

**BigFix Integration ServiceNow
Quick Start Guide**

Special notice

Before using this information and the product it supports, read the information in [Notices \(on page xl\)](#).

Edition notice

This edition applies to BigFix version 10 and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

- Chapter 1. Detailed system requirements.....5**
- Chapter 2. Deployment and configuration..... 10**
- Chapter 3. ServiceNow Fixlets and Tasks.....15**
- Appendix A. Glossary..... 27**
- Appendix B. Support..... 39**
- Notices.....xl
- Index.....

Chapter 1. Detailed system requirements

This section provides comprehensive information on the system requirements for Integration Services. Prior to service deployment, it is necessary for the user to possess the access outlined below.

BigFix Service Account Requirements

- admin access (not SOAP role admin access)

To facilitate the import of ServiceNow CMDB data into BigFix, a Master Operator account is required. Otherwise, the minimum account requirements to send BigFix endpoint data to ServiceNow are the following:

- A non-master operator account with permissions against the in-scope computers.
- Read access to the BigFix ServiceNow Data Flow site.
- The **Can use REST API** setting set to Yes
- The **Can Create Actions** setting set to No.

ServiceNow Service Account Requirements

- read and write access for CMDB_CI_COMPUTERS , SYS_CHOICE and CORE_COMPANY tables

The ServiceNow Administrator should have a service account that leverages basic authentication with read and write access to the CMDB tables.

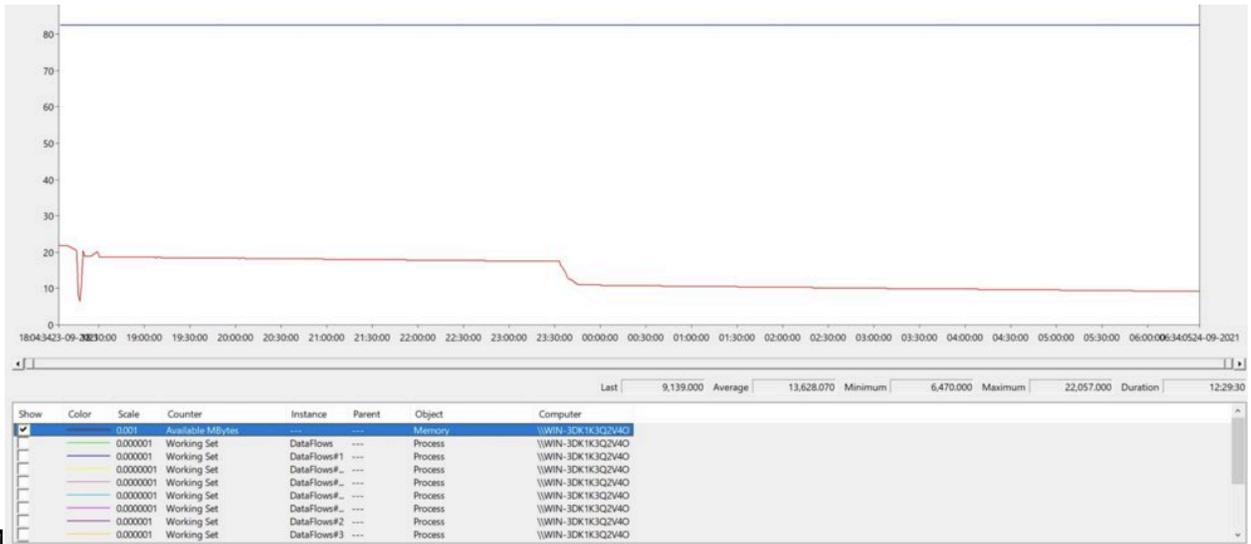
Table 1. ServiceNow Data Flow

Prerequisites	Operating system	Hardware	Configuration	BigFix Service Account	Supported BigFix versions	Supported ServiceNow versions	Recommendations
<p>Microsoft VC++ Redistributable package 2012. Install it from Microsoft website.</p>	<ul style="list-style-type: none"> • Windows 2016 • Windows 2019 	<ul style="list-style-type: none"> • 6-8 Cores • 32 GB RAM <p>RAM Utilization depends on number of devices, example:</p> <ul style="list-style-type: none"> • 50k devices utilize 3.5GB RAM • 300k devices utilize 22GB RAM* 	<ul style="list-style-type: none"> • Network Access to BigFix Root Server • Network Access to ServiceNow REST APIs 	<ul style="list-style-type: none"> • Master Operator account required • Access to InScope Devices • No Ability to Create Actions • Access to REST API • Access to Any Site Containing 	<p>BigFix Server version 10</p>	<ul style="list-style-type: none"> • Orlando • Madrid • New York • Rome • Quebec • Paris • San Diego 	<p>In larger environments, make sure you deploy the integration solution on a dedicated server.</p>

Table 1. ServiceNow Data Flow (continued)

Prerequisites	Operating system	Hardware	Configuration	BigFix Service Account	Supported BigFix versions	Supported ServiceNow versions	Recommendations
				In-Scope Properties			

*12 hours execution for 300K devices consumes maximum 22 GB



RAM

Table 2. Qualys Vulnerability Management

Prerequisites	Operating system	Hardware	Con-figuration	BigFix Service Account	Supported BigFix versions	Support-ed Qualys versions	Supported BI tools	Rec-om-men-da-tions
<ul style="list-style-type: none"> • Microsoft VC++ Redistributable package 2012. Install it from the Microsoft website. • Microsoft® ODBC Driver 17 for SQL Server®. Install it from the Microsoft website. • BigFix Insights 	<ul style="list-style-type: none"> • Mi-crosoft Win-dows 2016 • Mi-crosoft Win-dows 2019 	<ul style="list-style-type: none"> • 4-8 Cores • 4-8 GB RAM 			<ul style="list-style-type: none"> • BigFix Server ver-sion 10 with In-sights • BigFix Lifecycle or BigFix Compli-ance • Microsoft SQL Server 2017 	VMDR Module	<ul style="list-style-type: none"> • Power BI Desk-top/Serv-er, 2019 + • Tableau Desk-top/Serv-er, 2019.2 + 	

Chapter 2. Deployment and configuration

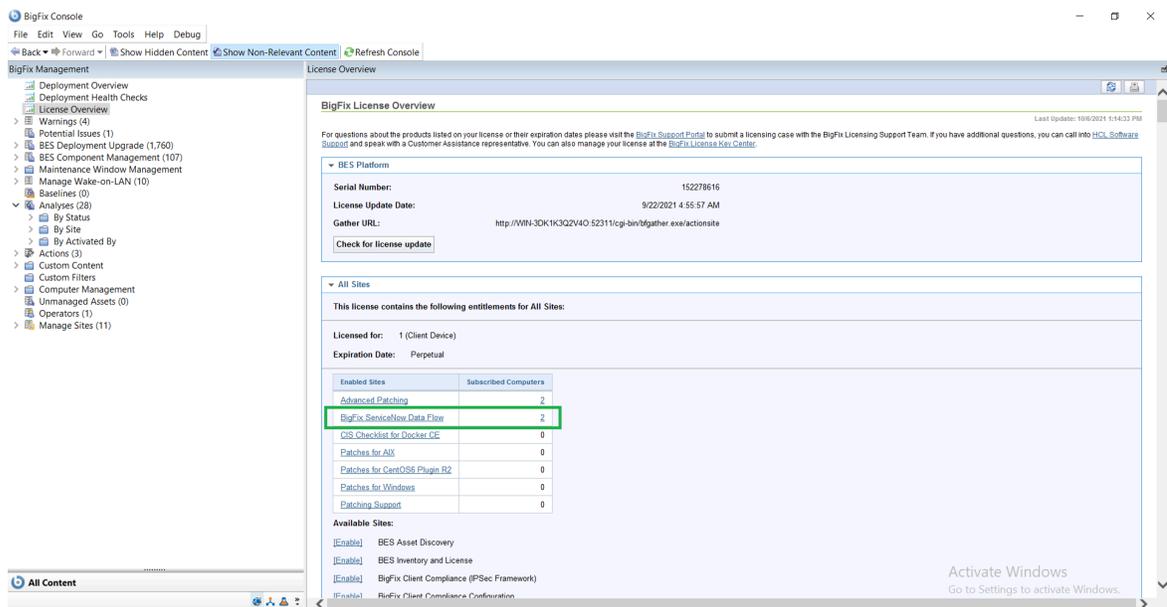
This module provides the steps to deploy the BigFix ServiceNow Data Flow solution.

Before you deploy the Fixlet, please note the following pre-requisites:

- read and write access for CMDB_CI_COMPUTERS , SYS_CHOICE and CORE_COMPANY tables in ServiceNow
- admin access for ServiceNow (not SOAP role admin access)

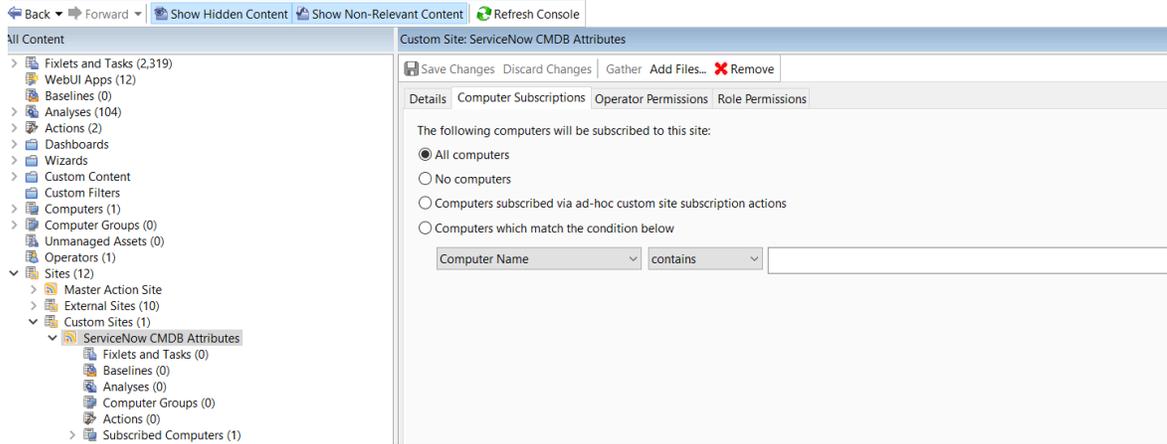
1. Enable a content site.

