Developer's Guide

Asset Model Import FlexConnector

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ArcSight
An HP Company

Contact Information

Phone	A list of phone numbers for HP ArcSight Technical Support is available on the HP Enterprise Security contacts page: https://softwaresupport.hp.com/documents/10180/14684/esp-support-contact-list
Support Web Site	http://softwaresupport.hp.com
Protect 724 Community	https://protect724.hp.com

Revision History

Date	Product Version	Description
12/23/14	7.0.7.7287.0	Platform updates
02/23/12	5.2.1.6190.0	Initial release of the Asset Model Import FlexConnector

Contents

Chapter 1
Overview

The Asset Model Import FlexConnector allows you to develop a model import connector to import the asset model data from a file. This enables you to create and maintain ESM Network Model data, and keep this data in sync with the data in your Asset Management system. Based on configuration, files are read by the connector, converted to XML based on parser attributes. Upon generation, the XML files are automatically transferred by the connector to the ESM server.

CSV is the only file format supported.

You configure the connector using the SmartConnector Configuration Wizard. Also, you must create parser files from the provided template that match the format of the CSV files.

The connector supports two modes of operation:

- Initial read and import
- Ongoing detection and import of updates

During the initial read and import for attributes specified in the CSV files, the connector can import a full set or subset of attributes for each asset based on CSV file content and corresponding matching parser configuration.

Once the information is imported into ESM, the list of attributes the connector sends to ESM for existing assets is not updated. If you add or remove attributes to be sent to ESM from the connector after you import the asset data, you will not get a history of the new attributes. Updates will only be from the point of time the attributes were added. If you want a history of the added attributes, re-import the asset data.

Assumptions

You should be familiar with writing a Log File FlexConnector. Refer to the *FlexConnector Developer's Guide* for more information about writing a parser.

Chapter 2
Asset Model Import FlexConnector Attributes

CSV File Attributes

The following table lists the CSV file attributes for the Asset Model in ESM. In order to work with these attributes, you should be familiar with the ESM Asset Model. See the ArcSight Console User's Guide, chapter Reference Guide, subtopic Assets for details.

Attribute	Description
Inactive Asset	Use to disable an asset.
Inactive Reason	The reason the asset was inactivated (disabled).
Name	The asset's friendly name. This field can default to the asset's host name or IP address. This name is listed in the Asset tree in ESM.
IP Address	The asset's IP address, in dotted-decimal notation.
MAC Address	The unique hardware ID for the network device.
Host Name	The asset's DNS name.
External ID	The asset's user-defined identifier.
Alias	The asset's display name. If an alias is not specified, the asset name is used. Typically used in a localized environment to display the asset name in the local language.
Parent Group	The URI of the asset's immediate parent group in the hierarchy, based on ESM's Asset tree. For example, "/All Assets/Customer A/".
Old Parent Group	Used only to move one asset from one group to another. Is the URI of the source group for the asset.
Description	The asset's text description.
Zone	As described in Assets and Changing Assets. Specify the Zone URI of the Asset, as shown in the in ESM Zones tree.
Location	The asset's user specified location.
Category	The URI of the category to which the asset belongs. An asset can belong to more than one category. Assets can be categorized based on business use, criticality, applications, hardware, operating system, or other criteria. If a category does not exist, it is automatically created for the asset. For example, for the category Criticality, and asset can belong to the category High (with the Criticality categories of High, Medium, and Low).

Chapter 3
Installing and Configuring the Asset Model Import FlexConnector

This chapter provides information about the prerequisites, installation and configuration of the Asset Model Import FlexConnector.

The following topics are covered:

Prerequisites

Before installing the Asset Model Import FlexConnector, the following prerequisites must be met:

- Ensure that ArcSight ESM 6.8c and Console are installed. For more information, see the ArcSight Installation and Configuration Guide.
- Local access to the machine where the Asset Model Import FlexConnector is to be installed and administrator privileges to that machine.
- A minimum of 256 MB of memory and 3 GB of available hard disk space on the host machine.
- Run the ArcSight ESM Manager. The command prompt window or terminal box displays a **Ready** message when the ESM Manager starts successfully. Monitor the `server.std.log` file located in `$ARCSIGHT_HOME\logs\default`. Although not required, it is helpful to have the Console running when installing the Asset Model Import FlexConnector to verify a successful installation.
- Zones must have been created in ESM to use with the assets, using the Network Modeling Wizard in the ESM Console. If the zones are not created, assets are not assigned to zones, and the zone information for the asset is ignored.
- ArcSight ESM and database components must be up and running to configure the Asset Model Import FlexConnector.

