

**BigFix
Software Distribution User's Guide**



Special notice

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

Edition notice

This edition applies to version 9.5 of BigFix and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. Overview	6
What's new in Software Distribution.....	6
System requirements	12
Supported package types.....	13
Chapter 2. Best practices	14
Policy-based distributions.....	14
Authorization.....	14
Prerequisites.....	14
Site organization.....	14
Chapter 3. Dashboards overview	15
Manage Software Distribution Packages dashboard.....	15
Manage Application Management Groups dashboard.....	16
Client Dashboard for Software Offers (deprecated).....	17
Chapter 4. Managing packages	20
Unicode support.....	20
SHA-256 task conversion.....	21
Creating a package or Fixlet.....	22
Adding tags to packages.....	24
Editing a package or Fixlet.....	25
Package type verification.....	33
Adding preinstallation and postinstallation commands.....	34
Import and export packages.....	37
Generating logs for individual tasks.....	40
Software repositories migration.....	41
Chapter 5. Managing Application Management Groups	43
Creating a custom site.....	44
Setting up viewing permissions.....	45
Creating Application Management Groups.....	46
Adding tasks to an Application Management Group.....	47
From the Manage Software Distribution Packages dashboard.....	47

From the Manage Application Management Groups dashboard.....	50
Adding targets to an Application Management Group.....	52
Adding an exclusion to an Application Management Group.....	55
Deploying Application Management Groups.....	57
Orphaned owners.....	61
Transferring resources to the corresponding LDAP operator.....	61
Transferring resources to a different operator.....	61
Appendix A. Support.....	63
Appendix B. Frequently asked questions.....	64
Notices.....	lxxi

Chapter 1. Overview

The Software Distribution application is part of the BigFix Software Distribution Systems Lifecycle Management suite. This application enables organizations to improve management of their desktop software distribution processes from a single, unified point of control, and storage-optimized library.

The BigFix architecture enables IT staff to control bandwidth so that packages can be delivered without affecting network performance regardless of network size or speed.

Some of the most significant cost-saving and time-saving features of BigFix Software Distribution include:

- Dynamic and policy-based bandwidth throttling to push large files over distributed networks without impacting line-of-business bandwidth.
- Support for roaming endpoints with pre-caching relay infrastructure.
- Features to optimize dynamic and evolving networks.
- Intelligent software distribution based on endpoint characteristics.
- Software distribution wizards and user self-provisioning.
- Continuous software application license usage and metering, including support for existing software repositories.
- Low-cost scalability with minimal infrastructure requirements.



Notes:

- The Software Distribution application, by default, is designed to suppress installation prompts and to install software silently.
- BigFix does not guarantee that all programs will install with Software Distribution. For such instances, check the vendor's website for the "unattended install" string in the installer. Copy and paste the string into the actionscript of the Fixlet that the Software Distribution dashboard creates. To view the list of supported packages in Software Distribution, see [Supported package types \(on page 13\)](#).
- You might need to give the system some time for the installation to take in effect, despite the action showing as completed. The disk might still be spinning and finishing all the software installation pieces. Wait for 10 minutes after the completed state and check the system.

What's new in Software Distribution

BigFix for Software Distribution application updates can contain a set of features, improvements, and bug fixes for the Software Distribution site.

What's new in the current release

From BigFix platform version 9.1 and later, the Manage Software Distribution dashboard is switching from using the upload manager tool to using the BigFix platform for file uploads to address potential security vulnerabilities.

Users are now required to stay on the dashboard until the files are uploaded. Users who use the upload manager tool outside of the dashboard will need to update to the latest version.

Additional changes:

- Fixed issue where certain packages cannot be exported from the Manage Software Distribution dashboard.
- Fixed issue where the Fixlets that are created from Manage Software Distribution dashboard are recorded with a proper timestamp.
- Fixed issue with the Client Dashboard for Software Offers where content is not translated on non-English systems.
- Fixed issue with Upload Maintenance Service for Linux BigFix deployments where it cannot connect to the database.
- The Software Distribution Deployment Results analysis was enhanced to include the number of lines returned from 200 to 1000.
- Minor string changes in the Manage Software Distribution dashboard.

What's new in Software Distribution application update V7.2

Table 1. Features and enhancements for version Software Distribution 7.2

Feature	Description
Unicode support	<p>With the Unicode support in BigFix version 9.5, the BigFix server can support any language. However, Unicode is not supported for Fixlets. A warning message was added to the Manage Software Distribution Packages dashboard when multiple languages are detected. This message is shown in the following scenarios involving unsupported Unicode characters:</p> <ul style="list-style-type: none"> • When creating, editing, or copying packages whose fields contain Unicode characters. • When uploading a file whose name contains a Unicode character. • When uploading a folder whose user supplied compressed file name contains a Unicode character. • When adding a file URL whose user supplied file name contains a Unicode character. • When creating a Fixlet in which the user manually enters action script or relevance containing Unicode characters. • When creating a default task from a package whose filename contains a Unicode character.

Known Bugs

Table 1. Features and enhancements for version Software Distribution 7.2 (continued)

Feature	Description
	<ul style="list-style-type: none"> • The dashboard might flag an unsupported Unicode character as supported due to false negative evaluations. The check to search for unsupported Unicode characters is quite broad; limiting the supported characters might be restrictive to some environments. • Error when one of the files in a package folder contain characters that do not fall under the same language that is set in the BigFix Server. There is no way to check the folder contents of a package that might contain files with Unicode characters in their name.
Package File URL source option	The HCL Software Distribution team recently released the feature that gives you the ability to add a file to a package by the file's URL. With this option available in the Manage Software Distribution Packages dashboard, you can choose to either download the file immediately, or download it during Fixlet runtime.
Bug Fixes	<ul style="list-style-type: none"> • Fixed issue with the Manage Software Distribution Packages dashboard when uploading a file whose name and metadata contains the string "%00". • Fixed issue with the Manage Software Distribution Packages dashboard where an error appears if an improperly formatted OSD file is uploaded.

What's new in Software Distribution application update V7.1

Table 2. Features and enhancements for version Software Distribution 7.1

Feature	Description
Import and export progress indicator	You can now track the progress of the package import and export features. For more information about the import and export features, see Import and export packages (on page 37) .
Rename exported packages	You can now rename the file name of the exported package if you do not want to use the default file name format. For more information, see Exporting packages (on page 38) .
Application Management Group deployment type modification	You can now change the task deployment type of an Application Management Group without the need to delete it first.

Table 2. Features and enhancements for version Software Distribution 7.1 (continued)

Feature	Description
Advanced options for DMG package file type	There are now additional options available for DMG file types, which you can set during the creation of the distribution task. For more information, see Creating distribution tasks (on page 29) .
Bug Fixes	<ul style="list-style-type: none"> • Fixed the folder upload failure issue in the Manage Software Distribution Packages dashboard, as well as the Fixed the issue where Fixlets failed due to invalid characters in the compressed folder. • Fixed the issue where Fixlets referencing multiple compressed folders is not able to properly extract all folders. • Fixed the issue where certain packages cannot be exported for Linux BigFix Servers. • Fixed the issue with the Upload Maintenance Service where it cannot execute on Windows 2003 systems. • Fixed the issue with the Client Dashboard for Software Offers where the offer tab does not fully expand in the BES Client UI window. • Fixed issue where files are stuck at pending upload for certain Windows Big-Fix deployments. • Fixed issue where certain MSI files cannot be uploaded. • Fixed cookie overflow issue on the Self Service Portal (SSP). • Fixed the issue with the SSP where non-master operators cannot deploy tasks. Updated TSP with support for additional configuration settings for tasks issued from SSP. • The upload manager utility has been updated to remove pop-ups that occur on 32-bit Windows systems. • Fixed the issue with upload manager utility where files of a compressed folder have a different timestamp than the original file. • The <code>zip</code> and <code>unzip</code> utility that is used by the Import and Export feature in the Manage Software Distribution dashboard are now hosted on the Software Distribution site, making it always available for download. • Fixed issue with the SSP where it caches pages that are not meant to be cached. • Fixed issue with the relevance for the Software Distribution Download Plugin and Upload Maintenance Service Fixlets. The Fixlets are now relevant only to the correct systems. • Fixed the issue where the actionscript fails if the compressed folder name contains certain characters. • Fixed the issue where the actionscript fails when the log file exists.

Table 2. Features and enhancements for version Software Distribution 7.1 (continued)

Feature	Description
	<ul style="list-style-type: none"> • Fixed the issue where certain parameters disappeared when a Fixlet is edited through the Software Distribution dashboard. • Fixed the issue where Fixlets cannot be edited through the Software Distribution dashboard if the Fixlet actionscript is marked as the default action. • Fixed the issue where certain characters in the Application Management Group cause the deployment to fail. • Fixed the issue where the package export process shows as failed when it actually succeeded. • Fixed issue where certain characters in SPB parameters cause the deployment to fail. • Improved warning message for Application Management Group tasks whose operator no longer exists. • Improved error messages for when a non-master operator tries to edit a master operator's tasks.

What's new in Software Distribution application update V7.0

Software Distribution application update V7.0 contains the following new features and enhancements.

Table 3. Features and enhancements for version Software Distribution 7.0

Feature	Description
SPB support for AIX systems	<p>In addition to the SPB support for Windows and Linux systems, BigFix for Software Distribution can now deploy SPB files to AIX endpoints that are supported by the BigFix platform. To see a complete list of clients supported by the platform, see http://support.bigfix.com/cgi-bin/redirect.pl?page=besclients-nonwindows.</p> <p>You can create and deploy installation tasks for SPB files to AIX endpoints from the Manage Software Distribution dashboard.</p>
Microsoft Application Virtualization (App-V) version 5.0 support	BigFix for Software Distribution now supports the distribution and management of packages for App-V version 5.0.
Preinstallation and postinstallation commands	You can now include any additional commands during the creation of the installation task through the wizard rather than editing the task after its creation.
Import and export packages	You can easily export packages that are created from one deployment and import them to a different deployment by clicking a few buttons. This feature saves you

Table 3. Features and enhancements for version Software Distribution 7.0 (continued)



Feature	Description
	<p>time from having to manually re-create the packages that you need. For more information, see Import and export packages (on page 37).</p> <p>This migration feature is available in BigFix version 9.1 and later.</p>
Rename uploaded folders	<p>This feature is available when you select to compress nested folders when adding an entire folder of content to your package.</p>
Additional actionscript closing markers	<p>Tasks that are created from the Manage Software Distribution dashboard now contain extra closing markers for easier identification. The closing markers identify the final steps of the actionscript, which gets updated every time a user edits the task.</p> <p> Note: Ensure that custom changes that are made to the actionscript are outside of the markers to prevent the changes from being overwritten.</p> <p>For more information about markers, see KB article SWG21668807 at HCL Software.</p>
Upload Manager logging feature	<p>A new log for uploading installation files is provided for troubleshooting purposes.</p> <p>If you upload software packages from the Manage Software Distribution dashboard, access the log at <code><Windows Temp>\SoftwareDistributionLogs\Upload-manager</code>.</p> <p>If you upload software packages from outside the BigFix console, access the log from the command line with the following switch:</p> <pre data-bbox="545 1314 1422 1371">- log <log file></pre> <p>For information about the upload manager, see Software repositories migration (on page 41).</p>
Bug Fixes	<ul style="list-style-type: none"> • The Linux Upload Maintenance Service no longer reveals the database password in the process monitor. • When editing a software distribution task, switching between “run as system user” and “run as current user” now works as intended. • Fixed issue where installation commands do not work on UNIX systems.

Table 3. Features and enhancements for version Software Distribution 7.0 (continued)


Feature	Description
	 Note: You need to update the Upload Maintenance Service for Linux BigFix Servers. Use Fixlet 6: TEM Server: Upgrade TEM Upload Maintenance Service .

What's new in Software Distribution application update V6.0

Software Distribution application update V6.0 contains the following new features and enhancements.

Table 4. Features and enhancements for version Software Distribution 6.0

Feature	Description
Support for the installation of PKG files on Solaris	You can now create and deploy installation tasks for PKG files to your Solaris endpoints from the Manage Software Distribution dashboard.
Self Service Portal (SSP) support for AIX and Solaris	The SSP can now add and remove computers with AIX and Solaris operating systems and the SSP Registration Management Dashboard can block users from these machines.
SSP Registration Management Dashboard Enhancements	You can now search, sort, and paginate computers in scroll view to enhance dashboard performance.
Modifiable SPB variable during deployment	Software Distribution tasks with SPB files support variable templating that enables the creation of customizable tasks.
Installation files custom directory support	Software Distribution tasks can now specify a custom file path location to download and run files instead of using the default location.

 **Note:** An advanced option to automatically convert old tasks with SHA-1 validation, which were created from the Software Distribution dashboard, into tasks with SHA-256 validation is available. For more information, see [SHA-256 task conversion \(on page 21\)](#).

System requirements

The BigFix Software Distribution application supports all operating systems that are supported by the BigFix Platform.

For a detailed list the system requirements for BigFix Software Distribution, see [Detailed system requirements](#).

Supported package types

BigFix Software Distribution can deploy any type of file. Auto-generation of package installation commands is supported for various package types that can be deployed to different endpoints.

The current version of BigFix Software Distribution supports the following file types:

- BAT
- CMD
- DMG (for Mac)
- EXE
- MSI
- MSP
- OSD
- PKG (for Mac and Solaris)
- RPM (for Linux and AIX)
- SPB (Deprecated)



Notes:

- The SPB file type for Windows, Linux, and AIX is no longer supported by BigFix Software Distribution.
- The inspector to check whether a Mac `.pkg` file is installed on an endpoint is not yet available.
- The Policy Action type of Mac PKG tasks is not supported in the Software Distribution task deployment process.

Chapter 2. Best practices

Learn how to best optimize your use of BigFix Software Distribution.

Use the following information as guidance for using this product.

Policy-based distributions

Use client settings to drive the installation of packages through policies.

Client settings are a cross-platform data tag that can be used in a number of ways by the BigFix platform. For example, a client setting called *Role* might be set to 'Facilities Management,' and an action might be present to install an Autodesk client on Windows systems with that condition. This practice allows predictable, centrally managed, role-based software provisioning, and rapid return to the wanted state after an OS reimage or migration.

Authorization

Test the installation of software under the systems management account.

On a Windows™ system, BigFix defaults to installing software in the *LocalSystem* account. On a Mac OS X, Linux™, or UNIX™ system, software is installed in the *root* account. Therefore, always test software installations under these accounts to ensure that they work correctly.

If a software package does not install under LocalSystem, run the `runascurrentuser.exe` tool to use the rights of the current user. To automate this action, create Fixlets with the Software Distribution dashboard.

Prerequisites

BigFix provides a powerful baseline concept that solves the dependency chain problem of prerequisite software.

For example, a piece of in-house software might require a particular version of Microsoft™ .Net, which might in turn require an upgrade of Windows™ Installer. Windows™ might also require a patch if Service Pack 3 is not installed. To define the prerequisite chain, bundle these four related Fixlets into a single baseline. Systems missing any component of the baseline can then install it, while systems that meet some or all of the prerequisites can omit that step and move on to the next one. All targeted systems are then brought to the same end state with a single action.

For more information about creating baselines, see the [BigFix Console Operator's Guide](#).