Navigate to BigFix License Overview Dashboard. In **Compliance/Lifecycle** panel, click **Enable BigFix ServiceNow Data Flow** Fixlet to gather the required content.



2. Create a Custom Site.

Go to Custom Sites and create a new site. Name it as **ServiceNow CMDB Attributes** and select **All Computers** in Computer Subscriptions.



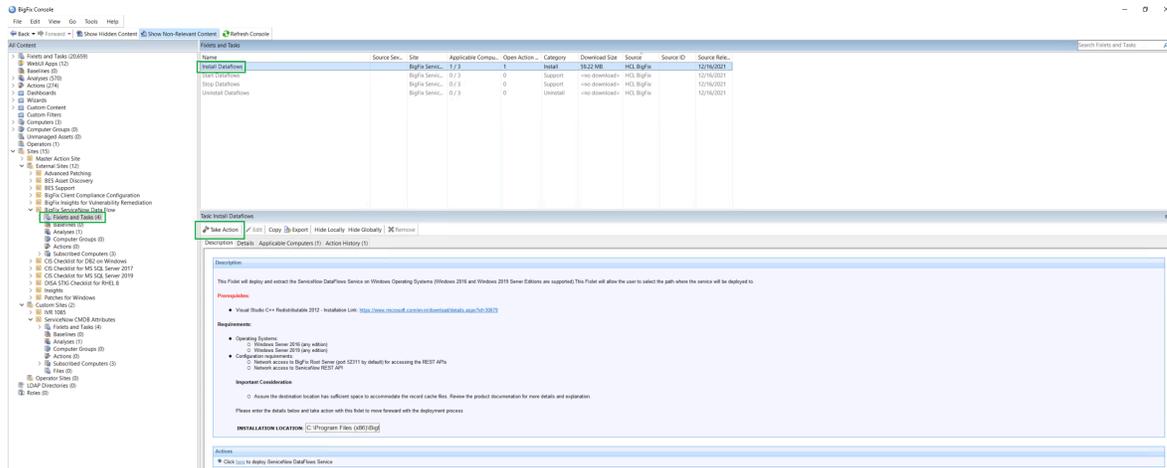
3. Deploy the solution to the target server.

To deploy ServiceNow version 1.2 follow the steps in the [Deploy BigFix ServiceNow Data Flow Service \(on page 15\)](#) Fixlet.

 **Note:**
Hardware analysis must be activated before the job run starts.

4. To deploy ServiceNow version 1.1 follow the steps below:

Select **Install Dataflows** task in BigFix ServiceNow Data Flow External Sites and click on **Take Action**. By default the installation location is `C:\Program Files(x86)\BigFix Enterprise\Dataflow`. Please do **not** change default installation location.



5. Set up DataFlow configuration file.

- a. Navigate to Installation Location C:\Program Files (x86)\BigFix Enterprise \Dataflow and open Dataflow configuration file.
- b. Update Bigfix and ServiceNow connection string.

```

1 <?xml version="1.0" ?><dataflowconfig xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="DataflowsConfig.xsd">
2 <datasources>
3 <datasource data_source_name="BigFixRestAPI" connectionstring="https://WIN-3DK1K3Q2V40:52311/api" verifycert="false" username="HYSv/6dlVFP8QlyxGt1RGUj3e3dSc4bor9mRg05+m" pa
4 </datasource>
5 <datasource data_source_name="ServiceNowAPI" connectionstring="https://dev76458.service-now.com/api/now/table" verifycert="false" username="OCL1/xDfa+V8B1n8k0E+PCkG75Ltc0ZC
6 </datasource>
7 <dataflows>
8 <dataflow displayname="Endpoint data from BigFix To ServiceNow" datatype="asset" schedule="*/30 * * * *">
9
10 <dataflowdescription/>
11 <sourceadapter displayname="BigFix Adapter" adapterclass="bigfix" data_source_name="BigFixRestAPI">
12 <device_properties>
13 <sourcekey displayname="BigFix Computer ID" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-1" datatype="string"/>
14 <targetkey displayname="ServiceNow SYS_ID" propertyname="ServiceNow CMB Attributes-ServiceNow Custom Properties-2" datatype="int"/>
15 <property displayname="Computer Name" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-2" datatype="string"/>
16 <property displayname="Discovery Source" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-3" datatype="string"/>
17 <property displayname="Last Discovered" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-4" datatype="string"/>
18 <property displayname="Chassis Type" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-5" datatype="string"/>
19 <property displayname="Virtual" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-6" datatype="boolean"/>
20 <property displayname="Manufacturer" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-7" datatype="string"/>
21 <property displayname="Model number" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-8" datatype="string"/>
22 <property displayname="OS" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-9" datatype="string"/>
23 <property displayname="OS Version" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-10" datatype="string"/>
24 <property displayname="OS Domain" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-11" datatype="string"/>
25 <property displayname="CPU Manufacturer" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-12" datatype="string"/>
26 <property displayname="CPU Name" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-13" datatype="string"/>
27 <property displayname="CPU Speed" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-14" datatype="string"/>
28 <property displayname="CPU Core Count" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-16" datatype="string"/>
29 <property displayname="RAM" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-17" datatype="string"/>
30 <property displayname="Disk space" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-18" datatype="string"/>
31 <identityproperty displayname="IP Address" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-19" datatype="string" weight="20"/>
32 <identityproperty displayname="MAC Address" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-20" datatype="string" weight="20"/>
33 </device_properties>
34 </sourceadapter>
35
36 <targetadapter displayname="ServiceNow Adapter" adapterclass="servicenow" data_source_name="ServiceNowAPI">
37 <device_properties>
38 <sourcekey displayname="ServiceNow SYS_ID" propertyname="sys_id" datatype="string"/>
39 <targetkey displayname="BigFix Computer ID" propertyname="correlation_id" datatype="string"/>
40 <property displayname="Name" propertyname="name" datatype="string" weight="20"/>
41 <property displayname="Discovery Source" propertyname="discover_source" datatype="string"/>
42 <property displayname="Last Discovered" propertyname="sys updated on" datatype="string"/>
43 </device_properties>
44 </targetadapter>
45 </dataflowdescription/>
46 </dataflow>
47 </dataflows>
48 </dataflowconfig>

```

6. Set up scheduler.

You can schedule the ServiceNow Dataflow as per requirement.

```

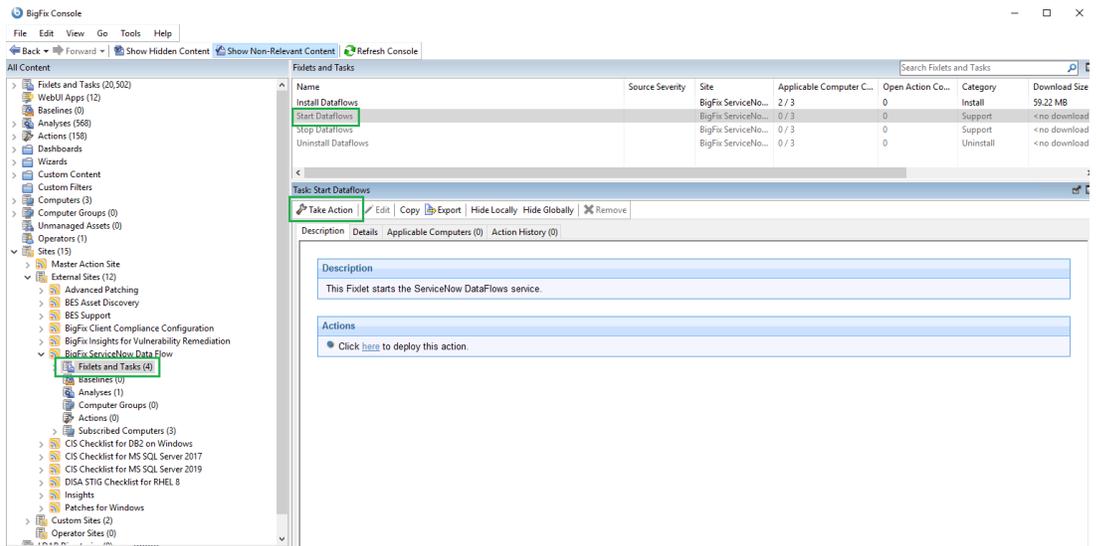
1 <?xml version="1.0" ?><dataflowconfig xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="DataflowsConfig.xsd">
2 <datasources>
3 <datasource data_source_name="BigFixRestAPI" connectionstring="https://WIN-3DK1K3Q2V40:52311/api" verifycert="false" username="HYSv/6dlVFP8QlyxGt1RGUj3e3dSc4bor9mRg05+m" pa
4 </datasource>
5 <datasource data_source_name="ServiceNowAPI" connectionstring="https://dev76458.service-now.com/api/now/table" verifycert="false" username="OCL1/xDfa+V8B1n8k0E+PCkG75Ltc0ZC
6 </datasource>
7 <dataflows>
8 <dataflow displayname="Endpoint data from Bigfix To ServiceNow" datatype="asset" schedule="*/30 * * * *">
9
10 <dataflowdescription/>
11 <sourceadapter displayname="BigFix Adapter" adapterclass="bigfix" data_source_name="BigFixRestAPI">
12 <device_properties>
13 <sourcekey displayname="BigFix Computer ID" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-1" datatype="string"/>
14 <targetkey displayname="ServiceNow SYS_ID" propertyname="ServiceNow CMB Attributes-ServiceNow Custom Properties-2" datatype="int"/>
15 <property displayname="Computer Name" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-2" datatype="string"/>
16 <property displayname="Discovery Source" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-3" datatype="string"/>
17 <property displayname="Last Discovered" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-4" datatype="string"/>
18 <property displayname="Chassis Type" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-5" datatype="string"/>
19 <property displayname="Virtual" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-6" datatype="boolean"/>
20 <property displayname="Manufacturer" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-7" datatype="string"/>
21 <property displayname="Model number" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-8" datatype="string"/>
22 <property displayname="OS" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-9" datatype="string"/>
23 <property displayname="OS Version" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-10" datatype="string"/>
24 <property displayname="OS Domain" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-11" datatype="string"/>
25 <property displayname="CPU Manufacturer" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-12" datatype="string"/>
26 <property displayname="CPU Name" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-13" datatype="string"/>
27 <property displayname="CPU Speed" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-14" datatype="string"/>
28 <property displayname="CPU Core Count" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-16" datatype="string"/>
29 <property displayname="RAM" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-17" datatype="string"/>
30 <property displayname="Disk space" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-18" datatype="string"/>
31 <identityproperty displayname="IP Address" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-19" datatype="string" weight="20"/>
32 <identityproperty displayname="MAC Address" propertyname="BigFix ServiceNow Data Flow-Hardware Attributes-20" datatype="string" weight="20"/>
33 </device_properties>
34 </sourceadapter>

```

For more information on Scheduler, refer to the link (on page).