Supported Platforms

The Asset Model Import FlexConnector supports the following platforms:

- Microsoft Windows Server 2003 R2 (SP2), 64-bit
- Microsoft Windows Server 2008 R2, 64-bit
- Microsoft Windows Server 2012 R2, 64-bit
- Red Hat Enterprise Linux (RHEL) 5.5 AS, 64-bit
- Red Hat Enterprise Linux (RHEL) 6.5, 64-bit

Installing the Asset Model Import FlexConnector

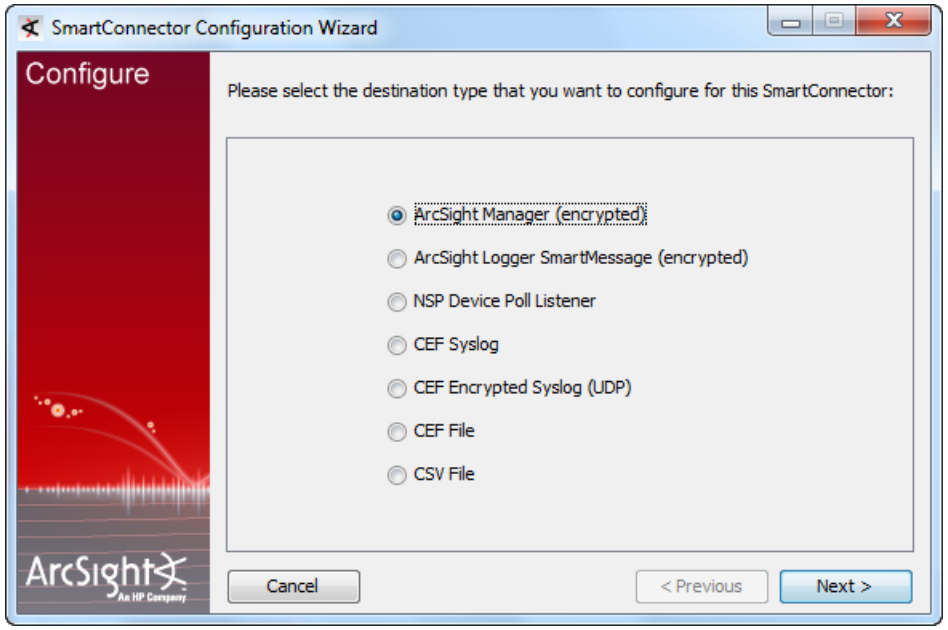
This section provides instructions on how to install the Asset Model Import FlexConnector.

1. Using the log-in credentials supplied to you by ArcSight, download the Asset Model Import FlexConnector installation executable file from the HP software support site to the machine where the connector will run.
2. Place the executable file in a directory.
3. Double-click the executable file to start the installer.
4. Follow the installation wizard through the following folder selection tasks and installation of the core connector software:
   - Introduction
   - Choose Install Folder
   - Choose Shortcut Folder
   - Pre-Installation Summary
   - Installing...

Configuring the Asset Model Import FlexConnector

This section provides information about configuring the Asset Model Import FlexConnector. After installation completes, the SmartConnector Configuration Wizard displays.