Site organization

Use custom sites to organize your generated tasks to improve performance and usability.

Use custom sites to categorize content within your deployment. Custom sites help tune your BigFix installation optimum resource usage. For more information about creating custom sites, see the [BigFix Console Operator's Guide](#).

Chapter 3. Dashboards overview

BigFix Software Distribution provides several dashboards for managing software distribution tasks in your deployment.

Learn about what these dashboards are and how you can access them from the console.

Manage Software Distribution Packages dashboard

The Manage Software Distribution Packages dashboard is a tool where you can perform common tasks that are associated with managing the software in your deployment.

Before you can use the dashboard, you must deploy the tasks that are listed in the Install Server Tools under the Software Distribution Setup node.

These tasks include:

- BigFix server: Register Download Plug-in for Software Distribution.



Note:

- The Plug-in Service task, which schedules other services to run, must be run before any other setup tasks.
- To install the "BigFix server: Register Download Plug-in for Software Distribution" task on RHEL 8 operating systems, the library `libnsl.so.1` must be manually installed with following command line:

```
yum install libnsl
```

- The minimum supported versions of BigFix server to use the Manage Software Distribution Packages dashboard are 9.5.17.94, 10.0.2.52, and above.

These tasks help the automation of processes that require communication with the BigFix server and Web Reports.

These tasks are displayed in the List panel only if they are not currently installed.

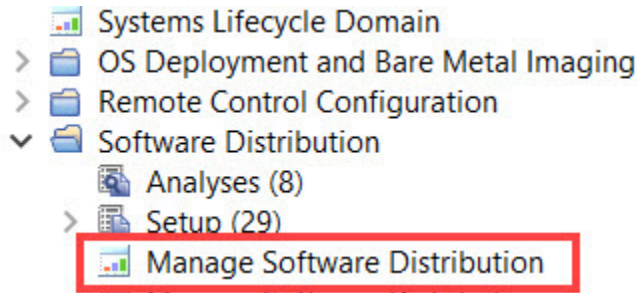
To install the tasks, click each task to open the task window. Then, click the link in the Actions box of the applicable Task window, as shown in the following image. The Take Action dialog opens. You can set specific parameters for each task.

For more information about using the Take Action Dialog, see the [BigFix Console Operator's Guide](#).

Dashboard location

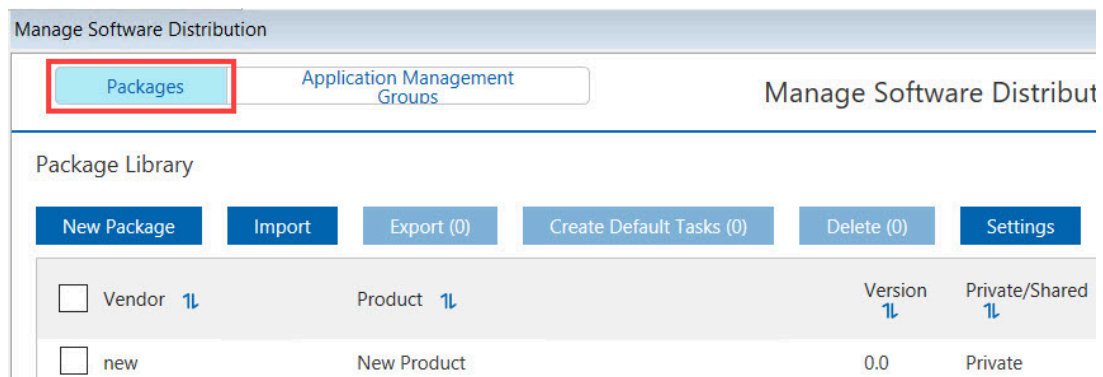
You can access the Manage Software Distribution Packages dashboard from the Software Distribution navigation tree of the Systems Lifecycle domain.

Figure 1. Software Distribution navigation tree



The Manage Software Distribution Packages dashboard is displayed under the **Packages** tab.

Figure 2. Manage Software Distribution Packages dashboard




Manage Application Management Groups dashboard

The Manage Application Management Groups dashboard helps you to oversee and deploy offers to a certain group of computers in your network.

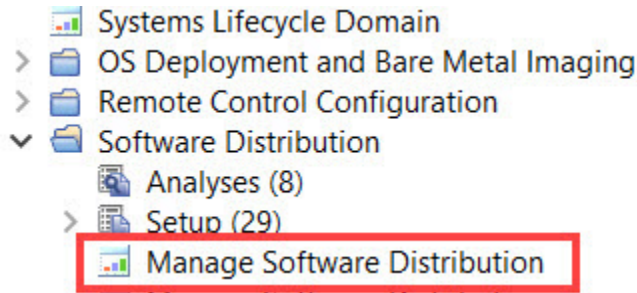
Offers contain a list of software that endpoint users can select to install on their machines. You can add and group offers from the Manage Application Management Groups dashboard. Endpoint users can view and install the available offers from the following options:

- Client dashboard. For more information about the Client dashboard, see [Client Dashboard for Software Offers \(deprecated\) \(on page 17\)](#).

 **Note:** The dashboard supports Internet Explorer 11 only.

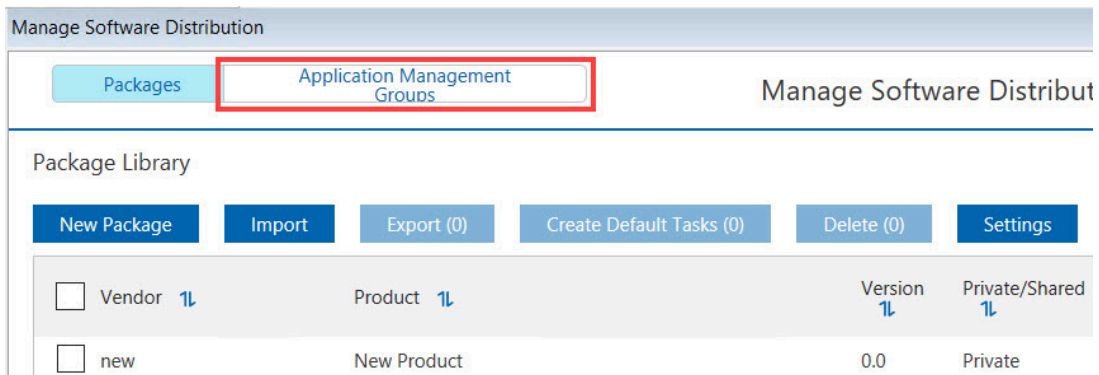
You can access the Manage Software Distribution Packages dashboard from the Software Distribution navigation tree of the Systems Lifecycle domain.

Figure 3. Software Distribution navigation tree



The Manage Application Management Groups dashboard is displayed under the **Application Management Groups** tab.

Figure 4. Manage Application Management Groups dashboard



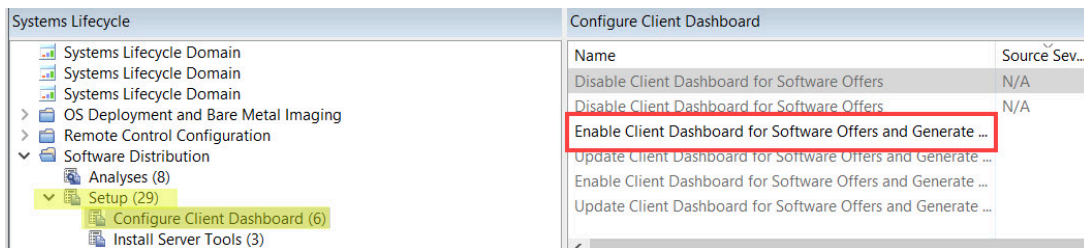
Client Dashboard for Software Offers (deprecated)

The Client Dashboard for Software Offers is where endpoint users can select and accept software offers that were made available to them.

The software offers work in a similar way to regular actions except that the deployment does not occur until the endpoint user chooses to install the software.

Before endpoint users can access the dashboard, you must deploy the **Enable Client Dashboard for Software Offers** task on each endpoint. This task is listed in the Configure Client Dashboard under the Software Distribution Setup node.

Figure 5. Enable Client Dashboard for Software Offers task navigation tree



Name	Source Sev...
Disable Client Dashboard for Software Offers	N/A
Disable Client Dashboard for Software Offers	N/A
Enable Client Dashboard for Software Offers and Generate ...	
Update Client Dashboard for Software Offers and Generate ...	
Enable Client Dashboard for Software Offers and Generate ...	
Update Client Dashboard for Software Offers and Generate ...	

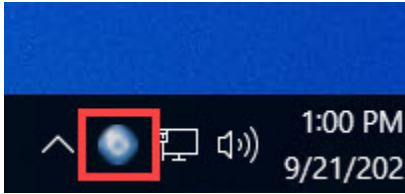
The **Enable Client Dashboard for Software Offers** task displays in the List panel only if this task is not currently installed.

Dashboard location

Endpoint users can access the dashboard from their system tray on Windows.

Click the **BigFix** icon to open the BigFix Support Center.

Figure 6. The BigFix Support Center on the Windows system tray

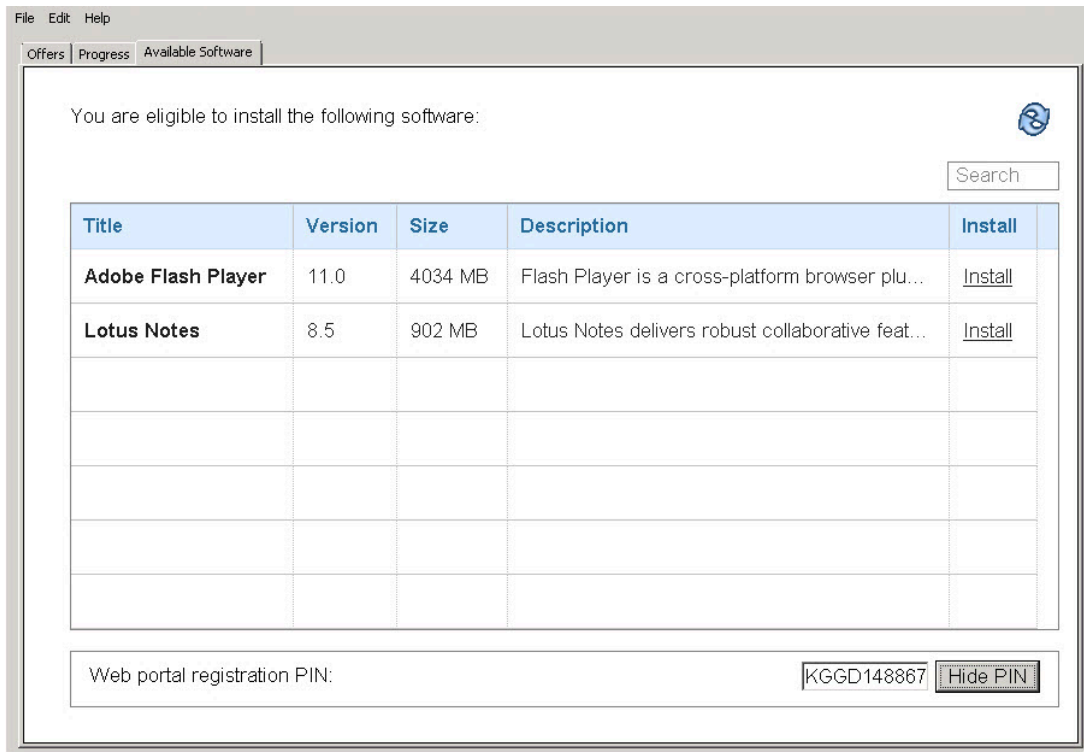


Note: You can configure the BigFix icon. For more information, see the topic about *Changing the Client Icon* from the [BigFix Configuration Guide](#).

The software offers are displayed in the **Available Software** tab. Endpoint users can select and install the software packages that you send them. You can customize the title, version, size, and description from the Manage Software Distribution Package and Manage Application Management Groups dashboards.

You can also view the web portal registration PIN, which is a unique alphanumeric digit that is assigned to a computer. Endpoint users use this PIN to register computers in the Self Service Portal.

Figure 7. Client Dashboard for Software



The screenshot shows a web application window titled "Client Dashboard for Software". The window has a menu bar with "File", "Edit", and "Help". Below the menu bar are three tabs: "Offers", "Progress", and "Available Software", with "Available Software" being the active tab. The main content area contains the text "You are eligible to install the following software:" followed by a search input field with the placeholder text "Search". Below this is a table with the following data:

Title	Version	Size	Description	Install
Adobe Flash Player	11.0	4034 MB	Flash Player is a cross-platform browser plu...	Install
Lotus Notes	8.5	902 MB	Lotus Notes delivers robust collaborative feat...	Install

At the bottom of the dashboard, there is a field for "Web portal registration PIN:" with the value "KGGD148867" and a "Hide PIN" button.

Chapter 4. Managing packages

You can bundle software distribution content into packages for faster deployment.

Packages are an important part of the Software Distribution product. They contain a list of files that are needed to install a specific software product, as well as Fixlets that install that product on your endpoints.

Packages establish management relationships between files and Fixlets.

You can use the Manage Software Distribution Packages dashboard to perform the following management tasks:

- Create packages.
- Create default tasks associated with new packages.
- Add files to existing packages.
- Create and manage associated Fixlets.
- Add tags to software packages.
- Add preinstallation and postinstallation commands
- Importing and exporting packages
- Set individual task logs.

For more information about the dashboard, see [Manage Software Distribution Packages dashboard \(on page 15\)](#).

Unicode support

Full support of Unicode computing standard enables consistent encoding, representation, and handling of text expressed in most of the world's writing systems and setting of local pages.

With the Unicode support in BigFix version 9.5, the BigFix Server can support any language. However, Unicode is not supported for Fixlets.

A warning message was added to the Manage Software Distribution Packages dashboard when multiple languages are detected. This message is shown in the following scenarios involving unsupported Unicode characters:

- When creating, editing, or copying packages whose fields contain Unicode characters.
- When uploading a file whose name contains a Unicode character.
- When uploading a folder whose user supplied compressed file name contains a Unicode character.
- When adding a file URL whose user supplied file name contains a Unicode character.
- When creating a Fixlet in which the user manually enters action script or relevance containing Unicode characters.
- When creating a default task from a package whose filename contains a Unicode character.

Known Bugs

- The dashboard might flag an unsupported Unicode character as supported due to false negative evaluations. The check to search for unsupported Unicode characters is quite broad; limiting the supported characters might be restrictive to some environments.
- Error when one of the files in a package folder contain characters that do not fall under the same language that is set in the BigFix Server. There is no way to check the folder contents of a package that might contain files with Unicode characters in their name.

SHA-256 task conversion

BigFix version 9.1 provides the capability to follow the NIST security standards by configuring an enhanced security option. This setting enables SHA-256 as the hashing algorithm for digital signatures and content verification.

When the enhanced security mode is enabled, you can use the SHA-256 algorithm to verify the file download integrity. If you enable this option, SHA-256 downloads are required and all BigFix 9.1 components no longer process action downloads that only specify a SHA-1 hash. For more information about security configurations, see [Security Configuration Scenarios](#).

BigFix for Software Distribution provides a method to convert tasks that were created using the Software Distribution dashboard from using the SHA1 algorithm to the SHA-256 algorithm.



