexera data should be exporting data for consumption by ServiceNow. The Flexera Integration app does not support resolving overlapping data. With a view to the long-term, where you have a choice of all of the above, IT Visibility would be the common recommendation. However, notice that this restriction applies to Flexera tools that are exporting data. The (quite separate) ServiceNow inventory connector (see next section of this manual) does not export data to ServiceNow, being strictly an importer of inventory discovered by ServiceNow. Therefore it is perfectly acceptable to use the same Flexera Integration app on the one instance of ServiceNow to combine integration with (say) IT Visibility (or either of the other data exporters) with the ServiceNow inventory connector.

- **FlexNet Manager Suite for Enterprises:** Version 4.x of the integration application.

ServiceNow provides cloud-based IT Service Management, while FlexNet Manager Suite is focused on Software Asset Management. To help provide a unified view of your management data, there are two parts to the integration of these systems, each of which is available independently:

- Data on hardware assets, application installations, and contracts can be exported from FlexNet Manager Suite and imported into ServiceNow
- Data on assets and contracts can be exported from ServiceNow and imported into FlexNet Manager Suite.

This release of the ServiceNow integration application supports the following versions of ServiceNow:

- Kingston
- London
- Madrid

- New York
- Orlando.



**Note:** ServiceNow has *deprecated older versions of Transport Layer Security (TLS)*. Requires version 1.2.

This ServiceNow documentation is divided into the following chapters:

- [Key Concepts](#) — key concepts to help you understand how and what type of data is merged with the integration application, where to view merged data, insight into how source of truth settings structure data into an optimized view with no duplicate or missing records
- [Architecture, Components, and Prerequisites](#) — background information including requirements you need to know to get started with the integration application, as well as contextual information to help you understand the configuration and operation of the integration
- [Installation and Configuration](#) — common tasks to be completed for all implementations, procedures for setting up data flows from FlexNet Manager Suite to ServiceNow or from ServiceNow to FlexNet Manager Suite
- [Operational Details](#) — steps showing how the export of data from FlexNet Manager Suite works (to export hardware inventory, installed applications, and contract data), and steps showing how the export of data from ServiceNow works (to export asset and contract data)
- [Appendices](#) — integration property descriptions, a performance improvement tip to create additional indexes on your ServiceNow instance, procedure to remove a previously-installed legacy integration application, and more.

## 1

# Key Concepts

Before using integration application for ServiceNow, it is helpful to understand some key concepts of the integration that are described in the following sections:

- [Data Types that Can Be Merged](#) — data types that can be exported from FlexNet Manager Suite and from ServiceNow
- [How Data Is Merged](#) — introduces the role that transform maps play in merging data between FlexNet Manager Suite and ServiceNow
- [Source of Truth](#) — how source of truth settings structure data into an optimized view with no duplicate or missing records
- [Where to View Merged Data](#) — where to go in FlexNet Manager Suite and ServiceNow in order to view data that has been merged by the integration application
- [ServiceNow Computer and Application Records](#) — table storage options in ServiceNow (Software Asset Management (SAM) Foundation plugin tables, Configuration Management Database (CMDB) tables, or both) and a description of how the integration application creates or updates computer records in ServiceNow and sets the CI classes.

## Data Types that Can Be Merged

The following table shows the data types that can be exported from FlexNet Manager Suite and data types that can be exported from ServiceNow.

When exporting from:	The following data types can be exported:
FlexNet Manager Suite	Hardware inventory, installed applications, and contracts.
ServiceNow	Assets and contracts



**Note:** When exporting from FlexNet Manager Suite, the three data types each correspond to a check box in the **ServiceNow export settings** section **Integrations** tab on the **System Settings** page. You can export any or all of these data types to ServiceNow. When exporting from ServiceNow, assets and contracts can be included in the export, as configured in scheduled jobs that can be accessed from either of the following ServiceNow menus: for integration application 5.x, see **Flexera Integration > Export Configuration > Scheduled Jobs**, or for integration application 4.x,

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see [FlexNet Manager Suite > Scheduled Jobs](#).

## How Data Is Merged

When data is merged between FlexNet Manager Suite and ServiceNow, transform maps are used to map the data. For more information, refer to [Transform Maps for ServiceNow Integration](#).

When data is merged between ServiceNow and FlexNet Manager Suite, business adapters are used to map the data. For more information, refer to [Business Adapter Mappings](#).

For both scenarios, an integration user needs to be created in ServiceNow so that both systems can communicate. For more information, refer to [Creating a ServiceNow Integration User](#).

## Source of Truth

When exporting from FlexNet Manager Suite for import into ServiceNow, a source of truth needs to be defined between systems in order to address any differences encountered during the merge. A set of integration properties are provided in ServiceNow in integration application 5.x, see [Flexera Integration > Integration Properties](#), or in integration app 4.x, see [FlexNet Manager Suite > Integration Properties](#). The integration properties let you specify whether to accept FlexNet Manager Suite as the source of truth for various data types. Choosing **No** for any option toggles that setting to ServiceNow as the source of truth. For example, when merging inventory, if a record is not found with given criterion, a new record will be created if FlexNet Manager Suite is source of truth for **Adding Inventories**. For more information about source of truth integration properties, refer to [Integration Properties](#).



**Note:** For records of hardware inventory and installed applications, FlexNet Manager Suite is considered the authoritative source of truth.

When exporting assets and contracts from ServiceNow for import into FlexNet Manager Suite, scheduled jobs need to be configured. For more information about scheduled jobs, refer to [Setting Up Data Flows from ServiceNow to FlexNet Manager Suite](#). Then, the business adapters are used to import data into FlexNet Manager Suite. Assets and contracts are both set as the source of truth by default; however, you can edit the business adapters to change these settings. For more information, refer to [Configuring FlexNet Beacon for Import](#).



**Note:** For assets and contracts, ServiceNow is considered the authoritative source of truth.

## Where to View Merged Data

The following table shows where to go in FlexNet Manager Suite and ServiceNow to view data that is merged by the integration application. This not only helps you understand the integration but also helps you understand where to go in both systems in order to view and validate results.

Data type	FlexNet Manager Suite menu location	ServiceNow menu location
Hardware inventory	<b>Discovery &amp; Inventory &gt; All Inventory</b>	Integration application 5.x: <b>Flexera Integration &gt; Imported Records &gt; Computers</b> and in integration app 4.x: <b>FlexNet Manager Suite &gt; Imported Records &gt; Computers</b>
Installed applications	<b>Applications</b> tab of inventory device properties.	<b>Software Installations</b> tab (SAM) or <b>Software Installed</b> tab (CMDB) of a computer record
Contracts	<b>Procurement &gt; All Contracts</b>	Integration application 5.x: <b>Flexera Integration &gt; Imported Records &gt; Contracts</b> and in integration app 4.x: <b>FlexNet Manager Suite &gt; Imported Records &gt; Contracts</b>

You may also want to compare inventory device properties.

Property	FlexNet Manager Suite	ServiceNow
General properties of inventory device such as: device type (Computer, Virtual machine), Manufacturer, Serial number, etc.	<b>Inventory device properties</b> (accessed by selecting a record from <b>All Inventory</b> )	<b>Computer</b> record (accessed by selecting a record from one of the following menus. In integration application 5.x: <b>Flexera Integration &gt; Imported Records &gt; Computers</b> and in integration app 4.x: <b>FlexNet Manager Suite &gt; Imported Records &gt; Computers</b> )

## ServiceNow Computer and Application Records

### Installed Applications

When exporting installed application data from FlexNet Manager Suite for import into ServiceNow, you have the option to select which tables store the data. Prior to integration application v4.0, installed application records were stored into Software Asset Management (SAM) Foundation plugin tables. Integration application v4.0 and later gives you 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. For more information, refer to [Integration Properties](#).

### Hardware Inventory

When hardware inventory records are exported from FlexNet Manager Suite to ServiceNow, the integration creates or updates computer records in ServiceNow. The integration also sets the correct CI class on these records based on the **Inventory Device Type** and **Operating System**. This enables viewing these records in the respective views within ServiceNow. The following table shows the logic of how the CI class of computer records are classified in ServiceNow and also shows where to view the resulting records in ServiceNow.

**Table 11:** Hardware inventory exported from FlexNet Manager Suite and imported to ServiceNow

Inventory device type of Inventory record in FlexNet Manager Suite	Operating system of Inventory record in FlexNet Manager Suite	CI class of Computer record in ServiceNow	View in ServiceNow
VM Host	contains "Microsoft" or "Windows"	Hyper-V server	<b>Configuration &gt; Hyper-V &gt; Hyper-V Servers</b>
	contains "VMware"	ESX server	<b>Configuration &gt; VMware &gt; ESX Servers</b>
	<i>anything else</i>	Visualization server	no direct link, but you can enter the following into the ServiceNow Filter navigator to access view: <code>cmdb_ci_virtualization_server.list</code>
Computer Virtual Machine Mobile Device	contains "AIX"	AIX Server	<b>Configuration &gt; Servers &gt; AIX</b>
	contains "Solaris" or "Sun OS"	Solaris Server	<b>Configuration &gt; Servers &gt; Solaris</b>
	contains "OS X"	OS X	<b>Configuration &gt; Servers &gt; OS X</b>
	contains "HP-UX"	HPUX Server	<b>Configuration &gt; Servers &gt; HPUX</b>
	contains "Unix"	Unix Server	<b>Configuration &gt; Servers &gt; Unix</b>
	contains "Linux"	Linux Server	<b>Configuration &gt; Servers &gt; Linux</b>
	contains "Microsoft" or "Windows" and contains "Server"	Windows Server	<b>Configuration &gt; Servers &gt; Windows Servers</b>
<i>anything else</i>	Computer	<b>Configuration &gt; Base Items &gt; Computer</b>	

For all the virtual machine records in an export, the import creates or updates Virtual Machine Instance records in ServiceNow and sets the correct CI class on these records based on the virtual machine type. The following table shows the logic of how the CI class of virtual machine records are classified in ServiceNow and also shows where to view the resulting records in ServiceNow.

