



# Trend Micro<sup>®</sup> Endpoint Security Platform Console

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Operator's Guide

**Version 8.0**

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## Trend Micro Endpoint Security Platform

The user documentation for Trend Micro Endpoint Security Platform introduces the main features of the software and installation instructions for your production environment. Read through it before installing or using the software.

Detailed information about how to use specific features within the software are available in the online help file and the online Knowledge Base at Trend Micro's Web site.

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# Introduction

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The Trend Micro Endpoint Security Platform (ESP) solves the increasingly complex problem of keeping your critical systems updated, compatible and free of security holes. The ESP Console uses patented Fixlet® technology to identify vulnerable or aberrant computers on your network and then allows authorized personnel to correct these issues across any subset of the network with a few simple mouse-clicks.

Rolling out a security patch or a software update can be accomplished in minutes, allowing you to keep a step ahead of potential network problems while maintaining a standardized operating environment. You can track the progress of each computer as updates are applied, making it easy to gauge the level of compliance across your entire enterprise.

ESP allows you to create and print an audit trail of each issue and its resolution to meet regulatory or policy guidelines. At any time and from any browser, you can view or print graphs and reports summarizing conditions across hundreds of thousands of networked computers.

Using an exhaustive library of Windows, Macintosh, Unix and Linux Inspectors, ESP can retrieve useful computer properties from each of the ESP Agents. These properties can be used to target your own Fixlet messages, tasks and actions. You can also use these retrieved properties to generate customized, continuously updated reports, graphs and 3D maps of your network.

You can also use ESP to communicate directly with all your networked users through an ESP Agent interface. You can offer them a menu of authorized choices so they can customize their solutions within corporate guidelines. For instance, you might offer a collection of approved, compatible graphics programs and let your users choose the one that best suits their needs.

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Trend Micro deploys a multi-purpose, lightweight Agent to all endpoint devices. These Agents report back through a chain of Relays and Servers, all under the aegis of a central Console, providing continuous visibility for far-flung organizations with hundreds of thousands of endpoints.

This guide describes the operation of the Trend Micro Endpoint Security Platform (ESP) Console. It includes a complete description of the interface, as well as step-by-step instructions for using the program. This guide also shows you how to optimize the performance of the various suite components, including ESP Servers, Relays and Agents. This guide *does not*, however, discuss the installation of the software. For that information, see the **ESP Administrator's Guide** or the ~~ESP Evaluation Guide~~.

## Audience

This guide is for administrators who are using ESP to monitor and remediate large networks of computers using prepackaged Fixlet messages. ESP also allows properly authorized administrators to create and target their own network Fixlet messages, Tasks and Analyses, either by modifying existing content or by creating new content from scratch.

A master Console operator can manage the rights and scope of other Console operators, allowing subsets of your network to be administered by divisional or regional managers. Both master and ordinary ESP Console operators can benefit from this guide.

## System Requirements

To install the ESP Console, you must have a computer that meets the following minimum requirements:

- **Hardware:** Intel Pentium III–class processor with 512 MB RAM. Larger deployments will require more capable computers.
- **Software:** Windows XP, 2003, Vista, 2008, 7, or 2008 R2 with Internet Explorer version 7.0 or better.

The ESP Console can be installed on a laptop or any moderately powerful computer. However, as the number of computers that you are managing with the ESP Console grows, you may need a more powerful computer. The latest [ESP Console recommendations](#) can be found at the BigFix support site.

The ESP Console also requires a high bandwidth connection (LAN speeds work best) to the ESP Server due to the amount of data that needs to be transferred to the ESP Console. If you need to remotely connect to the ESP Server across a slow bandwidth connection, it is recommended that you use a remote control connection to a computer (such as a Citrix server or Terminal Services computer) with a high-speed connection to the ESP Server. Contact your support technician for more information about ESP Console scaling requirements.

**Note:** The ESP Console is the primary interface to BigFix and manages a great deal of information about the ESP Agents. If the ESP Console computers are underpowered or on a slow connection, it can adversely impact performance.

# Using the Application

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## Overview of the BigFix Enterprise Suite

The **BigFix Enterprise Suite** (also called **BES**) has the following main components:

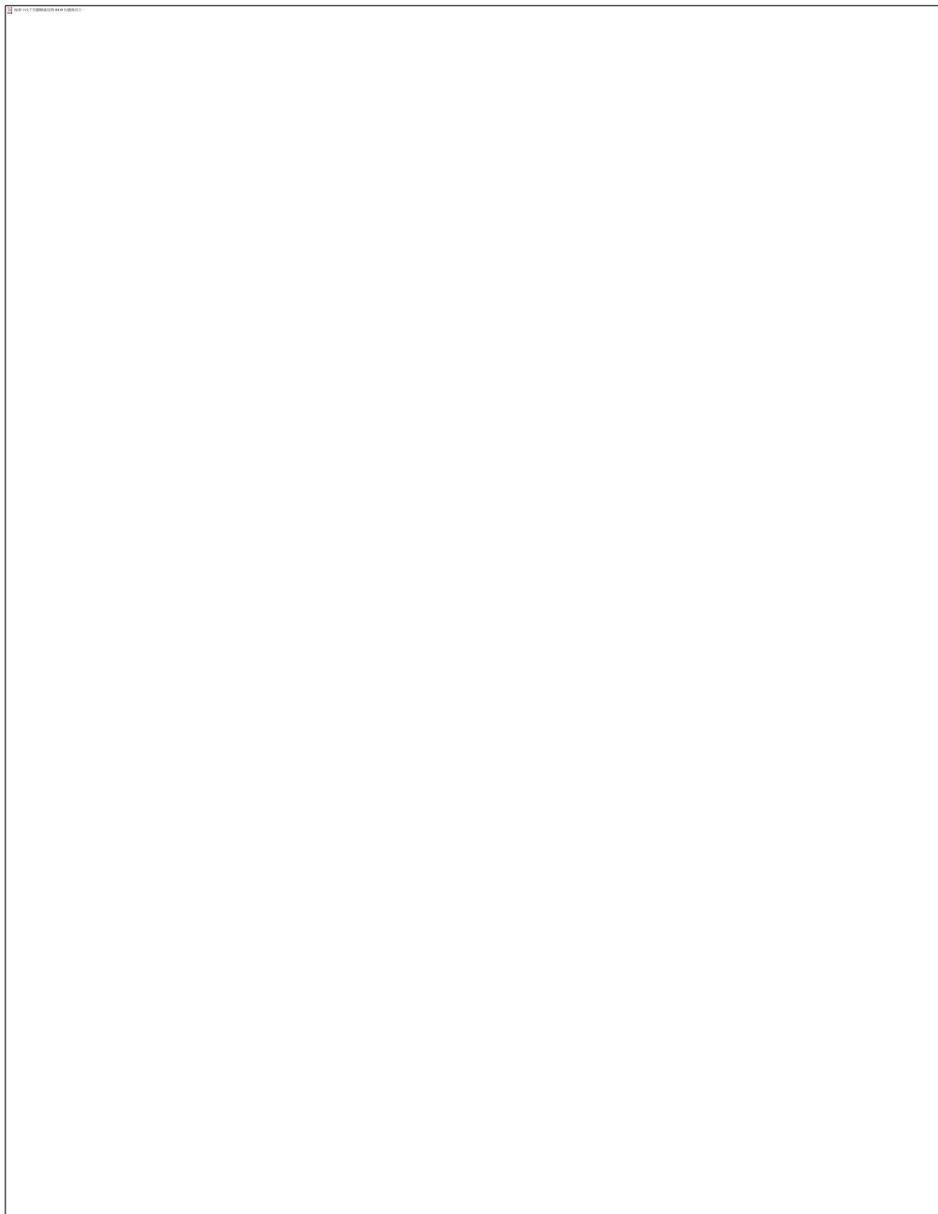
- **BigFix Clients** are installed on every computer you wish to manage under BigFix. They access a collection of Fixlet messages that seek out security holes, vulnerabilities and deviations from the desired operating environment. If a vulnerability is found, the BigFix Client can then implement corrective actions received from the BigFix Console. In most cases, the BigFix Client operates silently, without any direct intervention from the end user. However, should you need to solicit user response, BigFix also allows you to provide screen prompts.
- **BigFix Servers** are collections of interacting server applications that form the heart of the BigFix system. They coordinate the flow of information to and from individual BigFix Clients and store the results in the BigFix database(s). Redundancy is enabled by employing multiple servers.
- **BigFix Relays** increase the efficiency of the system. Instead of requiring every networked computer to directly access the BigFix Server, relays can be used to offload much of the burden. Hundreds of BigFix Clients can point to a BigFix Relay for downloads, which in turn makes only a single request of the server. BigFix Relays can connect to other relays as well, further increasing efficiency. BigFix can also automate the relay setup, dynamically determining the best configuration for the current state of your network.
- **The BigFix Console** ties all these components together to provide a system-wide view of your networked computers, along with their vulnerabilities and suggested remedies. If you are an Operator with the proper privileges, the BigFix Console allows you to quickly and simply distribute a fix to exactly those computers that need it -- with zero impact on the rest of the network. The BigFix Console is subject to certain minimal requirements, among them network access to the BigFix Server.
- **Web Reports** let you produce charts and graphs of your data, providing you with hard copy and helping you to maintain an audit trail of all the Fixlet activity on your network. It allows you to export this data for further manipulation in a spread sheet or database. The Web Reports program also allows you to aggregate information from additional BigFix Servers that you may have installed in your organization. This important feature allows an organization with hundreds of thousands of computers to be quickly and easily monitored.

## A Typical Installation

A typical BigFix installation has at least one BigFix Server that gathers Fixlet messages from the Internet. These messages can be viewed by the BigFix Console operator and distributed to the BigFix Relays, which forward the data on to the BigFix Clients. Each BigFix Client inspects its local computer and reports any relevant Fixlet messages back to the BigFix Relays, which compress the data and pass it back up to the servers.

The BigFix Console oversees this activity. It connects to the BigFix Server and periodically updates its display to reflect changes or new knowledge about your network. When vulnerabilities are discovered, the BigFix Console operator can then 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 will even allow home-based workers or on-the-road sales staff to connect over the Internet to a firewall-protected BigFix Relay in a DMZ. This simple hierarchy can be extended and deepened to accommodate networks of virtually any size.



**A typical deployment of the BigFix Enterprise Suite (BES).**

## Getting Started

The BigFix Console is the visible face of the **BigFix Enterprise Suite (BES)**, used by the operator to monitor and repair networked computers running the BigFix Client. To begin using the BigFix Console, you will need to be authorized. There are two kinds of BigFix Console user:

- **Operators**, who manage the day-to-day operation of BigFix, including Fixlet management and action deployment, subject to the management rights assigned by a BigFix Site Administrator or Master Operator.
- **Master Operators**, who are operators with the added authority to assign management rights to other BigFix Console operators. Master Operators can also:
  - Create new computer settings, which allow BigFix Clients to be labeled for various groupings.
  - Create or edit retrieved properties, which are used to filter and sort computers.
  - Change the BigFix Client heartbeat, to optimize BigFix performance.
  - Subscribe or unsubscribe from Sites.
  - Create Custom Actions (if that option was selected for this BigFix deployment).

Once you have your credentials, you're ready to operate the BigFix Console:

1. Start the BigFix Console by double-clicking on its desktop icon. Or select it from the Programs menu: **Start / Programs / BigFix Enterprise / BES Console**.
2. In order to establish an ODBC connection, the BigFix Console prompts for credentials for the default BigFix Database. Enter the **Username** and **Password** you created when you installed BigFix. If you have NT Authenticated access to the database, you won't need to type in a password.
3. The first time you launch the BigFix Console, it asks you for your **action site password** and **private key**. Insert the disk (or browse to the file) with your private site key to initialize the site.
4. After you initialize the action site, the BigFix Console opens and begins to import Fixlet messages. After it finishes, it sends the Fixlet messages to the BigFix Clients, which evaluate them and return the results. This process can take a few minutes.

## Introducing the BigFix Console

The **Main Console** window for the BigFix<sup>®</sup> Enterprise Suite has a panel on the left containing buttons and navigation trees called the **Domain Panel**. It is designed to group BigFix content into collections pertaining to specific operator domains, such as software patching, malware protection, power management, etc. After a domain has been chosen and topics are selected from the navigation tree, a list of related content appears to the right. From this list, specific items can be selected for a more detailed view in the Work Area beneath the list. Here is a simplified breakdown of some of the features you might encounter in a typical session:

- **Domain Panel:** This vertical panel on the left provides a high-level view of the extensive BigFix content, allowing you to quickly subdivide the information by major IT functions. Within each domain, this panel presents navigation trees that make it easy to zoom in on Fixlet Messages, Reports, Analyses and other content. This panel may be subdivided into sections, depending on the style of the domain. Some of these sections may include:
  - **Content Filters:** If it exists, this section is at the top and provides various content filters and reports that are a part of the selected domain. Click on the disclosure icon to the left (either a triangle or a plus sign) to produce a navigation tree to refine your choices.
  - **General Content:** This section lets you navigate all the content in the domain. The content may include Fixlet Messages, Tasks, Actions, Analyses and Computers, all collected from various sites. Click on the disclosure icon to the left (either a triangle or a plus sign) to open up the tree.
- **Domain Buttons:** At the bottom of the Domain Panel, these buttons represent the current set of BigFix Domains that are currently available to you. When you subscribe to a site, it is automatically entered into the proper domain. If a new domain is required, a button for it will be added to this group. At the bottom of the buttons is a control that allows you to adjust the number of buttons to display.
- **Console Toolbar:** This toolbar allows you to navigate back and forth through the items you have selected from the Domain navigation tree. In addition there are buttons that allow you to display items

you may have hidden and items that are not currently relevant to any of your BigFix Clients (this enables you to view all the available content for research or cloning purposes). There is also a refresh button that will reload content from the database for the Console display.