Note: If you created tasks outside of the Software Distribution Dashboard, you must manually update your custom content to include a SHA-256 hash.

A master operator can convert tasks that are created by all master operators, while a non-master operator can only convert tasks that he created.

To convert SWD tasks that are using still the SHA-1 validation, complete the following steps:

1. Ensure that the enhanced security and SHA-256 downloads options are enabled from the BigFix Administration Tool. For more information about setting the enhanced security option, see the following sources.
 - [Security Configuration Scenarios - Windows Systems](#)
 - [Security Configuration Scenarios - Linux Systems](#)



Important: When you enable the enhanced security option, you configure a restricted security environment that might affect product performance. Also, you cannot roll back to a previous version of BigFix after the option is enabled. For more information, see [Security Configuration Scenarios](#).

2. From the Manage Software Distribution dashboard, click **Settings**.
3. Click **Sha256 Conversion** to update existing content to include a SHA-256 hash.


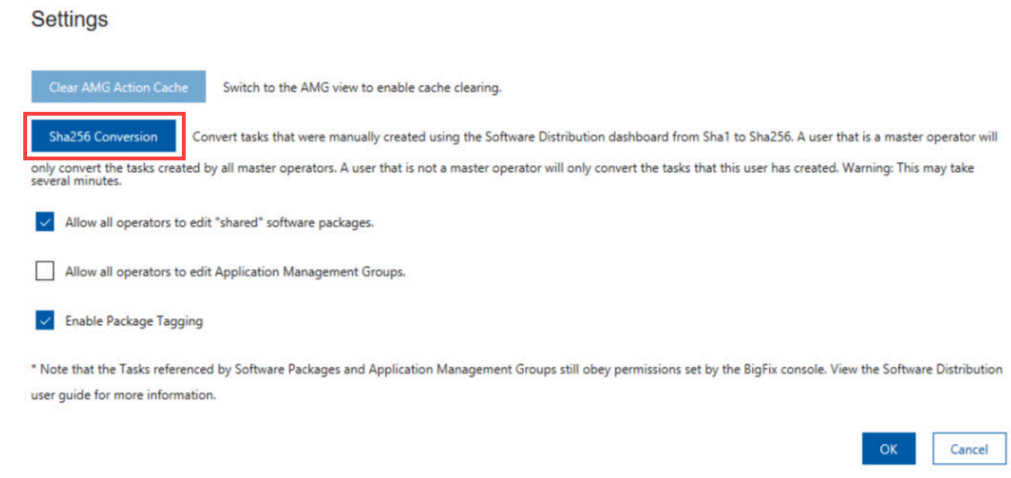
 **Note:** The conversion might take several minutes to complete.

Figure 8. Settings dialog

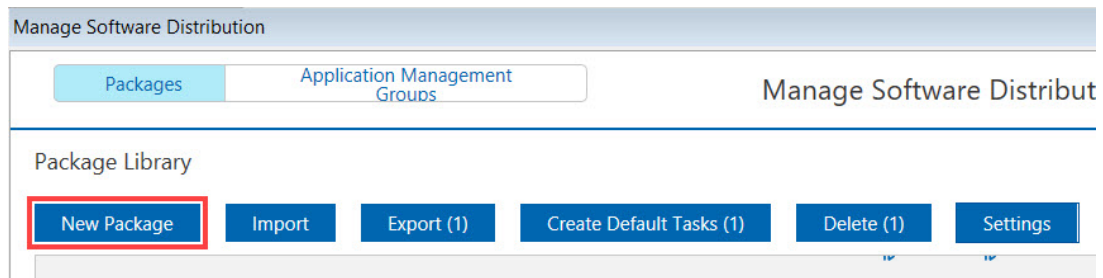


Creating a package or Fixlet

You must create a package before you can add files that are needed to install a specific software product.

From the Manage Software Distribution Packages dashboard, click **New Package**.

Figure 9. Manage Software Distribution Packages dashboard - New Package



Manually enter values the **Vendor**, **Product**, **Version**, **Private/Shared**, and **Tag** fields.

Figure 10. Adding a package

The screenshot shows a 'New Package' form with the following fields and values:

- Vendor: IBM
- Product: Lotus Notes
- Version: 8.5
- Private/Shared: Shared
- Tag: (empty)

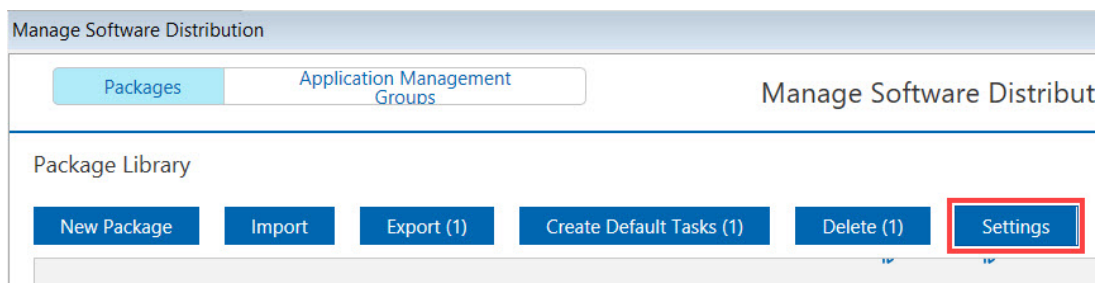
At the bottom right, there are two buttons: 'Confirm' (highlighted with a red arrow) and 'Cancel'.

You must designate your package as either *Private* or *Shared*. Shared packages are visible to all BigFix console operators. Private packages are visible only to the user who created them.

After you enter all applicable fields, click **Confirm**.

If you designate a package as Shared, be aware that this package cannot be edited by all console operators. To allow all console operators to edit shared packages, click **Settings**.

Figure 11. Settings button



Then, select **Allow all operators to edit shared software packages** and click **OK**.

Figure 12. Edit shared packages setting

Settings

Clear AMG Action Cache Switch to the AMG view to enable cache clearing.


Allow all operators to edit "shared" software packages.


Allow all operators to edit Application Management Groups.

Enable Package Tagging

* Note that the Tasks referenced by Software Packages and Application Management Groups still obey permissions set by the BigFix console. View the Software Distribution user guide for more information.

OK Cancel

 **Note:** If you do not have console permissions to edit a task, you cannot edit a task even if the option to allow all operators to edit shared packages is set.

 **Note:** If you want to keep packages private but share tasks with designated operators, copy the tasks to a custom site. For more information about working with custom sites, see the [BigFix Console Operator's Guide \(opens in new window\)](#).

After creating a package, you can see the package displayed under the Package Library.

Figure 13. New package displayed under the Package Library

Vendor	Product	Version	Private/Shared	Creator	Owner	Last Modified	Files	Tasks	Warnings	Tag
IBM	Lotus Notes	8.5	Shared	admin	admin	2021-09-21 13:44:16	0	0		

You now have an empty package. You can manage the files and Fixlets that you want to associate with this new package from the second window. The next step is to add files. For more information, see [Editing a package or Fixlet \(on page 25\)](#).

To save time from manually re-creating software packages from one BigFix Deployment to another, use the export and import feature. For more information, see [Import and export packages \(on page 37\)](#).

Adding tags to packages

To easily query Fixlets for each package, add a tag to the package from the Manage Software Distribution package dashboard.

The package tagging feature is not enabled by default. To enable the tagging feature, a master operator must first click **Settings** and select **Enable Package Tagging**.

Figure 14. Settings dialog

Settings

Clear AMG Action Cache Switch to the AMG view to enable cache clearing.

Allow all operators to edit "shared" software packages.

Allow all operators to edit Application Management Groups.

Enable Package Tagging

* Note that the Tasks referenced by Software Packages and Application Management Groups still obey permissions set by the BigFix console. View the Software Distribution user guide for more information.

OK Cancel

When you add a tag to a package, the tasks that are related to that package will contain the same tag value.

The package tagging feature is available in the Software Distribution site version 48 and later.



Note: Tags are case-sensitive.

- To add a tag to a new package, click **New Package** and enter the package tag in the **Tag** column.
- To add a tag to an existing package, click **Edit** and enter the package tag in the **Tag** column.

When a tag is added to a package, any Fixlet that gets generated from that package would contain the same tag.

The Fixlet has a Multipurpose Internet Mail Extensions (MIME) field that contains the tag value, which you can use to query Fixlets. For example, you can issue the following session relevance to query all Fixlets that have the tag value "mytag":

```
(name of it, id of it) of custom bes fixlets whose (mime field "x-fixlet-pkgTag"
of it = "mytag")
```

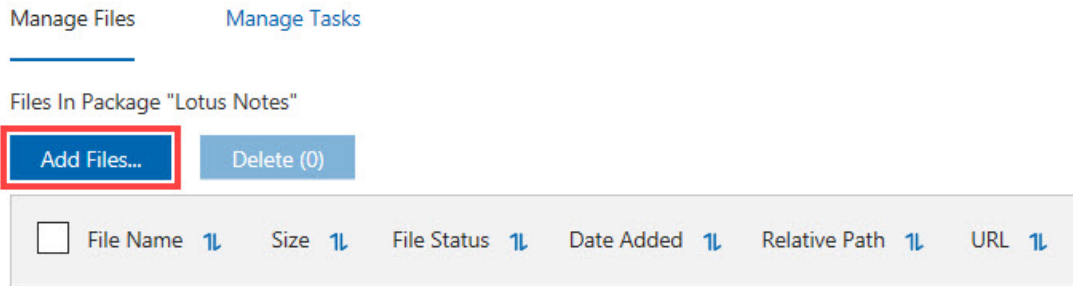
Editing a package or Fixlet

After creating a package, add the necessary files to install the software product that you want to deploy to your endpoints and then create the distribution tasks.

Adding the installation files

To add a file to the package, click **Add Files** located under the **Manage Files** tab.

Figure 15. Managing files



This action opens the **Add Files to Package** window where you can add files and folders. For information about the types of files you can add, see [Supported package types \(on page 13\)](#).



Note: The dashboard can only download files that do not require any authentication, such as files that do not need username or password.



Important: For IBM BigFix v9.1 or later: Do not close the dashboard while files are uploading. Otherwise, files may fail to upload.

There are different ways to add a file or a bundle to a package. You can use any of the following options:

Add File

Specify a single file, which is uploaded from the system. You can manually type the name of the file, or click **Browse** to locate a file stored in your system.

Add Folder

Specify an entire folder of content of your package, which is uploaded from the system. As in the previous example, type the name of the folder or browse to locate a folder in your system.



Note: The dashboard can only compress folder that is less than 4 GB.

Figure 16. Adding files from a folder

Add Files to Package

Select a new file or bundle of files to add, and specify its relative path within the package structure.

Add File

Add Folder


Compress folders at depth: Name of Compressed folders:


Add File URL

Use Relative Path:

Note: Do not leave the Software Distribution Dashboard while the file upload process is ongoing.


The Compression Depth feature, located within the **Add Folder** field, is used to compress files together at a specified folder depth. Use a depth of '0' to bundle all files together into one compression file.

 **Note:** To maintain optimum performance, use the compression feature if pushing more than 50 files to an endpoint. Distributing many small files costs more network bandwidth, while distributing fewer large files costs more endpoint processor. Use the **Compress Folders at depth** option to tune this performance control for your environment.

 **Note:** If you choose to compress nested folders when adding the installation files of a software product, you can rename the folders that are uploaded to a package. Rename the folders for easier identification, especially if multiple folders are uploaded. The folder name uses the following naming convention: `compressedPackageData-<YYMMDDHHMM>`

Add File URL

Specify the URL of the file. You can either choose to download the file immediately or only during Fixlet runtime.

 **Note:** The ability to download the file immediately and upload it to the BigFix server is available only for BigFix v9.1 or later.

By default, the HTTPS certificates used for enabling the HTTPS connection are validated by using the certificate bundle included in the BigFix console installation. If you want to use a different set of certificates, you can use the client setting `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node`

`\BigFix\EnterpriseClient\Settings\Client_Console_CACert_Path` specifying the full path of the file containing the set of certificates. For example, `c:\BigFix1\certificates\custom-ca-bundle.crt` on Windows systems.

Figure 17. Adding files from a URL

Add Files to Package

Select a new file or bundle of files to add, and specify its relative path within the package structure.

Add File

Add Folder

Compress folders at depth: Name of Compressed folders:

Add File URL

Do not download the file until Task runtime.

File Name:

SHA1:

SHA256:

Size (bytes):

Note: Do not leave the Software Distribution Dashboard while the file upload process is ongoing.

If you want to associate the file to a Fixlet and download it only when the Fixlet is deployed, click **Do not download the file until Task runtime**. Then, provide the following information, which are validated only during Fixlet runtime:

- File name
- SHA1 value
- SHA256 value
- Size information (in bytes)

Verify that you enter the correct values, otherwise the console will prompt an error message when the Fixlet is deployed.

Click **Use Relative Path** if you want to add the files into a specific folder of the package, and then enter the folder directory. For example, you must enter `InstallPackage/Languages` if you want to add another language file to your package with the following structure:

```
InstallPackage
- install.exe (file)
- Languages (folder)
```

```

- jpn.srt (file)
- eng.rt (file)
- Cache (folder)

```

After selecting an option, click the **Add to Package** button at the bottom part of the window. This action processes all the information for your package, analyzes the relevant files, and uploads them to the server.

Figure 18. File status

Manage Files Manage Tasks

Files In Package "Lotus Notes"

Add Files... Delete (0)

<input type="checkbox"/>	File Name	Size	File Status	Date Added	Relative Path	URL
<input type="checkbox"/>	desktop.ini	402 B	<input checked="" type="checkbox"/>	2021-09-21 14...		

The upload is complete when the file status changes to a check mark.



Note: If a file fails to upload, check the logs in `<Windows temp>\SoftwareDistributionLogs\Uploadmanager`. If a file fails to upload, check the logs in the folder `<Windows temp>\SoftwareDistributionLogs`, under folder `Uploads` for BigFix v9.1 or later, or folder `Uploadmanager` for BigFix v9.0 or earlier.

Creating distribution tasks

To create a distribution task for the package, click the **Manage Tasks** tab.

Figure 19. Adding a Fixlet to a package

Manage Files Manage Tasks

Distribution Tasks for Package "Lotus Notes"

New Task... Delete (0) Add to AMG: (0) Remove from AMG: (0)

<input type="checkbox"/>	Name	Owner	Tag	Created	Site	Applicable Computers	Status
--------------------------	------	-------	-----	---------	------	----------------------	--------



Note: Add tasks only after you add files.

Click **New Task** to open the **Create Distribution Task** window, which displays all available files associated with your package that can be included in a distribution task.



Note: The Policy Action type of Mac PKG tasks is not supported in the Software Distribution task deployment process.

Select each file that you want to deploy to your endpoints, and click **Next**.

Figure 20. Creating a distribution task

Create Distribution Task

Select the group of files you want to include in this task.

Available Files from package "Lotus Notes"

<input type="checkbox"/>	Name	Relative Path	URL
<input type="checkbox"/>	desktop.ini		
<input type="checkbox"/>	BESConsole.exe		

0 files included

Next Cancel

You cannot create a task where all of the files are in a relative path. Software Distribution tasks require that the installation commands exist in the root of the package. If you attempt to add files to a package that has no files in its root folder, the task displays the following warning:

Figure 21. Warning message when files which are not in the root folder, are added to a package

Create Distribution Task

No included files have a relative path in the root directory. Installation commands are run from the relative root of the package, and installation files must be in the root.