**Table 12:** Virtual machines exported from FlexNet Manager Suite and imported to ServiceNow

VM Type of Inventory record in FlexNet Manager Suite	CI class of Virtual Machine Instance record in ServiceNow	View in ServiceNow
AWS EC2	EC2 Virtual Machine Instance	no direct link, but you can enter the following into the ServiceNow Filter navigator to access view: <code>cmdb_ci_ec2_instance.list</code>
Hyper-V	Hyper-V Virtual Machine Instance	<b>Configuration &gt; Hyper-V &gt; Virtual Machine Instances</b>

VM Type of Inventory record in FlexNet Manager Suite	CI class of Virtual Machine Instance record in ServiceNow	View in ServiceNow
VMware	VMware Virtual Machine Instance	<b>Configuration &gt; VMware &gt; Virtual Machine Instances</b>
Zone	Solaris Virtual Machine Instance	no direct link, but you can enter the following into the ServiceNow Filter navigator to access view: <code>cmdb_ci_solaris_instance.list</code>
LPAR		
nPar		
Oracle VM		
SRP	Virtual Machine Instance	In integration application 5.x: <b>Flexera Integration &gt; Imported Records &gt; Virtual Machines</b> and in integration app 4.x: <b>FlexNet Manager Suite &gt; Imported Records &gt; Virtual Machines</b>
vPar		
WPAR		
Unknown		



**Tip:** Integration properties allow you to choose whether to use FlexNet Manager Suite or ServiceNow as the source of truth to create and update records. Another property allows you to choose whether FlexNet Manager Suite or ServiceNow should be used as the source of truth to update CI classes. See *Adding Inventories, Updating inventories, and Updating inventory class name (sys\_class\_name)* in [Integration Properties](#).

## 2

# Architecture, Components, and Prerequisites

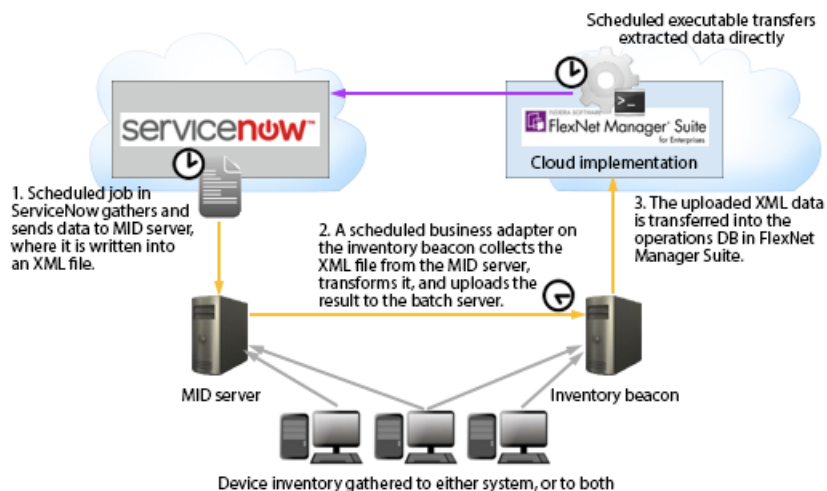
This chapter provides information you need to get started with the integration application.

The information is divided into the following sections:

- [Architecture](#) — architectural diagrams to help you understand both configuration and operation of the integration between ServiceNow and FlexNet Manager Suite
- [Prerequisites](#) — requirements for integrating FlexNet Manager Suite and ServiceNow
- [Download Adapter Tools Archive](#) — how to download the Adapter Tools archive that includes content needed for many adapters

## Architecture

This big-picture overview provides context for understanding both configuration and operation of the integration between ServiceNow and FlexNet Manager Suite.





The following two processes (illustrated in the diagram) operate completely independently:

- The export of computer, application, and contract data from FlexNet Manager Suite into ServiceNow (purple arrow). For details, see [Process for Exports from FlexNet Manager Suite to ServiceNow](#).
- The export of computer and contract data from ServiceNow for import into FlexNet Manager Suite (gold arrows). For details, see [Process for Exports from ServiceNow to FlexNet Manager Suite](#).

## Prerequisites

The following are requirements for integrating FlexNet Manager Suite release 2020 R2.5 and ServiceNow. At a high level, you need:

- A functional implementation of FlexNet Manager Suite
- An operational ServiceNow instance
- Installation of the ServiceNow integration application
- A ServiceNow integration account user with `x_fls_flexera_fnms.admin` role assigned

The following provides further details of these requirements:

- You need a functional implementation of FlexNet Manager Suite.



**Important:** To take full advantage of the features included in the v4.0 and later integration applications, it is recommended that you run FlexNet Manager Suite 2019 R1 or later. For more information about limitations with earlier releases of FlexNet Manager Suite, see the knowledge article [Feature Support for ServiceNow Integration](#), in the Flexera Customer Community.

- You must have a license issued by Flexera that permits use of the integration application. This license authorizes all communications in both directions through the integration application. To check, in the web interface navigate to the system menu (⚙️ ▼ in the top right corner) and click **FlexNet Manager Suite License**. Check under the **License details** for `ServiceNow integration enabled: Yes`. If this is not the case, request the license from your Flexera representative.
- You must have an operational inventory beacon that communicates successfully with the cloud-based application server for FlexNet Manager Suite.
- You must have an operational ServiceNow instance.
  - For data flows from ServiceNow to FlexNet Manager Suite, you need a MID server configured for your ServiceNow implementation.



**Tip:** If you prefer, your FlexNet Beacon and ServiceNow MID server can be implemented on the same physical computer (provided that there are common communications requirements — for example, you don't have a case where one requires a proxy server setting that the other cannot use).

- For data flows from FlexNet Manager Suite to ServiceNow: If your ServiceNow instance has the Software Asset Management (SAM) Foundation plugin installed, you can choose to direct installed application data to SAM tables, CMDB tables, or both. If your ServiceNow instance does not have the SAM Foundation plugin installed, you must

choose to direct Installed Application data to CMDB tables. For details on both, see [Configuring the Software Asset Management Foundation Plugin](#) and see the description of the **Use CMDB and/or SAM tables for installation** property in [Integration Properties](#).

- This release of the ServiceNow integration application supports the following versions of ServiceNow:
  - Kingston
  - London
  - Madrid
  - New York
  - Orlando.



**Note:** ServiceNow has deprecated older versions of Transport Layer Security (TLS). Requires version 1.2.

- If this is your first ever install of the FlexNet Manager Suite integration application for ServiceNow, you must install it from the ServiceNow Store (see [Installing the Flexera Integration Application from the ServiceNow Store](#)), and then any updates to the app are also done through the ServiceNow store. Alternatively, if you have previously installed an earlier version of the integration using an update set, refer to the knowledge article [Upgrading ServiceNow Integration Application Using an Update Set](#) in the Flexera Customer Community.
- For first time users, and if you will be exporting data from ServiceNow to FlexNet Manager Suite, two business adapters (`ServiceNowAssets.xml` and `ServiceNowContracts.xml`) must be used for assets and contracts. These can be found in the unzipped adapter tools archive (see [Download Adapter Tools Archive](#)). For more information, refer to [Configuring FlexNet Beacon for Import](#).

## Download Adapter Tools Archive

The Adapter Tools archive includes content for many adapters, and is updated on the Flexera website from time to time.

Start this procedure using a web browser on a computer that has good network accessibility from all the machines needing installations for your adapter.



**To download the adapter tools archive:**

1. Download the latest Adapter Tools for FlexNet Manager Suite `version.zip` archive from the Flexera Product and License Center:
  - a. Access <https://community.flexera.com/t5/FlexNet-Manager-Knowledge-Base/Adapter-Tools-for-FlexNet-Manager-Suite/ta-p/5114>.

- b. In that article, click `Adapter Tools for FlexNet Manager Suite - Cloud Edition`.

A new browser tab may appear temporarily, and the download of `Adapter Tools for FlexNet Manager Suite 2020 R2.5.zip` commences.

- c. In your browser dialog, choose to save the file, and if the browser allows it, direct the saved file to a

convenient working location (such as C:\temp on a central, accessible server).

If your browser saves the file to a default location (such as your Downloads folder), move or copy it to the appropriate working location when the download is finished.

2. Right-click the zip archive, and choose **Extract All...**

The folders are now available for the range of adapters in the Adapter Tools archive.

# 3

## Installation and Configuration

Because the system involves a number of different servers, there are several installation and configuration steps. These are described in full in the following topics.

The information is divided into the following sections:

- [Setting Up the Integration](#) — common tasks that must be completed for all implementations
- [Setting Up Data Flows from FlexNet Manager Suite to ServiceNow](#) — required if you want to export the FlexNet Manager Suite data on hardware assets, installed applications and contracts for use within ServiceNow
- [Setting Up Data Flows from ServiceNow to FlexNet Manager Suite](#) — required if you want to import assets and/or contracts data into FlexNet Manager Suite.

### Setting Up the Integration

Most of the groundwork on the FlexNet Manager Suite side has already been completed as part of product installation. Therefore the balance of the work that is common to both directions of data flow involves setting up ServiceNow.

- In ServiceNow terminology, you need to install an integration 'application' in ServiceNow (see [Installing the Flexera Integration Application from the ServiceNow Store](#)).
- There must also be a user account correctly configured in ServiceNow (see [Creating a ServiceNow Integration User](#)).

### Installing the Flexera Integration Application from the ServiceNow Store

The steps in this section provide steps for a *first time install* of the integration application for ServiceNow. If you have previously installed an earlier version of the integration using an update set, instead refer to the knowledge article [Upgrading ServiceNow Integration Application Using an Update Set](#) in the Flexera Community (login required).



**To install the integration application for ServiceNow from the ServiceNow store:**

1. Log into ServiceNow Store with ServiceNow HI credentials.

2. In the **Search** box, enter Flexera Integration and press Enter.

Application information appears in the search results.

3. From the search results, click **Flexera Integration**.

Information about the application displays.

4. In the right pane of the application window, view the **Compatibility** section to ensure that the integration application is compatible with the version of ServiceNow that you require. If the version of ServiceNow that you require is not listed, contact FlexNet Manager Suite Technical Support.