- **List Panel:** This is a listing of the items specified by the content filters and the navigation trees in the Domain Panel. You can sort this list by clicking on the column headers and you can rearrange the headers by dragging them left or right. In addition, you can right-click the headers to see a pop-up menu containing a list of all the possible fields. Check those you wish to use as headers.
- **Context Menu:** This is the menu that pops up when you right-click any item in a list. Different lists have different context menus.
- **Work Area Toolbar:** This bar contains context-sensitive buttons that can execute various actions based on the content of the current work area.
- **Work Area:** Below the List Panel and the Work Area Toolbar is the Work Area. When you click an item from the List Panel, the Console opens a detailed document in this window. The following discusses elements of one particular document -- the Fixlet message:
  - **Document tabs:** Each type of document has a unique set of tabs to go along with it. For a Fixlet message, the tabs include items such as Description, Details, Applicable Computers and Action History.
  - **Fixlet Message:** When a Fixlet message is opened from the list, the default Description tab is selected and the Fixlet document explains the issue in plain English.
  - **Action Button:** A Fixlet document typically contains at least one Action, represented by a link in the Work Area (also available from the Take Action button in the Work Area Toolbar). Click it to deploy the Action across your network.

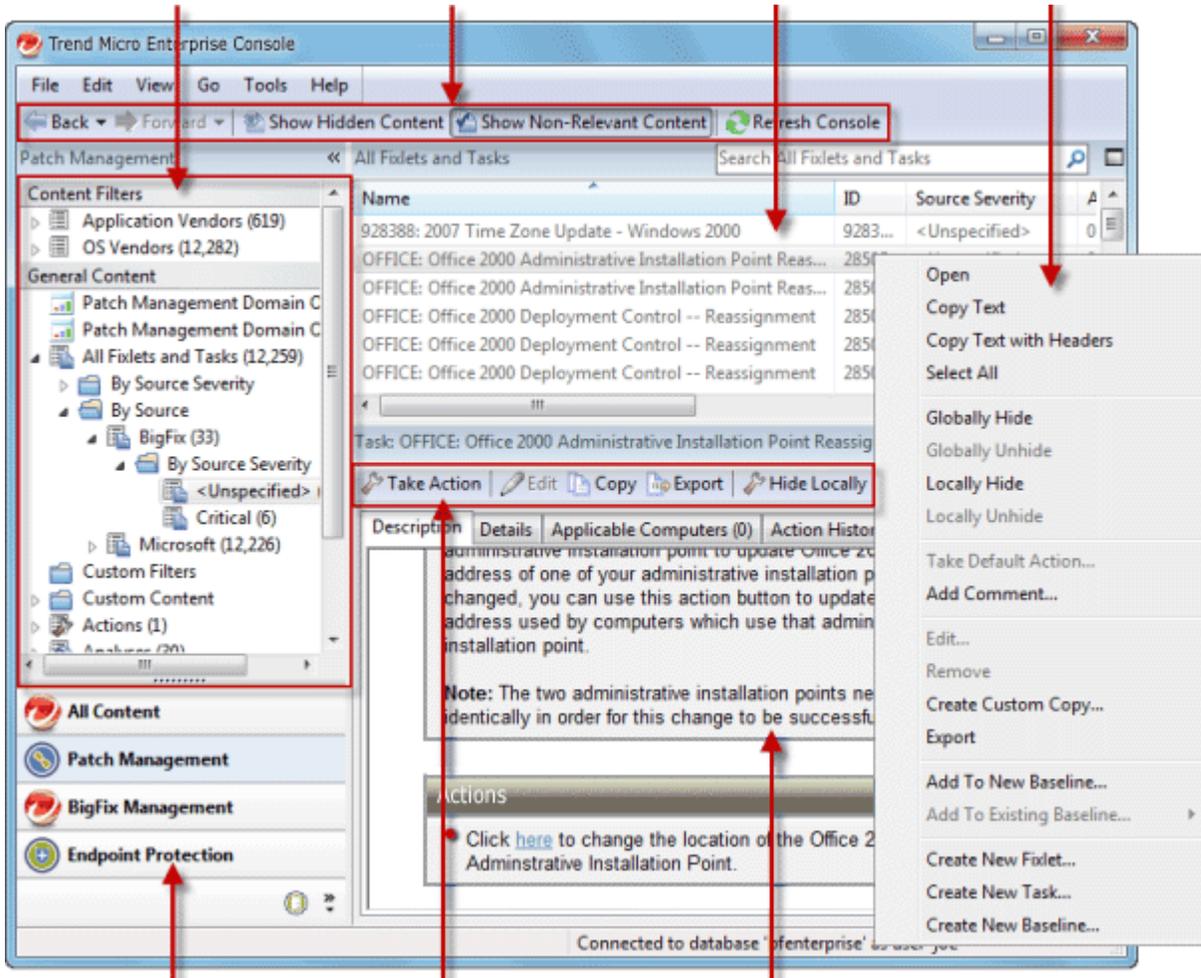
Below is a screen shot from a typical session. A subset of Fixlets and Tasks have been selected from the Domain navigation tree, and the user is viewing the description of a Task opened from the list panel:

**Domain Panel**

**Console Toolbar**

**List Panel**

**Context Menu**



**Domain Buttons**

**Work Area Toolbar**

**Work Area**

In general, your workflow will proceed first from the Domain Panel to the List Panel. After selecting an item from that list, you will follow the instructions in the Work Area to complete the task.

How you proceed depends on the content type. Fixlet messages describe problems that have been discovered on one or more BigFix Clients. Analyses present you with information collected from the Clients on your BigFix network. The Computer branch of the tree allows you to examine specific BigFix clients under your control.