7. Start Dataflows.

- a. Go to the Bigfix ServiceNow Data Flow in the External Sites and select **Fixlet and Tasks**. Select **Start Dataflows** task and click on **Take**



Action.

- b. In the **Take Action** dialog box, under Target choose Select Devices and select required computers in the **Applicable Computers** section and click **OK**. The Dataflow will start running in the windows service. To check if the service is running go to Windows → Run → services.msc.
8. Set the credentials for BigFix and ServiceNow.
- Obtain the credentials for your BigFix and ServiceNow database.
 - Navigate to the installation directory and run `\Dataflows.exe -- ProvideCredentials` command.
 - Enter password/secret key, as prompted.

When successful, the message *'The credentials provided are encrypted successfully!'* appears in the command prompt.

9. Initialize the Schema.

- Navigate to the installation directory and run `\Dataflows.exe --initializeschemas` command.

When successful, the message *'Schema Initialized Successfully!'* appears in the command prompt. Initialize schema will perform the following:

- verify the connection between ServiceNow and Bigfix
- add the OS and Manufacturer details from Bigfix to ServiceNow (in sys_choice and core_company tables). This is performed as the names may vary from user to user

- Ex: For OS windows different names can be win2012, w2012 or windows 2012 R2 server
- "Hardware Attribute" analyses will be created under the Bigfix ServiceNow Dataflow External site
- "ServiceNow Custom Properties" analyses will be created under the custom site ServiceNow CMDB Attributes

10. Validate the configuration.

Purpose: This step verifies the configuration provided from the previous steps.

- a. Navigate to the installation directory and run `\Dataflows.exe -- ValidateConfiguration` command.

When successful, the message 'Configuration verified successfully!' appears in the command prompt.



Note:

If ServiceNow integration is not working as intended you can reset the environment using following command: `\Dataflows.exe --Reset`.

Chapter 3. ServiceNow Fixlets and Tasks

Learn more about available Fixlets and Tasks for ServiceNow.

[Deploy BigFix ServiceNow Data Flow Service \(on page 15\)](#)

[Upgrade BigFix ServiceNow Data Flow Service to v1.2 \(on page 19\)](#)

[Uninstall BigFix ServiceNow Data Flow Service \(on page 20\)](#)

[Manage BigFix ServiceNow Data Flow Service \(on page 21\)](#)

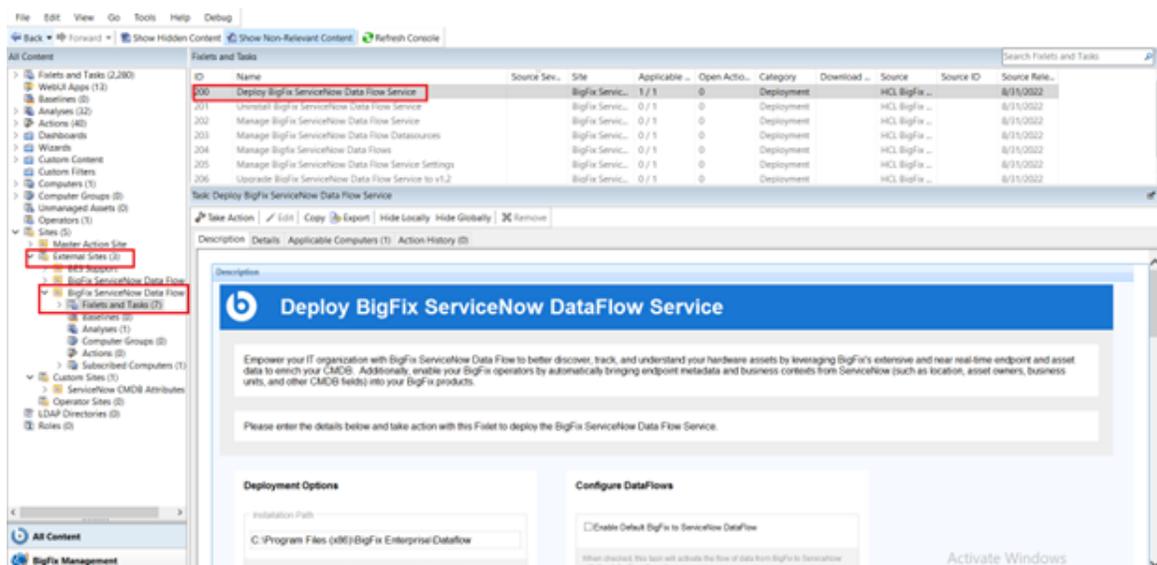
[Manage BigFix ServiceNow Data Flow Datasources \(on page 23\)](#)

[Manage BigFix ServiceNow Data Flow Data Flows \(on page 25\)](#)

[Manage BigFix ServiceNow Data Flow Service Settings \(on page 24\)](#)

Deploy BigFix ServiceNow Data Flow Service

1. Select **Deploy BigFix ServiceNow Data Flow Service** Fixlet from the BigFix ServiceNow Dataflow external site.



Note:

Please note following pre-requisites (the Fixlet will attempt to deploy these automatically):



- Microsoft Visual Studio C++ Redistributable 2012: <https://www.microsoft.com/en-in/download/details.aspx?id=30679>
- Microsoft ODBC Driver 17 for SQL Server: <https://www.microsoft.com/en-us/download/details.aspx?id=56567>

2. Provide all the required details.

- Deployment Options
 - Installation path - by default the path is C:\Program Files (x86)\BigFix Enterprise\Dataflow . It is possible to provide an alternate path.
 - Initialize Schema - checked by default
 - Start Services - checked by default. When enabled, the service will start automatically after the installation
- Configure DataFlows
 - Enable Default BigFix to ServiceNow Dataflow - when checked, the dataflow from Bigfix to ServiceNow will be enabled.
 - Enable Default ServiceNow to BigFix Dataflow - when checked, the dataflow from ServiceNow to Bigfix will be enabled.
 - Enable Preview Mode - checked by default. Preview setting is set to true. Enabling Preview Mode allows you to preview and validate the changes that will be made to BigFix and/or ServiceNow in a file rather than making the changes in the target system.

The screenshot displays two side-by-side configuration panels. The left panel, titled 'Deployment Options', contains three sections: 'Installation Path' with a text input field and a note 'Please provide the desired path for the installation of this service.'; 'Initialize Schema' with a checked checkbox and a note 'When checked, this task will validate the configuration and attempt to initialize the datasource schemas.'; and 'Start Services' with an unchecked checkbox and a note 'When checked, this task will validate the configuration and start the service.' The right panel, titled 'Configure DataFlows', contains three sections: 'Enable Default BigFix to ServiceNow DataFlow' with an unchecked checkbox and a note 'When checked, this task will activate the flow of data from BigFix to ServiceNow with the default configurations.'; 'Enable Default ServiceNow to BigFix DataFlow' with an unchecked checkbox and a note 'When checked, this task will activate the flow of data from ServiceNow into BigFix with the default configurations.'; and 'Enable Preview Mode' with an unchecked checkbox and a note 'When checked, this task will enable the preview mode in the configuration.'

- Configure BigFix DataSource
 - Connection String - URI for the BigFix RestAPI. Ex : <https://win-lfj8dd2ilij:52311/api>
 - Account - user name used to login to Bigfix Console
 - Password - password used to login to Bigfix Console

- Configure ServiceNow Datasource
 - Connection String - ServiceNow instance URL should be provided in the below format. Ex : `https://dev114254.service-now.com/api/now/table`
 - Account - user name used to login to ServiceNow instance
 - Password - password used to login to ServiceNow instance

Configure BigFix Datasource

Connection String

Please provide the URI for the BigFix RestAPI.
i.e. `https://BIGFIXSERVER:52311/api`

Account

Please provide the UserName for a Master Operator.

Password

Please provide the Password for this Master Operator.

Configure ServiceNow Datasource

Connection String

Please provide the URI to access your ServiceNow instance.
i.e. `https://SERVICE_NOW_INSTANCEID/service-now.com/api/now/table`

Account

Please provide the account name for this datasource.

Password

Please provide the password for the account specified above.

- Configure BigFixServiceNow ETL

Depending on which Dataflow is enabled, respective ETL gets checked. It is required to provide the ETL in the Unix cron format. Refer to the link ([on page](#)) for more information about the scheduler.

Configure BigfixServiceNow ETL

Import Bigfix Data Into ServiceNow

When checked, the ETL from Bigfix to ServiceNow will be enabled.

Bigfix to ServiceNow Import Schedule

Please specify the desired ETL schedule to import Bigfix data to ServiceNow.

Import ServiceNow Data Into Bigfix

When checked, the ETL from ServiceNow to Bigfix will be enabled.