1 The destination selection window is displayed.

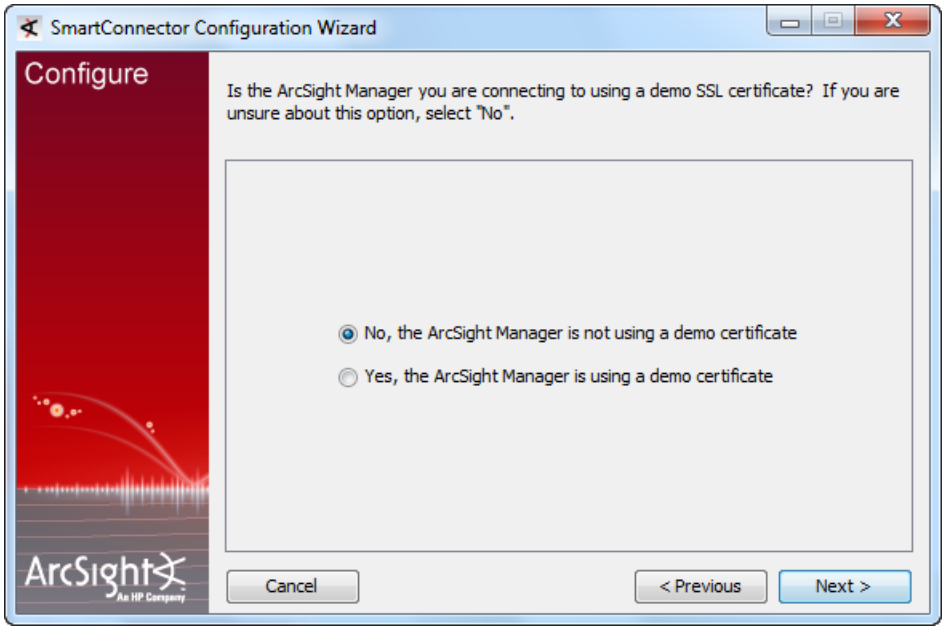


Make sure **ArcSight Manager (encrypted)** is selected and click **Next**.

Note

When selecting destinations for the Asset Model Import FlexConnector, select ArcSight Manager (Encrypted) only. No other destinations are supported.

2 The wizard prompts you for SSL certificate information.

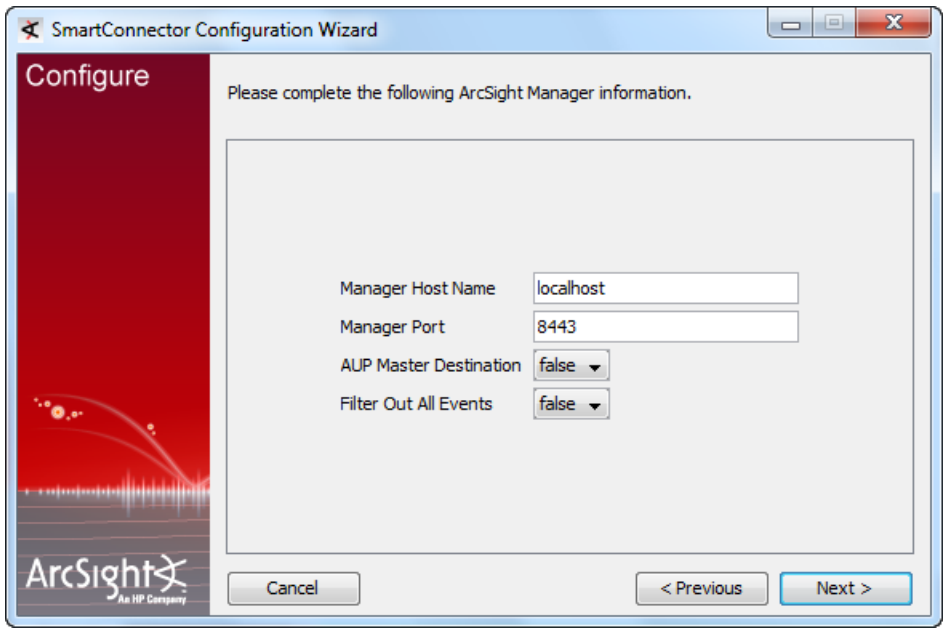


The default selection is **No, the ArcSight Manager is not using a demo certificate**. Choose **Yes** if the ArcSight Manager is using a demo certificate. (Before selecting this option, verify that the Manager is, in fact, using a demo certificate.

If you are not certain, select **No**, or consult your system administrator.) If the Manager is using a self-signed or CA-signed SSL certificate, select **No**.