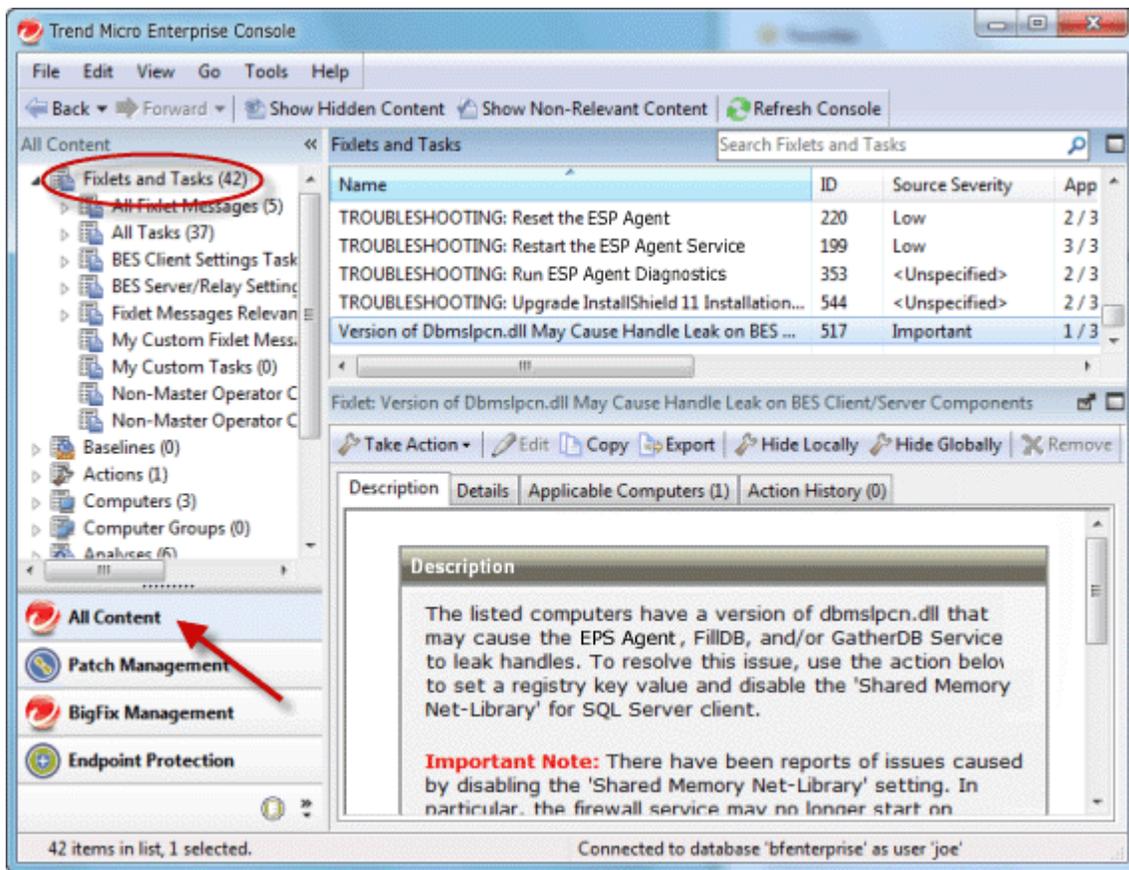
For instance, if you select Fixlets from the Domain Panel, a list of the relevant Fixlets will appear in the List Panel. Select one from the list and it will appear in the Work Area below. The Fixlet document will present you with a short, clear explanation of a problem that is currently affecting your BigFix Clients. If you wish, you can inspect the underlying code used in the Relevance Expression and the proposed Actions by clicking the Details tab. Once you have decided to deploy the action to the affected computers, click the Action (represented by a button in the Work Area Toolbar or a hyperlink in the Work Area) and follow the prompts. After deploying the action, the affected BigFix Clients will be remediated and will no longer report the problem. At that point, the Fixlet message will disappear from the relevant Fixlet list.

You can set preferences that govern how responsive and secure you want your BigFix network to be. To adjust the default values, select **Preferences** from the **File** menu.

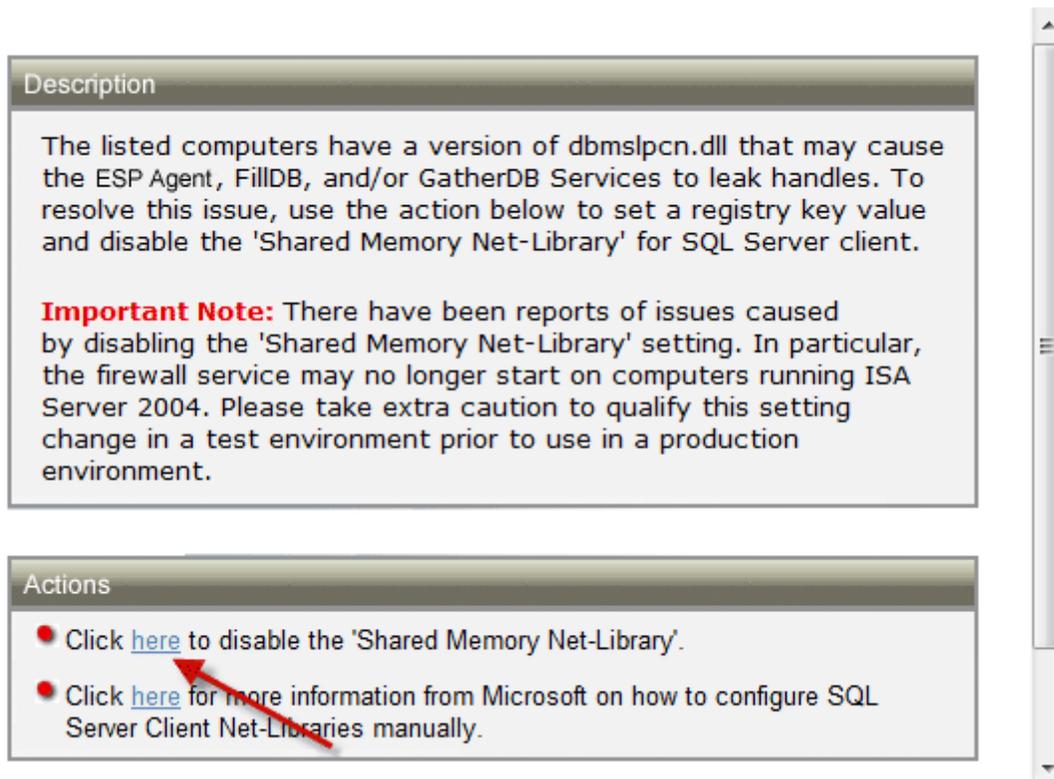
## Operating Basics

The BigFix Enterprise Suite is a powerful and feature-packed program that may seem overwhelming to a new user. Fortunately, once you master the typical workflow, the operation becomes straightforward and intuitive. Let's run through a sample session:

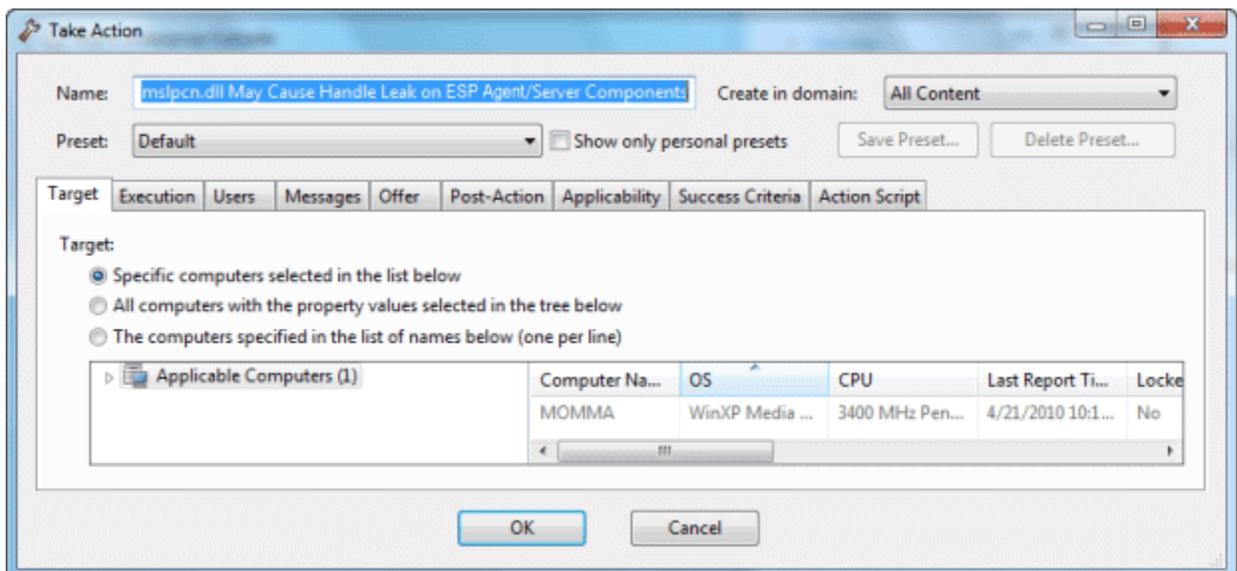
1. Start up the BigFix Console.
2. From the Domain Panel on the left, click the button labeled **All Content**, which lets us view all subscribed sites. Then click the **Fixlets and Tasks** item at the top of the Domain panel. This then displays a list of the Fixlet messages and Tasks that are currently applicable to your BigFix network in the List Panel to the right.



3. From the List Panel, click a Fixlet message of interest. The corresponding document will open in the Work Area below the list. This is the text of the Fixlet message, which will give you the information you need to decide on deployment, along with the specific Action(s) to take.



4. At the bottom of the message you will find one or more links that will initiate Actions to fix the afflicted computers. Click on the Action that seems most appropriate. A **Take Action** dialog box opens up.



5. Use the **Target** tab to select any subset of affected computers you wish to target with the Action. There are several techniques for deploying Actions:
  - **Specific computers selected in the list below.** The first targeting button lets you select the computers you want from the panel below right, which lists all those computers for which the

Fixlet message is currently relevant. The right-click menu allows you to select all the computers in the list. This technique limits the Fixlet action to the specified list.

- **All computers with the property values selected in the tree below.** Choose the second button to take actions on computers with a set of specified properties. Until the expiration of the action period, whenever a computer satisfies the given properties it will be targeted. As with all actions, only the affected computers will actually receive the action.
  - **The computers specified in the list of names below.** Choose the third button to specify a list of computers.
6. Use the rest of the tabs to prepare your action, including execution schedules, client messages, extra scripting and more, then click the **OK** button. For more information, see the article on the **Take Action** dialog.
  7. Once you supply your password, the Fixlet action will be deployed throughout your network, and will be applied specifically to each computer that needs it, subject to any filters you put in place.

This is the process that you will use for typical computer maintenance and remediation. As you explore the interface, you will discover that BigFix can also help you remediate security issues, inventory your computers, manage your users and maintain a detailed audit trail of every patch and upgrade. As varied as these tasks are, they are all accomplished with a similar workflow. You should experiment to learn more about the power of this interface.

## Fixlets and Tasks

### Introducing Fixlets and Tasks

**Fixlets** and **Tasks** are central to the functionality of BigFix. Using Relevance statements, they target specific computers, remediating just those BigFix Clients afflicted by an issue and never bothering those that aren't. They are both packaged with an **Action script** that can resolve the issue with a simple mouse-click.

Fixlets and Tasks differ mainly in how they get resolved.

- A Fixlet is triggered by a Relevance clause that detects a vulnerability. When an Action is invoked to remediate the vulnerability, the Fixlet automatically loses relevance and is thus no longer applicable on that specific BigFix client. As a Fixlet Action propagates through your network, you can track its progress with the BigFix Console, Web Reports and the Visualization Tool. Once every BigFix Client in your network has been remediated, the Fixlet is no longer relevant and it disappears from the list. Should the issue reappear, the Fixlet will reappear in the list, ready to address the issue again.
- A Task comes with one or more Action scripts that help you adjust settings or run maintenance assignments. It generally stays relevant until all the steps of its Action script have been executed. Tasks are designed for continued vigilance and as a consequence, they are often persistent.

Both Fixlets and Tasks may have a **Default Action**, allowing you to simply click from the list to deploy it. They can both be grouped into Baselines, allowing higher levels of automation. If you create a Baseline of Fixlets or Tasks which all contain default Actions, you can turn the tedious chores of maintaining a corporate policy or common operating environment into a single-click operation.