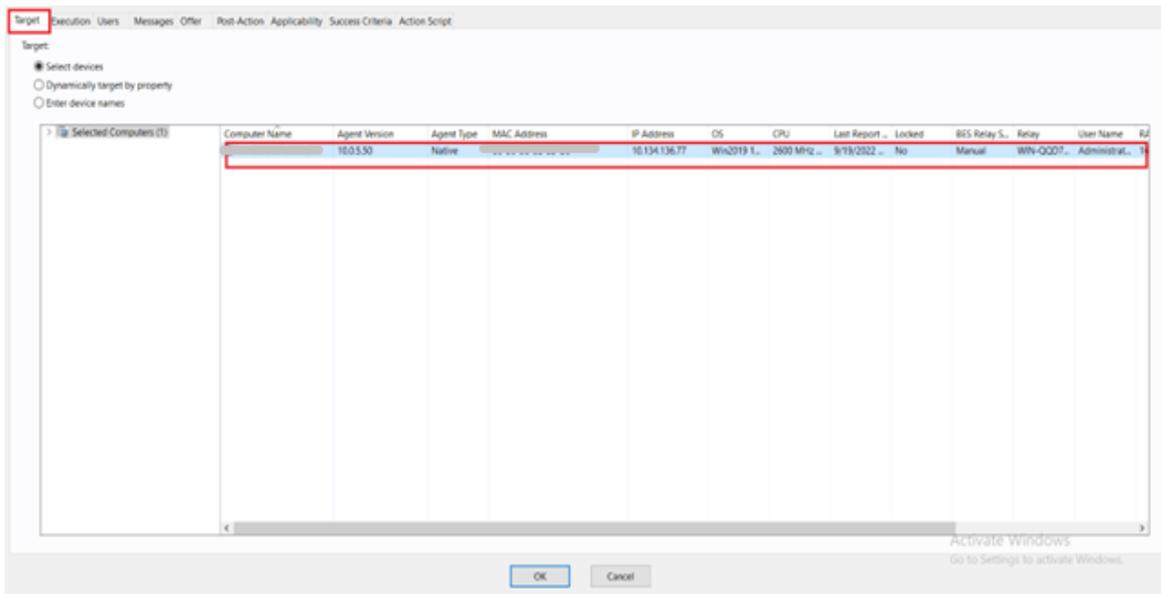
ServiceNow to Bigfix Import Schedule

Please specify the desired ETL schedule to import ServiceNow data to Bigfix.

- Advanced Settings

To provide proxy details click on **Advanced Settings**. This option is not mandatory.

3. Click on **Take Action** and select the target device where the Service should be installed and click **OK**. The BigFix ServiceNow Dataflow will be installed in the location provided with a folder named Dataflow.



The installation completion steps are logged in install.log and the dataflow process is logged in the logs folder inside the Dataflow folder. Default file location is C:\Program Files (x86)\BigFix Enterprise\Dataflow\install.log.

Upgrade BigFix ServiceNow Data Flow Service to v1.2



Note:

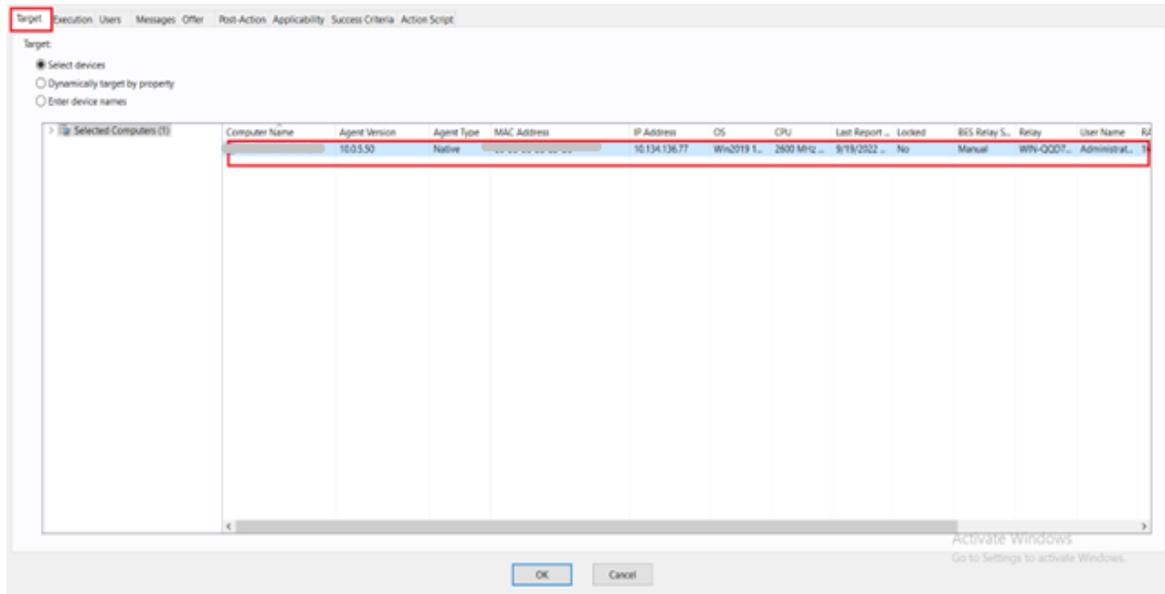
This Fixlet can be used only if there is previous version of BigFix ServiceNow Dataflow Service already installed.

1. Select **Upgrade BigFix ServiceNow Data Flow Service to v1.2** Fixlet from the BigFix ServiceNow Dataflow external site to upgrade the existing BigFix ServiceNow dataflow to the latest version.

The screenshot shows the BigFix console interface. In the left-hand navigation pane, the 'Fixlets and Tasks' folder is expanded, and the 'Upgrade BigFix ServiceNow Data Flow Service to v1.2' fixlet is highlighted with a red box. The main pane displays the details for this fixlet, including a description and an 'Antenna' section with a button to click a URL to deploy the services.

Name	Source Sev.	Site	Applicable ...	Open Actio...	Category	Download ...	Source	Source ID	Source Rele...
Uninstall BigFix ServiceNow Data Flow Service		BigFix Servic...	0 / 1	0	Deployment		HCL BigFix ...		8/31/2022
Manage BigFix ServiceNow Data Flow Service		BigFix Servic...	0 / 1	0	Deployment		HCL BigFix ...		8/31/2022
Manage BigFix ServiceNow Data Flow Datasources		BigFix Servic...	0 / 1	0	Deployment		HCL BigFix ...		8/31/2022
Manage BigFix ServiceNow Data Flow		BigFix Servic...	0 / 1	0	Deployment		HCL BigFix ...		8/31/2022
Manage BigFix ServiceNow Data Flow Service Settings		BigFix Servic...	0 / 1	0	Deployment		HCL BigFix ...		8/31/2022
Upgrade BigFix ServiceNow Data Flow Service to v1.2		BigFix Servic...	0 / 1	0	Deployment		HCL BigFix ...		8/31/2022

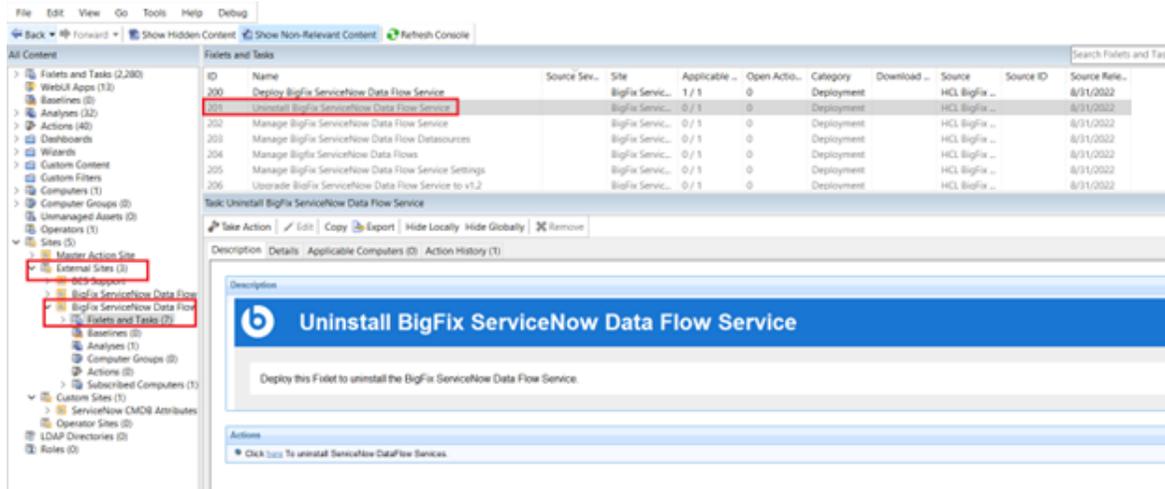
2. Select **Take Action** and select the target device to upgrade the Service. Click **OK**.



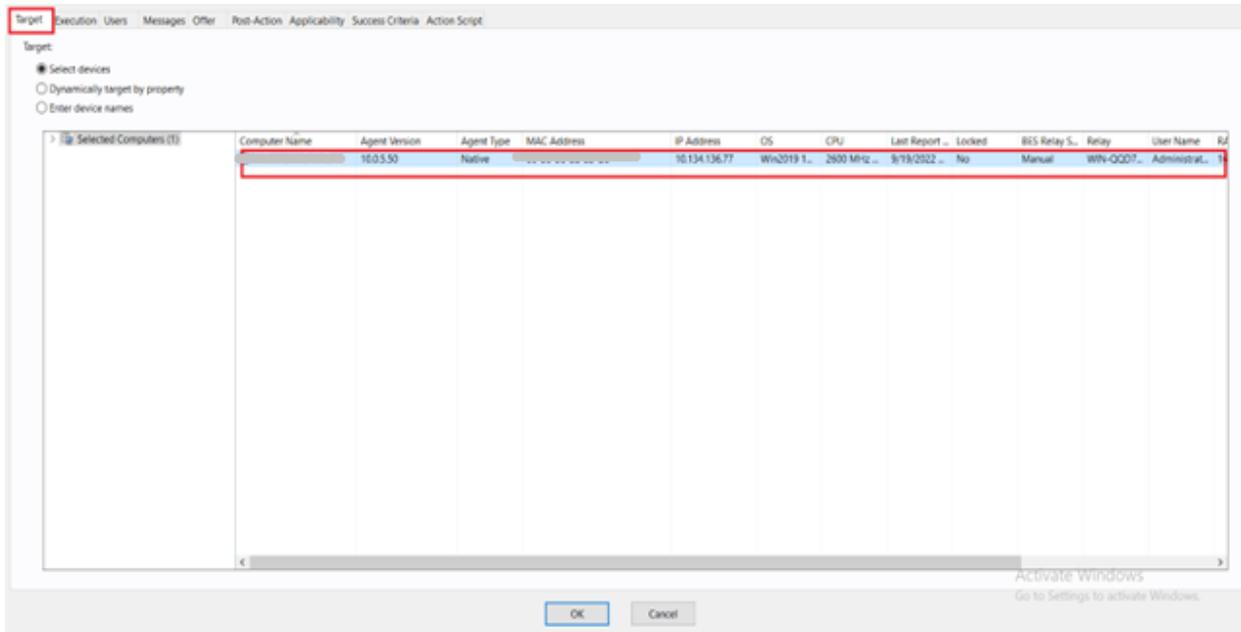
The upgradation completion steps are logged in bfsnow_upgrade.log. The default file location is C:\Program Files (x86)\BigFix Enterprise.