Select the group of files you want to include in this task.

Available Files from package "BSU-8984"

<input type="checkbox"/>	Name	Relative Path	URL
<input checked="" type="checkbox"/>	Firefox Installer.exe	custom	
<input type="checkbox"/>	clamav-0.104.1.win.x64.msi	custom	
<input type="checkbox"/>	Orca.Msi	custom	
<input type="checkbox"/>	appv_v5.appv	custom	

1 files included

Next Cancel

Click **Next**. In this window, you define an installation command to be used when sending the software package to your endpoints, and customize a command-line message specific to your distribution task.

Figure 22. Defining installation command



Note: If you added a PKG file, select whether it is a Mac or Solaris file.

You can also configure the following advanced options for the distribution task:

Force installation

This option is only applicable to SPB files.

You can specify the values for the SPB built-in variables, such as the installation path, folder name, file separator, either during the creation of the task or at deployment time.

To modify variables at deployment time, you must select them during task creation. The selected variables can then be edited in the Fixlet description page.

Add custom preinstallation and postinstallation commands

You can include any additional commands during the creation of the installation task through the dashboard rather than editing the task after its creation. For more information, see [Adding preinstallation and postinstallation commands \(on page 34\)](#).

Create an individual log

Configure the task to generate an individual log file upon the completion of the action. For more information, see [Generating logs for individual tasks \(on page 40\)](#).

Use a custom directory

Specify a full path location, including the drive, to download and run the installation files. For example, `C: / SWD`.

Files are downloaded and extracted to this custom directory instead of the default `__Download/` directory. Tasks run from the specified location instead of the default `../__BESData/actionsite` directory. A folder called `tmp` is created in the specified path, and is cleared before running any new tasks.

You can configure to remove the files from the client in the `tmp` folder when the action completes.

You can run the command either as a system user or current user or as a local user. The default is to run the task as a system user, but certain packages require the current user to install the software package successfully. Click **Next**.

Click **Create Task** when you complete these steps.



Note: The relevance builder that is **Create Expressions** and **Combine Expressions** in the Create Distribution Task is no longer available in the latest version of dashboard.

Figure 23. Defining additional target conditions

A security warning will be prompted to **Enable** or **Disable** dynamic content.

In the next window, click the link in the Actions box to deploy the action, and set parameters in the Take Action dialog.

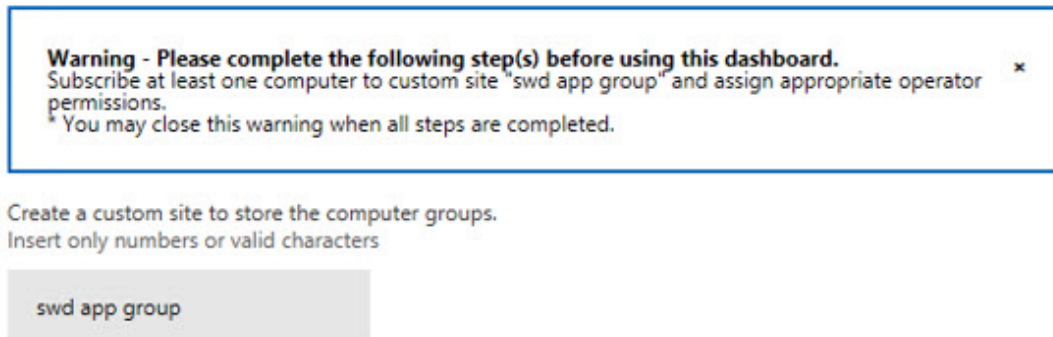


Note: Ensure that you test a Fixlet before deploying it in a production environment.

To verify if the task has completed successfully, check whether the software was installed on the endpoints. For more information, see [Package type verification \(on page 33\)](#).

You can edit a task only if you have the appropriate console permissions to view and edit the task, regardless of the permissions set through the Manage Software Distribution dashboard. If you do not have console permission to edit a task and you attempt to do so, an error message displays.

Figure 24. Permission restriction warning



A similar error message displays when you attempt to delete a Software Distribution package through the Manage Software Distribution dashboard without having the appropriate permission.

Package type verification

Check the state of your endpoints where you deployed the distributed task to verify whether the software was installed successfully.

Ensure that the software installation for each package type is successful by checking the state of the endpoint before and after deploying the task.

Table 5. How to verify the installation of different package types

Package Type	System state of the endpoint before the installation	System state of the endpoint after the installation
MSI	The task must be relevant, which means that the software that you want to install has not been installed yet.	The task must no longer be relevant to mean that the software installation was successful.
EXE	The software that you want to install must not be listed in the Control Panel > Programs and Features .	The software that you installed must be listed in the Control Panel > Programs and Features .
BAT	The folder for the software that you want to install must not be found in <code>C:\Program Files (x86)\BigFix Enterprise\BES</code>	A new folder for the installed software must be found in <code>C:\Program Files (x86)\BigFix Enterprise\BES</code>

Table 5. How to verify the installation of different package types (continued)

Package Type	System state of the end-point before the installation	System state of the end-point after the installation
	Client__BESTData\actionsite__-Download.	Client__BESTData\actionsite__-Download.
PKG	The package must not be listed when you run the command pkgutil --pkgs.	Run the command pkgutil --pkgs. The package must be listed to mean that the software installation was successful.

Adding preinstallation and postinstallation commands

You can include extra custom commands before or after the installation command, which is used to install the selected software package on endpoints. All commands are run from the root folder of the software package.

You can specify custom commands for any of the following script types:

BigFix actionscript

The custom command is added to the actionscript and is run directly from the task.

Windows batch script

A batch file is created that contains the custom command. The file is then run from the actionscript of the installation task.

UNIX shell script

A shell file is created that contains the custom command. The file is then run from the actionscript of the installation task.

Use the correct command syntax for the selected script type and validate that the commands are working. The dashboard does not check for valid actionscript, batch script, or shell script commands.

1. From the **Create Distribution Task** window of the Manage Software Distribution Packages dashboard, click **Next** until you see the **Show Advanced Options** under the installation command.
2. Click **Show Advanced Options**.
3. Click **Add custom preinstallation and postintallation commands**, and click **Next**.

Figure 25. Show Advanced Options

Create Distribution Task

Define the installation command which will be run to install the selected software package on endpoints. The installation command will be run from the root folder of the software package.

Predefined Installation command: "BESConsole.exe" ▼

Installation Command: "BESConsole.exe"

▼ Show Advanced Options

Add custom preinstallation and postinstallation commands

Create an individual log for this Task

Name of the log file:

Use the default name: {Action ID}.log Use a custom name: .log

Upload this log file to the Server upon completion of this Task.

Use custom working directory: /tmp

Run Command As:

System User Current User (Windows Only) Local User (Windows Only)

4. Select the script type and enter the commands in the provided spaces, then click **Next**.

! **Important:** Use the correct command syntax for the selected script type. The Manage Software Distribution dashboard does not check for valid commands.

✍ **Note:** Ensure that Apply command is selected if you want your custom commands to be added to the script, otherwise clear these options.

i **Tip:** You can use the return code of the installation as a postinstallation command by using this command: `parameter 'returnCode' ;`.

Figure 26. Add custom preinstallation and postinstallation commands

Create Distribution Task

Enter commands to be run before and after the installation command

Preinstallation BigFix
ActionScript Apply command

Postinstallation BigFix
ActionScript Apply command

The return code value of the installation command will be stored in:

parameter "returnCode"

Back Next Cancel

5. Follow the remaining instructions in the **Create Distribution Task** window.

Running deployment commands

On Windows systems, you can run the commands as a System User, Current User, or as a Local User. Commands that are run by BigFix Clients default to System User (On OS X, UNIX, and Linux computers, the software is installed as root). In some cases, you might want to install by using the credentials and local context of the Current User or a Local User. Details on how to set various parameters associated with Local User are listed below.

Use custom working directory: /tmp

Run Command As:

System User Current User (Windows Only) Local User (Windows Only)

Username: Password: Required

Interactive: Target User: Completion: job

Back Next Cancel

Running deployment commands as a Local User

This section explains the various parameters you can configure when you run a command as a local user that is different than the logged-in user.

- **Username:** Name of a user who is different than the user that is currently logged in, in either of the following formats:
 1. user@domain. Example: "myname@tem.test.com"
 2. domain\user. Example: "TEM\myname"
- **Password mode:** Defines the mode of authentication. The following options are available:
 1. **Required:** The application prompts you to enter a password, and the value you enter is passed on to the agent as a Secure Parameter.
 2. **Impersonate:** The agent searches for a session running for the user specified in **Username** and runs the command in the session of that user.
 3. **System:** The command is run as the local system account. For this option to work, the user specified in **Username** must be logged in to the system when the command is run.
- **Interactive:** Select the checkbox. The command opens the user interface of the user specified in **Username** and runs in that user's session.
- **Target user:** Optional. This option becomes active when you select **Interactive**. The command opens the user interface in the session of the user you specify in this field and runs in that session. The command runs with the primary user privileges, but the target user must be logged in to the system for the command to work.
- **Completion:** specifies whether the command must wait for the process to end.
 1. **None:** The command does not wait for the process to end. The user must be logged in to the system before the command starts running. The `SWD_Download` folder is retained if this option is selected. Deploy the `SWD_Download` folder cleanup fixlet to clean up the client computer, after the process ends.
 2. **Process:** The command waits for the process to end. This option does not require the specified user to be logged in to the system.
 3. **Job:** The command waits for the process to end. This option expects the process to do its own job control management and does not require the specified user to be logged in to the system.

Import and export packages

You can easily move packages that are created through the Software Distribution dashboard from one deployment to another. This feature is available from BigFix version 9.1 or later.

You cannot import and export packages at the same time.

The log for this migration feature is in the console system at `<Windows Temp>\SoftwareDistributionLogs\<Export or Import>`.

Exporting packages

When you export a single package, all the information is compressed into a `.zip` file. You can choose to name the `.zip` file or use the default file name format: `<VEND>_<PROD>_<VE>.zip`.

Where:

VEND

Stands for vendor and is composed of only 4 characters.

PROD

Stands for product and is composed of only 4 characters.

VE

Stands for version and is composed of only 2 characters.

The exported package uses the following directory structure:

```
vend_prod_ve.zip
- meta_data.txt (file)
- Files (folder)
  - <SHA1 of file> (folder)
    - Installation file (file)
  - <SHA1 of file> (folder)
    - Installation file (file)
- Fixlets (folder)
- Distribution tasks (file)
```

When you export multiple packages, each of the compressed package files is stored into a single `.zip` file that is named `swd_exported_pkgs.zip`.

If the file name exists, a suffix is added at the end of the file names to make it unique. For example, if you are trying to export a package that is named `vend_prod_ve.zip`, which exists in your exported packages folder, the new exported package will be saved as `vend_prod_ve_(1).zip`.

To export packages, complete the following steps:

1. From the Manage Software Distribution Packages dashboard, select the package that you want to export and click **Export**.
2. Specify the location where you want the package to be exported to. You can click **Browse** to the locate folder location.



Important: You cannot cancel this process after it is started. Do not leave the Manage Software Distribution dashboard until the export has completed.

Figure 27. Export Packages

3. Enter a name for the exported file, otherwise use the default name.
4. Click **Export**. A dialog prompts when the packages are successfully exported.

Importing packages

You can import a single package multiple times. For each import that you make of the same package, a duplicate is added to the Manage Software Distribution dashboard.

When unexpected issues occur during the import process, packages are still imported partially. A partially imported package means that not all the files or Fixlets were successfully imported to the dashboard.

To import packages, complete the following steps:

1. From the Manage Software Distribution Packages dashboard, select the package that you want to import and click **Import**.
2. Specify where the `.zip` file of the exported package is located. You can click **Browse** to locate the compressed package file.

! **Important:** You cannot cancel this process after it is started. Do not leave the Manage Software Distribution dashboard until the import has completed.

Figure 28. Import Packages

3. Click **Import**. A dialog prompts when the packages are successfully imported to the dashboard.
4. Refresh the dashboard when the import is complete to see the newly imported package.

Generating logs for individual tasks

Configure a distribution task to generate an individual log file upon its completion. You can enable the individual task logging feature to generate log entries for new and existing tasks. You can also upload the logs to the server for parsing purposes.

The log collection does not negatively affect the server as the size of each log file is limited to 1 MB. However, volume management can be used to partition the log directory with limited space so any resource issues affect the log storage only. This practice prevents the server from being overwhelmed.

1. From the **Create Distribution Task** window of the Manage Software Distribution Packages dashboard, click **Next** until you see the **Show Advanced Options** under the installation command.
2. Click **Show Advanced Options**.
3. Click **Create an individual log for this Task**.

Figure 29. Create individual log

The screenshot shows the 'Create Distribution Task' window. At the top, it says 'Define the installation command which will be run to install the selected software package on endpoints. The installation command will be run from the root folder of the software package.' Below this, there are two input fields: 'Predefined Installation command:' with a dropdown menu showing '"ping1.bat"' and 'Installation Command:' with a text box containing '"ping1.bat"'. A red box highlights the 'Show Advanced Options' section, which contains the following options:

- Add custom preinstallation and postinstallation commands
- Create an individual log for this Task
 - Name of the log file:
 - Use the default name: {Action ID}.log
 - Use a custom name: .log
 - Upload this log file to the Server upon completion of this Task
- Use custom working directory: /tmp

Below the red box, there is a 'Run Command As:' section with three radio buttons: System User, Current User (Windows Only), and Local User (Windows Only). At the bottom right, there are three buttons: 'Back', 'Next', and 'Cancel'.

4. Select the name that you want for the log file.

The default name for the log is `<Action_ID>.log`. If you want to specify a different name, enter any alphanumeric characters.



Note: Underscores are acceptable.

5. If you want to upload the file to the server when the task completes, click **Upload this log file to the Server upon completion of this Task**.
6. Follow the remaining instructions in the **Create Distribution Task** window.

If you configured the task to upload the log files to the server, a new folder that is called `LogsToBeUploaded` is created in `\BES Client__BESData__Global\SWDDeployData`.



Note: Generally, deployment results of all deployed software are logged in a single log file that is located in `\BES Client__BESData__Global\SWDDeployData\SWD_DeploymentResults.log`.

The logs that are uploaded to the server are in `\BES Server\UploadManagerData\BufferDir\shal\<last 2 digits of the compute ID>`.

The file name format of the logs that are in the server is not the same as the logs that are in the client. When a log file is uploaded to the server, a prefix string SWD is added to the log file name. You can change this prefix in the action script of the task.



CAUTION: The server mirrors the client folder. When you delete the logs in the client folder, the logs in the server side are also deleted. Ensure that you backed up the server log directory before you delete the log files from the client folder by using Fixlet 13. If the server space becomes too large, back up the logs in the server then clean the client folder.

Software repositories migration

The Software Distribution Upload Manager is a stand-alone tool that helps you to upload any packages that already exist in your deployment before installing Software Distribution.