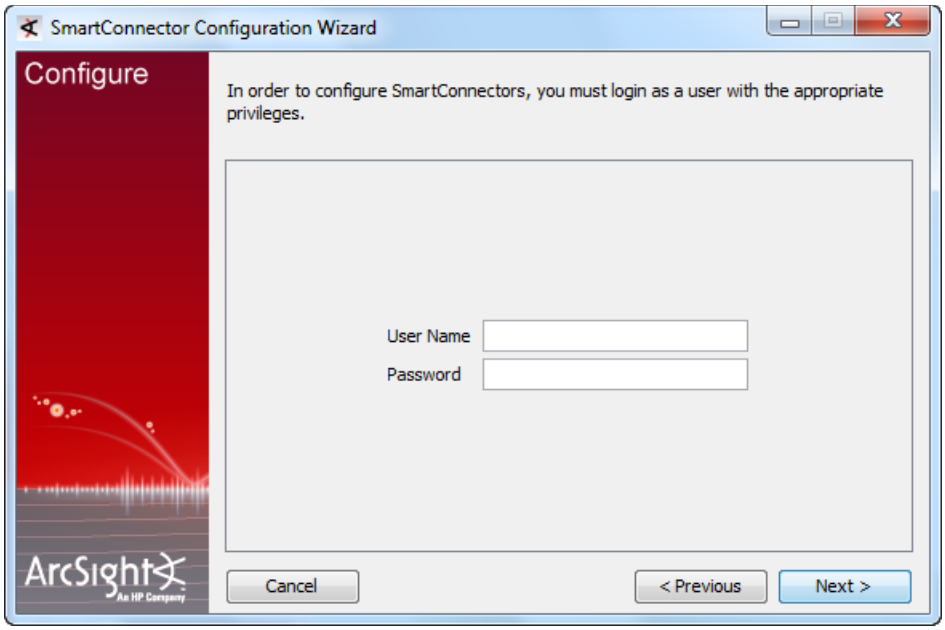
Click **Next**.

3 Enter the host and port information and click **Next**.



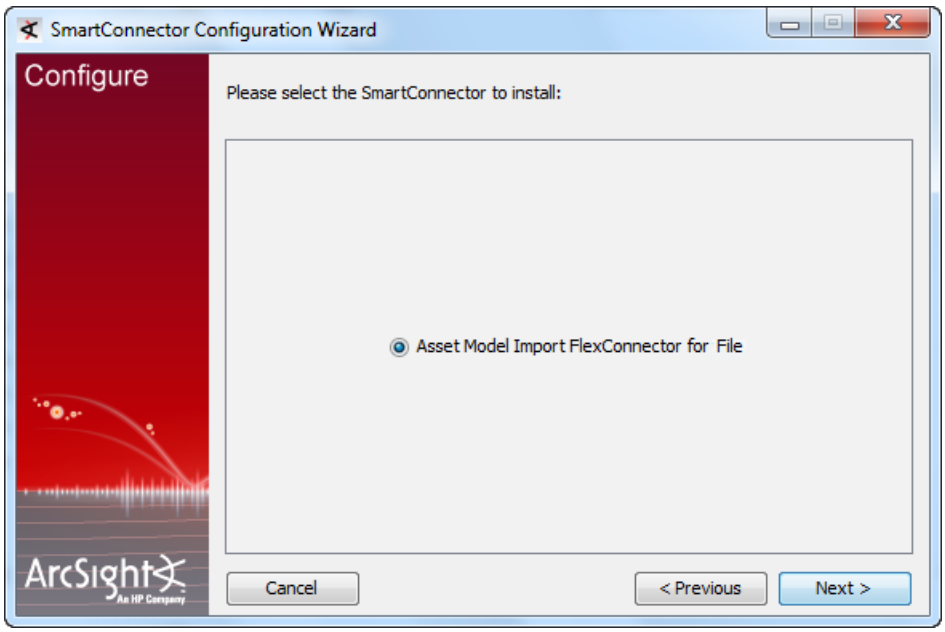
Parameter	Description
Manager Host Name	Enter the name of the host on which the ESM Manager is installed.
Manager Port	Enter the network port from which the ESM Manager is accepting requests. The default port is 8443.
AUP Master Destination	Select true or false.
Filter Out All Events	Select true or false.