Uninstall BigFix ServiceNow Data Flow Service

1. To uninstall existing BigFix ServiceNow Dataflow select **Uninstall BigFix ServiceNow Data Flow Service** Fixlet from the BigFix ServiceNow Dataflow external site.



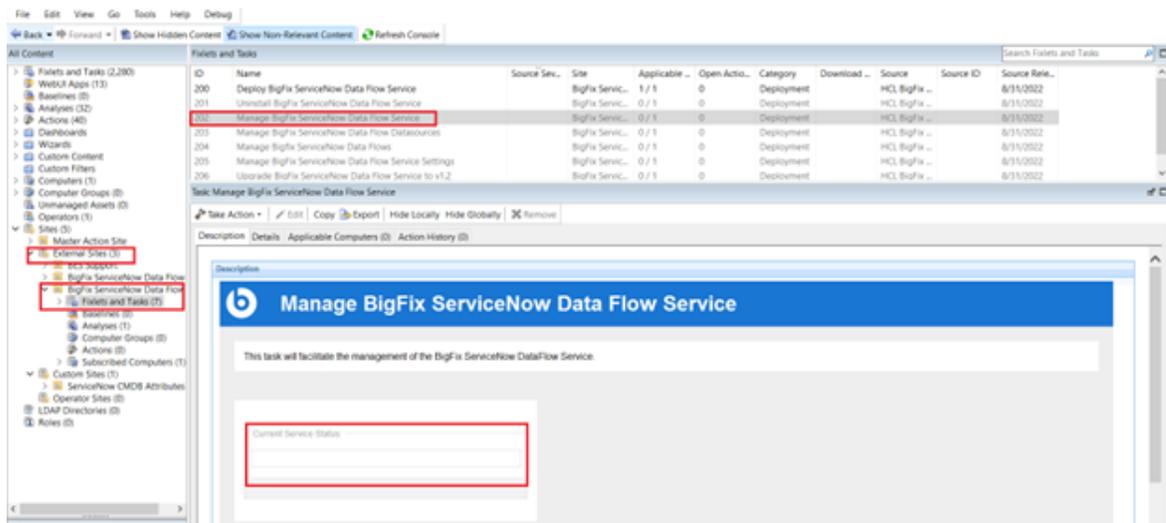
2. Select target devices under Target tab and click **OK**.



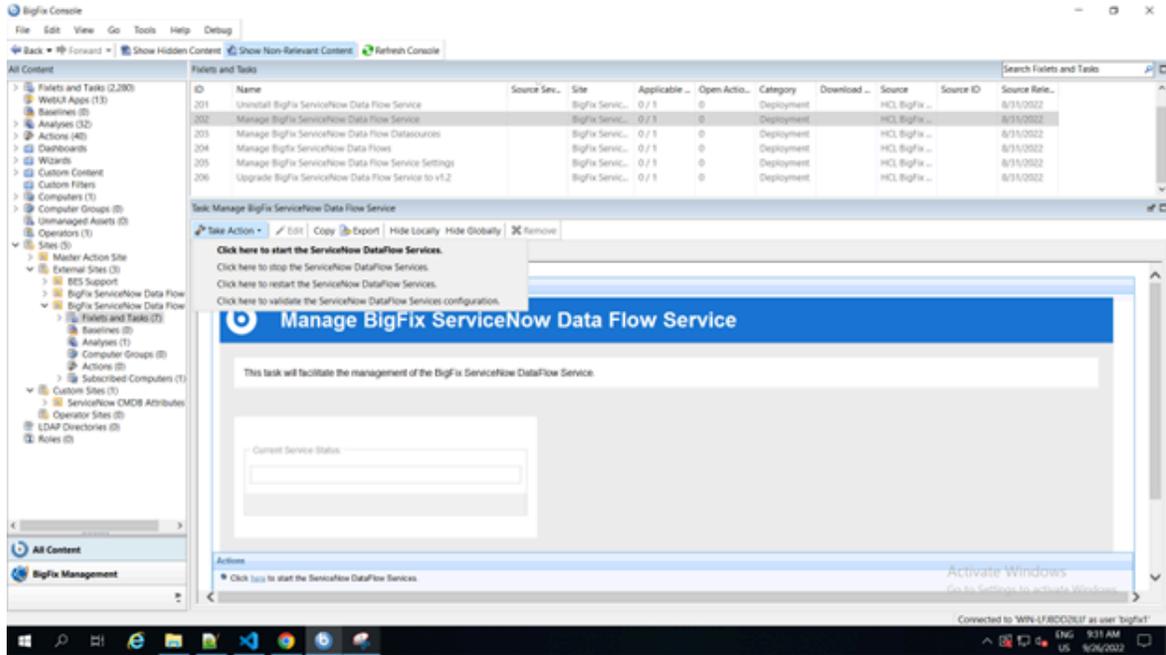
The uninstall completion steps can be checked in the bfsnow_uninstall.log file. The default file location is C:\Program Files (x86)\BigFix Enterprise.

Manage BigFix ServiceNow Data Flow Service

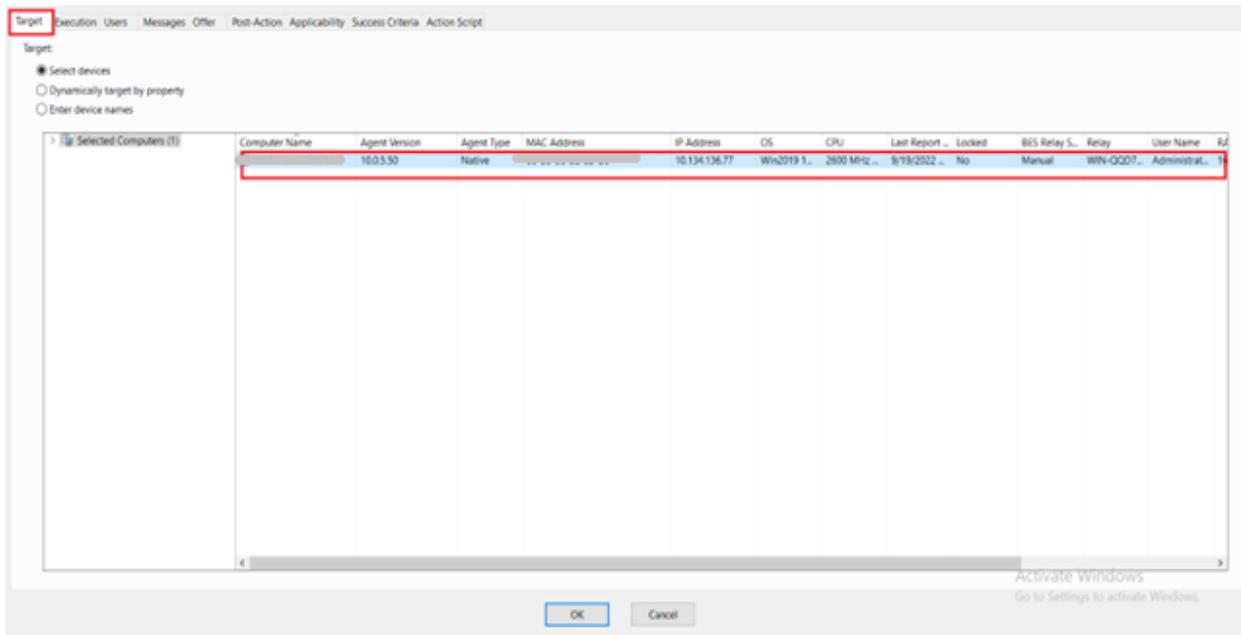
1. To stop, start or restart the DataFlow Service and to validate configuration file use **Manage BigFix ServiceNow Data Flow Service** Fixlet from the BigFix ServiceNow Dataflow external site. The current service state of the dataflow is displayed on the UI.



2. Choose the desired action from the **Take Action** list.



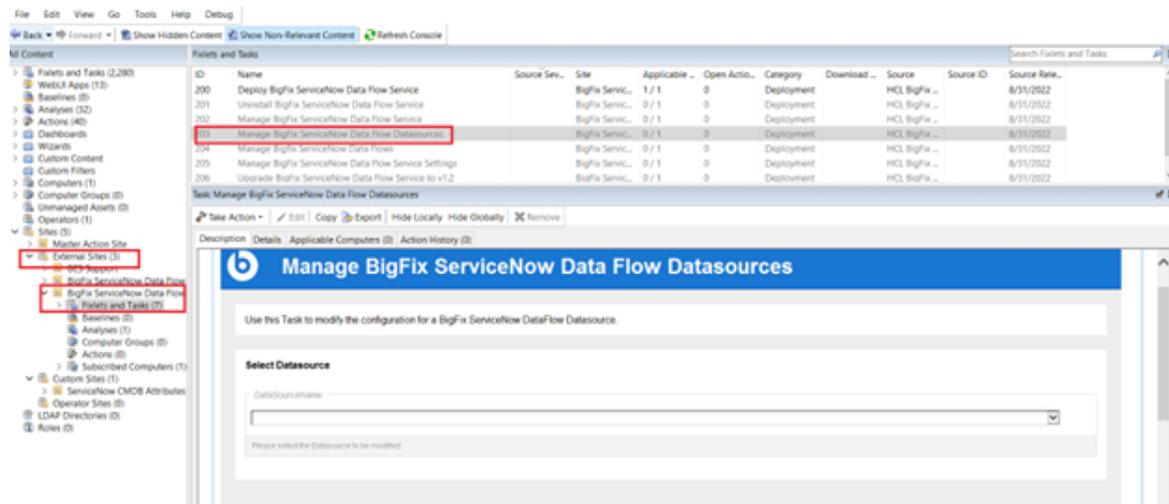
3. Select target devices under Target tab and click **OK**.