5. In the right pane of the application window, click the **Get** button.

A notice appears.

6. At the bottom of the notice, click **Continue**.

7. On the **Purchase of Flexera Integration** page, choose the **Make available on specific instances** radio button, and click the **Select** button.

A **Select Instances** dialog appears.

8. In the **Available Instances** pane, double-click the instance that you want the app to be available on and click **OK**.

9. Select the **I accept** check box (to accept terms of use and subscription terms and conditions) and click **Get**.

10. Log into the ServiceNow instance where you made the integration application available. (You selected this instance in *step 8*).

11. In the Filter navigator, enter System Applications and then under **System Applications**, click **Applications**.

The **Applications** list appears.

12. Click the **Downloads** tab.

The **Downloads** list appears.

13. Scroll to the **Flexera Integration** application, and click the **Install** button.

The application now appears in the ServiceNow menu, displayed in the left-hand navigation panel as **Flexera Integration**.

## Creating a ServiceNow Integration User

This simple process sets up the user account used for integration between Service Now and FlexNet Manager Suite, and assigns the user to the appropriate role. Complete this task while you are still logged into ServiceNow as an administrator.



**To create the user account in ServiceNow:**

1. In ServiceNow, go to **User Administration > Users**.
2. Click **New**, complete the properties for your new user, and click **Submit**.



**Tip:** Take note of the user ID and password, which you will need again later in the set-up processes.

3. Once the creation process finishes, click the hyperlinked **User ID** for this user, and scroll down to **Roles**.
4. Click **Edit**, and select `x_fls_flexera_fnms.admin` from the collection, and add to **Roles List**.
5. Click **Save**.
6. Close the user properties page.

## Setting Up Data Flows from FlexNet Manager Suite to ServiceNow

For records of installed applications and hardware inventory, FlexNet Manager Suite is considered the authoritative source of truth. Data on installed applications and hardware inventory, as well as contracts, can be exported from FlexNet Manager Suite to ServiceNow. The summary of the export process is:

1. On a weekly schedule (3am on Sunday mornings, application server time), an export utility extracts the appropriate data from FlexNet Manager Suite and transfers it to ServiceNow using API calls. This communication relies on *all* of the following details (configured as described in the following topics):
  - The URL of your ServiceNow instance
  - The user account registered for accessing ServiceNow
  - The communications token copied from ServiceNow and saved in FlexNet Manager Suite.
2. In ServiceNow, the FlexNet Manager Suite integration application processes the data received through the API calls, and schedules imports of that data using the ServiceNow Import Set.



**Tip:** The Transform Maps used during import to switch data from one product's formats to the other are also defined in the integration application.

If you wish to make use of this data flow, you need to complete the following processes:

- [Configuring ServiceNow for Import](#)
- [Configuring FlexNet Manager Suite for Export](#)

## Configuring ServiceNow for Import

Continue the following while still (or again) logged into ServiceNow with administrator privileges.



**To configure imports into ServiceNow:**

1. For service integration application v5.x, in the **Flexera Integration** group in the navigation bar, click **Generate Token**. For service integration application v4.x, in the **FlexNet Manager Suite for Enterprises** group in the navigation bar, click **Generate Token**.
2. From the account details you created earlier (see [Creating a ServiceNow Integration User](#)), insert the user ID in the **Username** field and supply the **Password**, and click **Generate OAuth Token**.

A long Refresh Token appears at the top of the page.

3. Copy this Refresh Token value, and transfer to the web interface of FlexNet Manager Suite.
4. When doing Installed Application data export, decide what tables in ServiceNow that you want this data to go in. To do this, in ServiceNow for integration application 5.x, navigate to **Flexera Integration > Integration Properties** (or for version 4.x, navigate to **FlexNet Manager Suite > Integration Properties**). Then in that page, from the **Decide whether to use CMDB or SAM tables** drop-down list and select one of the following options:
  - **Decide automatically** — Import to SAM tables. If no SAM tables exist, data is instead imported to CMDB tables.
  - **Use CMDB tables** — Import to CMDB tables.
  - **Use SAM tables** — Import to SAM tables. If there are no SAM tables, the import will fail.
  - **Use CMDB and SAM tables** — Import to CMDB tables **and** SAM tables. If SAM tables do not exist, the import will fail.
5. Change the account used for processing the import in ServiceNow. To do this:
  - a. For integration application 5.x, go to **Flexera Integration > Advanced > Scheduled Data Imports** (or for service integration application v4.x, go to **FlexNet Manager Suite > Advanced > Scheduled Data Imports**).  
The Scheduled Data Imports list appears.
  - b. Click **FNMS Import Schedule**.
 

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**Note:** *Flexera Schedule Import is currently only used by Flexera Data Platform. FlexNet Manager Suite users should select **FNMS Import Schedule**.*
  - c. Change the **Run as** user to the integration user. (This is the user ID that you created earlier (see [Creating a ServiceNow Integration User](#)).
  - d. Click **Update**.

## Configuring FlexNet Manager Suite for Export

You need to complete this configuration once to commence operations. Repeat if your ServiceNow details change at any time in the future. You may also use this same page to trigger an immediate export from FlexNet Manager Suite to ServiceNow.



### To configure export from FlexNet Manager Suite:

1. Ensure that you are (still) logged into FlexNet Manager Suite with an account that is a member of the Administrator role, and that this account has the **Configure** access right.
2. In the web interface, navigate to the system menu (⚙️ ▼ in the top right corner) > **System Settings**, select the **Integrations** tab, and expand the **ServiceNow** accordion.



**Tip:** *The **Integrations** tab is only visible when your account has the access rights described above.*

3. In **Instance URL**, enter the protocol and path to your ServiceNow website (for example, `https://YOUR-`

`INSTANCE.service-now.com`).

4. In **Username**, enter the account you use to access ServiceNow. This must exactly match the **User ID** value shown in the ServiceNow interface (see [Creating a ServiceNow Integration User](#)).
5. Paste the **Token** value from ServiceNow into the **Token** field on this page (see [Configuring ServiceNow for Import](#)).



**Tip:** The **Username** is mandatory for FlexNet Manager Suite to commence the export process, but it is not transferred back to ServiceNow, as the **Token** value alone is now sufficient for authentication.



**Note:** In future, if you wish to temporarily disable these data exports from FlexNet Manager Suite, you can remove any one or more values from **Instance URL**, **Username**, or **Token**.

6. If necessary, change the default selection of data types to export to ServiceNow. It is best practice to export all available data types.



**Warning:** Hardware inventory details are critical to the ServiceNow data set. Contracts and installed applications both have dependencies on assets in that system. If you clear the **Hardware inventory** check box, you may produce gaps in the contract and software records imported into ServiceNow.

7. Click **Save**.

When details are complete, the export from FlexNet Manager Suite to ServiceNow is triggered weekly at 3am on Sunday mornings. If you need to trigger an additional export (for example, when commencing integrated operations), continue with the rest of this process.



**Tip:** While the first export of any given data type is always a full export of all active records, subsequent data transfers from FlexNet Manager Suite to ServiceNow are differential (that is, only data that is new or changed since the last successful export of the same type is included). If you wish to transfer all available active data (rather than the differential data set), select the **Perform full export** check box before continuing.

8. Click **Export** to trigger an immediate export using the settings saved in the fields displayed above.

The **Export** button triggers a process that:

- Extracts the required data of the first data type from your operations database (the normal order when all are selected is hardware inventory, contracts, installed applications)
- Segments the data for easier transmission across the Internet, minimizing time-out risks with ServiceNow
- Reassembles the data into staging tables in ServiceNow
- Repeats the process for the next selected data type.

Separate transforms on your ServiceNow instance then map each data type from the staging tables to your operational ServiceNow tables.

To verify progress of a test run:

1. In the ServiceNow navigation bar, for integration application 5.x, go to **Flexera Integration > Import History > Import Transactions** (or for service integration application v4.x, go **FlexNet Manager Suite > Integration History > Import Transactions**). Each of these transactions represents a data chunk\* or segment transferred to ServiceNow. The segmentation is necessary because of the large number of records that may need to be



transferred. When the data is received by ServiceNow, the integration application separately schedules each transaction for import into the operational database tables in ServiceNow. As each transaction is completely imported, its **State** column value is set to *Succeeded*.

2. Similarly, access **FlexNet Manager Suite > Integration History > Import Runs**. Each data type exported from FlexNet Manager Suite creates a separate entry here for import into ServiceNow. For each data type, when all its individual transactions have succeeded, the **State** value on the overall Import Run is also set to *Succeeded*.
3. Finally, when all the transferred data types have been successfully imported, a status report is sent to FlexNet Manager Suite. On the **System Settings** page in the **Integrations** tab, the status is displayed under **Last completed export**.

\* The configuration for data transfers from FlexNet Manager Suite to ServiceNow uses these values:

- The number of database records included in each transferred segment: 4000
- The number of retries if ServiceNow returns a connection failure: 10
- The length of time to wait for ServiceNow to respond before timing out: 30 seconds
- The maximum number of records of each data type to be included in the transfer, by type:
  - Hardware inventory: 10,000,000
  - Contracts: 500,000
  - Installed applications: 10,000,000.

## Setting Up Data Flows from ServiceNow to FlexNet Manager Suite

Details of hardware assets and/or contracts, for which ServiceNow is considered the authoritative source of truth, can be imported into FlexNet Manager Suite from ServiceNow. In summary, the process is:

1. Each data collection is triggered by a scheduled job in ServiceNow that invokes a script.
2. The script uses ServiceNow database views to gather the required data and transfers it, in chunks, to the appropriate MID server.
3. The MID server writes the chunks into an XML file.
4. A separate schedule configured on the inventory beacon for FlexNet Manager Suite triggers an import through a business adapter, collecting the XML file, transforming it, and uploading it to the central application server.
5. The normal import processes on the application server imports the data (transformed as appropriate) into the operations databases for FlexNet Manager Suite.

If you wish to make use of this data flow, you need to complete the following processes:

- [Setting Up a MID Server](#)
- [Configuring ServiceNow for Export](#)
- [Configuring FlexNet Beacon for Import](#).

No configuration of the central application server is needed, since this part of the integration leverages all standard operating processes.

