

# BigFix Getting Started



# Special notice

Before using this information and the product it supports, read the information in [Notices \(on page 38\)](#).

# Edition notice

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

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# Chapter 1. Introduction

BigFix is a suite of products that provides a fast and intuitive solution for compliance, endpoint, and security management and allows organizations to see and manage physical and virtual endpoints through a single infrastructure, a single console, and a single type of agent.

BigFix provides you with the following capabilities:

- Single intelligent agent for continuous endpoint self-assessment and policy enforcement.
- Real-time visibility and control from a single management console.
- Management of hundreds of thousands of endpoints regardless of location, connection type, or status.
- Targeting of specific actions to an exact type of endpoint configuration or user type.
- Management of complexity and cost reduction, increasing accuracy, and boosting productivity.
- Patch management, software distribution, and OS deployment.
- Support for heterogeneous platforms.
- Mobile device management.
- Automatic endpoint assessment and vulnerability remediation according to the National Institute of Standards and Technology (NIST) standards.
- Real-time protection from malware and other vulnerabilities.
- Server Automation.

Depending on your business and environment needs, you can choose to implement some or all of these capabilities by buying licenses for the specific products belonging to the suite.

Licensing is done through annual subscription, according to the number of endpoints that are managed and the products that are selected in the suite.

All products are compatible with one another and are accessible from anywhere in your network by using the BigFix console.

Typically, a BigFix installation consists of the following parts:

- [BigFix Platform \(on page 3\)](#)
- One or more [BigFix applications \(on page 6\)](#)

For more details about the product, see:

- [A sample architecture \(on page 9\)](#)
- [Types of content \(on page 10\)](#)
- [How to identify on which targets to apply content \(on page 12\)](#)

# Chapter 2. BigFix Platform

All the BigFix applications run on top of the BigFix platform.

The BigFix platform is a multi-layered technology platform that acts as the core part of the global IT infrastructure. The platform is a dynamic, content-driven messaging and management system that distributes the work of managing IT infrastructures out to the managed devices themselves, the agents.

The platform can manage up to 250,000 physical and virtual computers, over private or public networks, including servers desktops, roaming laptops, mobile phones, Point-Of-Sale devices, Automated Teller Machines, and self-service kiosks.

The platform supports Microsoft Windows, UNIX, Linux, and Mac OS.

In terms of features and benefits, BigFix platform delivers:

## **A single intelligent agent**

It operates with less than 10 megabytes of RAM and it must be installed on every computer that must be managed. It continuously assesses the state of the endpoint against the stated policy, whether connected to the network or not. As soon as the agent notices that the target out of compliance with a policy or checklist, it informs the server, runs the configured remediation task, and immediately notifies the server of the task status and result. In most cases, the agent operates silently, without any direct intervention from the user. However, if you want to solicit a user response, the program also allows you to provide screen prompts. A computer with the BigFix agent installed is also referred to as a *client*.

## **A single console**

Whatever specific solution you use, whether it is endpoint protection, systems lifecycle management or security configuration and vulnerability management, it is managed from a single console. If you are an operator with the required privileges, from the console you can quickly and easily distribute a fix to only those computers that need it, with no impact on the rest of the network.

## **A single server**

It coordinates the flow of information to and from individual clients and stores the results in the database. It manages policy-based content and allows the operator to maintain real-time visibility and control over all devices in the environment. The content is delivered in messages that are called *Fixlet* and it is updated continuously using the Content Delivery cloud-based service. Because most of the analysis, processing, and enforcement work is done by the agent rather than the server, one server can support up to 250,000 endpoints. High availability is enabled by employing multiple servers.

### **Optionally one or more relays**

They help manage distributed devices and policy content. A relay is a client, that is enhanced with a relay service. It performs all client actions to protect the host computer, and in addition, delivers content and software downloads to child clients and relays. Instead of requiring every networked computer to directly access the server, relays can be used to offload much of the burden. Hundreds of clients can point to a relay for downloads, which in turn makes only a single request to the server. Relays can connect to other relays as well, further increasing efficiency. Promoting an agent to a relay takes minutes and does not require dedicated hardware or network configuration changes.

### **Optionally a secondary server**

A Disaster Server Architecture (DSA) server, which replicates the server information for disaster recovery. If a BigFix server fails, other BigFix servers automatically take over as fully functional BigFix servers.