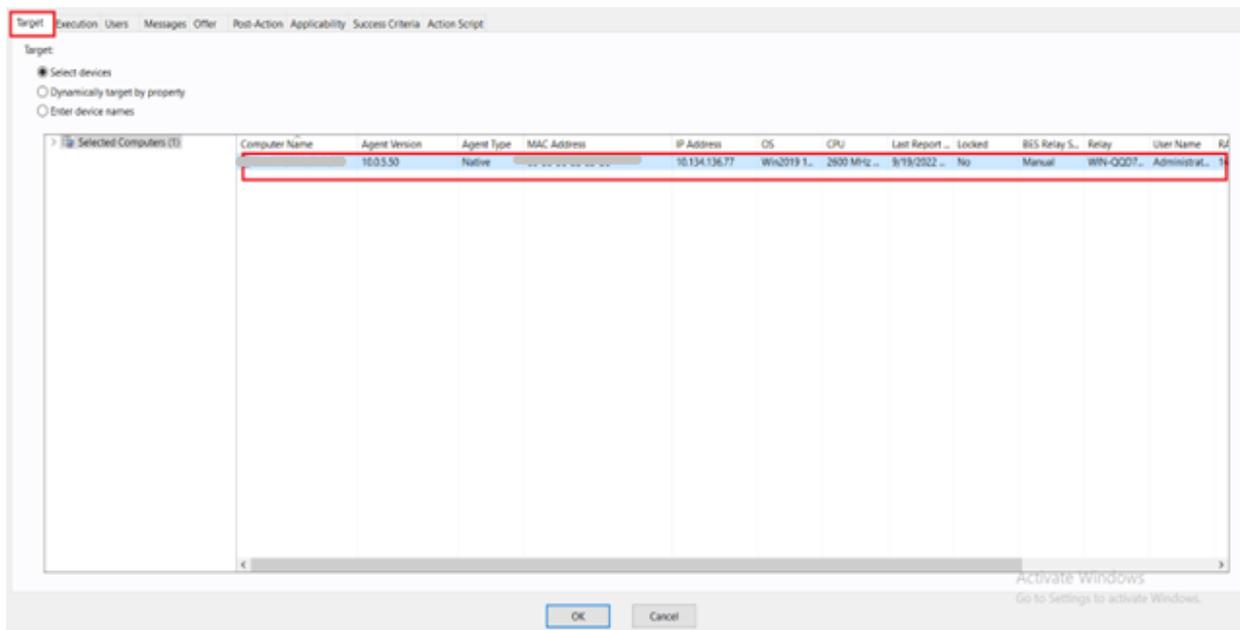
Check manage_services.log in the Dataflow folder for any issues.

Manage BigFix ServiceNow Data Flow Datasources

1. To add or modify connection string, account ,password or the proxy settings of BigFix and ServiceNow use **Manage BigFix ServiceNow Data Flow Datasources** Fixlet from the BigFix ServiceNow Dataflow external site.
2. Choose the datasourcename from the drop down.
3. Add/Modify the datasource connection string , account and password for the selected datasource.
4. Add/Modify the proxy host, proxy username, proxy password for the selected datasource.



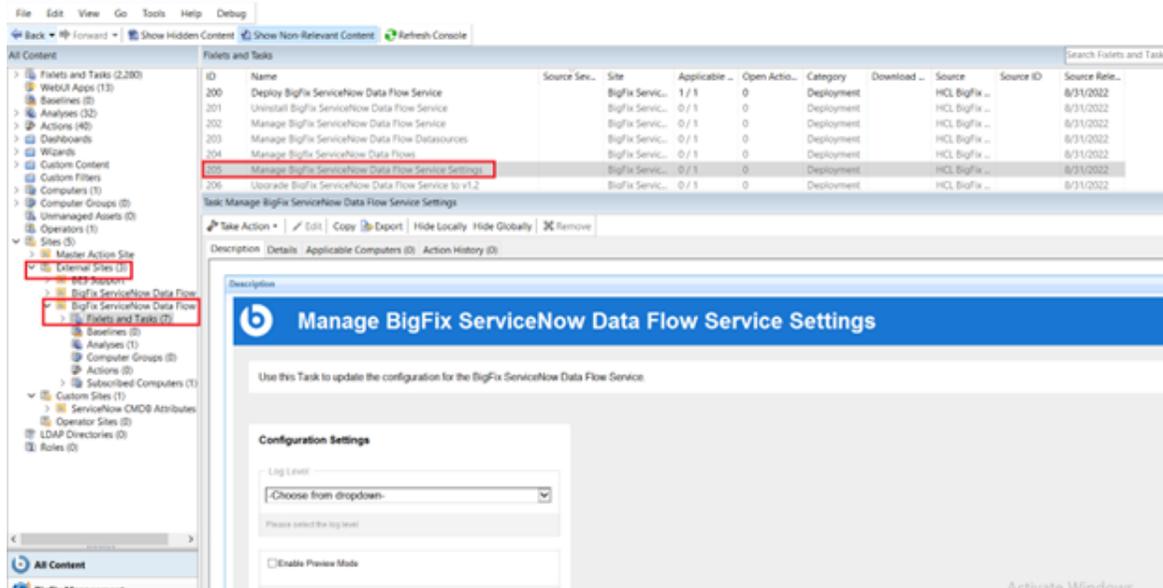
5. Select target devices under Target tab and click **OK**.



The completion steps are logged in manage_datasource.log in the Dataflow folder.

Manage BigFix ServiceNow Data Flow Service Settings

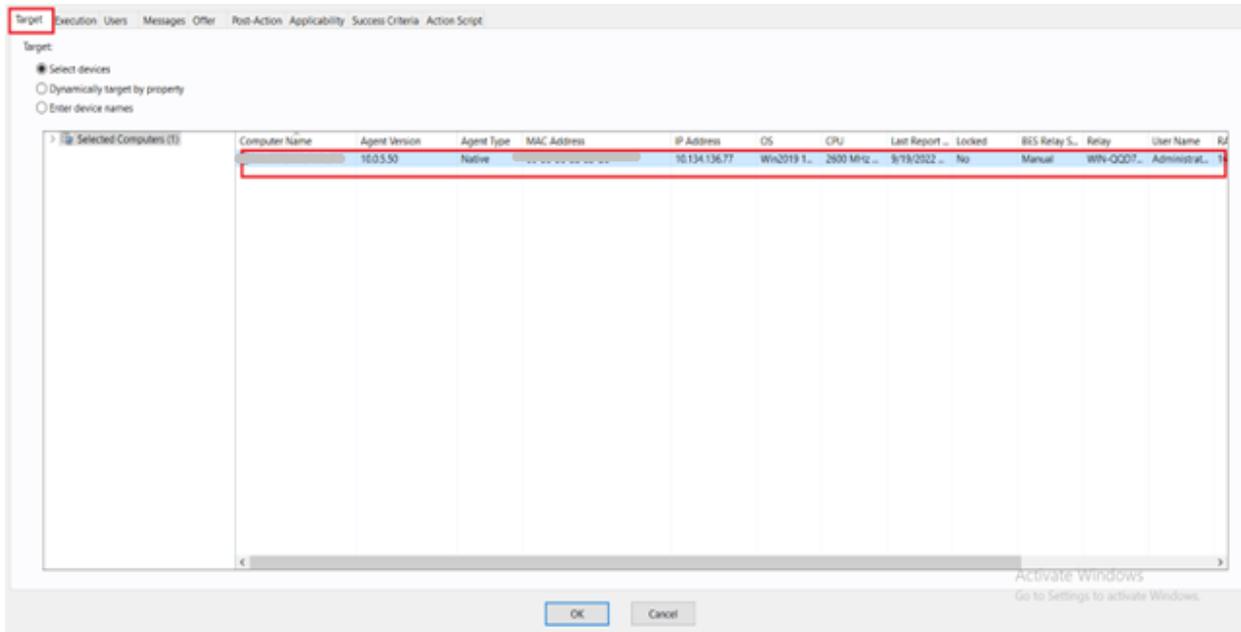
1. To change the value of a specific setting in the configuration file use **Manage ServiceNow Data Flow Service Settings** Fixlet from BigFix ServiceNow Dataflow external site.



2. Provide all the required details:

- Loglevel : choose the required log level from dropdown
- Enable Preview Mode : unchecked by default. It sets the Preview to false in the configuration file . Enable to turn preview mode to true. Enabling Preview Mode allows you to preview and validate the changes that will be made to BigFix and/or ServiceNow in a file rather than making the changes in the target system.
- Max Computer age : provide suitable computer age. Max computer age retrieves the computers that have been reported to BigFix Server within the max computer age value. Ex : If maxcomputerage= 3, it pulls computer from BigFix server that were reported within last 3 hours.