## Setting Up a MID Server

You may already have an operational MID server (accessible from your chosen inventory beacon) that you wish to use for data transfers from ServiceNow to FlexNet Manager Suite. If so, and the MID server is validated in ServiceNow, you may skip this topic.

On the other hand, you may prefer to set up a specific MID server especially for this integration. If so, follow these steps while you are still logged into ServiceNow with administrator privileges.



**To set up a MID server that stages data from ServiceNow:**

1. In the navigation bar, expand **MID Server** and click **Downloads**.
2. Click the link appropriate for your platform.
3. In the navigation bar, in the **MID Server** group, click **Installation Instructions**, and click the link appropriate to your version of ServiceNow.

The documentation opens in a new tab.

4. Step through those instructions to complete installation of your MID server.

Take particular note of the exact name you give this MID server, as you will need it again soon. (It is also available through **MID Server > Servers**.)

5. Be sure to validate your MID server (see the **Validate the MID Server** link on the MID Server installation page).

## Configuring ServiceNow for Export

Now that you have a MID server installed, two further configuration points for ServiceNow remain:

- Identifying the MID server as the one to use for the exports to FlexNet Manager Suite
- Scheduling the exports from ServiceNow.

Continue the following while still logged into ServiceNow with administrator privileges.



**To configure ServiceNow for export:**

1. In ServiceNow, go to **Flexera Integration > Integration Properties**.
2. In ServiceNow, in integration application 5.x, go to **Flexera Integration > Integration Properties**, or in integration app 4.x, see **FlexNet Manager Suite > Integration Properties**.
3. In the list of **Integration Properties**, scroll down to the **MID server name** field (in the **ServiceNow → FNMS** section), and enter the full name of the MID server.
4. Optionally, in the **Export file path** field, enter an alternative file path location to store the XML file (instead of the default MID server location). Because the FlexNet Beacon reads this file using the business adapter, FlexNet Beacon needs access to this file location.

5. Scroll down (if necessary), and click **Save**.
6. In ServiceNow, in integration application 5.x, go to **Flexera Integration > Export Configuration > Scheduled Jobs**, or in integration app 4.x, go to **FlexNet Manager Suite > Scheduled Jobs**.

The list of standard jobs to export data from ServiceNow is displayed, including:

- Export Assets from ServiceNow
- Export Contracts from ServiceNow.

Each of these jobs needs to be configured for your environment.

7. Add a **Run as** column to this page and enter the integration user ID in the column for both jobs. To do so:
  - a. Click the Personalized List (gear) icon in the upper left corner at the top of list of scheduled jobs.
  - b. On the **Personalize List Columns** dialog, select **Run as** from the **Available** columns and move it to the **Selected** columns.
  - c. On the Scheduled Script Executions page, change the **Run as** user (that is blank by default) to the integration user ID (see [Creating a ServiceNow Integration User](#)).
8. Click the first export task to schedule (such as Export Assets from ServiceNow).

The **Scheduled Script Execution** properties are displayed.



**Note:** The MID server collects the exported XML data in chunks, such that the XML file is not well formed until the last chunk has been received. Be sure to schedule sufficient time for the exports to complete before the scheduled import from the MID server into FlexNet Manager Suite.

9. Change the value in the **Run** field to your desired schedule.

These data exports may be large, based on the size of your ServiceNow repository. A common practice would be to choose **Weekly** exports.



**Tip:** ServiceNow by default limits its exports from the database to 10,000 records (for a general discussion, see <https://community.servicenow.com/community/blogs/blog/2014/08/01/increasing-the-export-limit>, but note that this page discusses limits for exports from the ServiceNow user interface grids, which are not relevant to the database exports to FlexNet Manager Suite). You can modify the maximum number of records exported from ServiceNow by having your ServiceNow administrator add the property `glide.db.max_view_records` and setting a new limit. For instructions on adding the property, see [http://wiki.servicenow.com/index.php?title=Adding\\_a\\_Property#gsc.tab=0](http://wiki.servicenow.com/index.php?title=Adding_a_Property#gsc.tab=0).

10. Use the additional fields that appear to complete configuring your scheduled job.

For example, for **Weekly** exports, set the **Day**, and **Time** of day, when the export should occur. An off-peak time is preferable.

11. Click **Update** to save your changes.

Repeat the scheduling for the Export Contracts from ServiceNow task.

12. With both exports now scheduled, run a test of each by clicking **Execute Now** on the associated **Scheduled Script Execution** properties page.

(This same button can be used to run the export if you chose the **Run On Demand** setting for the schedule.) Use the test to assess the time taken to complete the export and finish a well-formed XML file on the MID server, as a check on your scheduling plans. The test also allows you to troubleshoot any problems.

13. Monitor overall progress in ServiceNow by going to **Flexera Integration > Export History > Export Runs** in integration application 5.x, and in integration app 4.x, go to **FlexNet Manager Suite > Integration History > Export Runs**.

The **State** column on this view shows the progress of export, and the **Stage** column displays **File Completion** when the XML file is done.

14. On the MID server, check for well-formed (complete) XML files.

The file names are of the form `x_fls_flexera_fnms_ExportType.xml`, where the placeholder *ExportType* is either **Asset** or **Contract**.

This completes the configuration of ServiceNow for data flows from ServiceNow to FlexNet Manager Suite. These same data flows also require some configuration of FlexNet Manager Suite to receive the data. This side of the configuration is covered next.

## Configuring FlexNet Beacon for Import

If you are not already familiar with importing business-related data to FlexNet Manager Suite, the following terminology summary may help:

- A "business adapter" is an XML file that allows configuration of a connection to a source of business data, as well as mapping of that data from the source format to the database tables and columns required in FlexNet Manager Suite. The data from ServiceNow is handled as business data, and therefore data transfers make use of business adapters.
- The "Business Adapter Studio" is a utility available on each inventory beacon for customizing and testing business adapters.
- The "Business Importer" is the process that exercises the business adapters to the schedule you define, and controls each import as defined in its business adapter.

In previous tasks, you have configured ServiceNow to run two exports that queue data about hardware assets and contracts and send it to the MID server of your choice. On the MID server, the data is written into XML files. Once these have been completed, two business adapters running on your inventory beacon collect this data and upload it to your central operations databases. You must use the following process to configure these business adapters before they can operate.



**Tip:** Clearly, the inventory beacon and the ServiceNow MID server must access a common folder for the transfer of the XML files. It is possible that the FlexNet Beacon software and the ServiceNow MID server are installed on the same physical machine; but if they are on separate machines, network access allowing a file share is required. This means you may need to grant at least read access for the share on your MID server to two accounts on your inventory beacon:

- The local administrator account with which you will log in now for configuring and testing your business adapters
- The account that runs your FlexNet Beacon Service, which will exercise the business adapters in production (by default, this is the local **SYSTEM** account on your inventory beacon).

As well as access to the MID server, your inventory beacon requires access to the unzipped archive you downloaded for the ServiceNow integration application to complete this process.



**To configure an inventory beacon for importing data for FlexNet Manager Suite:**

1. On your chosen inventory beacon, log in as a local administrator.
2. If necessary, validate that, from this server, you can access the file share where the MID server saves the completed XML files.
3. In the unzipped archive you downloaded for the ServiceNow integration application, open the `Importer` folder and locate the two business adapters `ServiceNowAssets.xml` and `ServiceNowContracts.xml`.
4. Copy these two files to the business adapters folder, `%CommonAppData%\Flexera Software\Beacon\BusinessAdapter`, on the inventory beacon.
5. Start the FlexNet Beacon software from the Windows start menu on the inventory beacon, using the **Run as administrator** option.
6. In the interface for FlexNet Beacon, select the **Business Importer** page from the **Connections** group (in the left-hand navigation pane).

The two adapters appear in the list of available business adapters.

7. For each of these adapters in turn, select the adapter from the list, and click **Edit...** In the following dialog, click **Edit Adapter**.

The Business Adapter Studio opens, editing this adapter.

8. In the Business Adapter Studio, select the top level import node (like `ServiceNowAssets` or `ServiceNowContracts`) and locate the **File name** field. Complete the file path and file name for the appropriate XML file on the MID server. If you have already exported data from ServiceNow to the MID server, you may click the `...` button and browse to the respective XML file in the folder on the MID server.

*The following example from the assets adapter shows a path when the MID server and inventory beacon are installed on the same physical computer:*

```
C:\ServiceNow\MyMIDServerFolder\agent\x_fls_flexera_fnms_asset.xml
```

*The following example from the contracts adapter shows a path when the MID server is separate, using UNC format:*

```
\\MyMIDServer\ServiceNow\MyMIDServerFolder\agent\x_fls_flexera_fnms_contracts.xml
```

9. When the file path and name are identified, click **Refresh** (just below the `...` button).
10. **Save** the modified adapter; and repeat the process for the other adapter.
11. When both are completed and saved, close Business Adapter Studio.
12. If you have not already created the schedule(s) on which you want to run these adapters, switch to the **Scheduling** page of the FlexNet Beacon interface, and create one or two now.

You may run these two business adapters on the same schedule, as the inventory beacon queues them and

runs them one after the other.



**Important:** Remember that there is a delay between when the scheduled job starts executing in Service Now, and when the MID server finishes assembling the transmitted chunks into a valid XML file. You can test the elapsed time for your environment by triggering each export, and waiting until, in the **Export Runs** view (in ServiceNow), it reaches the *Succeeded* state. Allow a safety buffer for future data growth, and set the schedule for the business adapters to run after the exports and assembly of the XML files are completed.


**13.** In the **Business Importer** page of the FlexNet Beacon, select each adapter in turn, and:

- a. Click **Schedule...**
- b. From the list of available schedules, select the one for each adapter.
- c. Click **OK**.
- d. Ensure that the adapter is marked as **Enabled**.
- e. Repeat for the other adapter.

**14.** At the bottom of the inventory beacon interface, click **Save** to store your changes.

**15.** Optionally, if you have test data waiting for a system check, you can select each adapter in turn, and click **Execute Now**.

The Business Importer takes the raw data from XML files, transforms it into the formats required for FlexNet Manager Suite, and uploads it to the central application server.