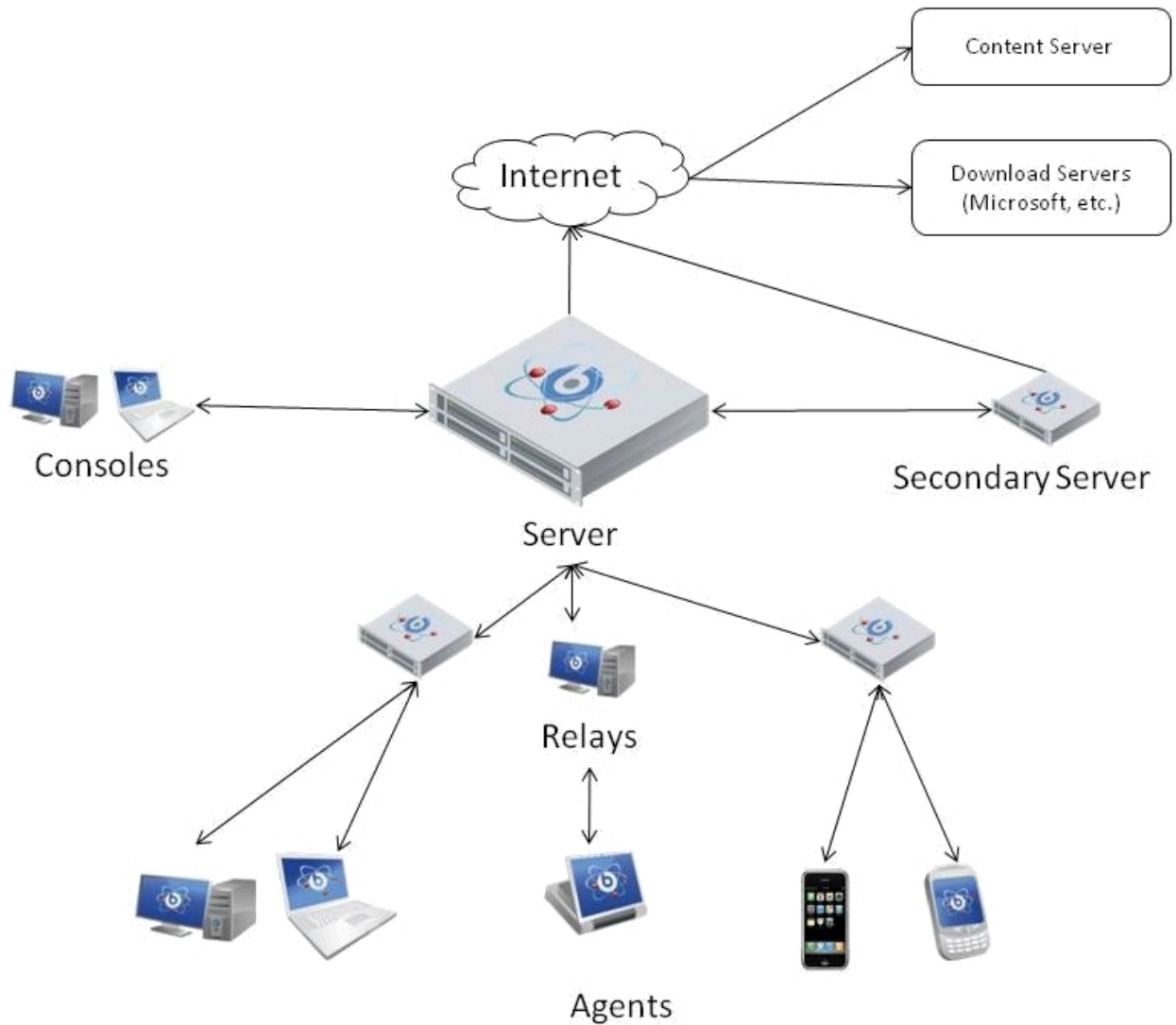
### **Web Reports**

Using the Web Reports program you can:

- Produce charts and graphs of your data, providing you with hardcopy.
- Help you to maintain an audit trail of all the Fixlet activity in your network.
- Export data for further manipulation in a spreadsheet or database.
- Aggregate information from extra BigFix servers that are installed at your organization.



The interface runs in a web browser and provides a set of users with visibility into the state of the computers, but no rights to alter those computers.



# Chapter 3. BigFix applications

The BigFix solution comprises several application products that provide consolidated security and operations management, simplified and streamlined endpoint management, while increasing accuracy and productivity.

## **BigFix Lifecycle**

Use this application to provide administrators with an agent-based tool that delivers accurate visibility into the state of endpoints and automatically remediates issues.

BigFix Lifecycle includes the following applications:

### **OS Deployment**

Provides a consolidated, comprehensive solution to quickly deploy new workstations and servers throughout a network from a single, centralized location.

### **Power Management**

Manages and monitors the power usage settings on the computers in your network. It also manages and applies the company conservation policies that you set with the use of dashboards, wizards, and web reports.

### **Remote Control**

Remotely takes over and monitors workstations and servers in your deployment.

### **Server Automation**

Automates provisioning workflows. You can automate a sequence of Fixlets, tasks, and baselines across different endpoints, such as servers or computers.

### **Software Distribution**

Provides a consolidated, comprehensive solution to quickly deploy software throughout a network from a single, centralized

location. It provides cost-effective operational control and visibility of your software delivery and installation process.

### **BigFix Patch**

Use this application to provide an automated, simplified patching process to all distributed endpoints. It manages both operating system and software application patches.

### **BigFix Compliance**

Use this application to protect endpoints, automate remediation, and assure regulators that you are meeting security compliance standards.

### **BigFix Inventory**

Use this application to scan monitored computers to:

- Identify which software is installed.
- Match the signatures that are discovered by the scan against the software catalog.
- Create reports.
- Compare the results with the information about costs and entitlement that is provided in the contracts.

You can decide to add applications that belong to the BigFix solution later by buying extra licenses; they will automatically be available for use on the BigFix Console. You do not have to install any additional software or buy new hardware when you add applications that belong to the solution. Only Asset Discovery and Inventory require the installation of new components, but the installation is done by BigFix itself.



**Note:** Asset Discovery is a BigFix platform component that allows you to identify unmanaged assets in your network.

Many customers start with one application, such as Patch, and then expand the scope of their deployments, buying new licenses, as they start to appreciate the full capabilities of the product solution.

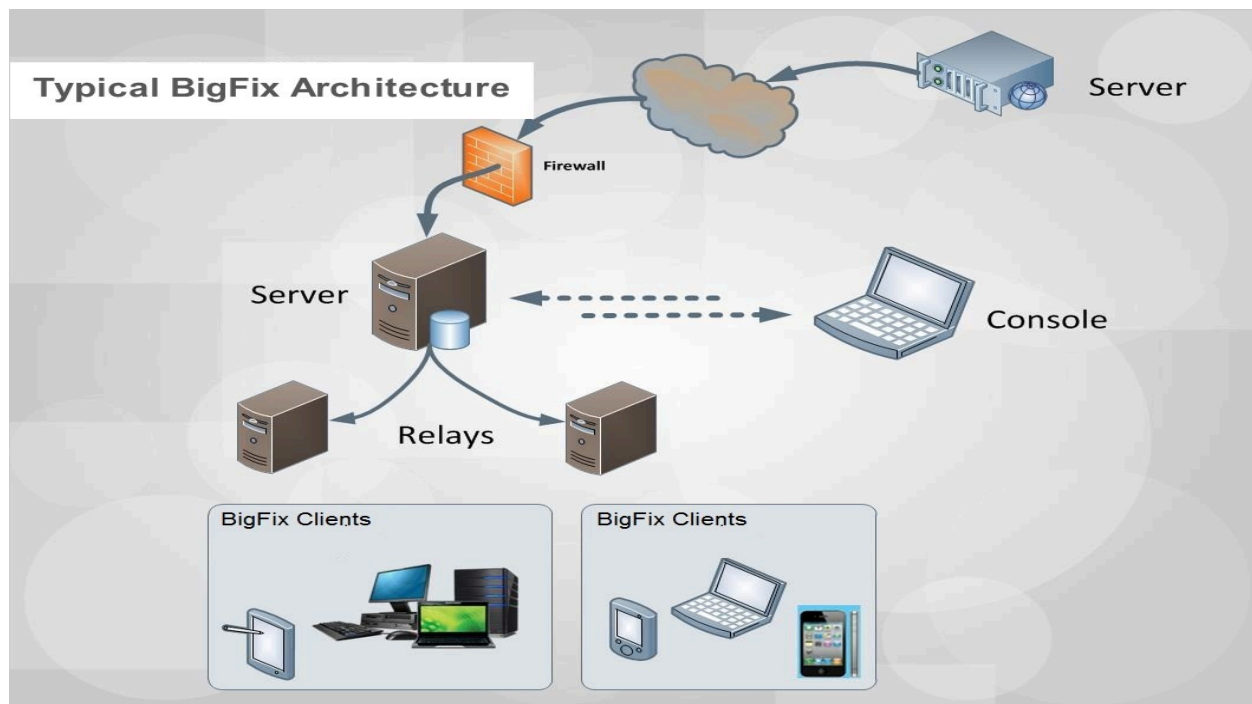
Consider that some capabilities are common to more than one application in the BigFix product solution. For example, as you can see in the picture, the capability to apply OS and software application patches is available in the Patch application, as well as in the Compliance and Lifecycle applications. You can buy any of these licenses to manage patches.