At any time, you can open a Fixlet or Task to inspect the underlying Relevance expressions that are used to target the Clients, as well as the Action script(s) that are designed to address the issue. The language is human-readable to give you a high degree of confidence in both the applicability the trigger and efficacy of the

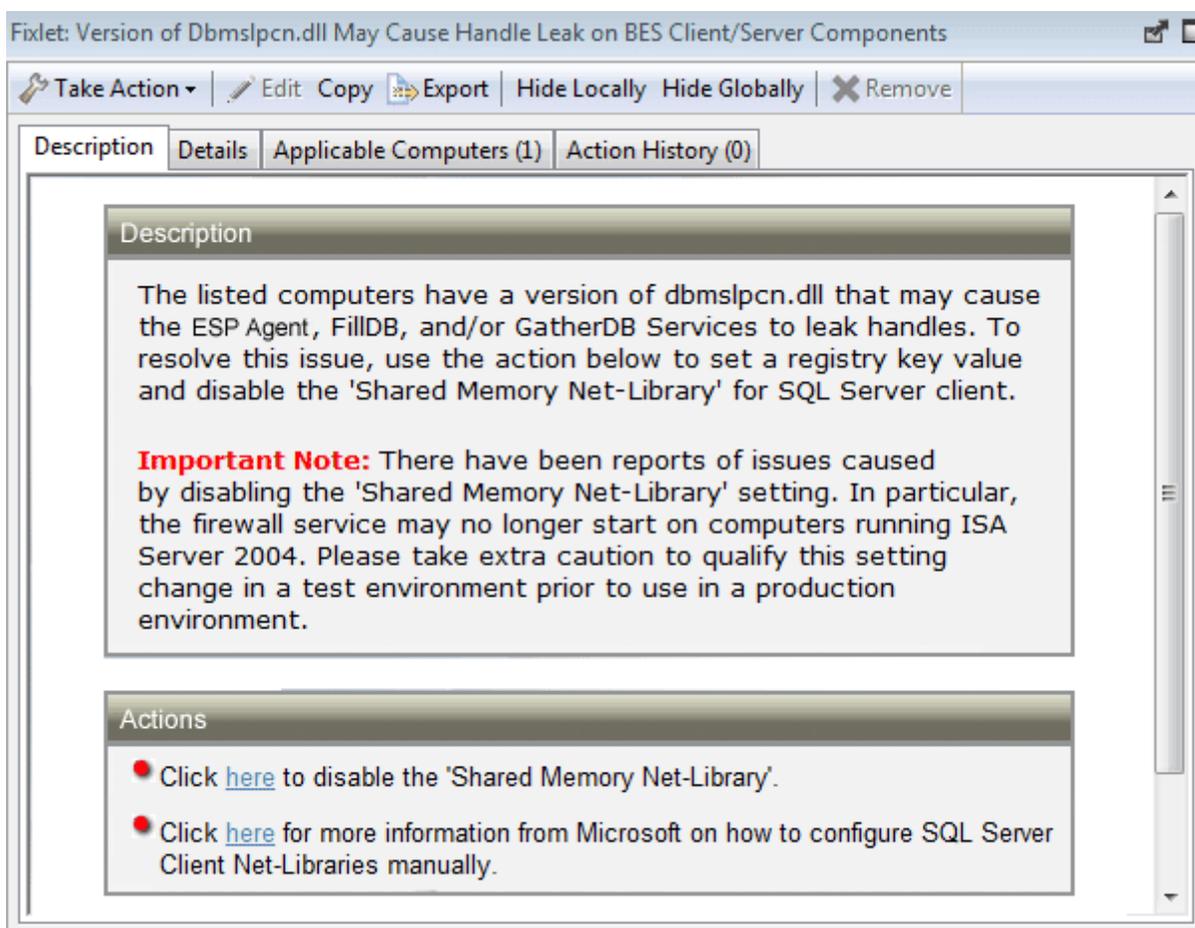
remedial Action. You can also see exactly which computers on your network are affected by each Fixlet or Task. Once propagated, you can then view the progress and ultimate history of each Action taken on a Client-by-Client basis.

## Viewing Fixlets and Tasks

To display a Fixlet or Task,

1. From the navigation tree in the Domain Panel, click the icon labeled **Fixlets and Tasks**.
2. From the resulting List Panel on the right, click an item to open it.

The body of the Fixlet message shows up in the Work Area (click the **Description** tab if not already selected).



When selected, each Fixlet or Task gets a window of its own.

Each Fixlet or Task comes with four tabs in the Work Area:

- **Description:** This is a page providing a descriptive explanation of the problem and one or more Actions to fix it. The Actions are represented by links at the bottom of the description page. Click on an Action to bring up the Take Action dialog, which allows you to further target or schedule the Action. Don't worry

about accidentally clicking on an Action hyperlink. Before the actual deployment, you always get a chance to modify (or cancel) the Action.

- **Details:** This dialog contains the Fixlet/Task properties such as category, security ID, download size, source, severity and date. It also lists the code behind the Relevance expressions and the Actions. At the bottom of this dialog there is a text box for you to enter a comment that will stay attached to this item.
- **Applicable Computers:** This is a filter/list of all the computers targeted by the selected Fixlet or Task. You can filter the list by selecting items from the folders on the left, and sort the list by clicking on the column headers.
- **Action History:** This is a filter/list of any Actions that have been deployed from this Fixlet or Task. If the item is new, there won't be any Actions in the list. Like the other filter/lists in the BigFix Console, you can filter the Actions using the left panel, and sort them by clicking the column headers above the right hand list.