4 Enter a valid ArcSight **User Name** and **Password**.

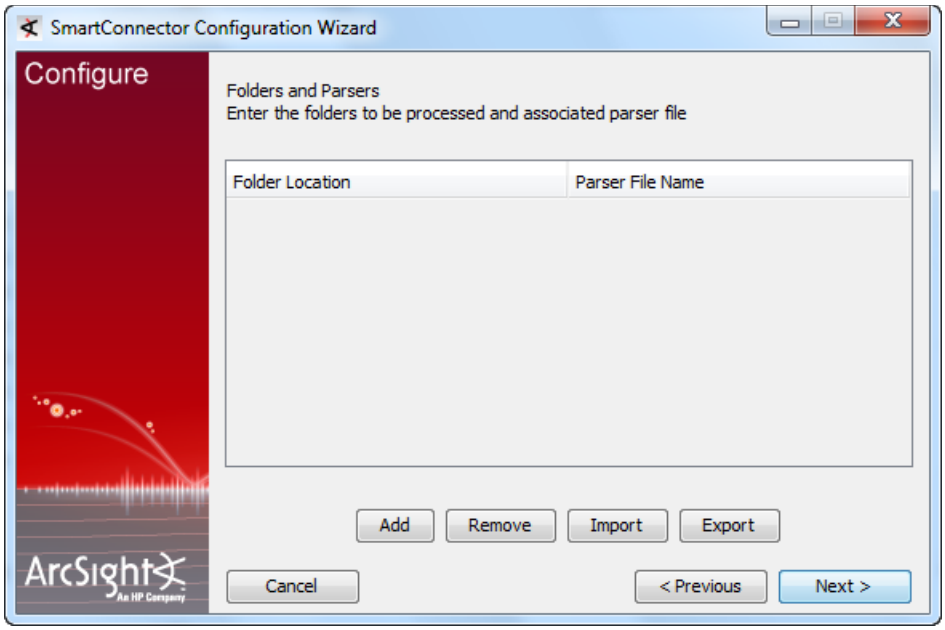


This is same user name and password you created during the Arcsight Manager installation. Click **Next**.

5 Select **Asset Model Import FlexConnector for File** and click **Next**.



6 The Folders and Parsers window displays:

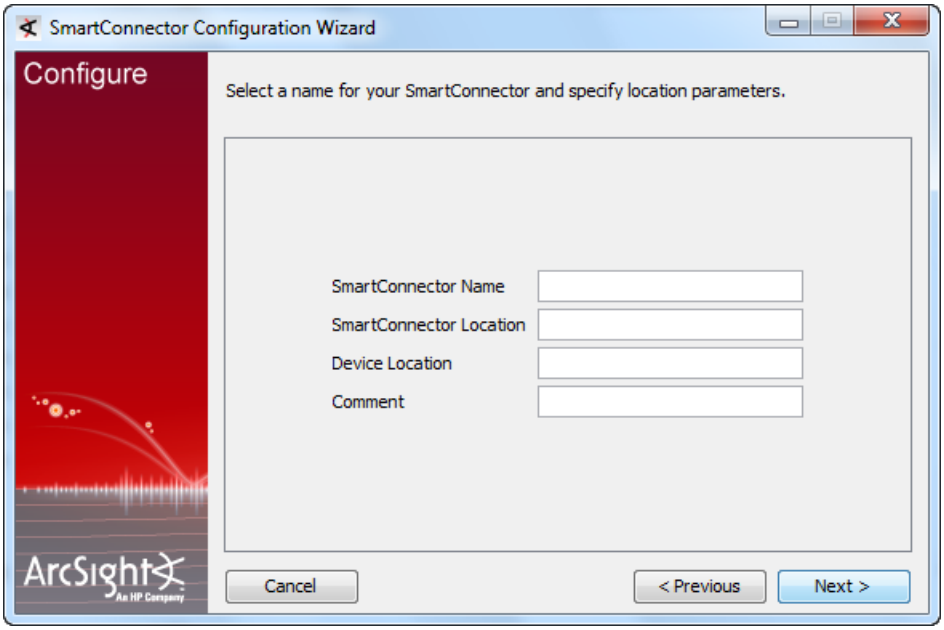


Click Add to add folder locations for folders containing the CSV log files and the associated parsers. Click **Next**.

Field	Description
Folder Location	Enter the complete path to the folder containing the CSV log files. Each folder must contain CSV files of the same format, and associated with the same parser.
Parser File Name	Enter the name of the parser associated with the specific CSV folder. The parser must match for the format of the CSV file. You can create a different parser format for each folder configured.