All these applications take advantage of the continuous evaluation on the agent and of the gathering process to acquire data from repositories and send to the targets.

# Chapter 4. A sample architecture

A sample architecture helps you to plan your environment.

A typical installation has at least one BigFix server that gathers Fixlets from the internet. These messages can be viewed by the console operator and distributed to the relays, which forward the data on to the clients. Each client inspects its local computer and reports any relevant Fixlets back to the relays, which compress the data and pass it back up to the servers.



The console oversees this activity. It connects to the server and periodically updates its views to reflect changes or new information about your network. When vulnerabilities are discovered, the console operator can target patches or other fixes to the appropriate computers. The progress of the fixes can be followed in near real time as they spread to all the relevant computers and, one by one, eliminate bugs and vulnerabilities.

BigFix is flexible enough to connect to a distant office over a VPN and even allows home-based workers or on-the-road sales staff to connect over the internet to a firewall-protected relay in a DMZ. This simple hierarchy can be extended and deepened to accommodate networks of virtually any size.

# Chapter 5. Types of content

BigFix is based on contents. The generic term of content might represent data to distribute to targets, or instructions to run on targets, or queries to run on targets.

BigFix implementation is based on these different types of content:

## **Action**

An action is a script that runs on selected targets. Actions are used to fix policy violation and security exposures, to run configuration steps or, in general, to run operations or commands on targets. Fixlets, tasks, and baselines contain actions and depend on actions to run their remediation mission.

## **Fixlet**

A Fixlet is a document that contains instructions that the BigFix agents on target systems use to assess their status, identify issues, such as a vulnerability or a lack of compliance with a policy rule, and take corrective actions to resolve.

## **Task**

A task is a document that contains instructions that BigFix agents on target systems use to run locally commands or configuration activities.

## **Baseline**

A baseline is a deployment container of Fixlets and tasks. You can use it to apply a set of contents at the same time to one or more targets. The contents are applied according to the sequence specified in the baseline description. For example, a baseline might contain:

1. A Fixlet to install a product.
2. A Fixlet to upgrade it to a required level.
3. A task to configure the product that is installed.

When the baseline is deployed, the contents are applied respecting the predetermined sequence.

### **Analysis**

An analysis is a collection of property expressions that allows an operator to view and summarize various properties of BigFix client computers across a network.

You can access these types of contents from the BigFix console. Each application that belongs to the BigFix suite uses these contents to accomplish its activities. You can create your custom content to satisfy your specific needs. For example, you can create custom Fixlets to apply patches to your home-developed applications or to enforce your policy rules. You must have specific authorizations to create your custom content.

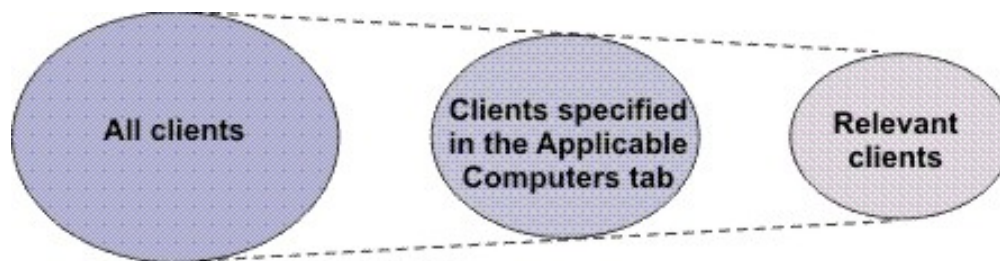
Contents are contained in content sites. These contents are automatically updated on a timely basis. The set of content sites available to you depends on the BigFix product licenses that you bought. If you have the required authorizations, you can create your own custom content site to collect your custom contents.

# Chapter 6. How to identify on which targets to apply content

BigFix helps you identify on which targets to apply content.

One of the main strengths of BigFix is its ability to determine which targets the content applies to, in other words, which computers need that content. This is accomplished using Relevance expressions. Relevance expressions are part of the content definition and their scope is to interrogate the hardware and software properties of your managed clients to ensure that a patch or a maintenance activity, for example, is applied to only those computers that need it, and to no others.

When you define a content, you specify in the Applicable Computer tab a set of computers that can be targets for that content. Relevance evaluation narrows down this set of computers and selects only those computers that really must apply that content.



Even though relevance expressions are used in the same way for all types of content, depending on the type of content, the relevance triggers different behaviors:

## **Relevant action**

It represents a violation to be remediated by running the instructions stated in the action description using the Action script language. Actions incorporate relevance clauses that can be customized at run time in the Take Action dialog.

## **Relevant Fixlet**

It means that the computer is out-of-compliance with a policy rule. When the Fixlet is relevant, the actions that are contained in the Fixlet definition can be



run to remediate the issue. After the actions run, the relevance is evaluated again to check if the vulnerability is fixed.

For example, a Fixlet can be used to install Symantec Endpoint Protection. This Fixlet is relevant for those computers where Symantec Endpoint Protection is not installed. After the Fixlet is installed on all the relevant computers, it is no longer marked as relevant. If, later, Symantec Endpoint Protection is uninstalled on one or more computers specified in the Applicable Computers tab, the Fixlet is marked as relevant again.

### **Relevant task**

It indicates that the computer has a violation of a configuration standard or requirement or it must run maintenance activities.

For example, a task can be used to start Symantec Endpoint Protection. This task is relevant for those computers where Symantec Endpoint Protection is not active.

When the task is relevant, the actions that are contained in the task definition can be run to remediate the issue. After all the steps of the actions have completed, the task is marked as not relevant on the computer. The relevance expression is not evaluated again. As a best practice, success criteria can be used to determine whether the actions completed successfully to ensure that the remediation efforts succeeded in solving the problem.

### **Relevant baseline**

It informs that one or more of the Fixlets that it contains is relevant for one or more computers that satisfy the criteria of both relevance expressions, those specified in the Fixlet description and those specified in the baseline Applicable Computers tab. If nothing is specified in the baseline Applicable Computers tab, then no restriction applies to the Fixlet or task applicability.