The tool uploads your packages to the BigFix server. You can use the dashboard to create related default Software Distribution tasks.

Before BigFix can deploy software packages, it needs a tool to analyze, archive, and upload those packages to the BigFix server. The tool is called `uploadmanager.exe`. This tool requires access to the BigFix server and database.

You can find the tool on your BigFix server in the `BES Server\BESReportsServer\wwwroot\SiteData\bes_bfenterprise\Sites\Software Distribution` folder. The tool must be copied to a working directory before use.

The tool can be used to create a script to import a library in two ways:

- A script can be written to produce a list of directory names that are passed into the Upload Manager as an `inputdirslist`. This process is the ideal approach for libraries that are structured. For example, if the software repository reliably follows the pattern of `/VENDOR/PRODUCT/VERSION` folders, a simple listing of those folders is sufficient.
- A script can be written that iterates the file system and calls the tool repeatedly on a per product directory basis. This process is the ideal approach for libraries that are not structured, in which the external script must test a directory for applicability.

Packages that are uploaded in this manner have their files uploaded and their metadata entered with estimated values derived from file analysis. To generate Fixlets using these estimated values, select the uploaded packages and click **Create Default Tasks**.



Note: All Fixlets generated in this manner are marked as Validation Required.

For access to the upload manager, see the [BigFix software download website](#). For detailed usage instructions, see this [technote](#).

Return codes

Use the following `uploadmanager.exe` return codes when troubleshooting failures:

```
Return Code 0 = success
Return Code 1 = incorrect command line usage
Return Code 2 = partial upload failure
Return Code 4 = full upload failure
Return Code 8 = dsn login failed
Return Code 16 = json error;
Return Code 32 = compression partial failure
Return Code 64 = compression full failure
Return Code 128 = file access error
Return Code 256 = tempfile deletion failure
Return Code 512 = database query error
Return Code 1024 = Invalid file/folder error
```

Chapter 5. Managing Application Management Groups

Group software distribution tasks and client computers for faster deployment, especially in large networks.

Most software deployments are controlled by console operators. Operators choose which software to deploy to different computers or groups of computers. Operators can also choose whether to have the software installed as a mandatory action or to comply to a policy.

BigFix has a mechanism called *Offers* to handle self-provisioning of software. Some software can be made optionally available to endpoint users who can choose to install the software from the following options:

- Client Dashboard for Software Offers. For more information, see [Client Dashboard for Software Offers \(deprecated\) \(on page 17\)](#).

To simplify the distribution of software offers and actions, group the tasks and endpoints into different Application Management Groups. *Application Management Groups* are collections of tasks that can be organized into groups of content and delivered to targeted groups of client computers. These tasks are viewed by BigFix clients as offers, policy actions, or mandatory actions. For more information about where to deploy offers, see [Manage Application Management Groups dashboard \(on page 16\)](#).

User permissions

Application Management Group access level is determined at the time of its creation and cannot be altered.

Master Operator

If the Application Management Group is owned by a master operator, then the Application Management Group is fully accessible to all master operators.

A master operator-controlled Application Management Group has the following properties:

- All master operators can edit, delete, deploy, or stop the Application Management Group.
- Non-master operators can view and copy the Application Management Group.
- All users can make a copy of the Application Management Group.
- If the owner of the Application Management Group is demoted from a master operator to a non-master operator, the owner loses access to the Application Management Group.

Non-master Operator

If the Application Management Group is owned by a non-master operator, then the Application Management Group is fully accessible only by the owner.

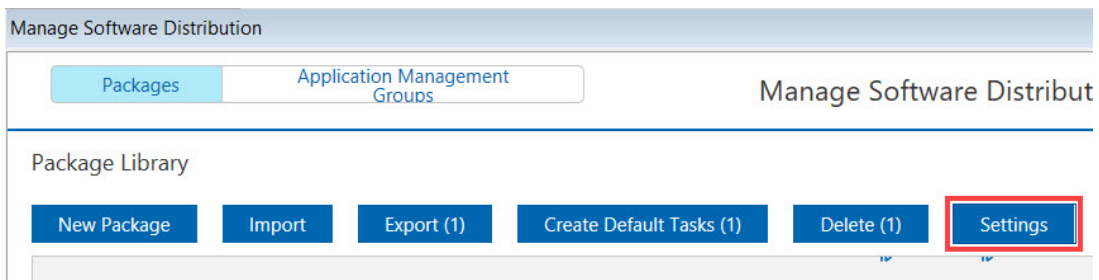
An owner-controlled Application Management Group has the following properties:

- Only the owner can edit, delete, deploy, or stop the Application Management Group. You can set to allow all console operators to edit the Application Management Group. See [Settings \(on page 44\)](#).
- Master operators can only stop the Application Management Group that is owned by a non-master operator.
- All users can make a copy of the Application Management Group.
- If the owner of the Application Management Group is promoted from a non-master operator to a master operator, the owner gains full access. Other master operators can only stop or delete the Application Management Group that is now owned by a master operator.

Settings

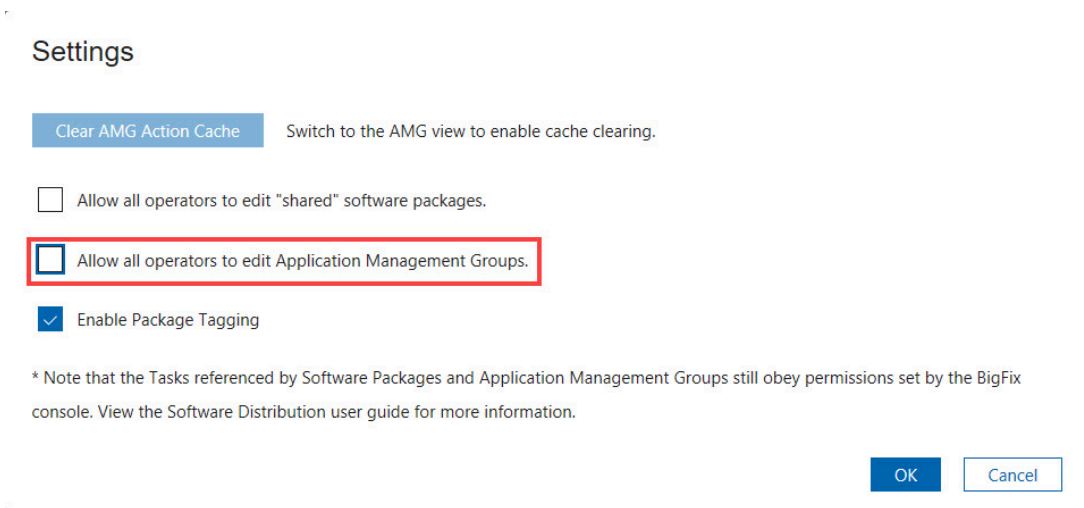
To allow all console operators to edit the Application Management Group, click **Settings**.

Figure 30. Settings button



Then, select **Allow all operators to edit Application Management Groups**.

Figure 31. Edit Application Management Groups setting



Creating a custom site

Creating a custom site to host the Application Management Group deployments reduces the effect on the performance of the master action site.

When you access the Manage Application Management Groups dashboard for the first time, you are prompted to create a custom site.

Figure 32. Creating a custom site



Note: You must be a master operator to create a custom site.

The default custom site name is *swd_app_group*. You can enter any name for the custom site, and click **Create**.

The custom site stores the Application Management Group computer groups that are created from the dashboard.

After you create the custom site, you must complete the following tasks:

- Subscribe all Software Distribution endpoints to the custom site.
- Give write access to all operators who are going to use the Manage Application Management Groups dashboard.

Setting up viewing permissions

Users of the Manage Application Management Groups dashboard who are master operators must set their permissions to view issued actions of other operators.

1. Select a master operator from the Operator list.
2. Click the **Details** tab.
3. Select **Yes** from the **Show Other Operator's Actions** drop-down menu.

Figure 33. Viewing permissions

The screenshot shows the BigFix console interface for a user named 'bigfix'. At the top, there are buttons for 'Save Changes', 'Discard Changes', 'Reset Password', and 'Remove'. Below these are tabs for 'Details', 'Administered Computers (6)', 'Issued Actions (36)', 'Assigned Roles (0)', and 'Sites (6)'. The main content area is divided into two sections: 'Overview' and 'Permissions'.

Overview

Name	bigfix
User Type	Local Console Operator
Last Login Time	6/11/2012 5:14:15 PM
Login	<input checked="" type="radio"/> Always allow this user to log in. <input type="radio"/> Only allow this user to log in when they are a member of at least one role. <input type="radio"/> Disable this user's login.

Permissions

	Explicit Permissions	Effective Permissions
Master Operator	Yes	Yes
Show Other Operators' Actions	Yes	Yes
Custom Content	Yes	Yes
Unmanaged Assets	Show All	Show All

A red box highlights the 'Show Other Operators' Actions' row, and a red arrow points to the 'Yes' dropdown menu in the 'Explicit Permissions' column.

4. Click **Save Changes**.

Creating Application Management Groups

An Application Management Group is a collection of tasks and targets. When an Application Management Group is deployed, its tasks are distributed as offers or actions to all of its targets.

You must complete the following tasks:

- Create a custom site to limit the performance impact on the master action site.

You must create a custom site when you access the Application Management Group dashboard for the first time. For more information, see [creating a custom site. \(on page 44\)](#)

- If you are a master operator, ensure that you set the viewing permissions correctly. For more information, see [Setting up viewing permissions \(on page 45\)](#).
- Upgrade the BigFix console and client to at least version 8.2.1310.

The Client dashboard does not work correctly for earlier versions.

- Run the Enable Client Dashboard for Software Offers task.

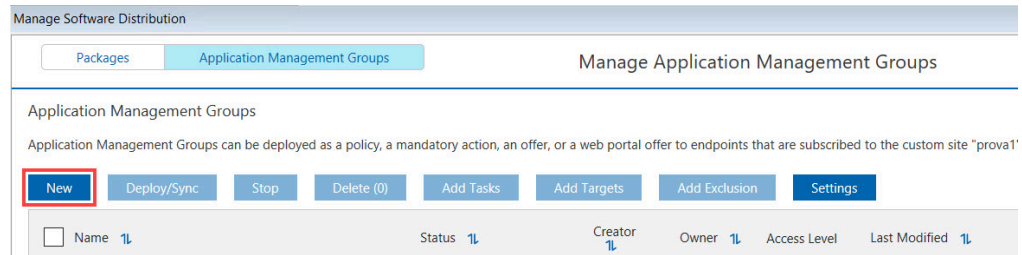
You can find this task under the Configure Client Dashboard, which is in the Software Distribution Setup node of the navigation tree.



Note: You must subscribe at least one computer to the custom site and assign appropriate operator permissions.

1. From the Manage Application Management Group dashboard, click **New**.

Figure 34. New Application Management Group



2. Enter a name for the group in the **Name** field.
3. Click **Confirm**.

You can now see the new group displayed under the Application Management Groups Library.

You now have an Application Management Group.

The next steps are to add tasks and targets. For more information, see [Adding tasks \(on page 47\)](#) and [Adding targets \(on page 52\)](#).

You can manage the tasks and targets that you want to associate with the Application Management Group from the Tasks and Targets tabs.

Adding tasks to an Application Management Group

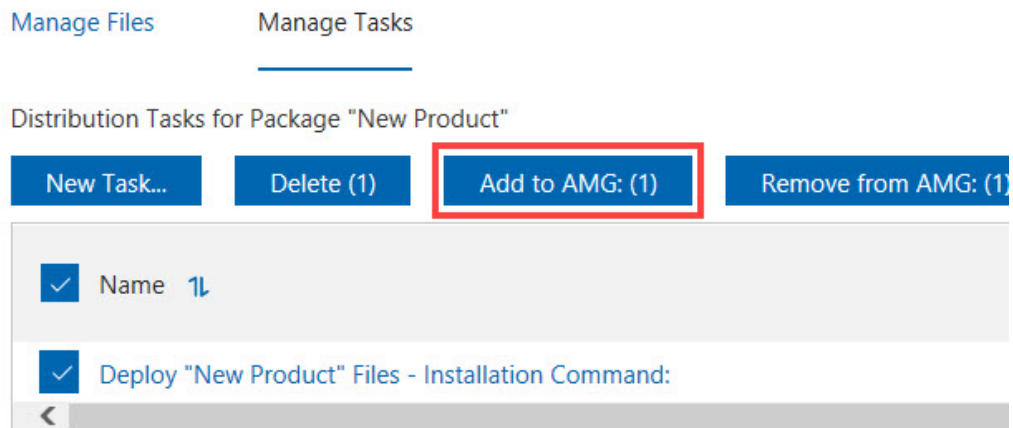
You can use any of the software distribution dashboards to select the tasks you want to add to an Application Management Group.

From the Manage Software Distribution Packages dashboard

You can add tasks to existing Application Management Groups from the Manage Software Distribution Packages dashboard.

1. On the **Manage Tasks** tab, select one or more task that you want to add in an Application Management Group.
2. Click **Add to AMG**.

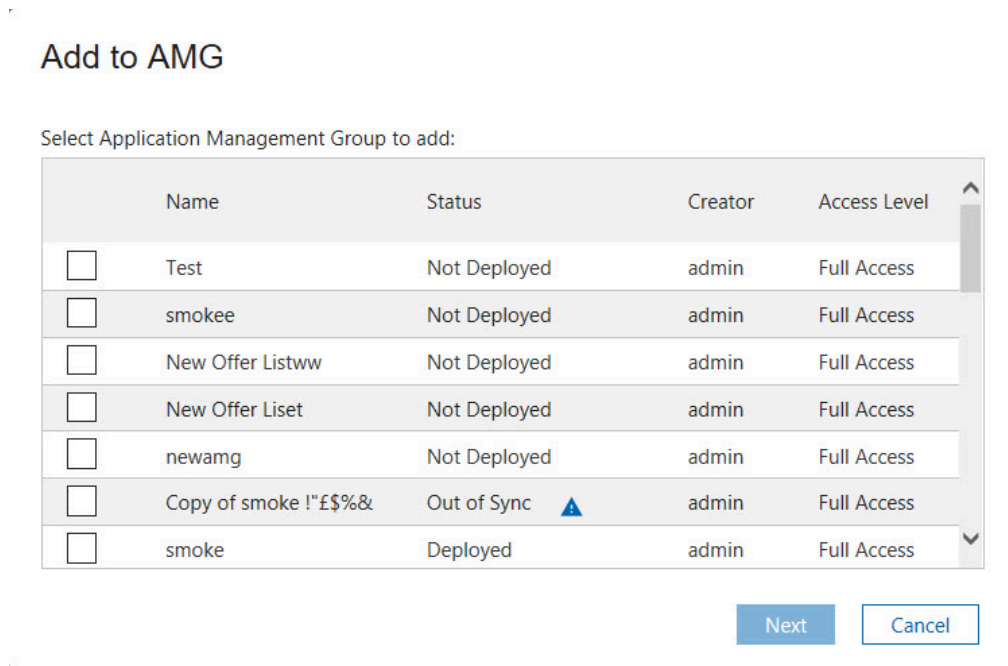
Figure 35. Adding tasks from the Manage Software Distribution Packages dashboard




The **Add to AMG** dialog box opens.