Use **Import** and **Export** to copy the list of folders and parsers to or from a spreadsheet if needed.

7 Enter a name for the SmartConnector and provide other information identifying the connector's use in your environment. Click **Next**.



8 Read the SmartConnector summary and click **Next**. If the summary is incorrect, click **Previous** and make changes.

9 When the SmartConnector completes its configuration click **Next**. The Wizard now prompts you to choose whether you want to run the SmartConnector as a process or as a service.

If you choose to run the SmartConnector as a service, the Wizard prompts you to define service parameters for the SmartConnector.

10 After making your selections, click **Next**. The Wizard displays a dialog confirming the SmartConnector's configuration.

11 Click **Finish**.

A parser example that you can use as is or use as a template is created during the configuration process is located at:
`$ARCSIGHT_HOME\user\agent\flexagent\mic\asset_flexfile\`.

Running SmartConnectors

SmartConnectors can be installed and run in standalone mode, on Windows platforms as a Windows service, or on UNIX platforms as a UNIX daemon, depending upon the platform supported. On Windows platforms, SmartConnectors also can be run using shortcuts and optional Start menu entries.

If installed standalone, the SmartConnector must be started manually, and is not automatically active when a host is re-started. If installed as a service or daemon, the SmartConnector runs automatically when the host is re-started. For information about connectors running as services or daemons, see the ArcSight SmartConnector User's Guide.

For connectors installed standalone, to run all installed SmartConnectors on a particular host, open a command window, go to `$ARCSIGHT_HOME\current\bin` and run: `arcsight connectors`

To view the SmartConnector log, read the file: `$ARCSIGHT_HOME\current\logs\agent.log`

To stop all SmartConnectors, enter `Ctrl+C` in the command window.

Set the Model Import User

After installing, configuring, and starting the connector, from the ArcSight ESM Console set the Model Import User for the connector (this can be **admin** or some other user). Setting the user links the user to the assets, and that user is then treated as the "creator" of the assets. The connector is then run on that user's behalf.

1. From the **ESM Console**, go to the **Navigator** panel and choose the **Resources** tab.
2. Under **Resources**, choose the **Connector** tab.
3. From under the **All Connector** directory, navigate to your **Asset Model Import FlexConnector**.
4. Move to the **Inspect/Edit** panel and choose the **Connector** tab.
5. Under the **Connector** tab, go to **Model Import User** and select an **admin** user from the drop down list, as shown below:

6. Click **OK**.

CSV Format and Parser Example

The following is an example of the CSV format. Each line of the CSV file represents one asset.

If you want categories to create automatically on the ESM server side, the property archive.import.asset.category.auto.create must be set to true in the server.properties property file. See the *ArcSight Console User's Guide*, chapter *Reference Guide*, subtopic *Asset Auto-Creation*, for details on working with assets.

Default CSV Format

By default, the parser supports the following CSV format:

```
Action,InactiveAsset*,InactiveReason,AssetName,Ip,Mac,HostName,Ext
ernalId,Alias,ParentGroupUri,OldParentGroupUri,AssetDescription,Zo
neUri,LocationUri,AssetCategory
```

*the asset can be inactive or active based on the value passed (true or false) to enable or disable the asset

An example of a CSV file:

```
addAsset,,,asset_1,199.199.0.1,00:11:22:33:44:51,myhostname_1,myex
ternalid_1,myalias_1,myparentgroupuri_1,,myassetdesc,myzoneuri,myl
ocationuri,myassetcategory
```

Where **AssetCategory** can be multiple categories separated by ";" and **Action** can be one of the following:

- **addAsset:** Creates an asset
- **updateAsset:** Update an existing asset on the server. The server will update asset attributes and merge categories.
- **removeAsset:** Removes the asset
- **addCategory:** Assigns one or more categories, separated by a semi-colon (;)
- **removeCategory:** Removes one or more categories, separated by a semi-colon (;)
- **addZone:** Assigns a zone. An asset can belong to one zone only. If an asset belongs to a zone, the newly-added zone will replace the existing zone. Do not add assets from more than one zone in a CSV file. Generate separate CSV files to contain assets from different zones.
- **removeZone:** Removes the asset from a zone.
- **moveAsset:** Removes the asset from the existing parent group and associates it with the new parent group.