For example, a baseline might contain Fixlets and tasks for both Windows and Linux operating systems, however, if the baseline Applicability Computers states that only Windows computers are relevant then only the Fixlets and tasks that are applicable for Windows are considered.



**Note:** Even though the baseline contains tasks, the Fixlet behavior is applied.

### **Relevant analysis**

It runs property queries, according to their query intervals, and sends the results back to the server. The results are then displayed on the BigFix console.

When a computer evaluates relevance of a newly-gathered document, for example a Fixlet or an analysis, it posts the results, and these results are then displayed on the BigFix console. After the initial evaluation, the computer only reports changes, because there is no benefit in using network bandwidth to report the same result.

Relevance expressions are written in a human-readable proprietary language called Relevance Language.

If you have Custom Content authorization, you can write a new relevance expression or modify existing expressions, to tailor content delivery to your needs. For more information about assigning authorizations to operators, see [Mapping authorized activities with permissions](#).

# Chapter 7. A patch management scenario

Follow the steps listed in these topics to learn how to deploy a patch using the Patch Management application on a newly installed BigFix server. All the steps are run from the BigFix console.

This scenario applies to Windows operating systems. You can follow the same procedure to enable and apply patches also on other operating systems.

The scenario is divided into two parts:

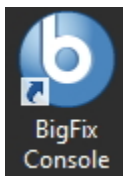
- [Configuring Patch Management for Windows patches \(on page 15\)](#)
- [Applying a Windows patch \(on page 18\)](#)

## Configuring Patch Management for Windows patches

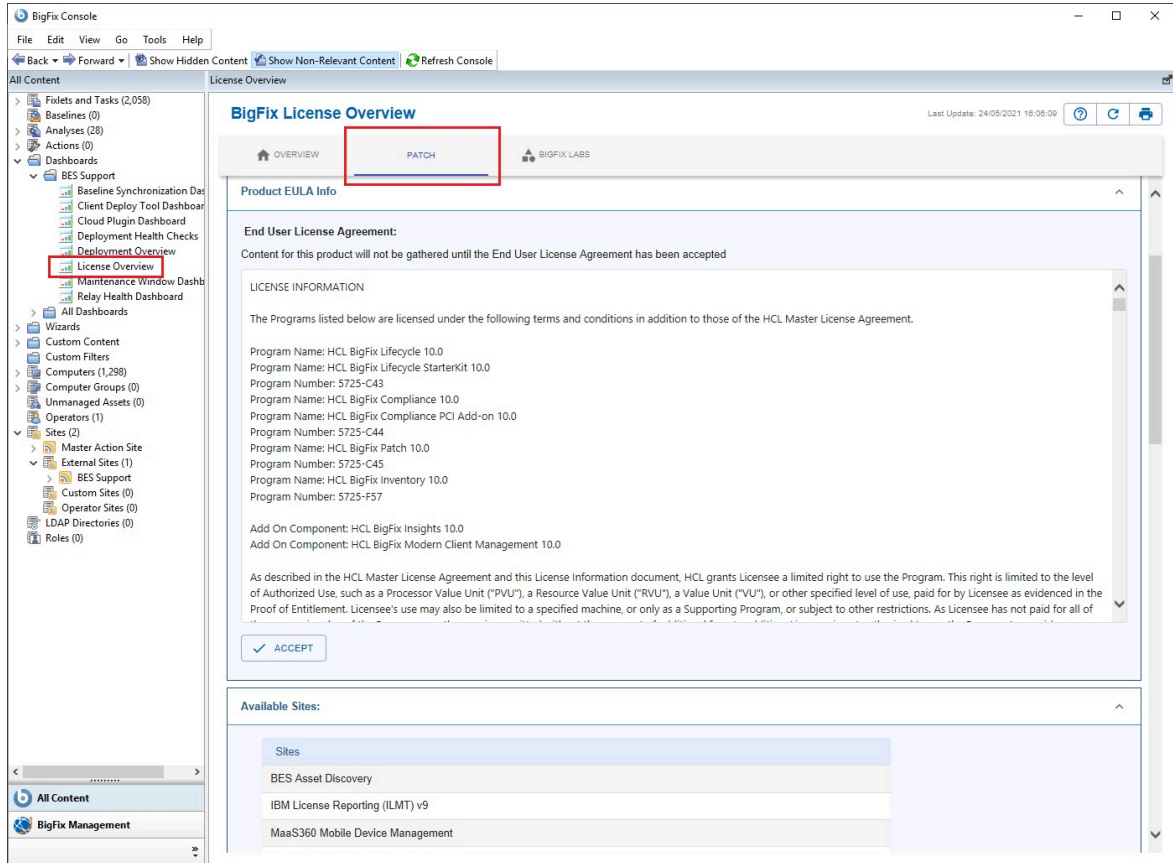
After installation, the BigFix product is automatically set up to subscribe to certain management and maintenance sites. In this way content from those sites automatically flows into your enterprise and is evaluated for relevance on all computers running the BigFix client.

Run these steps to subscribe to the Patch Management site:

1. Open the BigFix console by double clicking the icon:



2. Click the **License Overview** dashboard.
3. Select the Patch Management tab.



4. Read and accept the Patch Management license agreement.
5. In the **Available sites** click **Enable** beside **BES Asset Discovery, Patches for Windows (English), Patching support** and **Updates for Windows Applications** to enable download content from the Patch Management web site.

The screenshot shows the BigFix Console interface. The left sidebar contains a navigation tree with the following structure:

- All Content
  - Filelets and Tasks (2,088)
  - Baselines (0)
  - Analyses (32)
  - Actions (0)
  - Dashboards
    - BES Support
      - Baseline Synchronization Dashboard
      - Client Deploy Tool Dashboard
      - Cloud Plugin Dashboard
      - Deployment Health Checks
      - Deployment Overview
      - License Overview
      - Maintenance Window Dashboard
      - Relay Health Dashboard
    - All Dashboards
  - Wizards
  - Custom Content
  - Custom Filters
  - Computers (1,298)
  - Computer Groups (0)
  - Unmanaged Assets (0)
  - Operators (1)
  - Sites (6)
    - Master Action Site
    - External Sites (5)
      - BES Asset Discovery
      - BES Support
      - Enterprise Security
      - Patching Support
      - Updates for Windows Applications
    - Custom Sites (0)
    - Operator Sites (0)
    - LDAP Directories (0)
    - Roles (0)

The main content area is titled "BigFix License Overview" and shows the following details:

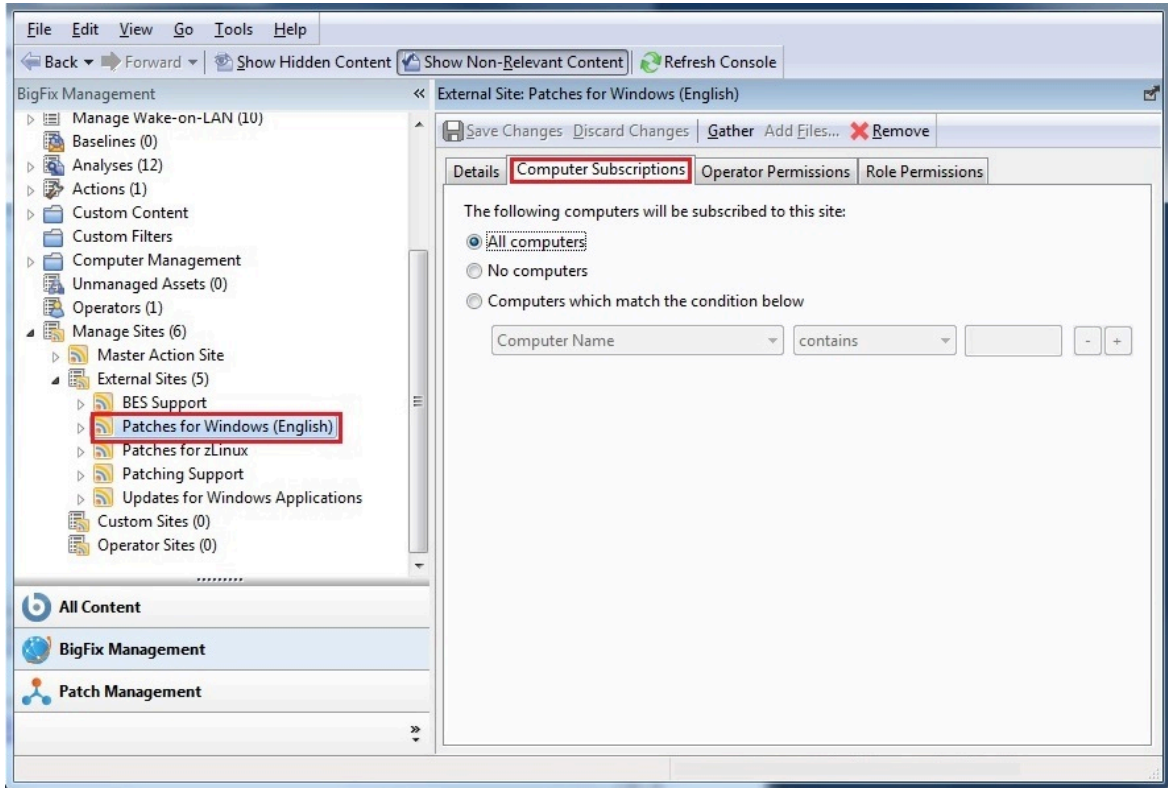
- This license contains the following entitlements for Patch
- Licensed for: 1500 (Client)
- License Type: Perpetual
- Maintenance Expiration Date: 25/06/2022 VALID

Below the license details is a section titled "Available Sites:" with a table listing various sites and their subscribed computers:

Enabled	Sites	Subscribed Computers
ENABLED	<a href="#">BES Asset Discovery</a>	0
ENABLED	<a href="#">Enterprise Security</a>	0
ENABLED	<a href="#">Patching Support</a>	0
ENABLED	<a href="#">Updates for Windows Applications</a>	0
ENABLE	<a href="#">IBM License Reporting (ILMT) v9</a>	
ENABLE	<a href="#">MaaS360 Mobile Device Management</a>	
ENABLE	<a href="#">Patches for AIX</a>	
ENABLE	<a href="#">Patches for CentOS 5 Native Tools (Deprecated)</a>	
ENABLE	<a href="#">Patches for CentOS 6 Plugin R2</a>	
ENABLE	<a href="#">Patches for CentOS 7 Plugin R2</a>	
ENABLE	<a href="#">Patches for Debian 7</a>	
ENABLE	<a href="#">Patches for ESX3</a>	
ENABLE	<a href="#">Patches for ESXi</a>	
ENABLE	<a href="#">Patches for HP-LUX</a>	
ENABLE	<a href="#">Patches for Mac OS X</a>	

The Patch Management site is now listed in the **Manage Sites** node of the domain panel.

- Open the **Manage Sites** node and select **Patches for Windows (English)**.
- From the site dialog, click the **Computer Subscriptions** tab and then select **All computers**.



8. You can either wait for the gather process to automatically run or you can click **Gather** to start downloading the available contents from the selected sites.
9. After the gather process completes, the **Patches for Windows (English)** subtree is populated with the new content.

## Applying a Windows patch

Run the following steps from the console to apply a Windows patch:

1. Expand the **Patches for Windows (English)** subtree and click **Subscribed Computers**. In the **List panel** you see an entry representing the client installed on the server system.
2. Select the **Relevant Fixlets and Tasks** tab to display the list of Fixlets that are relevant for the selected client.