To check the status of imports, in the web interface of FlexNet Manager Suite, navigate to the system menu (  ▼ in the top right corner) and choose either **Data Inputs** (in the **Business Data** tab) or **System Health > System Tasks**.



**Tip:** If you need to interrupt the export from ServiceNow, disable the scheduled jobs in ServiceNow, and disable the relevant schedule(s) in FlexNet Beacon.

# 4

## Operational Details

The exchange of data between ServiceNow and FlexNet Manager Suite happens in a pair of independent processes driven by schedules (either Windows scheduled tasks or schedules built in to the products).

As these schedules by default run on a weekly cycle, you may expect the data to be synchronized after the weekly runs and up until either system is subsequently updated. If you require an intermediate syncing after an important update to one system or the other, you can also trigger either process manually.

The process flows are described in detail in the following topics. Notes about configuration and customization are included.

### Process for Exports from FlexNet Manager Suite to ServiceNow

A Windows scheduled task `Export to ServiceNow` triggers exports to ServiceNow at 3am every Sunday morning.

If you are in an administrator role, you can also trigger an export through the web interface for FlexNet Manager Suite. Navigate to the system menu (⚙️ in the top right corner), choose **System Settings > Integrations** and expand the **ServiceNow** section.

#### Process Details

1. On the central application server, when the export is triggered, a utility is launched that:
  - Checks whether you have licensed the ServiceNow integration option from Flexera (if not, it shows an error in the same page of the web interface).
  - Tests your ServiceNow credentials in the **ServiceNow export settings** section of **System Settings > Integrations**.
2. Next, the utility checks whether ServiceNow is able to accept an import at this time:
  - It checks whether a record in `Scheduled Data Imports`, and another in `Data Sources`, have been created by the integration application. (Links to the relevant pages where you can inspect the records in ServiceNow are under **Flexera Integration > Advanced** in integration application 5.x and in integration app 4.x under

**FlexNet Manager Suite > Advanced.)**

- It ensures that no prior import is already in process, checking that there is *no* record in the `Import Runs` table or the `Import Transactions` table that are incomplete (that is, have a `State` other than `Succeeded` or `Failed`). Both lists are available for inspection in the **FlexNet Manager Suite Integration History** group.

If either of the checks fails, the utility abandons the export and displays an appropriate error.

3. The utility checks the connection with the operations databases for FlexNet Manager Suite. (If there is any failure, the utility abandons the export and displays an appropriate error.)
4. All being well, the data export, transfer, and import processes are run for all data types (unless any of them have been specifically excluded) in the following order:
  - a. Hardware inventory
  - b. Contracts
  - c. Installed applications



**Caution:** *In ServiceNow, contracts and installed applications both have dependencies on hardware inventory. It is recommended that you do not exclude the hardware inventory, as this may result in unpredictable gaps in other records when the correct dependencies cannot be established.*

The data collected is differential (that is, collecting only additions and changes since the last export). To prevent timeout issues, each data set is split into segments for transfer to ServiceNow. Each segment is identified with a transaction ID, transaction type, and the data in an XML chunk. ServiceNow returns a return code for each segment of data.

- If the return code shows a failure, the segment is retransmitted for a maximum number of tries, after which the utility exits (skipping any remaining exports) and displays an appropriate error.
  - While success continues, the utility waits for each data type to complete before commencing the next data type.
5. In ServiceNow, as the first data chunk is received, the integration application creates a record in the `Import Runs` table. (For details of the main columns in the `Import Runs` table, see [Import Runs Columns](#).)




**Note:** *If you have selected to store installed application data to SAM Foundation Plugin tables but the SAM plugin is not found, then ServiceNow logs an error in the Application Log and returns an error code. In FlexNet Manager Suite, the utility abandons the export and displays an appropriate error in the log file.*

6. For each data chunk (including the first), ServiceNow creates a record in the `Import Transactions` table. (For details of the main columns in the `Import Transactions` table, see [Import Transactions Columns](#).)
7. When the transaction record is created, it returns a success code to FlexNet Manager Suite, which then processes and transmits the next data chunk. This loop continues until all the records of a particular export type have been transmitted.
8. In ServiceNow, the inbound data chunks are written to staging tables (visible in the navigation panel under **Flexera Integration > Staging Records** in integration application 5.x and in integration app 4.x under **FlexNet Manager Suite > Staging Records**) based on the transaction type:



Transaction type	Import Set Table
inventory_export	Inventory Imports (note that this is hardware inventory)
application_export	Application Imports
contract_export	Contract Imports
connection_test	Not applicable
export_status	Not applicable

9. In ServiceNow, the integration application uses the Scheduled Data Imports and Data Sources records to process each Import Transaction record. The integration application queues the transaction records, and as each record is processed, it sets its State to Succeeded. When all the transaction records for an Import Run are completed, the integration application also sets its State to Succeeded.
10. During this processing loop, FlexNet Manager Suite continues polling the API for status. Only when it receives a successful completion message does it resume the process with the next selected data type.
11. When the data has been collated from the individual transactions to the staging tables, transform maps are executed to map the fields in the import set tables to fields in ServiceNow database tables. The final tables for data from each transaction type are shown below. (For a complete set of the transform mappings, see [Transform Maps for ServiceNow Integration](#).)

Transaction type	Ultimate Data Tables in ServiceNow
application_export	Software Model, Discovery Model, Software Installation, and Software Instance. The tables used are dependent upon the <b>Use CMDB and/or SAM tables for installation</b> integration property. For more information about integration properties, refer to <a href="#">Integration Properties</a> .
contract_export	Contract and Lease Instance
	 <b>Tip:</b> Check the <b>Contract used by</b> tab near the bottom of the page of contract properties. This references all computers linked to the contract.
inventory_export	Product Model, Virtual Machine Instance, Computers

At the completion of this process, data exported from FlexNet Manager Suite is reflected in your ServiceNow data set.

## Import Runs Columns

These are the major properties of the entries in the **Import Runs** view created as ServiceNow commences each data import. In integration app 5.x go to **Flexera Integration > Import History > Import Runs** and in integration app 4.x, go to **FlexNet Manager Suite > Integration Runs > Import Runs**.

Column	Notes
Number	An automatically-generated sequential numbering of each created record in this listing.
Import Id	A GUID created by FlexNet Manager Suite as it exports the data, used to track activity and exchanges for this particular import into ServiceNow.
Import Type	The type of data being imported, being one of Inventory, Contract, or Application.
State	<p>Values include:</p> <ul style="list-style-type: none"> <li>• <b>New</b> — This default state is set when a record is created in the <b>Import Runs</b> listing.</li> <li>• <b>Waiting</b> — ServiceNow has received the final data chunk for the particular <b>Import Type</b>.</li> <li>• <b>Succeeded</b> — All data chunks for this <b>Import Run</b> have been processed by ServiceNow.</li> <li>• <b>Failed</b> — For some reason (unspecified here), the import has failed.</li> </ul>

## Import Transactions Columns

These are the major properties of the entries in the **Import Transactions** view created as ServiceNow receives each data segment for import. In integration app 5.x go to **Flexera Integration > Import History > Import Transactions** and in integration app 4.x, go to **FlexNet Manager Suite > Integration Runs > Import Transactions**.

Column	Notes
Number	An automatically-generated sequential numbering of each created record in this listing.
Import Run	The ID of the import run of which this transaction is a part.
Import Type	The type of data being imported, being one of Inventory, Contract, or Application.

Column	Notes
State	<p>Values include:</p> <ul style="list-style-type: none"> <li>• <b>New</b> — This default state is set when a record is created in the <b>Import Transactions</b> listing.</li> <li>• <b>Waiting</b> — ServiceNow is processing another transaction received earlier.</li> <li>• <b>Processing</b> — Set when the integration application invokes import of this transaction.</li> <li>• <b>Succeeded</b> — ServiceNow has completed the import of this transaction.</li> <li>• <b>Failed</b> — For some reason (unspecified here), the import of the transaction has failed.</li> </ul>
Payload	The segment of data, in XML format, that makes up this transaction.

## Transform Maps for ServiceNow Integration

These transform maps map hardware, license, and contract data collected from FlexNet Manager Suite into ServiceNow.

Data collected from FlexNet Manager Suite is initially held in staging tables within ServiceNow, and must be transformed for insertion in the operational tables in your ServiceNow implementation. For example, the FNMS Inventory -> Computer set has columns that are matched with the Computers table in ServiceNow. Contract data is first mapped into the Contracts table in ServiceNow, and a second transform map is run to provide links to relevant Configuration Items (Computers).

The following tables show the standard transformations from the staging tables (the source) to operational tables (the target) within ServiceNow. Items marked [Script] involve a data transformation, which may involve finding the foreign key to another record, or conversion of units such as bytes to MB.

In each transform, the "(key)" fields are used for record matching. If a record already exists with identical key values for fields so marked, it is updated; and if not, a new record is created.



**Note:** There are integration properties that define:

- Whether a new record should be created in ServiceNow when a match for incoming data is not found
- Whether an existing record should be updated when a match is found

These properties can be modified in ServiceNow by navigating **Integration Properties**. In integration app 5.x go to **Flexera Integration > Integration Properties** and in integration app 4.x, go to **FlexNet Manager Suite > Integration Properties**.