The connector does not validate the data in the CSV file or in the XML archive. The archive can fail processing based on existing edit checks in ESM.

Parser Example and Template

You create parser files to match the format of your CSV files. This example is provided to help you create your own parser files.

```
comments.start.with=#

delimiter=,

token.count=15

token[0].name=Action

token[0].type=String

token[1].name=Inactive

token[1].type=String

token[2].name=InactiveReason
```

```
token[2].type=String
token[3].name=AssetName
token[3].type=String
token[4].name=Ip
token[4].type=String
token[5].name=Mac
token[5].type=String
token[6].name=HostName
token[6].type=String
token[7].name=ExternalId
token[7].type=String
token[8].name=Alias
token[8].type=String
token[9].name=ParentGroupUri
token[9].type=String
token[10].name=OldParentGroupUri
token[10].type=String
token[11].name=AssetDescription
token[11].type=String
token[12].name=ZoneUri
token[12].type=String
token[13].name=LocationUri
token[13].type=String
token[14].name=AssetCategory
token[14].type=String

###keep these 7 fields unchanged###

additionaldata.enabled=true
additionaldata.duplicate.keys.allowed=false
event.deviceEventCategory=__stringConstant(Asset)
event.deviceCustomString1Label=__stringConstant(model.sender)
```

```
event.deviceCustomString1=__stringConstant(flexcsv)

event.deviceCustomString2Label=__stringConstant(model.template)

event.deviceCustomString2=__stringConstant(mic/asset_flexcsv/asset
.vm)


###field mappings###


event.deviceVendor=__getVendor(CSV File)

event.deviceProduct=__stringConstant(Assets)

event.deviceAction=Action

additionaldata.Action=Action

event.externalId=ExternalId

event.flexString1=AssetName

#following mappings maybe removed in future but required for now

additionaldata.UniqueUserId=AssetName

event.destinationUserId=AssetName
```

CSV File Attributes

Attribute	Description
Action	Defines the action you can take. See "Default CSV Format" on page 16 for details on possible actions.
InactiveAsset	Use to disable an asset.
InactiveReason	The reason the asset was inactivated (disabled).
AssetName	The asset's friendly name. This field can default to the asset's host name or IP address. This name is listed in the Asset tree in ESM.
IP	The asset's IP address, in dotted-decimal notation.
MAC	The unique hardware ID for the network device.
HostName	The asset's DNS name.
ExternalID	The asset's user-defined identifier.
Alias	The asset's display name. If an alias is not specified, the asset name is used. Typically used in a localized environment to display the asset name in the local language.
ParentGroupUri	The URI of the asset's immediate parent group in the hierarchy, based on ESM's Asset tree. For example, "/All Assets/Customer A/".
OldParentGroupUri	Used only to move one asset from one group to another. Is the URI of the source group for the asset.
AssetDescription	The asset's text description.
ZoneUri	As described in Assets and Changing Assets. Specify the Zone URI of the Asset, as shown in the in ESM Zones tree.
LocationUri	The asset's user-specified location.
AssetCategory	The URI of the category to which the asset belongs. An asset can belong to more than one category. Assets can be categorized based on business use, criticality, applications, hardware, operating system, or other criteria. If a category does not exist, it is automatically created for the asset. For example, for the category Criticality, and asset can belong to the category High (with the Criticality categories of High, Medium, and Low).

Reloading Asset Model Data

A redeployment, reconfiguration or mistaken deletion of attributes of your ESM structure may require reloading all asset data. Use the following procedure to reload asset data:

1. Stop the connector if running.
2. From the ESM Console, go to the **Navigator** panel and choose the **Resources** tab.
3. Under **Resources**, choose the **Asset** tab.

4 Under **All Assets**, go to the top level directory. Highlight the **asset data**, right-click and choose **Delete Group** from the shortcut menu.

Be sure not to delete all assets. Delete only the assets managed by this connector.

5 On the connector side, reconstitute the asset data by recopying it from its original source, or renaming the backup files to their original file names.

Chapter 4

Asset Model Import FlexConnector for CSV Parser Template

This chapter provides information about the Asset Model Import FlexConnector for CSV parser template.