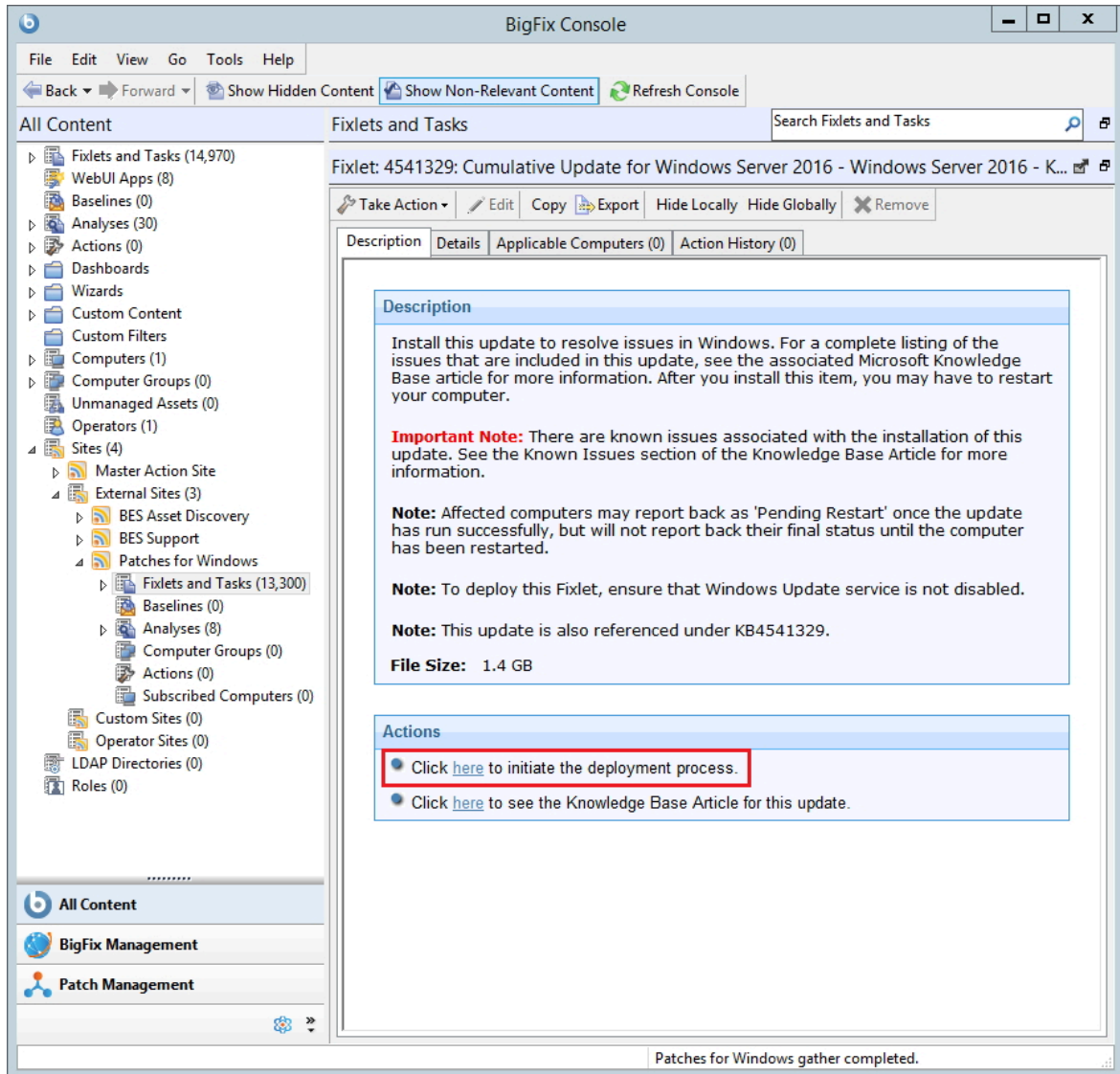
The screenshot displays the BigFix Management console interface. The left-hand navigation pane shows a tree view with categories like 'Maintenance Window Management', 'Baselines (0)', 'Analyses (12)', 'Actions (1)', 'Custom Content', 'Computer Management', 'Unmanaged Assets (0)', 'Operators (1)', and 'Manage Sites (6)'. The 'Manage Sites (6)' folder is expanded to show 'Subscribed Computers (1)'. The main window is titled 'Subscribed Computers' and contains a table with columns: Computer Na..., OS, CPU, Last Report Ti..., Locked, and BES Relay Sele... The table lists one computer: NC9128111234, Win2008R2 6.1..., 2400 MHz Xeon, 27/03/2014 14:..., No, Manual. Below the table, the computer name 'NC9128111234' is displayed. The 'Edit Settings' section includes 'Remove From Database' and 'Send Refresh' buttons. The main content area shows a summary of 'Relevant Fixlets and Tasks (109)'. A table lists these items with columns: Name, Site, and Category. The following table represents the data shown in the screenshot:

Name	Site	Category
MS13-082: Vulnerabilities in .NET Framework ...	Patches for Win...	Security Hot
MS11-025: Vulnerability in Microsoft Foundat...	Patches for Win...	Security Hot
MS13-052: Vulnerabilities in .NET Framework ...	Patches for Win...	Security Hot
MS13-062: Vulnerability in Remote Procedure...	Patches for Win...	Security Hot
MS13-093: Vulnerability in Windows Ancillary...	Patches for Win...	Security Hot
MS13-095: Vulnerability in Digital Signatures ...	Patches for Win...	Security Hot
MS14-009: Vulnerabilities in .NET Framework ...	Patches for Win...	Security Hot
MS13-065: Vulnerability in ICMPv6 could allo...	Patches for Win...	Security Hot
MS13-076: Vulnerabilities in Kernel-Mode Dri...	Patches for Win...	Security Hot
MS13-077: Vulnerability in Windows Service C...	Patches for Win...	Security Hot
MS13-101: Vulnerabilities in Windows Kernel-...	Patches for Win...	Security Hot
MS14-009: Vulnerabilities in .NET Framework ...	Patches for Win...	Security Hot
MS14-015: Vulnerabilities in Windows Kernel-...	Patches for Win...	Security Hot
MS13-081: Vulnerabilities in Windows Kernel-...	Patches for Win...	Security Hot
MS13-081: Vulnerabilities in Windows Kernel-...	Patches for Win...	Security Hot
MS13-081: Vulnerabilities in Windows Kernel-...	Patches for Win...	Security Hot
MS13-081: Vulnerabilities in Windows Kernel-...	Patches for Win...	Security Hot

The status bar at the bottom indicates '1 item in list, 1 selected.'