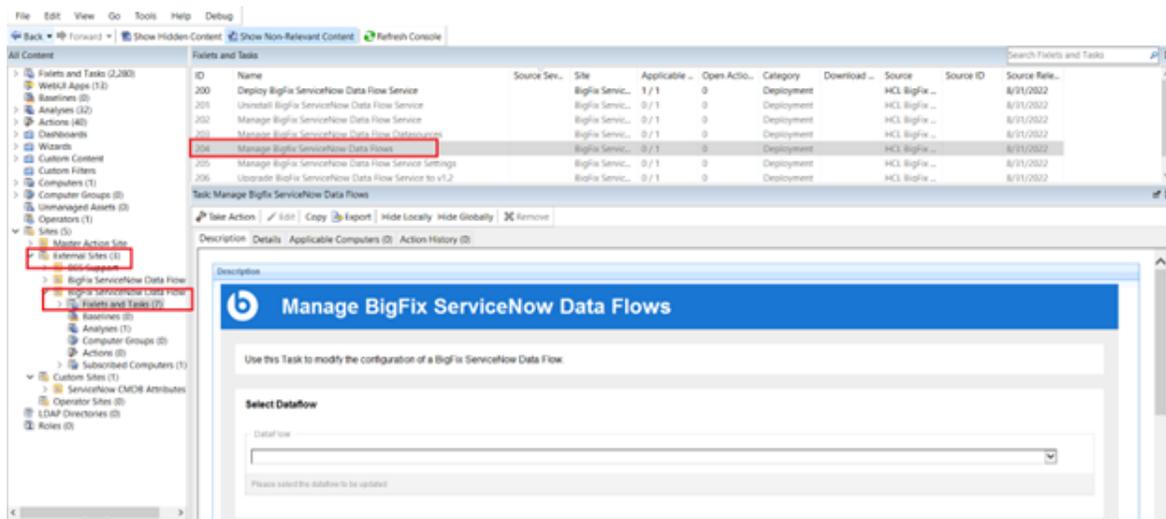
3. Select target devices under Target tab and click **OK**.



Changes in the settings are logged in the manage_settings.log in the Dataflow folder.

Manage BigFix ServiceNow Data Flows

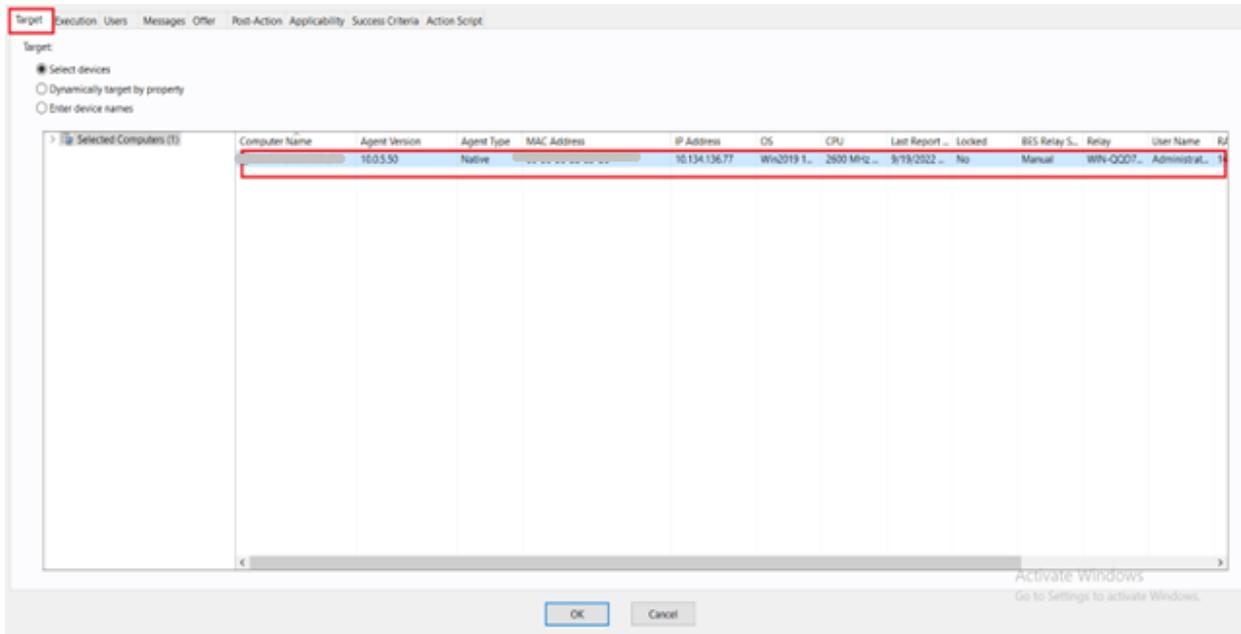
1. To change the scheduler or to remove any dataflow from configuration file use **Manage BigFix ServiceNow Data Flows** Fixlet from the Bigfix ServiceNow Dataflow external site.



2. Provide all the required details:

- DataFlow: choose the Dataflow from dropdown
- Configure DataFlow ETL: the existing schedule from the configuration file will appear in the Configure Dataflow ETL block. Provide a different scheduler in the unix cron time format. Follow the [link](#) to learn more about the scheduler.
- Check the checkbox to remove the selected dataflow from the configuration file if needed.

3. Select target devices under Target tab and click **OK**.



The changes are logged in the manage_dataflows.log file in the Dataflow folder.

Appendix A. Glossary

This glossary provides terms and definitions for the Modern Client Management for BigFix software and products.

The following cross-references are used in this glossary:

- See refers you from a non-preferred term to the preferred term or from an abbreviation to the spelled-out form.
- See *also* refers you to a related or contrasting term.

[A \(on page 27\)](#) [B \(on page 28\)](#) [C \(on page 28\)](#) [D \(on page 30\)](#) [E \(on page 32\)](#) [F \(on page 32\)](#) [G \(on page 32\)](#) [L \(on page 32\)](#) [M \(on page 33\)](#) [N \(on page 34\)](#) [O \(on page 34\)](#) [P \(on page 34\)](#) [R \(on page 35\)](#) [S \(on page 35\)](#) [T \(on page 37\)](#) [U \(on page 37\)](#) [V \(on page 37\)](#) [W \(on page 38\)](#)

A

action

1. See [Fixlet \(on page 32\)](#).
2. A set of Action Script commands that perform an operation or administrative task, such as installing a patch or rebooting a device.

Action Script

Language used to perform an action on an endpoint.

agent

See [BigFix agent \(on page 28\)](#).

ambiguous software

Software that has an executable file that looks like another executable file, or that exists in more than one place in a catalog (Microsoft Word as a standalone product or bundled with Microsoft Office).

audit patch

A patch used to detect conditions that cannot be remediated and require the attention of an administrator. Audit patches contain no actions and cannot be deployed.

automatic computer group

A computer group for which membership is determined at run time by comparing the properties of a given device against the criteria set for group membership. The set of devices in an automatic group is dynamic, meaning that the group can and does change. See also [computer group \(on page 29\)](#).

B

baseline

A collection of actions that are deployed together. A baseline is typically used to simplify a deployment or to control the order in which a set of actions are applied. See also [deployment group \(on page 30\)](#).

BigFix agent

The BigFix code on an endpoint that enables management and monitoring by BigFix.

BigFix client

See [BigFix agent \(on page 28\)](#).

BigFix console

The primary BigFix administrative interface. The console provides a full set of capabilities to BigFix administrators.

BYOD

Bring Your Own Device (BYOD) refers to employees using personal devices to connect to their organizational networks and access work-related systems and potentially sensitive or confidential data.

C

client

A software program or computer that requests services from a server. See also [server \(on page 36\)](#).

client time

The local time on a BigFix client device.

Cloud

A set of compute and storage instances or services that are running in containers or on virtual machines.

Common Vulnerabilities and Exposures Identification Number (CVE ID)

A number that identifies a specific entry in the National Vulnerability Database. A vendor's patch document often includes the CVE ID, when it is available. See also [National Vulnerability Database \(on page 34\)](#).

Common Vulnerabilities and Exposures system (CVE)

A reference of officially known network vulnerabilities, which is part of the National Vulnerabilities Database (NVD), maintained by the US National Institute of Standards and Technology (NIST).

component

An individual action within a deployment that has more than one action. See also [deployment group \(on page 30\)](#).

computer group

A group of related computers. An administrator can create computer groups to organize systems into meaningful categories, and to facilitate deployment of content to multiple computers. See also [automatic computer group \(on page 27\)](#) and [manual computer group \(on page 33\)](#).

console

See [BigFix console \(on page 28\)](#).

content

Digitally-signed files that contain data, rules, queries, criteria, and other instructions, packaged for deployment across a network. BigFix agents use the detection criteria (Relevance statements) and action instructions (Action Script statements) in content to detect vulnerabilities and enforce network policies.

content relevance

A determination of whether a patch or piece of software is eligible for deployment to one or more devices. See also [device relevance \(on page 31\)](#).

Coordinated Universal Time (UTC)

The international standard of time that is kept by atomic clocks around the world.

corrupt patch

A patch that flags an operator when corrections made by an earlier patch have been changed or compromised. This situation can occur when an earlier service pack or application overwrites later files, which results in patched files that are not current. The corrupt patch flags the situation and can be used to re-apply the later patch.

custom content

BigFix code that is created by a customer for use on their own network, for example, a custom patch or baseline.

CVE

See [Common Vulnerabilities and Exposures system \(on page 29\)](#).

CVE ID

See [Common Vulnerabilities and Exposures Identification Number \(on page 28\)](#).

D

data stream

A string of information that serves as a source of package data.

default action

The action designated to run when a Fixlet is deployed. When no default action is defined, the operator is prompted to choose between several actions or to make an informed decision about a single action.

definitive package

A string of data that serves as the primary method for identifying the presence of software on a computer.

deploy

To dispatch content to one or more endpoints for execution to accomplish an operation or task, for example, to install software or update a patch.

deployment

Information about content that is dispatched to one or more endpoints, a specific instance of dispatched content.

deployment group

The collection of actions created when an operator selects more than one action for a deployment, or a baseline is deployed. See also [baseline \(on page 28\)](#), [component \(on page 29\)](#), [deployment window \(on page 31\)](#), and [multiple action group \(on page 33\)](#).

deployment state

The eligibility of a deployment to run on endpoints. The state includes parameters that the operator sets, such as 'Start at 1AM, end at 3AM.'

deployment status

Cumulative results of all targeted devices, expressed as a percentage of deployment success.

deployment type

An indication of whether a deployment involved one action or multiple actions.

deployment window

The period during which a deployment's actions are eligible to run. For example, if a Fixlet has a deployment window of 3 days and an eligible device that has been offline reports in to BigFix within the 3-day window, it gets the Fixlet. If the device comes back online after the 3-day window expires, it does not get the Fixlet. See also [deployment group \(on page 30\)](#).

device

An endpoint, for example, a laptop, desktop, server, or virtual machine that BigFix manages; an endpoint running the BigFix Agent.

device holder

The person using a BigFix-managed computer.

device property

Information about a device collected by BigFix, including details about its hardware, operating system, network status, settings, and BigFix client. Custom properties can also be assigned to a device.

device relevance

A determination of whether a piece of BigFix content applies to a device, for example, where a patch should be applied, software installed, or a baseline run. See also [content relevance \(on page 29\)](#).

device result

The state of a deployment, including the result, on a particular endpoint.