The transform maps in this topic are separated into the following respective data group that they are used for:

- [Transform maps for inventory data](#)
- [Transform maps for installed application data](#)

- [Transform maps for contracts data](#)

## Transform maps for inventory data

### Computer Model Transform

- Original data from FlexNet Manager Suite: Inventory
- Target table in ServiceNow: Product Model [cmdb\_model]

Source Display Name	Source Field	Target Display Name	Target Field
ModelNo (key)	u_modelno	Model number	model_number
ChassisType	u_chassistype	Type	type
ComputerType	u_computertype	Model categories	cmdb_model_category
Manufacturer	u_manufacturer	Manufacturer	manufacturer
ModelNo	u_modelno	Name	name

### Virtual Machine Transform

- Original data from FlexNet Manager Suite: Inventory.
- Target table in ServiceNow: Virtual Machine Instance [cmdb\_ci\_vm\_instance]

Source Display Name	Source Field	Target Display Name	Target Field
ComputerID (key)	u_computerid	FlexNet Computer ID	x_fls_flexera_fnms_computer_id
[Script]	[Script]	Is deleted	x_fls_flexera_fnms_is_deleted
[Script]	[Script]	Correlation ID	correlation_id
[Script]	[Script]	Class	sys_class_name
[Script]	[Script]	Disks size (GB)	disks_size
[Script]	[Script]	Memory (MB)	memory
ComputerName	u_computername	Name	name
Domain	u_domain	Domain	sys_domain
IPAddress	u_ipaddress	IP Address	ip_address
MACAddress	u_macaddress	MAC Address	mac_address
Manufacturer	u_manufacturer	Manufacturer	manufacturer
ModelNo	u_modelno	Model ID	model_id
ModelNo	u_modelno	Model number	model_number
NumberOfProcessors	u_numberofprocessors	CPUs	cpus

Source Display Name	Source Field	Target Display Name	Target Field
SerialNo	u_serialno	Serial number	serial_number

### Computer Transform

- Original data from FlexNet Manager Suite: Inventory
- Target table in ServiceNow: Computer [cmdb\_ci\_computer]

Source Display Name	Source Field	Target Display Name	Target Field
ComputerID (key)	u_computerid	FlexNet Computer ID	x_fls_flexera_fnms_computer_id
[Script]	[Script]	RAM (MB)	ram
[Script]	[Script]	Correlation ID	correlation_id
[Script]	[Script]	Disk space (GB)	disk_space
AssetID	u_assetid	FlexNet Asset ID	x_fls_flexera_fnms_asset_id
CalculatedUser	u_calculateduser	Calculated User	x_fls_flexera_fnms_calculated_user
ChassisType	u_chassistype	Chassis type	chassis_type
ComputerName	u_computername	Name	name
ComputerStatus	u_computerstatus	Status (hardware_status)	hardware_status
ComputerType	u_computertype	Subcategory	subcategory
DiscoveredDate	u_discovereddate	Discovered date	x_fls_flexera_fnms_discovered_date
Domain	u_domain	Domain	sys_domain
InventoryConnection Name	u_inventoryconnection name	Inventory Connection	x_fls_flexera_fnms_inventory_connection
InventorySource	u_inventorysource	Inventory Source	x_fls_flexera_fnms_inventory_source
IPAddress	u_ipaddress	IP Address	ip_address
IsDeleted	u_isdeleted	Is deleted	x_fls_flexera_fnms_isdeleted
LastLoggedInUser	u_lastloggedinuser	Last logged in user	x_fls_flexera_fnms_last_logged_in_user
MACAddress	u_macaddress	MAC Address	mac_address
Manufacturer	u_manufacturer	Manufacturer	manufacturer
MaxClockSpeed	u_maxclockspeed	CPU speed (MHz)	cpu_speed
ModelNo	u_modelno	Model ID -> model_number	model_id
ModelNo	u_modelno	Model number	model_number
NumberOfCores	u_numberofcores	CPU core count	cpu_core_count

Source Display Name	Source Field	Target Display Name	Target Field
NumberOfProcessors	u_numberofprocessors	CPU count	cpu_count
NumberOfThreads	u_numberofthreads	CPU core thread	cpu_core_thread
OperatingSystem	u_operatingsystem	Operating System	os
ProcessorType	u_processortype	CPU type	cpu_type
SerialNo	u_serialno	Serial number	serial_number

## Transform maps for installed application data

### Software Transform

- Used when you opt to use CMDB tables for Installed Application data.
- Original data from FlexNet Manager Suite: Application.
- Target table in ServiceNow: Software [cmdb\_ci\_spkg]

Source Display Name	Source Field	Target Display Name	Target Field
FlexeraID (key)	u_flexeraid	Flexera Unique ID	x_fls_flexera_fnms_id
ApplicationID	u_applicationid	FlexNet Application ID	x_fls_flexera_fnms_application_id
ApplicationName	u_applicationname	Package name	package_name
ApplicationVersion	u_applicationversion	Version	version
Classification	u_classification	Subcategory	subcategory
ProductName	u_productname	Name	name
Publisher	u_publisher	Manufacturer	manufacturer

### Software Instance Transform

- Used when you opt to use CMDB tables for Installed Application data.
- Original data from FlexNet Manager Suite: Application.
- Target table in ServiceNow: Software Instance [cmdb\_software\_instance]



**Tip:** When application data is imported into ServiceNow, the installed application records are linked to their computer record based on FlexNet Computer ID. This is recommended and the most reliable way to link records. However, if for any reason you need to link records based on Computer Serial Number; note that the installed application records do have Computer Serial Number available and therefore you can manually edit the transform map in ServiceNow to change the key to be Computer Serial Number.

Source Display Name	Source Field	Target Display Name	Target Field
FlexeraID (key)	u_flexeraid	Software -> Product Name	Product Name
[Script] (key) [Note 1]	[Script]	Installed on	installed_on
[Script]	[Script]	Is deleted	x_fls_flexera_fnms_is_deleted
DiscoveredAt	u_discoveredat	Discovered at	x_fls_flexera_fnms_discovered_at
DiscoveredBy	u_discoveredby	Discovered by	x_fls_flexera_fnms_discovered_by
FlexeraID	u_flexeraid	Flexera Unique ID	x_fls_flexera_fnms_id
LastScanned	u_lastscanned	Last scanned	x_fls_flexera_fnms_last_scanned
ProductName	u_productname	Name	name

Note:

1. An installed application record defines the installation of an application on a computer. A source record from FlexNet Manager Suite in the Application Import [x\_fls\_flexera\_fnms\_application\_import] table has these values.

The import process creates or updates such a record in ServiceNow in the Software Instance [cmdb\_software\_instance] table. The record links an application record in the Software [cmdb\_ci\_spkg] table and a computer record in Computer [cmdb\_ci\_computer].

Field map, [Script] (key), finds a computer record in the Computer table based on source ComputerID

[u\_computerid] in the target FlexNet Computer ID [x\_fls\_flexera\_fnms\_computer\_id] field.

Another field map, FlexeraID (key) finds an application record in the Software table based on the source FlexeraID [u\_flexeraid] field in the target Flexera Unique ID [x\_fls\_flexera\_fnms\_id] field.

### Software Model Transform

- Used when you opt to use SAM tables for Installed Application data.
- Original data from FlexNet Manager Suite: Application
- Target table in ServiceNow: Software Model [cmdb\_software\_product\_model]

Source Display Name	Source Field	Target Display Name	Target Field
FlexeraID (key)	u_flexeraid	FlexNet Manager Id	x_fls_flexera_fnms_id
ApplicationName	u_applicationname	FlexNet Application Name	x_fls_flexera_fnms_application_name
ApplicationVersion	u_applicationversion	Version	version
Classification	u_classification	Type	type
FlexeraID	u_flexeraid	Short description	short_description
ProductName	u_productname	Name	name

Source Display Name	Source Field	Target Display Name	Target Field
Publisher	u_publisher	Manufacturer	manufacturer

### Software Installation Transform

- Used when you opt to use SAM tables for Installed Application data.
- Original data from FlexNet Manager Suite: Application
- Target table in ServiceNow: label [cmdb\_sam\_sw\_install]



**Tip:** When application data is imported into ServiceNow, the installed application records are linked to their computer record based on FlexNet Computer ID. This is recommended and the most reliable way to link records. However, if for any reason you need to link records based on Computer Serial Number; note that the installed application records do have Computer Serial Number available and therefore you can manually edit the transform map in ServiceNow to change the key to be Computer Serial Number.

Source Display Name	Source Field	Target Display Name	Target Field
ApplicationID (key)	u_applicationid	FlexNet Application ID	x_fls_flexera_application_id
[Script] (key) [Note 1]	[Script]	Installed on	installed_on
[Script]	[Script]	Is deleted	x_fls_flexera_fnms_is_deleted
ApplicationVersion	u_applicationversion	Version	version
DiscoveredAt	u_discoveredat	Last Discovered	x_fls_flexera_fnms_last_discovered
DiscoveredBy	u_discoveredby	Discovered by	x_fls_flexera_fnms_discovered_by
DisplayName	u_displayname	Display name	display_name
FlexeraID	u_flexeraid	Discovery model -> prod_id	discovery_model
FlexeraID	u_flexeraid	Prod id	prod_id
LastScanned	u_lastscanned	Last scanned	last_scanned
Publisher	u_publisher	Publisher	publisher

Note:

1. An installed application record defines the installation of an application on a computer. A source record from FlexNet Manager Suite in the Application Import [x\_fls\_flexera\_fnms\_application\_import] table has these values.

The import process creates or updates such a record in ServiceNow in the Software Installation [cmdb\_sam\_sw\_install] table. The record links an application record in the Software Discovery Model [cmdb\_sam\_sw\_discovery\_model] table and a computer record in Computer [cmdb\_ci\_computer].

Field map, [Script] (key), finds a computer record in Computer table based on source ComputerID [u\_computerid] in the target FlexNet Computer ID [x\_fls\_flexera\_fnms\_computer\_id] field.



Another field map, FlexeraID (key) finds an application record in the Software Discovery Model table based on the source FlexeraID [u\_flexeraid] field in the target Prod ID [prod\_id] field.

## Transform maps for contract data

### Contracts Transform

- Original data from FlexNet Manager Suite: Contracts
- Target table in ServiceNow: Contract [ast\_contract]

Source Display Name	Source Field	Target Display Name	Target Field
ContractNumber (key)	u_contractnumber	Contract number	vendor_contract
ContractName	u_contractname	Description	short_description
ContractStatus	u_contractstatus	State	state
ContractType	u_contracttype	Short Description	short_description
EndDate	u_enddate	Ends	ends
IsDeleted	u_isdeleted	Is deleted	x_fls_flexera_fnms_is_deleted
StartDate	u_startdate	Starts	starts
Vendor	u_vendor	Vendor	vendor

### Contract Instance Transform

- Original data from FlexNet Manager Suite: Contracts
- Target table in ServiceNow: Lease Instance [ast\_contract\_instance]

Source Display Name	Source Field	Target Display Name	Target Field
ContractNumber (key)	u_contractnumber	Contract	ast_contract -> vendor_contract
ContractType	u_contracttype	Contract Type	contract_type
See note.	See note.	Configuration Item	ci_item



**Note:** Script is run to query cmdb\_ci\_computer table. If the CI is found, the script returns the sys\_id for REF. If the CI is not found, this field is left blank.