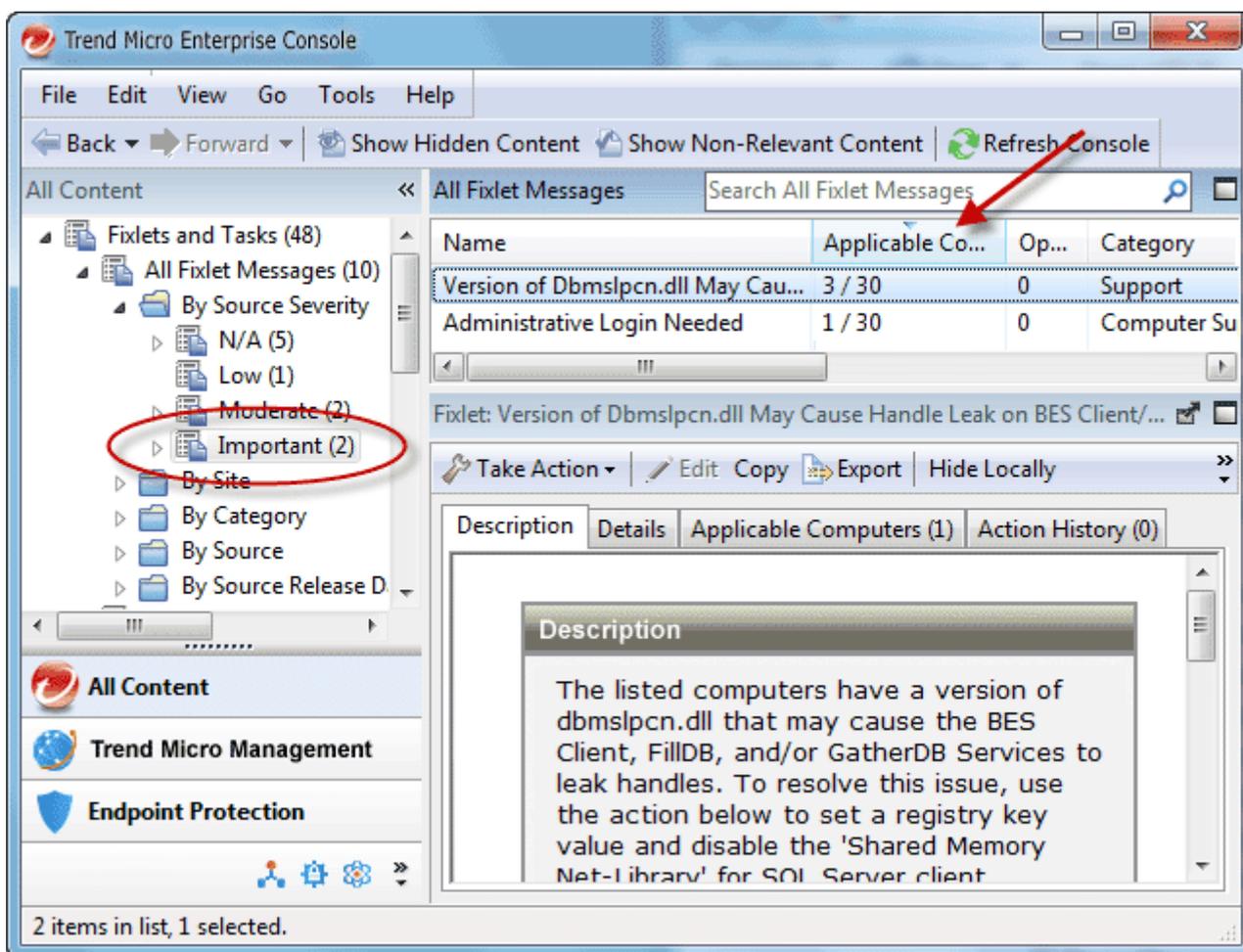
## Monitoring Fixlets and Tasks

When a Fixlet or Task becomes relevant somewhere on your network, BigFix will add it to the list available under the **Fixlets and Tasks** icon in the Domain Panel navigation tree. You can filter this list by opening the icon and clicking the subcategories underneath. Each icon represents data groupings that you can use to narrow down the items in the List Panel on the right. Then, in the listing area itself, you can sort the items by clicking a column heading.

The list headers include the following information:

- **Name:** The name assigned to the Fixlet message by the author.
- **ID:** A numerical ID assigned to the Fixlet message by the author.
- **Source Severity:** A measure of how serious a Fixlet message is, assigned by the Fixlet author. Typical values are Critical, Important, Moderate or Low.
- **Site:** The name of the site that is generating the relevant Fixlet message.
- **Applicable Computer Count:** The number of BES Clients in the network currently affected by the Fixlet message.
- **Open Action Count:** Number of distinct actions open for the given Fixlet message.
- **Category:** The type of Fixlet message, such as a security patch or update.
- **Unlocked Computer Count:** The number of unlocked computers affected by the Fixlet.
- **Download Size:** The size of the remedial file or patch that the action will download.
- **Source:** The name of the source company that provided the Fixlet information.
- **Source ID:** An identification number assigned to the Fixlet to relate it back to its source.
- **Source Release Date:** The date this Fixlet message was released.

For example, you might filter the Fixlet list by opening the **Source Severity** folder and selecting **Important** to filter out less pressing Fixlet messages.



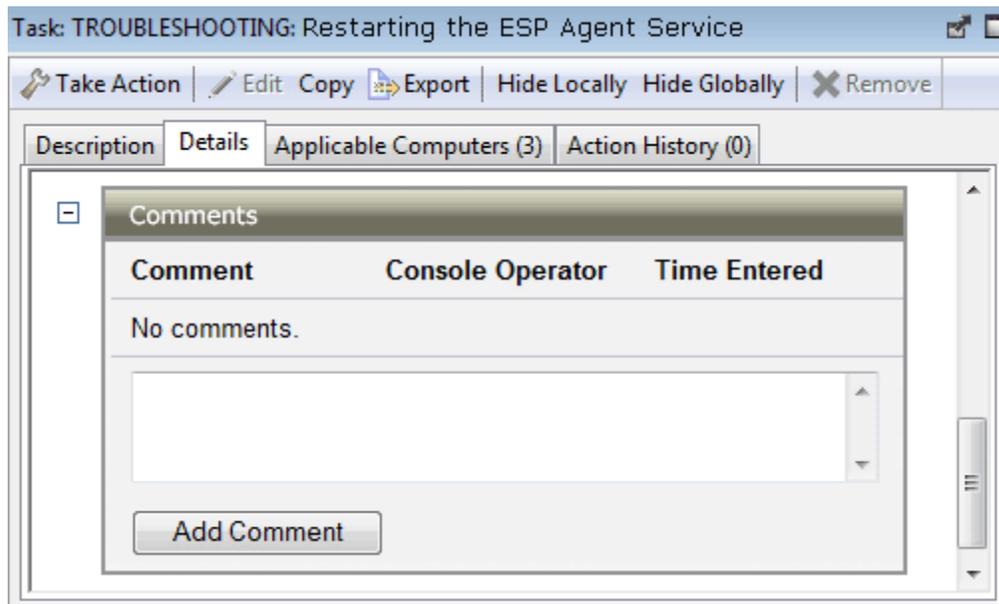
Then you could sort the Fixlet messages by **Applicable Computer Count** (which shows the number of affected computers) to find which Fixlet messages are relevant to the greatest number of computers. If you don't see one of the columns listed above, right-click in the Fixlet header and select it from the pop-up menu.

## Commenting on Fixlets and Tasks

You can attach a comment to a Fixlet or Task that other operators can read.

1. From the Domain Panel, select **Fixlets and Tasks** from the navigation tree.
2. Select a Fixlet or Task from the List Panel on the right by clicking it.

- From the document panel below, select the **Details** tab and scroll to the bottom.