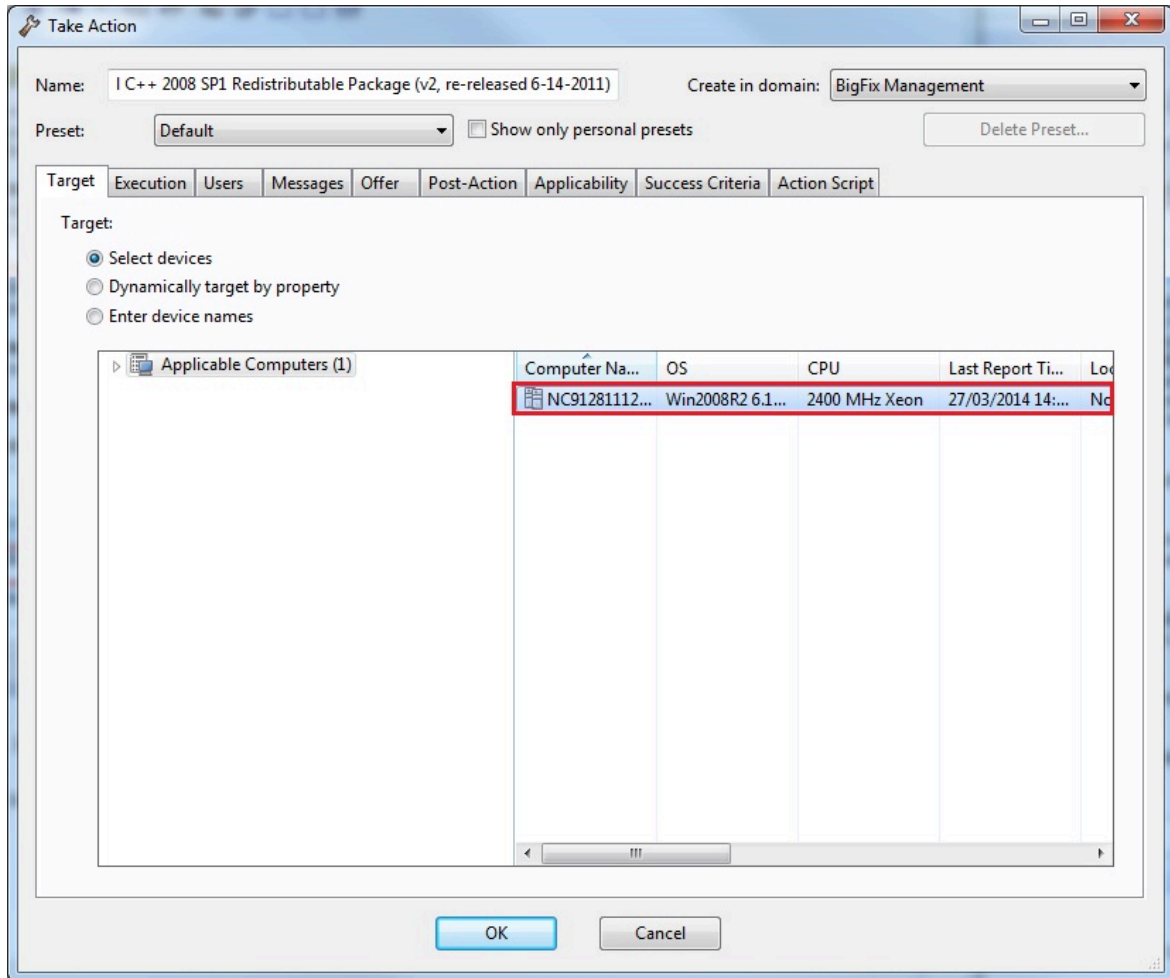
A Fixlet is relevant for a client if the client needs to install the content referenced in the Fixlet. The need to install that content is automatically evaluated on the Client using a set of predefined conditions specified in Fixlet.

3. Double click a Fixlet to access the Fixlet description.
4. In the **Actions** pane choose to initiate the deployment process.

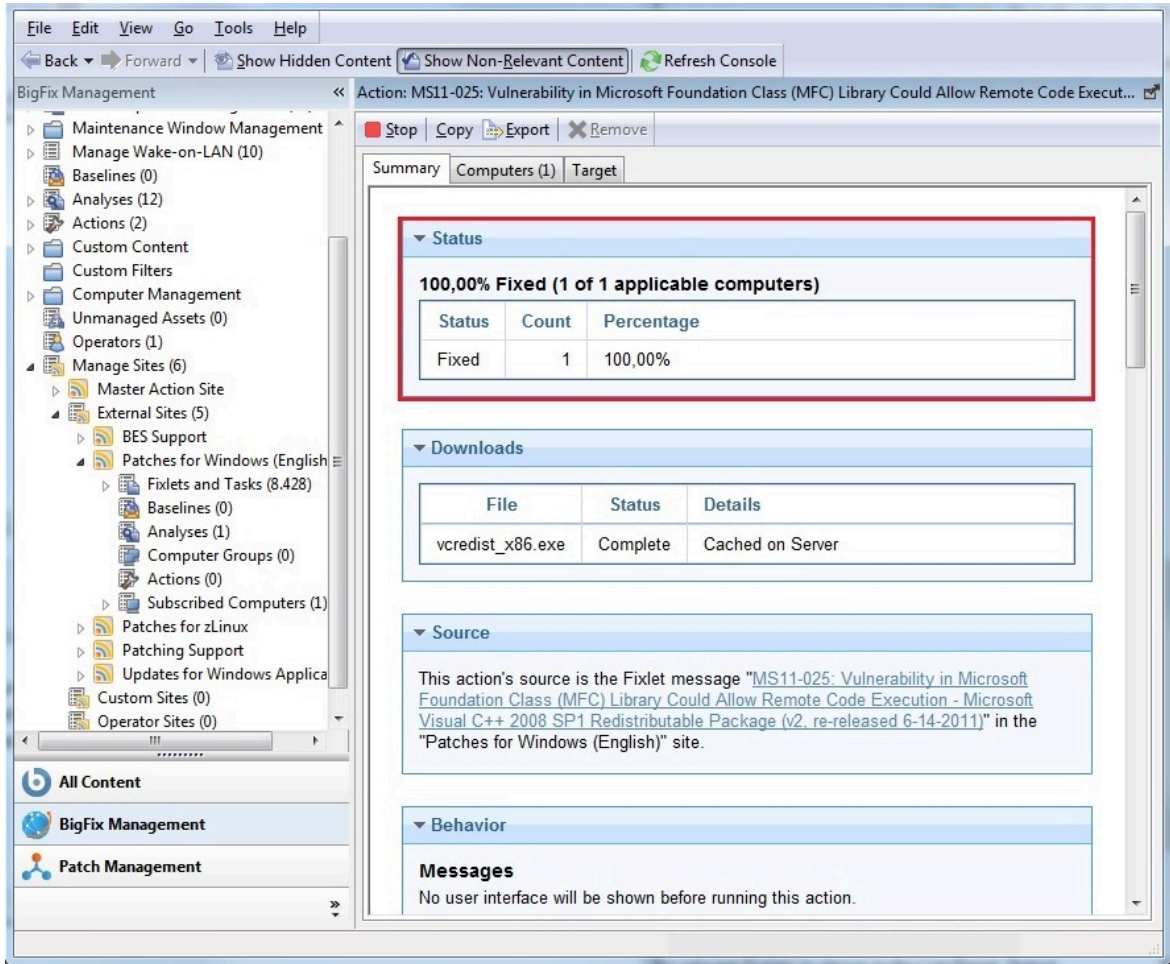


5. The **Take action** panel opens. In this panel select the client and then click **OK** to start the deployment.





6. You are automatically redirected to the **Action** panel. The status pane shows the progression of the deployment of the Fixlet. The status changes from **Not evaluated** to **Evaluating** to **Fixed** if the vulnerability on the client is successfully fixed. The remove of the vulnerability is automatically evaluated on the Client using a set of predefined conditions specified in the **Success Criteria** tab of the Action.



7. After the vulnerability is removed the client does not need to apply again the Fixlet and the Fixlet is marked as not-relevant for the client.