The following topics are covered:

CSV Parser Template

The Asset Model Import FlexConnector for CSV includes a CSV parser template that is generated during connector configuration:

Attribute	Description
FullName	**Required** The actor's full name as concatenated in the IDM or database.
FirstName	Specifies the actor's first name.
LastName	Specifies the actor's last name.
MiddleInitial	Specifies the actor's middle initial.
StartTime	If a time is not provided, it will default to system time.
DN	The distinguished name for the user, for example, CN=John Doe, OU=Sales, DC=companyname,DC=com
EmployeeType	The type of employee this actor is in your company. This value is usually a classification unique to your company's personnel operations, for example, full-time, exempt, or contractor.
Status	The employment status of the actor, one of: Active, Deleted or Disabled. When an actor is deleted from the IDM or database, the actor will remain in the ESM actor model with the status of deleted. This will preserve any history related to this actor in case activity appears on the system that is inappropriate to the actor's status. If the actor is deleted directly from ESM, the actor will be completely removed from the ESM actor model without preserving a history.

Attribute	Description
Title	Specifies the actor's job title.
Company	The company by whom the actor is employed, applies to contractors or employees from partner companies.
Org	The organization within your company of which the actor is a member.
Department	The actor's department.
Manager	The actor's manager.
Assistant	The actor's assistant.
EmailAddress	The actor's company email address.
Location	The actor's work location.
Office	The actor's office address.
BusinessPhone	The actor's business phone.
MobilePhone	The actor's mobile phone.
Fax	The actor's fax number.
Pager	The actor's pager number.
Address	Actor's business street address.
City	Actor's business address city.
State	Actor's business address state.
ZIPCode	Actor's business address ZIP code.
CountryOrRegion	Actor's business address country or region.

The IDMIdentifier is captured during the connector setup. The UUID is mapped from event.destinationUserId.

Note that the UUID is not the same as uniqueid.fields. uniqueid.fields identifies a unique row in the database.

CSV Parser ID-based Template

The following is the CSV parser template for an ID database table:

```
version.order=1

version.id=1

version.query=<query to verify database version or existence of
certain table/columns>

maxid.query=<query to select maxid>

query=<select query to select appropriate columns. The query would
select all the records where id is greater than a given id--as a
parameter>

id.field=<id column>

###optional###
```

```
#uniqueid.fields=<comma separated field(s) identifying unique row
when id is same for than one row>

###keep these 7 fields unchanged###

additionaldata.enabled=true

additionaldata.duplicate.keys.allowed=false

event.deviceEventCategory=__stringConstant("Actor")

event.deviceCustomString1Label=__stringConstant(model.sender)

event.deviceCustomString1=__stringConstant(flexdatabase)

event.deviceCustomString2Label=__stringConstant(model.template)

event.deviceCustomString2=__stringConstant(../flexagent/mic/flexda
tabase/base.vm)

###field mappings###

event.deviceVendor=__getVendor("My Database")

event.deviceProduct=__stringConstant(Identity Manager)

event.destinationUserId=<user id column>

###optional mappings###
```

CSV Parser Time-based Template

The following is the base attributes parser template for timestamp database tables:

```
version.order=1

version.id=1

version.query=<query to verify database version or existence of
certain table/columns>

lastdate.query=<query to select max timestamp>

query=<select query to select appropriate columns. The query would
select all the records where timestamp is greater than a given
timestamp--as a parameter>

timestamp.field=<timestamp column>

uniqueid.fields=<comma separated field(s) identifying unique row>

###keep these 7 fields unchanged###

additionaldata.enabled=true

additionaldata.duplicate.keys.allowed=false

event.deviceEventCategory=__stringConstant("Actor")

event.deviceCustomString1Label=__stringConstant(model.sender)
```

```
event.deviceCustomString1=__stringConstant(flexdatabase)

event.deviceCustomString2Label=__stringConstant(model.template)

event.deviceCustomString2=__stringConstant(../flexagent/mic/flexda
tabase/base.vm)

###field mappings###

event.deviceVendor=__getVendor("My Database")

event.deviceProduct=__stringConstant(Identity Manager)

event.destinationUserId=<user id column>

###optional mappings###
```