3. Select the Application Management Group to which you want to add the selected tasks, and click **Next**.

Figure 36. Select an Application Management Group



 **Note:** If the status of the selected Application Management Group is "Deployed", you must deploy the Application Management Group again after adding the task. For more information, see [Deploying Application Management Groups \(on page 57\)](#).

4. Select how you want to deploy the task. You can select from the following options:

Offer

This action handles self-provisioning of software from the Client Dashboard for Software Offers.

Mandatory Action

This action runs once and expires.

Policy Action

This action continually runs and checks whether your computers comply to the policy.

Portal Offer

This action handles self-provisioning of software from the Software Distribution Self Service Portal.



Note: Deploying a Portal Offer does not immediately create an action. You must deploy the Application Management Group when a task is added to have the offer shown in the Self Service Portal.

Add to AMG

Deploy Task As:

Offer

Offer
 Mandatory Action
 Policy Action
 Portal Offer

Search

ID	Site	Title*	Version*	Size*	Description*
9413	ActionSite	New F	0.0	0.1 MI	

Click each cell to edit. Any change to these fields

Deployed Application Management Groups that contain the selected task.

Confirm Add
Cancel

5. **Optional:** To edit the profile for mandatory action, client, or portal offer, click on the appropriate cells.

For mandatory actions, you can update the expiration time. For offers, you can update the title, version, size, or description and make it meaningful and appropriate for the endpoint clients.



Note:

- a. All Application Manager Groups that are not yet deployed and that contain the same offer or action are also updated. Each offer or action can have only one profile. The offer or action profile remains the same in other Application Management Groups.
- b. The offers in AMG do not support category.

6. Click **Confirm Add**.


The task is now added to the Application Management Group that you selected.

If you already added targets to the Application Management Group, you can now deploy the Application Management Group. For more information, see [Deploying Application Management Groups \(on page 57\)](#). Otherwise, start adding targets to the Application Management Group. For more information, see [Adding targets \(on page 52\)](#).

From the Manage Application Management Groups dashboard

You can also add tasks to an Application Management Group from the Manage Application Management Group dashboard.

1. Select the Application Management Group to which you want to add tasks.

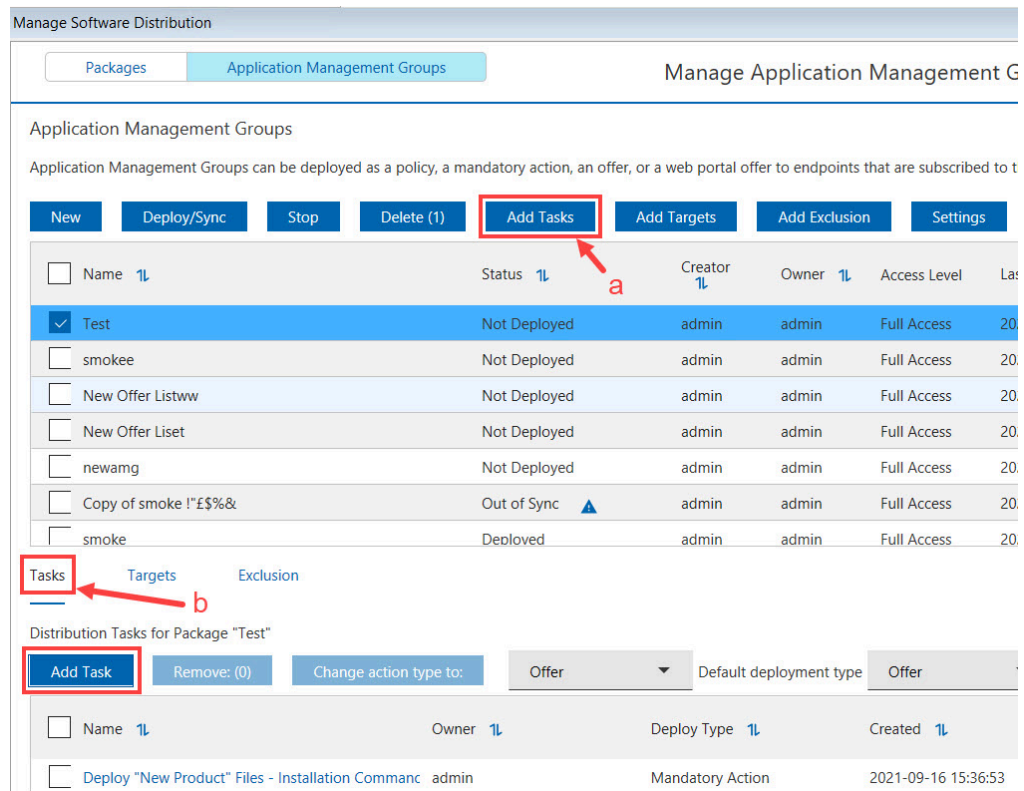
 **Note:** If the status of the selected Application Management Group is "Deployed", you must deploy the Application Management Group again after adding the tasks. For more information, see [Deploying Application Management Groups \(on page 57\)](#).

2. Open the **Add Tasks** dialog.

There are two ways to add tasks from this dashboard:

- a. Click **Add Tasks** from the Application Management Groups tab.
- b. Click **Tasks > Add Tasks**.

Figure 37. Adding tasks from the Manage Application Management Groups dashboard



The screenshot shows the 'Manage Application Management Groups' dashboard. At the top, there are tabs for 'Packages' and 'Application Management Groups'. Below the tabs, there are several action buttons: 'New', 'Deploy/Sync', 'Stop', 'Delete (1)', 'Add Tasks', 'Add Targets', 'Add Exclusion', and 'Settings'. The 'Add Tasks' button is highlighted with a red box and labeled 'a'. Below the buttons is a table of Application Management Groups. The table has columns for Name, Status, Creator, Owner, Access Level, and Last Modified. The 'Test' group is selected, and its status is 'Not Deployed'. Below the table, there are tabs for 'Tasks', 'Targets', and 'Exclusion'. The 'Tasks' tab is highlighted with a red box and labeled 'b'. Below the tabs, there is a section for 'Distribution Tasks for Package "Test"'. This section includes an 'Add Task' button (highlighted with a red box), a 'Remove: (0)' button, and a 'Change action type to:' dropdown menu. Below this section is another table with columns for Name, Owner, Deploy Type, and Created. The table contains one row: 'Deploy "New Product" Files - Installation Commanc' with owner 'admin', deploy type 'Mandatory Action', and created date '2021-09-16 15:36:53'.

The Add Tasks dialog opens and lists all the available software distribution tasks. These tasks were created from the Manage Software Distribution Packages dashboard, and are viewed by endpoint users as offers from the Client Dashboard for Software Offers.

3. Select how you want to deploy the task. You can select from the following options:

Offer

This action handles self-provisioning of software from the Client Dashboard for Software Offers.

Mandatory Action

This action runs once and expires.

Policy Action

This action continually runs and checks whether your computers comply to the policy.

Portal Offer

This action handles self-provisioning of software from the Software Distribution Self Service Portal.



Note: Deploying a Portal Offer does not immediately create an action. You must deploy the Application Management Group when a task is added to have the offer shown in the Self Service Portal.

Figure 38. Add Tasks dialog

Deploy Task As:

Offer

ID	Site	Title*	Version*	Size*	Description*
9413	ActionSite	New F	0.0	0.1 Mi	

Confirm Add Cancel



Tip: Use the **Default deployment type** feature if you plan to create several tasks with the same deployment type in one go. This feature helps you save time from selecting the deployment type on every task creation.



Note:



- a. You can easily change the deployment type after the creating the task, without the need to delete and re-create the task from scratch.
- b. The offers in AMG do not support category.

4. Select the tasks that you want to deploy to a particular group of clients.
5. **Optional:** If you want to edit the profile for the mandatory action, client, or portal offer, double-click the appropriate cells.

For mandatory actions, you can update the expiration time. For offers, you can update the title, version, size, or description and make it meaningful and appropriate for the endpoint clients.



Note: All Application Manager Groups that are not yet deployed and that contain the same offer or action are also updated. Each offer or action can have only one profile. The offer or action profile remains the same in other Application Management Groups.

6. Click **Confirm Add**.

The **Distribution Tasks** that you added are shown on the **Tasks** tab.

If you already added targets to the Application Management Group, you can now deploy the Application Management Group. For more information, see [Deploying Application Management Groups \(on page 57\)](#). Otherwise, start adding targets to the Application Management Group. For more information, see [Adding targets \(on page 52\)](#).

Adding targets to an Application Management Group

You can add targets to an Application Management Group from the Manage Application Management Group dashboard.

You can use the Add Target dialog to add Computer Groups or Active Directory Groups to the named target group.

Targets are computer groups that operators issue software distribution tasks to. These groups were previously defined in your console environment.

1. Select the Application Management Group to which you want to add targets.



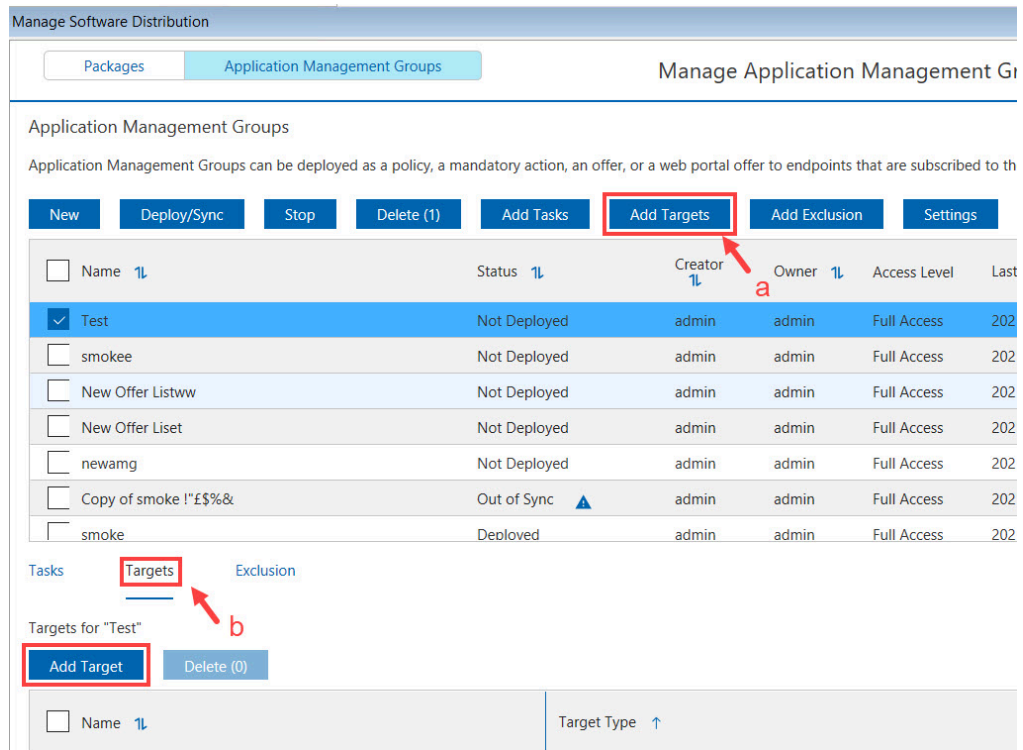
Note: If the status of the selected Application Management Group is "Deployed", you must deploy the Application Management Group again after adding the targets. For more information, see [Deploying Application Management Groups \(on page 57\)](#).

2. Open the Add Targets dialog.

There are two ways to add targets from this dashboard:

- a. Click **Add Targets** from the Application Management Groups tab.
- b. Click **Targets > Add Targets**.

Figure 39. Adding targets from the Manage Application Management Groups dashboard



The Add Targets dialog opens.


3. You can select targets either from a Computer Group or from an Active Directory Group.

- If you select Computer Group as the target, check the available targets for that group, and click **Confirm Add**.

Figure 40. Add target- Computer Group

The screenshot shows the 'Add Targets' dialog with 'Computer Groups' selected in the 'Target' dropdown. Below, a table lists available targets. Two targets are selected with checkmarks: 'windows' (Manual Computer... 0) and 'windows_automatic' (Automatic Compu... 27). The text '2 targets included' is shown below the table. At the bottom right are 'Confirm Add' and 'Cancel' buttons.

	Name	Target Type	Computers
<input checked="" type="checkbox"/>	windows	Manual Computer...	0
<input checked="" type="checkbox"/>	windows_automatic	Automatic Compu...	27

 **Note:** You can only select manual computer groups or automatic computer groups from the user's action site or the custom site that is created by the Application Management Groups dashboard.

- If you select Active Directory Group as the target, You can add the targets for that group, enter the name of the target and click **Add Target**.

Figure 41. Add target- Active Directory Group

The screenshot shows the 'Add Targets' dialog with 'Active Directory Group' selected in the 'Target' dropdown. Below, there are dropdowns for 'Logged on user' and 'AD Security Group' with the text 'is a member of' between them. There is an input field, a 'Match case' checkbox, and an 'Add Target' button. Below, a table lists available targets. Two targets are selected with checkmarks: 'windows' (Manual Computer Group 0) and 'windows_automatic' (Automatic Computer Group 27). The text '2 targets included' is shown below the table. At the bottom right are 'Confirm Add' and 'Cancel' buttons.

	Name	Target Type	Computers
<input checked="" type="checkbox"/>	windows	Manual Computer Group	0
<input checked="" type="checkbox"/>	windows_automatic	Automatic Computer Group	27

4. check the available targets for that group, and click **Confirm Add**.

The targets that you added are shown under the Targets tab.



Note: When new targets are added, only the definition of the Application Management Group changes. The same offer becomes relevant to other targeted computers.

If you already added tasks to the Application Management Group, you can now deploy the Application Management Group. For more information, see [Deploying Application Management Groups \(on page 57\)](#). Otherwise, start adding tasks to the Application Management Group. For more information, see [Adding tasks \(on page 47\)](#).

Adding an exclusion to an Application Management Group

You can add a target as an exclusion to remove it from the Application Management Group. When the Application Management Group is deployed, the tasks are distributed only to the targeted computer groups and not to the excluded computer group.

Only one exclusion can be added for each Application Management Group. An existing exclusion is overwritten each time you add an exclusion.