# Appendix A. Glossary

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

The following cross-references are used in this glossary:

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

[A \(on page 23\)](#) [B \(on page 24\)](#) [C \(on page 25\)](#) [D \(on page 27\)](#) [E \(on page 29\)](#) [F \(on page 29\)](#) [G \(on page 29\)](#) [L \(on page 29\)](#) [M \(on page 30\)](#) [N \(on page 31\)](#) [O \(on page 31\)](#) [P \(on page 32\)](#) [R \(on page 32\)](#) [S \(on page 32\)](#) [T \(on page 35\)](#) [U \(on page 35\)](#) [V \(on page 35\)](#) [W \(on page 36\)](#)

## A

### **action**

1. See [Fixlet \(on page 29\)](#).
2. A set of Action Script commands that perform an operation or administrative task, such as installing a patch or rebooting a device.

### **Action Script**

Language used to perform an action on an endpoint.

### **agent**

See [BigFix agent \(on page 24\)](#).

### **ambiguous software**

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

### **audit patch**

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

### **automatic computer group**

A computer group for which membership is determined at run time by comparing the properties of a given device against the criteria set for group membership. The set of devices in an automatic group is dynamic, meaning that the group can and does change. See also [computer group \(on page 25\)](#).

## **B**

### **baseline**

A collection of actions that are deployed together. A baseline is typically used to simplify a deployment or to control the order in which a set of actions are applied. See also [deployment group \(on page 27\)](#).

### **BigFix agent**

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

### **BigFix client**

See [BigFix agent \(on page 24\)](#).

### **BigFix console**

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

### **BYOD**

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

## C

### **client**

A software program or computer that requests services from a server. See also [server \(on page 33\)](#).

### **client time**

The local time on a BigFix client device.

### **Cloud**

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

### **Common Vulnerabilities and Exposures Identification Number (CVE ID)**

A number that identifies a specific entry in the National Vulnerability Database. A vendor's patch document often includes the CVE ID, when it is available. See also [National Vulnerability Database \(on page 31\)](#).

### **Common Vulnerabilities and Exposures system (CVE)**

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

### **component**

An individual action within a deployment that has more than one action. See also [deployment group \(on page 27\)](#).

### **computer group**

A group of related computers. An administrator can create computer groups to organize systems into meaningful categories, and to facilitate deployment of content to multiple computers. See also [automatic computer group \(on page 24\)](#) and [manual computer group \(on page 30\)](#).

### **console**

See [BigFix console \(on page 24\)](#).

## **content**

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

## **content relevance**

A determination of whether a patch or piece of software is eligible for deployment to one or more devices. See also [device relevance \(on page 28\)](#).

## **Coordinated Universal Time (UTC)**

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

## **corrupt patch**

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

## **custom content**

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

## **CVE**

See [Common Vulnerabilities and Exposures system \(on page 25\)](#).

## **CVE ID**

See [Common Vulnerabilities and Exposures Identification Number \(on page 25\)](#).

## D

### **data stream**

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

### **default action**

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

### **definitive package**

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

### **deploy**

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

### **deployment**

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

### **deployment group**

The collection of actions created when an operator selects more than one action for a deployment, or a baseline is deployed. See also [baseline \(on page 24\)](#), [component \(on page 25\)](#), [deployment window \(on page 28\)](#), and [multiple action group \(on page 31\)](#).

### **deployment state**

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

### **deployment status**

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

**deployment type**

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

**deployment window**

The period during which a deployment's actions are eligible to run. For example, if a Fixlet has a deployment window of 3 days and an eligible device that has been offline reports in to BigFix within the 3-day window, it gets the Fixlet. If the device comes back online after the 3-day window expires, it does not get the Fixlet. See also [deployment group \(on page 27\)](#).

**device**

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

**device holder**

The person using a BigFix-managed computer.

**device property**

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

**device relevance**

A determination of whether a piece of BigFix content applies to applies to a device, for example, where a patch should be applied, software installed, or a baseline run. See also [content relevance \(on page 26\)](#).

**device result**

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

**Disaster Server Architecture (DSA)**

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

**DSA**



See [Disaster Server Architecture \(on page 28\)](#).

**dynamically targeted**

Pertaining to using a computer group to target a deployment.

**E****endpoint**

A networked device running the BigFix agent.

**F****filter**

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

**Fixlet**

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

**Full Disk Encryption**

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

**G****group deployment**

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

**L****locked**

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

## M

### **MAG**

See [multiple action group \(on page 31\)](#).

### **management rights**

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

### **manual computer group**

A computer group for which membership is determined through selection by an operator. The set of devices in a manual group is static, meaning they do not change. See also [computer group \(on page 25\)](#).

### **master operator**

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

### **masthead**

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

### **MCM and BigFix Mobile**

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

### **mirror server**

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

### **Multicloud**

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

**multiple action group (MAG)**

A BigFix object that is created when multiple actions are deployed together, as in a baseline. A MAG contains multiple Fixlets or tasks. See also [deployment group \(on page 27\)](#).

## N

**National Vulnerability Database (NVD)**

A catalog of officially known information security vulnerabilities and exposures, which is maintained by the National Institute of Standards and Technology (NIST). See also [Common Vulnerabilities and Exposures Identification Number \(on page 25\)](#).

**NVD**

See [National Vulnerability Database \(on page 31\)](#).

## O

**offer**

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

**open-ended deployment**

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

**operator**

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

## P

### **patch**

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

### **patch category**

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

### **patch severity**

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

## R

### **relay**

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

### **Relevance**

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

## S

### **SCAP**

See [Security Content Automation Protocol \(on page 33\)](#).

### **SCAP check**

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

**SCAP checklist**

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

**SCAP content**

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

**SCAP enumeration**

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

**SCAP mapping**

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

**Security Content Automation Protocol (SCAP)**

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

**server**

A software program or a computer that provides services to other software programs or other computers. See also [client](#) (*on page 25*).

**signing password**

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

**single deployment**

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

**site**

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

**site administrator**

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

**software package**

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

**SQL Server**

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

**standard deployment**

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

**statistically targeted**

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

**superseded patch**

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

**system power state**

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

## T

**target**

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

**targeting**

The method used to specify the endpoints in a deployment.

**task**

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

## U

**UTC**

See [Coordinated Universal Time \(on page 26\)](#).

## V

**virtual private network (VPN)**

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

## **VPN**

See [virtual private network](#) (*on page 35*).

## **vulnerability**

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

# W

## **Wake-from-Standby**

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

## **Wake on LAN**

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

## **WAN**

See [wide area network](#) (*on page 36*).

## **wide area network (WAN)**

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



# Appendix B. Support

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

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

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