# Process for Exports from ServiceNow to FlexNet Manager Suite

How the import of data from ServiceNow works.

## Process Details

- Two scheduled jobs are run separately (and not at the same time) in ServiceNow.



**Note:** These jobs are visible in **Export Configuration > Scheduled Jobs** (or **Scheduled Jobs** in 4.x) as *Export Assets from ServiceNow* and *Export Contracts from ServiceNow*. Click the job names to make them active or inactive, to modify the schedule, or to execute either one immediately.

- When either job is executed, ServiceNow creates an XML file on the MID server with the data from the database view. (In integration app 5.x go to **Flexera Integration > Export Configuration > Database Views** and in integration app 4.x, go to **FlexNet Manager Suite > Database Views**.) The filename is `x_fls_flexera_fnms_asset.xml` for assets or `x_fls_flexera_fnms_contract.xml` for contracts. The files are overwritten with every export.



**Tip:** Within the **Database Views**, you can specify additional tables to join to the database view, or within a table, you can add additional columns to join to the database view. To preview the records for an export (without actually invoking the export), click the view name in that page to display the properties of the view; and under the **Related Links** heading, click *Try It*.

- After the export is executed in ServiceNow, a record is created under **Export Runs**. In integration app 5.x go to **Flexera Integration > Export History > Export Runs** and in integration app 4.x, under **FlexNet Manager Suite > Integration History > Export Runs**. ServiceNow updates the state of this record to Succeeded when the export is successfully completed.
- Two independent business adapters from FlexNet Manager Suite (on potentially independent schedules) connect from your inventory beacon to your MID server, and collect the latest XML files saved there, converting them into the intermediate data form required for business data uploads. (For details of the mapping between source data in ServiceNow and destination fields in the FlexNet Manager Suite database, see [Business Adapter Mappings](#).)



**Important:** The business adapters will fail if they are run while the XML files on the MID server are incomplete. Be sure that the schedules for export from ServiceNow, and the running of the business adapters, allow sufficient time for the export to be completed. For large data sets, this may be several hours.

- As the adapters complete their run, the data set is uploaded immediately to the application server for FlexNet Manager Suite. (There is also a catch-up upload task that runs overnight to retry any failed uploads.)
- On a separate schedule, the batch server starts a business import job. This imports data from the data package into the FlexNet Manager Suite database.

At the completion of this process, data exported from ServiceNow is reflected in your FlexNet Manager Suite data set.

## Properties for Export Columns

These are the major properties of the entries in the **Export Runs** view created as ServiceNow commences each data export. In integration app 5.x go to **Flexera Integration > Export History > Export Runs** and in integration app 4.x, under **FlexNet Manager Suite > Integration History > Export Runs**.

Column	Notes
Number	An automatically-generated sequential numbering of each created record in this listing.
Export Type	The type of data being exported, either Contract or Asset.
Stage	<p>May have the following values:</p> <ul style="list-style-type: none"> <li>File Creation — Displayed when the integration application sends the opening XML tag to the MID Server to be commence writing the XML file.</li> <li>Data Collection — Displayed while the integration application gathers the data and sends it to MID Server to be written into the XML file. The data is sent in multiple chunks of 500 records each.</li> <li>File Completion — Displayed when the closing XML tag has been sent to the MID Server.</li> </ul>
State	<p>Provides additional insight into the Data Collection stage in particular. Values include:</p> <ul style="list-style-type: none"> <li>New — This default state is set when a record is created in the <b>Export Runs</b> listing.</li> <li>Processing — The integration application is reading from the ServiceNow database and compiling a chunk of data.</li> <li>Processed — All database records required for the current chunk (maximum: 500) have been prepared.</li> <li>Waiting — The data chunk is being transferred to the MID server.</li> <li>Ready — The MID server has notified that the data chunk has been added to the XML file. At this point, the integration application sets the state back to Processing and prepares the next chunk of data.</li> <li>Succeeded — All data chunks have been transferred, and no more are required.</li> <li>Failed — For some reason (unspecified here), the export has failed.</li> </ul>
Counter	The number of database records that the integration application has read and processed. Because the data is transferred to the MID server in a number of chunks, the counter value is used as a cursor for reading the correct records from the database for the next data chunk.

## Business Adapter Mappings

Two business adapters are supplied as a standard part of the ServiceNow integration application for FlexNet Manager Suite, and are used in the process of transferred asset and contract data from ServiceNow to FlexNet Manager Suite. The following lists show the source data from ServiceNow, and the target (destination) fields in FlexNet Manager Suite, for each of these adapters in turn.



**Tip:** For special purposes, mappings can be added, removed, or changed by editing the business adapter(s) in Business Adapter Studio on your inventory beacon.

In each listing, the first field shown is used for matching existing records (a key). During import, if the value in this field already exists in the compliance database, the record is updated with the other values imported for this item. Otherwise, a new record is automatically created in FlexNet Manager Suite.

In both listings below, "display" names are the names visible in the two products' web interfaces; and the **Source Field** column shows a compound name made up of:

- An abbreviated reference to a ServiceNow database table name (see below)
- An underscore character
- The field name in the relevant database table (which name may contain additional underscores).

The mapping of the abbreviated references to the actual database table names in the ServiceNow database is:

- acntrct represents ast\_contract
- ahrdwr represents alm\_hardware
- cicomp represents cmdb\_ci\_computer
- cdbmdl represents cmdb\_model
- sysusr represents sys\_user.

## Assets Imports

- Business adapter file name: ServiceNowAssets.xml
- Original data source: ServiceNow database view x\_fls\_flexera\_fnms\_asset
- Destination table in FlexNet Manager Suite database: Asset

Source Display Name	Source Field	Target Display Name	Target Field
<b>Serial number</b>	cicomp_serial_number	<b>Serial Number</b>	SerialNumber (key)
<b>Asset tag</b>	ahrdwr_asset_tag	<b>Asset Tag</b>	AssetTag
<b>Asset Status</b>	ahrdwr_install_status	<b>Asset Status</b>	AssetStatus
<b>Configuration Item</b>	ahrdwr_ci	<b>Name</b>	ShortDescription
<b>Installed</b>	cicomp_install_date	<b>Installed on</b>	InstallationDate
<b>Manufacturer</b>	cicomp_manufacturer	<b>Manufacturer</b>	Manufacturer
<b>ModelNo</b>	cicomp_model_number	<b>ModelNo</b>	ModelNo

Notes:

1. AssetStatusID is a foreign key to the AssetStatus table, from which display values are drawn.



**Note:** *AssetStatus* is a mandatory field for asset records in FlexNet Manager Suite. The out of the box business adapter does explicit mapping between ServiceNow **Status** values and FlexNet Manager Suite *AssetStatus* values, as shown in the following table. If needed, you can modify these mappings in the business adapter or if you have custom mappings defined in ServiceNow, you must include them here. Note that if you are also 'round-tripping' this data (that is, copying it back from to ServiceNow at some future point, to maintain synchronization), you need to provide a similar mapping in the relevant transform map as well.

ServiceNow	FlexNet Manager Suite
On order	Purchased
In stock	In Storage
In transit	Purchased
In use	Installed
Consumed	Installed
In maintenance	Other
Retired	Retired
Missing	Other

## Contracts Imports

- Business adapter file name: ServiceNowContracts.xml
- Original data source: ServiceNow database view x\_fls\_flexera\_fnms\_contract
- Destination table in FlexNet Manager Suite database: Contract

Source Display Name	Source Field	Target Display Name	Target Field
<b>Contract number</b>	acntrct_vendor_contract	<b>Contract Number</b>	ContractNo (key)
<b>Description</b>	acntrct_description	<b>Information</b>	Comments
<b>Display name</b>	cmdbmdl_display_name	<b>Contract type</b>	ContractTypeID [Note 1]
<b>Ends</b>	acntrct_ends	<b>Expiry date</b>	EndDate
<b>Short description</b>	acntrct_short_description	<b>Contract Name</b>	ContractName
<b>Starts</b>	acntrct_starts	<b>Start date</b>	StartDate
<b>State</b>	acntrct_state	<b>Status</b>	ContractStatusID [Note 2]

Notes:

1. ContractTypeID is a foreign key to the ContractType table, from which display values are drawn. Also see note below.

2. ContractStatusID is a foreign key to the ContractStatus table, from which display values are drawn.



**Note:** *ContractTypeID* is a mandatory field for contract records in FlexNet Manager Suite. If a record in ServiceNow has a **Display name** value that does not exist in FlexNet Manager Suite, the record is imported with the contract type *General*. To work around this type change, you can modify the business adapter to provide an explicit mapping between ServiceNow **Display name** values and FlexNet Manager Suite *ContractTypeID* values. Note that if you are also 'round-tripping' this data (that is, copying it back from FlexNet Manager Suite to ServiceNow at some future point, to maintain synchronization), you need to provide a similar mapping in the relevant transform map as well.

## 5

# Appendices

The following topics cover removal of any previously-installed legacy integration application (any version less than 4.0), and improving the performance of ServiceNow with additional database indexes. A possible exception in the ServiceNow log files is also explained.

## Integration Properties

The **Integration Properties** page lets you specify export integration properties. In integration application 5.x, page is accessible from **Flexera Integration > Integration Properties**, or in integration application 4.x, it is available from **FlexNet Manager Suite > Integration Properties**. The integration properties let you choose whether to accept FlexNet Manager Suite as the source of truth for various data types. Choosing **No** for any option sets ServiceNow as the source of truth for that property and choosing **Yes** for any option sets FlexNet Manager Suite as the source of truth for that property.

The descriptions in the following sections show you which properties are for use with exports from ServiceNow and which properties are for use with exports from FlexNet Manager Suite.