1. Select the Application Management Group to which you want to add an exclusion.



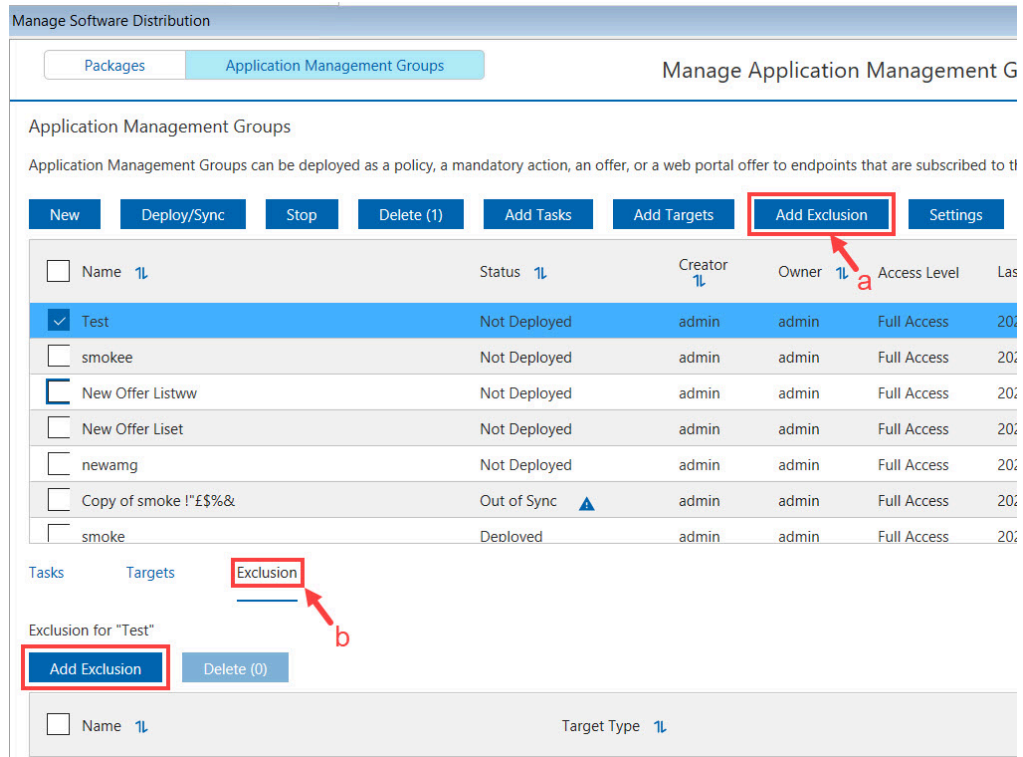
Note: If the status of the selected Application Management Group is *Deployed*, you must deploy the Application Management Group again after you add the exclusion. For more information, see [Deploying Application Management Groups \(on page 57\)](#).

2. Open the Add an Exclusion dialog.

There are two ways to add an exclusion from this dashboard:

- a. Click **Add Exclusion** from the Application Management Groups tab.
- b. Click **Exclusion > Add Exclusion**.

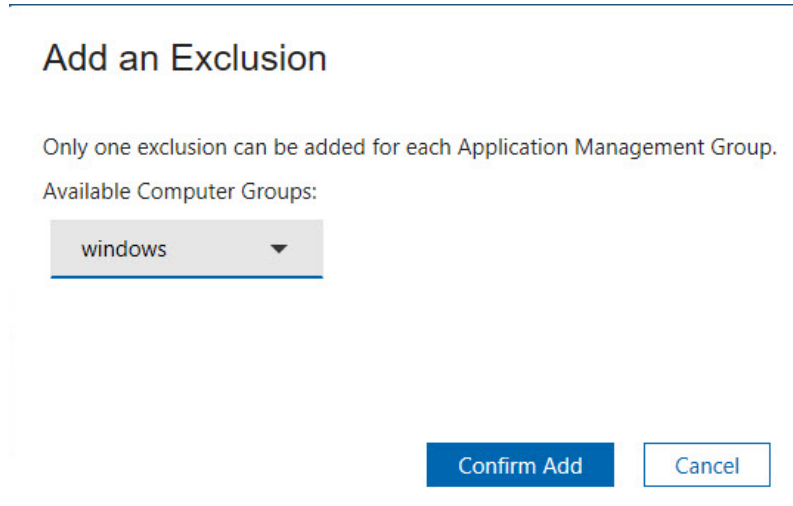
Figure 42. Adding an exclusion



The Add an Exclusion dialog opens.

3. Select one computer group from the list of available computer groups.

Figure 43. Selecting an exclusion from available computer groups



4. Click **Confirm Add**.

The following scenario is an example of computers being excluded from an Application Management Group.



Note: The letters refer to individual computers.

```
Target1: Computer Group 1 (A, B)
Target2: Computer Group 2 (B, C)
Target3: Computer Group 3 (C, D)
Exclusion: Computer Group 2 (B, C)
```

As a result, no computers in Computer Group 2 are applicable. When the Application Management Group is deployed, the tasks are distributed only to computers A and D.

Deploying Application Management Groups

Learn how Application Management Groups are deployed and how they relate to BigFix computer groups.

When an Application Management Group is deployed, the following entities are created:

- An automatic computer group.
- An action for each task.

Computer groups

The Application Management Group computer group is stored at the custom site, which was created during the initial setup process. For example, if five Application Management Groups are deployed, then five automatic computer groups are created, one for each Application Management Group.


The computer group definition contains all the targets that are listed in the Application Management Group.

The computer groups use the following naming convention:

```
name_of_the_custom_site name_of_the_Application_Management_Group
```

For example, if you named the custom site as *“swd_app_group”* during the setup process and have an Application Management Group called *“Offer1”*, you can find a computer group called *“swd_app_group Offer1”* in the *“swd_app_group”* site.

Figure 44. Computer group naming convention

All Computer Groups				Search All Computer Groups 
Name ^	Type	Site	Member Computer...	
swd_app_group Offer1	Automatic	prova	0	
windows	Manual		0	

Actions

The number of actions that are created upon deployment depends on the operator site. There can be one action per task per operator site. For example, a non-master operator creates two Application Management Groups and adds the same task to both groups. When the two groups are deployed, only one action is created. If another operator creates

an Application Management Group and adds the same task as the first operator and deploys the group, a separate action is created. In this example, a total of two actions were created, one for each operator.

Master operators use the same operator site, so if five different master operators use the same task in their Application Management Groups, only one action is created for that task.

The actions use the following naming convention:

```
SWD AMG Action: title_of_the_originating_task
```

Each action references the ID of the automatic computer group in the custom site. For example, if you have a computer group called "swd_app_group Offer1" and this computer group has ID 44. The action contains a relevance clause that checks to see if the endpoint is a member of the computer group whose ID is 44.

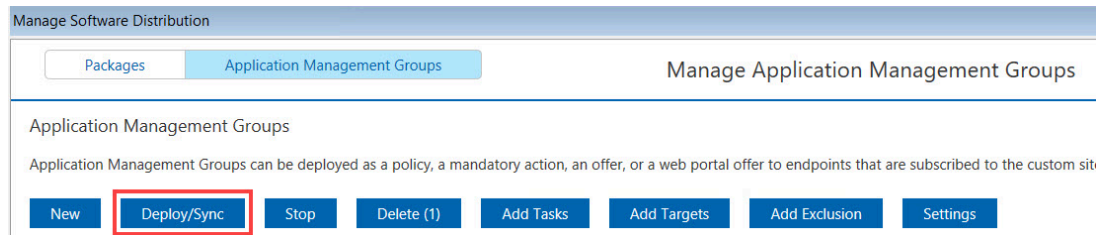
Figure 45. Action naming convention

Time Issued	State	% Complete	Name	Site
9/15/2021 10:41:54 ...	Open	100.00% (1...	Change Multiple Settings	Maste
9/15/2021 9:54:53 P...	Open	100.00% (1...	Change Multiple Settings	Maste
7/9/2021 5:11:47 PM	Open		SWD AMG:226: Deploy "New Product" Files - Installati...	Maste
6/3/2021 11:19:55 P...	Open		SWD AMG:226: Deploy "New Product" Files - Installati...	Maste
5/26/2021 3:40:20 P...	Open	0.00% (0/27)	SWD AMG:2444: Deploy "New Product" Files - Installa...	Maste
5/25/2021 3:35:10 P...	Open	0.00% (0/25)	SWD AMG:2443: Deploy "Mozilla Modificato" Files - I...	Maste
5/24/2021 7:55:03 P...	Open	0.00% (0/27)	SWD AMG:2629: Deolv "New Product" Files - Installa...	Maste

Deployment

To deploy an Application Management Group, select the group that you want to deploy, and click **Deploy/Sync**.

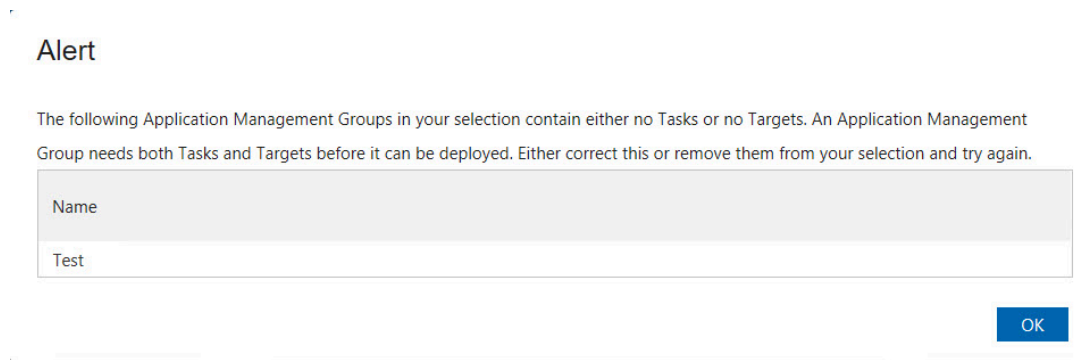
Figure 46. Deploy an Application Management Group



You might be prompted to enter your BigFix credentials twice, first for the creation of the Fixlets, and second for the creation of the computer group.

An alert messages will be displayed when the selection does not contain any Tasks or Targets.

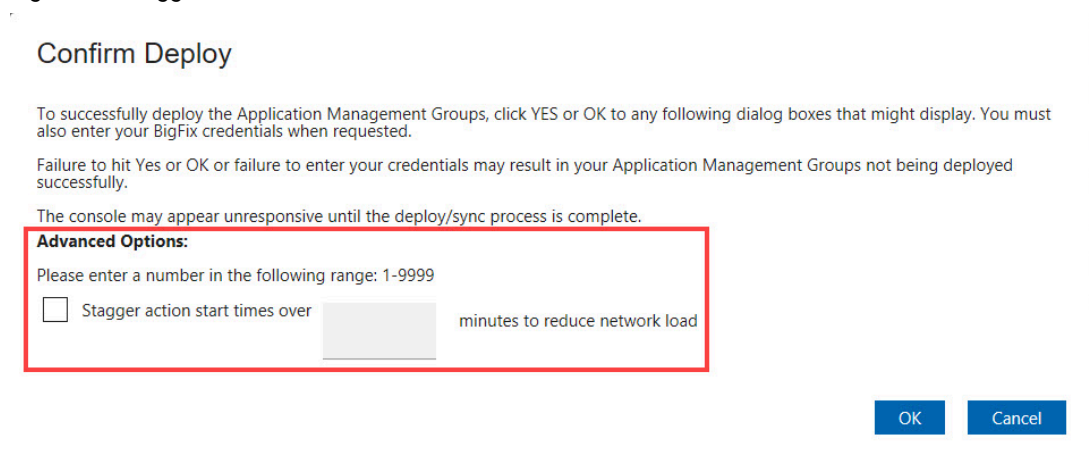
Figure 47. Deployment Alert



Set the advanced options to force the program to space out the running of actions. This can help reduce the load on the network in bandwidth-intensive actions such as large downloads. It is especially useful for allowing Relays to effectively service hundreds of attached Clients. This option is mainly for mandatory and policy actions.

Each computer can have a different start time.

Figure 48. Stagger action



When the Application Management Group is deployed, the status changes to Deployed.

You can continue to add new tasks or targets to a deployed Application Management Group. However, the status changes from *Deployment* to *Out of Sync* because the Application Management Group does not get automatically updated with the new tasks or targets.

Out of Sync state

If an Application Management Group was deployed before the addition or removal of a task or target, the Application Management Group becomes out of sync.

Figure 49. Out of Sync state

Application Management Groups Last Updated: 2021-09-22 07:47:29

Application Management Groups can be deployed as a policy, a mandatory action, an offer, or a web portal offer to endpoints that are subscribed to the custom site "prova1".

[New](#)
[Deploy/Sync](#)
[Stop](#)
[Delete \(1\)](#)
[Add Tasks](#)
[Add Targets](#)
[Add Exclusion](#)
[Settings](#)

Search

micros	Out of Sync ▲	admin	admin	2021-05-26 15:39:51	202▲
--------	---------------	-------	-------	---------------------	------

You must deploy the Application Management Group to put it back to a synchronized state.

Click the yellow icon to view the last deployed model.

Figure 50. Compare Models dialog

Compare Models

Current Model

Tasks Targets Exclusion

Name	ID	Site	Deploy Type	Warnings
Deploy "Mozilla M...	2443	ActionSite	1	
Deploy "New Prod...	226	ActionSite	1	
Deploy "New Prod...	2444	ActionSite	1	
Distribuisci: Config...	2677	ActionSite	1	

Last Deployed Model

Tasks Targets Exclusion

Name	ID	Site	Deploy Type

[Close](#)

Orphaned owners

When a local operator is converted to an LDAP operator, the association between the operator name and shared packages and Application Management Groups of that local operator remains. However, that local operator no longer exists. Master operators must transfer resources of orphaned owners to an owner that exists.

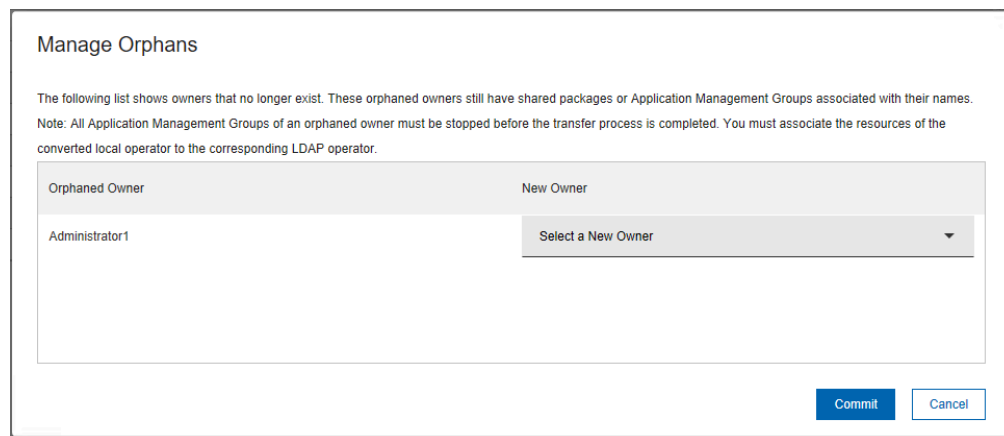
Transferring resources to the corresponding LDAP operator

You can associate a resource of a converted local operator to its corresponding LDAP operator.

All the Application Management Groups of an orphaned owner must be stopped for the transfer process to complete.

1. From the Manage Software Distribution dashboard, you are prompted to select a new owner to replace the orphaned owner.

Figure 51. Transferring orphaned owners



The screenshot shows a web interface titled "Manage Orphans". Below the title is a paragraph of text: "The following list shows owners that no longer exist. These orphaned owners still have shared packages or Application Management Groups associated with their names. Note: All Application Management Groups of an orphaned owner must be stopped before the transfer process is completed. You must associate the resources of the converted local operator to the corresponding LDAP operator." Below this text is a table with two columns: "Orphaned Owner" and "New Owner". The "Orphaned Owner" column contains the text "Administrator1". The "New Owner" column contains a dropdown menu with the text "Select a New Owner" and a downward arrow. At the bottom right of the interface are two buttons: "Commit" (in blue) and "Cancel" (in white with a blue border).