Disaster Server Architecture (DSA)

An architecture that links multiple servers to provide full redundancy in case of failure.

DSA

See [Disaster Server Architecture \(on page 31\)](#).

dynamically targeted

Pertaining to using a computer group to target a deployment.

E

endpoint

A networked device running the BigFix agent.

F

filter

To reduce a list of items to those that share specific attributes.

Fixlet

A piece of BigFix content that contains Relevance and Action Script statements bundled together to perform an operation or task. Fixlets are the basic building blocks of BigFix content. A Fixlet provides instructions to the BigFix agent to perform a network management or reporting action.

Full Disk Encryption

To reduce a list of items to those that share specific attributes.

G

group deployment

A type of deployment in which multiple actions were deployed to one or more devices.

H

Hybrid cloud

The utilization of distinct sets of cloud services (typically public and private) with integration and/or orchestration across them.

L

locked

An endpoint state that prevents most of the BigFix actions from running until the device is unlocked.

M

MAG

See [multiple action group \(on page 33\)](#).

management rights

The limitation of console operators to a specified group of computers. Only a site administrator or a master operator can assign management rights.

manual computer group

A computer group for which membership is determined through selection by an operator. The set of devices in a manual group is static, meaning they do not change. See also [computer group \(on page 29\)](#).

master operator

A console operator with administrative rights. A master operator can do everything that a site administrator can do, except creating operators.

masthead

A collection of files that contain the parameters of the BigFix process, including URLs to Fixlet content. The BigFix agent brings content into the enterprise based on subscribed mastheads.

MCM and BigFix Mobile

Refers to the offering by Bigfix that is common for both Modern Client Management to manage laptops (Windows and macOS) and BigFix Mobile to manage mobile devices (Android, iOS, and iPadOS).

mirror server

A BigFix server required if the enterprise does not allow direct web access but instead uses a proxy server that requires password-level authentication.

Multicloud

The utilization of distinct sets of cloud services, typically from multiple vendors, where specific applications are confined to a single cloud instance.

multiple action group (MAG)

A BigFix object that is created when multiple actions are deployed together, as in a baseline. A MAG contains multiple Fixlets or tasks. See also [deployment group \(on page 30\)](#).

N

National Vulnerability Database (NVD)

A catalog of officially known information security vulnerabilities and exposures, which is maintained by the National Institute of Standards and Technology (NIST). See also [Common Vulnerabilities and Exposures Identification Number \(on page 28\)](#).

NVD

See [National Vulnerability Database \(on page 34\)](#).

O

offer

A deployment option that allows a device holder to accept or decline a BigFix action and to exercise some control over when it runs. For example, a device holder can decide whether to install a software application, and whether to run the installation at night or during the day.

open-ended deployment

A deployment with no end or expiration date; one that runs continuously, checking whether the computers on a network comply.

operator

A person who uses the BigFix WebUI, or portions of the BigFix console.

P

patch

A piece of code added to vendor software to fix a problem, as an immediate solution that is provided to users between two releases.

patch category

A description of a patch's type and general area of operation, for example, a bug fix or a service pack.

patch severity

The level of risk imposed by a network threat or vulnerability and, by extension, the importance of applying its patch.

R

relay

A client that is running special server software. Relays spare the server and the network by minimizing direct server-client downloads and by compressing upstream data.

Relevance

BigFix query language that is used to determine the applicability of a piece of content to a specified endpoint. Relevance asks yes or no questions and evaluates the results. The result of a Relevance query determines whether an action can or should be applied. Relevance is paired with Action Script in Fixlets.

S

SCAP

See [Security Content Automation Protocol \(on page 36\)](#).

SCAP check

A specific configuration check within a Security Content Automation Protocol (SCAP) checklist. Checks are written in XCCDF and are required to include SCAP enumerations and mappings per the SCAP template.

SCAP checklist

A configuration checklist that is written in a machine-readable language (XCCDF). Security Content Automation Protocol (SCAP) checklists have been submitted to and accepted by the NIST National Checklist Program. They also conform to a SCAP template to ensure compatibility with SCAP products and services.

SCAP content

A repository that consists of security checklist data represented in automated XML formats, vulnerability and product name related enumerations, and mappings between the enumerations.

SCAP enumeration

A list of all known security related software flaws (CVEs), known software configuration issues (CCEs), and standard vendor and product names (CPEs).

SCAP mapping

The interrelationship of enumerations that provides standards-based impact measurements for software flaws and configuration issues.

Security Content Automation Protocol (SCAP)

A set of standards that is used to automate, measure, and manage vulnerability and compliance by the National Institute of Standards and Technology (NIST).

server

A software program or a computer that provides services to other software programs or other computers. See also [client \(on page 28\)](#).

signing password

A password that is used by a console operator to sign an action for deployment.

single deployment

A type of deployment where a single action was deployed to one or more devices.

site

A collection of BigFix content. A site organizes similar content together.

site administrator

The person who is in charge of installing BigFix and authorizing and creating new console operators.

software package

A collection of Fixlets that install a software product on a device. Software packages are uploaded to BigFix by an operator for distribution. A BigFix software package includes the installation files, Fixlets to install the files, and information about the package (metadata).

SQL Server

A full-scale database engine from Microsoft that can be acquired and installed into the BigFix system to satisfy more than the basic reporting and data storage needs.

standard deployment

A deployment of BigFix that applies to workgroups and to enterprises with a single administrative domain. It is intended for a setting in which all Client computers have direct access to a single internal server.

statistically targeted

Pertaining to the method used to target a deployment to a device or piece of content. Statically targeted devices are selected manually by an operator.

superseded patch

A type of patch that notifies an operator when an earlier version of a patch has been replaced by a later version. This occurs when a later patch updates the same files as an earlier one. Superseded patches flag vulnerabilities that can be remediated by a later patch. A superseded patch cannot be deployed.

system power state

A definition of the overall power consumption of a system. BigFix Power Management tracks four main power states Active, Idle, Standby or Hibernation, and Power Off.

T**target**

To match content with devices in a deployment, either by selecting the content for deployment, or selecting the devices to receive content.

targeting

The method used to specify the endpoints in a deployment.

task

A type of Fixlet designed for re-use, for example, to perform an ongoing maintenance task.

U**UTC**

See [Coordinated Universal Time \(on page 29\)](#).

V**virtual private network (VPN)**

An extension of a company intranet over the existing framework of either a public or private network. A VPN ensures that the data that is sent between the two endpoints of its connection remains secure.

VPN

See [virtual private network \(on page 37\)](#).

vulnerability

A security exposure in an operating system, system software, or application software component.

W

Wake-from-Standby

A mode that allows an application to turn a computer on from standby mode during predefined times, without the need for Wake on LAN.

Wake on LAN

A technology that enables a user to remotely turn on systems for off-hours maintenance. A result of the Intel-IBM Advanced Manageability Alliance and part of the Wired for Management Baseline Specification, users of this technology can remotely turn on a server and control it across the network, thus saving time on automated software installations, upgrades, disk backups, and virus scans.

WAN

See [wide area network \(on page 38\)](#).

wide area network (WAN)

A network that provides communication services among devices in a geographic area larger than that served by a local area network (LAN) or a metropolitan area network (MAN).

Appendix B. Support

For more information about this product, see the following resources:

- [BigFix Support Portal](#)
- [BigFix Developer](#)
- [BigFix Playlist on YouTube](#)
- [BigFix Tech Advisors channel on YouTube](#)
- [BigFix Forum](#)

Notices

This information was developed for products and services offered in the US.

HCL may not offer the products, services, or features discussed in this document in other countries. Consult your local HCL representative for information on the products and services currently available in your area. Any reference to an HCL product, program, or service is not intended to state or imply that only that HCL product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any HCL intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-HCL product, program, or service.

HCL may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

HCL

330 Potrero Ave.

Sunnyvale, CA 94085

USA

Attention: Office of the General Counsel

For license inquiries regarding double-byte character set (DBCS) information, contact the HCL Intellectual Property Department in your country or send inquiries, in writing, to:

HCL

330 Potrero Ave.

Sunnyvale, CA 94085

USA

Attention: Office of the General Counsel

HCL TECHNOLOGIES LTD. PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. HCL may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-HCL websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this HCL product and use of those websites is at your own risk.

HCL may use or distribute any of the information you provide in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

HCL

330 Potrero Ave.

Sunnyvale, CA 94085

USA

Attention: Office of the General Counsel

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by HCL under terms of the HCL Customer Agreement, HCL International Program License Agreement or any equivalent agreement between us.

The performance data discussed herein is presented as derived under specific operating conditions. Actual results may vary.

Information concerning non-HCL products was obtained from the suppliers of those products, their published announcements or other publicly available sources. HCL has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-HCL products. Questions on the capabilities of non-HCL products should be addressed to the suppliers of those products.

Statements regarding HCL's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to actual people or business enterprises is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to HCL, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. HCL, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS," without warranty of any kind. HCL shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work must include a copyright notice as follows:

© (your company name) (year).

Portions of this code are derived from HCL Ltd. Sample Programs.

Trademarks

HCL Technologies Ltd. and HCL Technologies Ltd. logo, and hcl.com are trademarks or registered trademarks of HCL Technologies Ltd., registered in many jurisdictions worldwide.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other product and service names might be trademarks of HCL or other companies.

Terms and conditions for product documentation

Permissions for the use of these publications are granted subject to the following terms and conditions.

Applicability

These terms and conditions are in addition to any terms of use for the HCL website.

Personal use

You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative work of these publications, or any portion thereof, without the express consent of HCL.

Commercial use

You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of HCL.

Rights

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

HCL reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by HCL, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

HCL MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.