### Properties used when exporting from ServiceNow for input to FlexNet Manager Suite

The following table provides descriptions of properties to use when exporting from ServiceNow for input to FlexNet Manager Suite.

Setting/Property	Description
<b>Exclude virtual machine assets</b>	Choose whether to exclude virtual machine assets from the export from ServiceNow.
<b>MID server name</b>	Enter the full name of the MID server.
<b>Export file path</b>	Optionally, enter a file path for where to store the exported XML data file from ServiceNow (instead of storing it in the default MID server location). Because the FlexNet Beacon reads this file using the business adapter, FlexNet Beacon needs access to this file location.

Setting/Property	Description
<b>Configure the log verbosity (View the Application logs at System Logs - System Log - Application logs)</b>	<p>Choose the desired level of log verbosity:</p> <ul style="list-style-type: none"> <li>• <b>Error</b></li> <li>• <b>Warning</b></li> <li>• <b>Information</b></li> <li>• <b>Debugging</b></li> <li>• <b>Tracing</b></li> </ul>

## Properties used when exporting from FlexNet Manager Suite for input to ServiceNow

The following table provides descriptions of properties to use when exporting from FlexNet Manager Suite for input to ServiceNow.

Setting/Property	Description
<b>FlexNet Manager Suite is source of truth for:</b>	<p>Choose <b>Yes</b> to accept FlexNet Manager Suite as the source of truth for any of the following:</p> <ul style="list-style-type: none"> <li>• <b>Adding inventories</b></li> <li>• <b>Updating inventories</b></li> <li>• <b>Updating inventory class name (sys_class_name)</b></li> <li>• <b>Adding installations</b></li> <li>• <b>Updating installations</b></li> <li>• <b>Adding contracts</b></li> <li>• <b>Updating contracts</b></li> </ul> <p>Choose <b>No</b> to any of the above settings to specify ServiceNow as the source of truth for that setting.</p>
<b>Use CMDB and/or SAM tables for installations</b>	<p>Choose what tables in ServiceNow that you want imported data to go in:</p> <ul style="list-style-type: none"> <li>• <b>Decide automatically</b>—Import to SAM tables. If no SAM tables exist, data is instead imported to CMDB tables.</li> <li>• <b>Use CMDB tables</b>—Import to CMDB tables.</li> <li>• <b>Use SAM tables</b>—Import to SAM tables. If there are no SAM tables, the import will fail.</li> <li>• <b>Use CMDB and SAM tables</b>—Import to CMDB tables <b>and</b> SAM tables. If SAM tables do not exist, the import will fail.</li> </ul>



Setting/Property	Description
<b>Configure the log verbosity (View the Application logs at System Logs - System Log - Application logs)</b>	Choose the desired level of log verbosity: <ul style="list-style-type: none"> <li>• <b>Error</b></li> <li>• <b>Warning</b></li> <li>• <b>Information</b></li> <li>• <b>Debugging</b></li> <li>• <b>Tracing</b></li> </ul>

## Additional ServiceNow Indexes for Performance

Creating additional indexes on your ServiceNow instance substantially improves the intake of data exported from FlexNet Manager Suite.

ServiceNow enables you to create your own database indexes. A worked example suggests that, with the following indexes added, you can expect better than four-fold performance increase in the initial data transforms to finish the import of data that has been exported from FlexNet Manager Suite.

Database table	New column indexed
Contract [ast_contract]	vendor_contract
Software Model [cmdb_software_product_model]	x_fls_flexera_fnms_id
Product Model [cmdb_model]	model_number
Computer [cmdb_ci_computer]	x_fls_flexera_fnms_computer_id
Software Installation [cmdb_sam_sw_install]	x_fls_flexera_fnms_application_id

## Removing a Legacy Integration Application

The integration application for ServiceNow (from version 3.0 and later of the adapter) is a scoped application. The previous integration applications used global scope. While two integration applications can be present in ServiceNow at the same time (with different scopes), it is recommended that you remove any previously-installed integration application for FlexNet Manager Suite after installing the newer version and successfully running the migration script.



**Note:** Using the following process to remove all the components of the legacy integration application (including its menu, tables, scripts, and user interface components). As expected, this process does not remove any records from ServiceNow core tables.

**To remove a legacy integration application:**

1. In ServiceNow, navigate to **System Applications > Applications**, and click **FlexNet Manager Suite Integration**.
2. On the page that appears, click **Delete**.

A confirmation dialog appears asking you to type in the word “delete”.

3. Enter `delete` in the dialog, and click **Ok**.

The application deletion progress dialog appears, and the integration application is deleted.



**Tip:** Sometimes deleting the integration application fails to remove the Scheduled Jobs it created. To check, or to delete them manually:

- a. In ServiceNow, navigate to **System Scheduler > Scheduled Jobs > Scheduled Jobs**.
- b. Filter the list of scheduled jobs to find those with Name starting with `Export`.
- c. If the following scheduled jobs exist, delete them manually:
  - `Export Assets from ServiceNow`
  - `Export Contracts from ServiceNow`

## Configuring the Software Asset Management Foundation Plugin

When you export application data from FlexNet Manager Suite for use in ServiceNow, the export utility `fnmp_servicenow_export.exe` makes use of tables that are part of a plugin for ServiceNow. The naming of this plugin, and your method of enabling it, have changed considerably across various releases of ServiceNow. Choose the appropriate step below depending on your current version of ServiceNow.

**Summary of procedures across ServiceNow releases:**

1. Up to and including the Helsinki release of ServiceNow, the following applies:
  - The plugin name is `Software Asset Management`, and its ID is `com.snc.software_asset_management`.
  - This plugin has a dependency on a second one named `Software Asset Management Core` with the ID `com.snc.sam.core`.
  - Your ServiceNow administrator can make the `Software Asset Management` plugin **Active** in the **System Plugins** page of your ServiceNow instance. This action automatically makes the `Software Asset Management Core` plugin active as well.
2. For the Istanbul release of ServiceNow, the following applies:
  - If you had activated the `Software Asset Management` plugin in an earlier version of ServiceNow, and your ServiceNow instance has now been upgraded to Istanbul, there should be no need to activate the plugin a second time.

- The plugin feature is called "Software Asset Management Template", but still accessed through the **System Plugins** page of your ServiceNow instance.
  - The plugin name is `Software Asset Management`, and its ID is `com.snc.software_asset_management`.
  - (There is no visible dependency on any other plugin, as had been the case for earlier releases of ServiceNow.)
  - Your ServiceNow administrator can make the `Software Asset Management` plugin **Active** in the **System Plugins** page of your ServiceNow instance.
3. For the Jakarta release of ServiceNow, the following applies:
- If you had activated the `Software Asset Management` plugin in an earlier version of ServiceNow, and your ServiceNow instance has now been upgraded to Jakarta, there should be no need to activate the plugin a second time.
  - Confusingly, there is a new and different plugin named `Software Asset Management Premium`, and its ID is `com.snc.samp`. This is used internally by a new SAM application that is subscription based.



**Important:** *This new subscription-based application and its plugin are not relevant to the integration with FlexNet Manager Suite, and this subscription is not required for the integration. Do not be confused by the similarities. Be aware that, when current ServiceNow documents refer to "Software Asset Management" or "SAM", they are generally referring to the new application and the premium plugin it uses, and this is not relevant to your project for integration with FlexNet Manager Suite.*

- The plugin from previous releases, named `Software Asset Management` or `Software Asset Management Template`, with its ID `com.snc.software_asset_management`, is no longer visible in the **System Plugins** page of your ServiceNow instance. However, it is still supported for the Jakarta release, and is still required for the integration between ServiceNow and FlexNet Manager Suite.



**Tip:** *Some documents from ServiceNow refer to this plugin as the "Base SAM plugin" or the "old SAM plugin", and the like. Be prepared to be precise, and refer to its ID `com.snc.software_asset_management` to be sure the correct plugin is identified.*

- To activate the "base SAM plugin", send a request to ServiceNow Support to activate the `Software Asset Management Template` plugin *with the ID* `com.snc.software_asset_management` on your ServiceNow instance.
4. For the Kingston release of ServiceNow, the following applies:
- For the Kingston release, do *not* activate the earlier plugin named `Software Asset Management`, with its ID `com.snc.software_asset_management`. This legacy plugin is only applicable to the Jakarta and earlier releases.
  - Instead, for Kingston, activate the `Software Asset Management Foundation` plugin, with its ID `com.snc.sams`. This plugin does not require any additional licensing.
  - Contact ServiceNow Support to request activation of the `Software Asset Management Foundation` plugin ( `com.snc.sams`).

# Deleting Records from ServiceNow

If an asset or application record exists both in FlexNet Manager Suite and ServiceNow but is then deleted in FlexNet Manager Suite, the records are marked for deletion in ServiceNow during the next export from FlexNet Manager Suite. However, the records are not automatically deleted. To delete the records from ServiceNow, you need to create a Global business rule and include a script with a condition: `current.state == 'Succeeded'`.



## To delete records in ServiceNow using a global business rule:

1. In ServiceNow, navigate to **System Definition**, and click **Business Rule**.

The **Business Rules** page appears.

2. Click **New**.

3. Do the following.

- a. In the **Name** field, enter a name for the rule:
- b. From the **Table** field, select **x\_fls\_flexera\_fnms\_import\_transaction**.
- c. Ensure that the **Application** field is set to **Global**.
- d. Select the **Active** check box.
- e. Select the **Advanced** check box.
- f. On the **Advanced** tab, enter the following in the **Condition** field:

```
current.state == 'Succeeded'
```

- g. On the **Advanced** tab, enter the following into the **Script** field:

```
var util = new FNMSUtil();
util.removeIsDeletedRecordsFromTable('cldb_ci_computer');
util.removeIsDeletedRecordsFromTable('cldb_software_instance');
util.removeIsDeletedRecordsFromTable('cldb_ci_vm_instance');
util.removeIsDeletedRecordsFromTable('cldb_sam_sw_install');
```



**Note:** The last line (`util.removeIsDeletedRecordsFromTable('cldb_sam_sw_install')`); should only be included if your setup is using the SAM Foundation plugin.