2. Select the correct LDAP operator from the drop-down list.
3. Click **Commit**.

The resources that used to belong to the orphaned owner now belongs to its corresponding LDAP operator. All console permissions remain the same for the new operator.

Transferring resources to a different operator

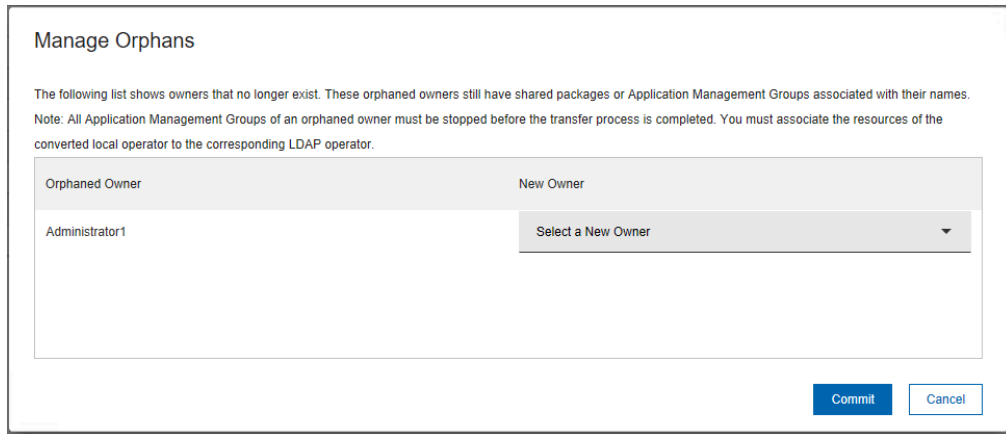
You can associate a resource of a converted local operator to a different operator instead of the corresponding LDAP operator.

You must ensure that the new operator has the correct permissions to view and edit the tasks that are referenced by the software package or Application Management Group before initiating the transfer of ownership. Otherwise, the Tasks in the Package or Application Management Group might not correctly transfer over to the new operator.

All the Application Management Groups of an orphaned owner must be stopped for the transfer process to complete.

1. From the Manage Software Distribution dashboard, you are prompted to select a new owner to replace the orphaned owner.

Figure 52. Transferring orphaned owners



Manage Orphans

The following list shows owners that no longer exist. These orphaned owners still have shared packages or Application Management Groups associated with their names.
Note: All Application Management Groups of an orphaned owner must be stopped before the transfer process is completed. You must associate the resources of the converted local operator to the corresponding LDAP operator.

Orphaned Owner	New Owner
Administrator1	Select a New Owner ▼

Commit **Cancel**

2. Select a new owner instead of the corresponding LDAP operator from the drop-down list.
3. Click **Commit**.

The resources that used to belong to the orphaned owner now belongs to a new operator.

Appendix A. Support

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

- [Knowledge Center](#)
- [BigFix Support Center](#)
- [BigFix Support Portal](#)
- [BigFix Developer](#)
- [BigFix Wiki](#)
- [HCL BigFix Forum](#)

Appendix B. Frequently asked questions

This section is designed to help you better understand BigFix Software Distribution through questions and answers.

What is the definition of a package?

Packages are bundles of content and are the most important part of the software Distribution product. Packages contain a list of the files that are needed to install a specific software product. The list also includes the Fixlets that are needed to install the product on the actual endpoints. The Package establishes management relationships between files and Fixlets.

What is the definition of an Application Management Group?

Application Management Groups are collections of tasks that can be organized into groups of content and delivered to targeted groups of client computers. These tasks are viewed by BigFix clients as offers.

What is the role of MSTs in Software Distribution?

An MST, or Microsoft Transform file, is a subfile of an MSI, or Microsoft Installer file. Transform files are used to set or override installation options such as the product language, license key, or component selections. In the context of Software Distribution, you can use the Create Distribution Task wizard to automatically generate tasks for a package. The wizard creates a task for every MST included in a package. Each task contains a single `.mst` file.



Note: If you want to apply multiple `.mst` files in a single task, you must enter the installation command in the wizard.



Note: You can have different tasks apply different MSTs, but you can only apply one MST per Software Distribution task.

I created a Fixlet from the *Create Fixlet Wizard*; why does not it work?

See the [Fixlet Authoring](#) support page on the BigFix support website for general Fixlet authoring support.

I created a Fixlet in Current User mode and deployed it to the endpoints. Why did it not get installed at the endpoints?

The logged in user must have Administrator privileges to install the software.

Why do I need installation files in the root directory to create a Fixlet?

See the [Technote](#) on structuring software distribution packages in the BigFix support website.

Can I find the list of packages that are installed on an endpoint?

Because BigFix does not repackage the software in a new format, it uses vendor-specified tags, such as the package GUID. These attributes are already gathered in BigFix inventory for many common packaging systems. Alternatively, analyses can be used to identify attributes that indicate that a piece of software is installed. The BigFix SAM scanner is useful in this regard.

Are there any recommendations in creating packages?

See the [Technote](#) on structuring software distribution packages in the BigFix support website.

If I have deployed a software, why is my computer still relevant to the package?

The auto-generated Fixlet relevance is generalized to support common package characteristics. To further customize the applicability relevance of a Software deployment Fixlet, use the **Target using the following applicability conditions** option in either the Create Distribution Task dialog or Edit Distribution Task dialog.

What should I do if my software package has `setup.exe` and `.msi` in it?

This depends on the type of software that you are installing. Check with the specific software vendor for their recommendations.

What is a 'relative path'?

The relative path concept can be used when you add files to a package. For example, an MSI transform file can be added to an existing package and placed into a subfolder by using this feature. Open actions that are based on this package must be re-created before they can take advantage of the new file. For more guidance, see the related [Technote](#) on the BigFix support website.

I modified a Fixlet that was created in the Manage Software Distribution dashboard by adding another action. But when I edit that same Fixlet again, the extra action disappeared. What happened?

The Manage Software Distribution dashboard only supports one action per Fixlet and will delete other actions when found. Consider creating another Fixlet in the same package if you have a need for another action.

How do I bundle multiple installations into a single package?

This practice is not suggested. Instead, create individual Fixlets and use baselines to specify ordering. For more information, see the [Best Practices \(on page 14\)](#) section.

The system with the BigFix console is set up to go through a proxy except when it communicates with the BigFix server. When uploading files through the Manage Software Distribution dashboard, I noticed that it is still going through the proxy. Is there a way to ignore the proxy?

The upload manager (the tool that does the uploading) checks native Windows settings for proxy information. To prevent file uploads from going through the proxy, you need to set up a bypass list in the proxy settings for Windows. Complete the following steps:

1. Open the command prompt as an administrator.
2. For 64-bit Windows systems, open `C:\Windows\sysWOW64\netsh.exe` from the command prompt. For 32-bit Windows systems, use `C:\Windows\system32\netsh.exe`.
3. In the `netsh.exe` terminal, type `winhttp` and hit enter.
4. In the `winhttp` terminal, type `set proxy proxy-server="<proxyURL:port>" bypass-list="<IEM-Server-address><other-addresses>i ..."`.
5. To verify whether the bypass list was updated, you can type the command `show proxy` in the `winhttp` terminal to see whether your bypass list setting was set.

For more information about proxy settings, see the Microsoft TechNet documentation at <https://technet.microsoft.com/en-us/library/Cc731131%28WS.10%29.aspx>.

Why are my SPB tasks not becoming relevant?

To deploy SPB package types, you must first run the 'Deploy SIE' task from the *Client Manager for TCM* site on your endpoints. For more information about working with SPB package types, see the [Supported package types \(on page 13\)](#) section.

How do I know which actions are associated with the Manage Application Management Groups dashboard?

Actions that are created with the Manage Application Management Groups dashboard have titles with the following format: `SWD AMG Action: title_of_the_originating_task`.

When I deploy an Application Management Group, why do I get an error that tells me the computer group exists? What do I do?

Deploying an Application Management Group creates an automatic computer group for that Application Management Group. During the stop process, you might receive a dialog request to delete the computer group. If you click cancel on this request, the group is not deleted. The next time that you attempt to deploy the Application Management Group, you will see an error that tells you that the computer group exists. To work around the error, delete the computer group and then deploy the Application Management Group again.

What do I do if I get a different error when I attempt to deploy an Application Management Group?

If you encounter a problem when you deploy an Application Management Group, complete the following steps:

1. Stop the Application Management Group to put it in a "Not Deployed" state.
2. Delete the corresponding computer group for that Application Management Group.
3. Deploy the Application Management Group again.

Why are my Application Management Group actions not showing in the Client Dashboard?

If you encounter a problem with the Client Dashboard, complete the following steps:

1. Check that the client is subscribed to the Application Management Group custom site.
2. Check that the client is a member of at least one of the targets that are listed in the Application Management Group.
3. Check that there is an automatic computer group for that Application Management Group in the custom site. If it is not there, stop the Application Management Group and deploy again.
4. Check that the ID referenced by the action matches the ID of the corresponding computer group in the custom site. If the IDs do not match, do the following steps:
 - a. Stop the Application Management Group.
 - b. Delete the corresponding computer group in the custom site.
 - c. Deploy the Application Management Group again.
5. Check that the originating task is relevant on the client.

I removed a computer group as a target from a deployed Application Management Group. Then, I resynchronized the Application Management Group. Why are the actions from this Application Management Group still relevant for computers from the removed computer group?

During resynchronization, the existing automatic computer group for the Application Management Group is updated with the new listing of computer group targets. Occasionally, the client receives the action before its computer group information is updated. To avoid this issue, stop and redeploy the Application Management Group whenever a computer group is removed from a deployed Application Management Group.

Where can I find the Manage Software Distribution dashboard debug log?

Follow the steps to turn on the debug mode for the dashboard.

1. Click the Manage Software Distribution dashboard and press ALT+CTRL+SHIFT+D. The **Debug Settings** window opens.
2. Select the **Track function calls in Diagnostic Panel** check box.
3. In the Log Settings section, move the slider for **Levels to Include** to **Debug**.
4. Close the **Debug Settings** window.
5. Press Ctrl+F5 to reload the dashboard.
6. When the error message is displayed, press Alt+Ctrl+Shift+D again.
7. Click **View Dashboard Log**.

I am seeing duplicate Application Management Groups-related actions for master operators. What do I do?

Complete the following steps:

1. From the Manage Application Management Groups dashboard, click the **Settings** icon.
2. Click **Clear AMG Action Cache**.



Note: The cache must be cleared if a master operator deployed an Application Management Group before Software Distribution site version 35.

I deleted a software distribution task, but its packages in the SHA1 folder that is stored in the C:\Program Files\BigFix Enterprise\BES Server\wwwrootbes\Uploads folder are not being deleted automatically. Why is that and what must I do?

If you used the **Software Distribution Wizard** to create the task, no automatic cleanup occurs. This behavior is expected of the wizard. You must locate and delete the files or folders from the repository manually. Any cleanup of payloads must be done manually. It is suggested that you use the **Manage Software Distribution** dashboard instead of the **Software Distribution Wizard** to create software distribution tasks.

If you used the **Manage Software Distribution** dashboard to create the task, and yet its packages are not automatically deleted upon deleting of the task, ensure that you have:

- Deleted the files from the software distribution package
- Deleted all tasks that reference the file
- Stopped all open actions that reference the file

If any of these measures were not taken, the file and sha1 folder remains.

The installation of .pkg files on Mac endpoints was successful, but the task remains relevant. Why is that? How do I verify whether the software installation was truly successful?

The task remains relevant because the inspector to check whether the Mac .pkg files are installed on an endpoint is not yet available. For information on how to manually check whether the package was deployed successfully, see [Package type verification \(on page 33\)](#).



Note: Reinstalling a .pkg file does not cause any issues.

Can I easily migrate created software packages from one BigFix Deployment to another?

Yes. Software packages can now easily be exported and imported from the Manage Software Distribution dashboard. For more information about this feature, see [Import and export packages \(on page 37\)](#).

Why does the status of a software deploy action not accurately reflect the installation status of the deployed application?

Software distribution is unable to determine whether a software installation was successful in many cases. The issues that are related with the actual package installation are outside of the control of Software Distribution. It runs the package, but cannot track the result of that execution.

Why are Solaris .pkg files failing to install?

Solaris .pkg files may fail due to conflicts. The default option is to quit when encountering a conflict. If you would like to ignore conflicts and proceed with the installation, you can edit the Action script to change these values. These three settings, `conflict`, `idepend`, and `rdepend`, are set to 'quit' by default. Change 'quit' to 'nocheck' and then rerun the task.

I added preinstallation and postinstallation commands, but the commands failed

Ensure that the syntax is correct. The dashboard does not check the validity of the actionscript, batch script, or shell script commands. These script types are just wrappers so you do not need to directly edit the actionscript.

Import or export is taking too long. What might be causing this delay?

Importing and exporting large packages, both in size and quantity, might take a while to process due to the large amount of data. Check the logs to see if the process stopped running. If so, restart the process.

What are the possible causes for the export and import features to fail?

To find out why export or import failed, check the logs from the console system at `<Windows Temp>\SoftwareDistributionLogs\<Export or Import>`.

Here are some possible causes of failure:

File or Fixlet name is too long.

The export and import processes might fail when an uploaded installation file or Fixlet has a file name that is over 100 characters.

To fix this issue, rename the file or Fixlet name in the console with a shorter name. Renaming the file names in the compressed file is not advisable.

Resource is lock.

This issue is caused when the import or export process was ended prematurely. An example scenario is when you leave the dashboard when the export or import process is still in progress.

To fix this issue, restart the BigFix console to clear the console cache or restart the system.

Cannot download the zip or unzip utility.

To process exports and imports, the dashboard needs to download a zip or unzip utility if it has not been previously downloaded. If the download fails, a possible issue might be due to unconfigured proxy settings. The dashboard does not use the same proxy as the rest of the console. To fix this issue, configure the proxy setting using Internet Explorer's Internet Options.

A package failed to export. The export log has an entry that says *"Unexpected HTTP response: 404 Not Found"*. What do I do?

The file failed to export because it cannot be found on the server. A file can go missing if it was deleted in the BigFix server or if it was originally uploaded under a different file name.

To fix this issue, complete the following steps:

1. Check whether the file was previously uploaded to the BigFix server in the following location *<IEM Server directory>/wwwrootbes/Uploads/<sha1 of file>*. If the sha1 folder exists, delete that sha1 folder.
2. Refresh the Manage Software Distribution dashboard. An X mark displays beside the missing file. It might take several minutes before the change is reflected in the dashboard.
3. Upload the missing file again.

I specified the file's URL but the file failed to download. How can I troubleshoot?

There are a couple of ways to troubleshoot:

- Verify if the file URL is correct.
- Check if you can download the file in a browser.

- Check your proxy settings in Internet Explorer's Internet options. The dashboard does not use the same proxy as the rest of the console.
- Check the download logs, which can found at *<Windows Temp>\SoftwareDistributionLogs\Downloads*.

How do I uninstall the Software Distribution Self Service Portal?

To uninstall the Software Distribution Self Service Portal, deploy the following Fixlets from the **Software Distribution** site:

Fixlet 146: Remove Self Service Portal for Mobile Device Management

Use this Fixlet to completely uninstall the Self Service Portal. When the portal is removed, users are no longer able to use the self service portal to view and manage their computers and mobile devices.

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.