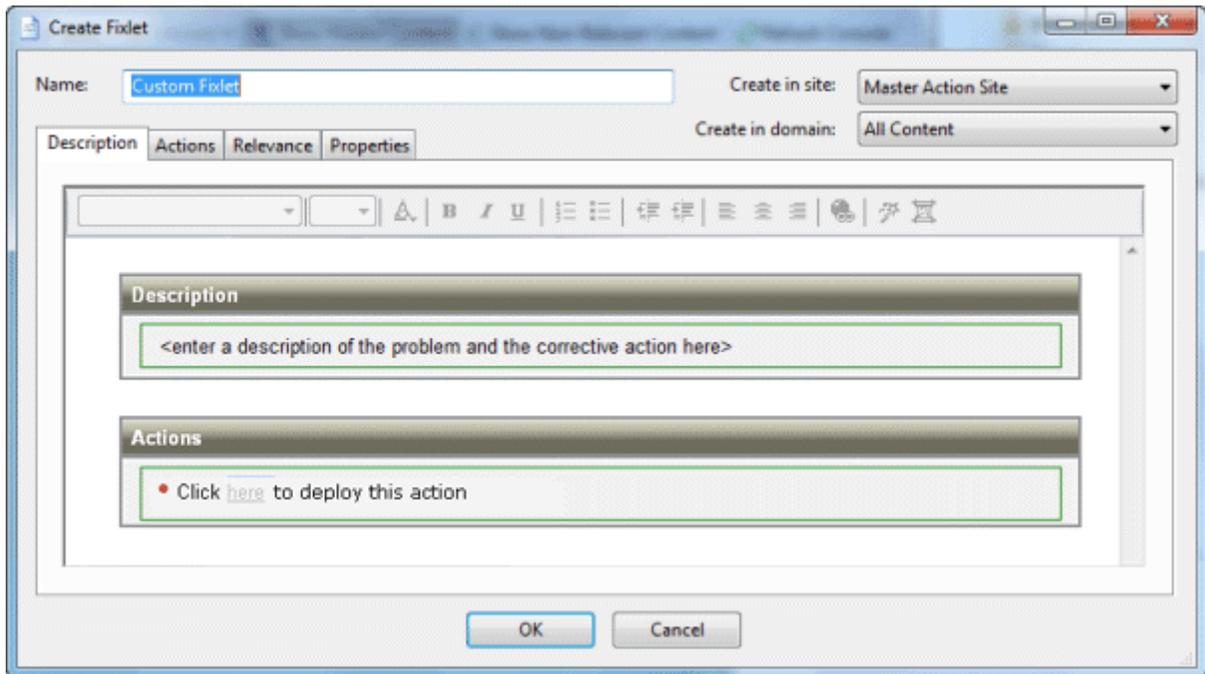
- Type your comment into the text box and click the **Add Comment** Button.

Your comment will be name- and time-stamped for other operators to view it. In addition to Fixlets and Tasks, you can attach comments to Actions, Computers and Analyses.

## Creating or Customizing Fixlets and Tasks

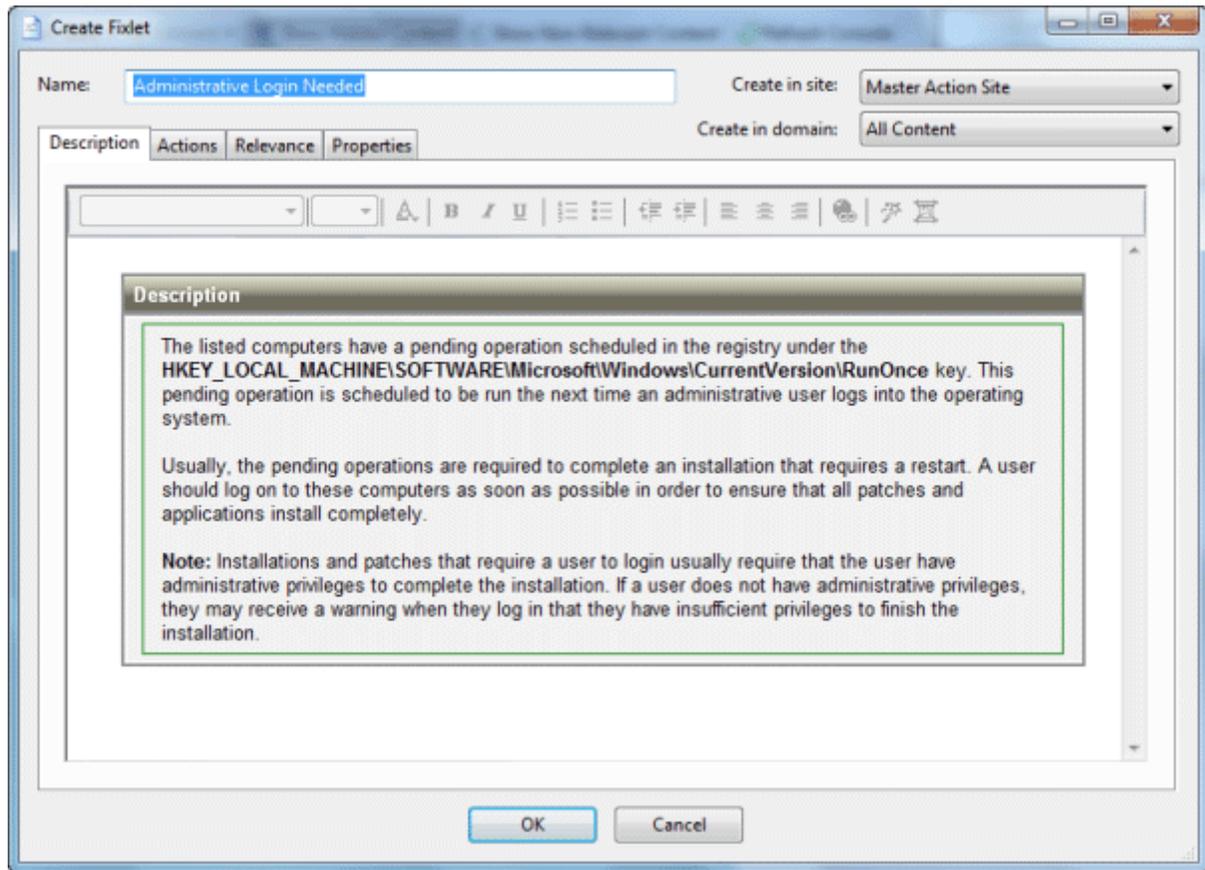
To create your own custom Fixlet or Task message from scratch,

- Select **Tools > Create New Fixlet** or **Task**. This brings up a Create dialog with blank fields for you to fill in.



You may also wish to customize a Fixlet or Task. You can do this by cloning and modifying an existing one. To do so, first select the desired Fixlet or Task from the List Panel, then:

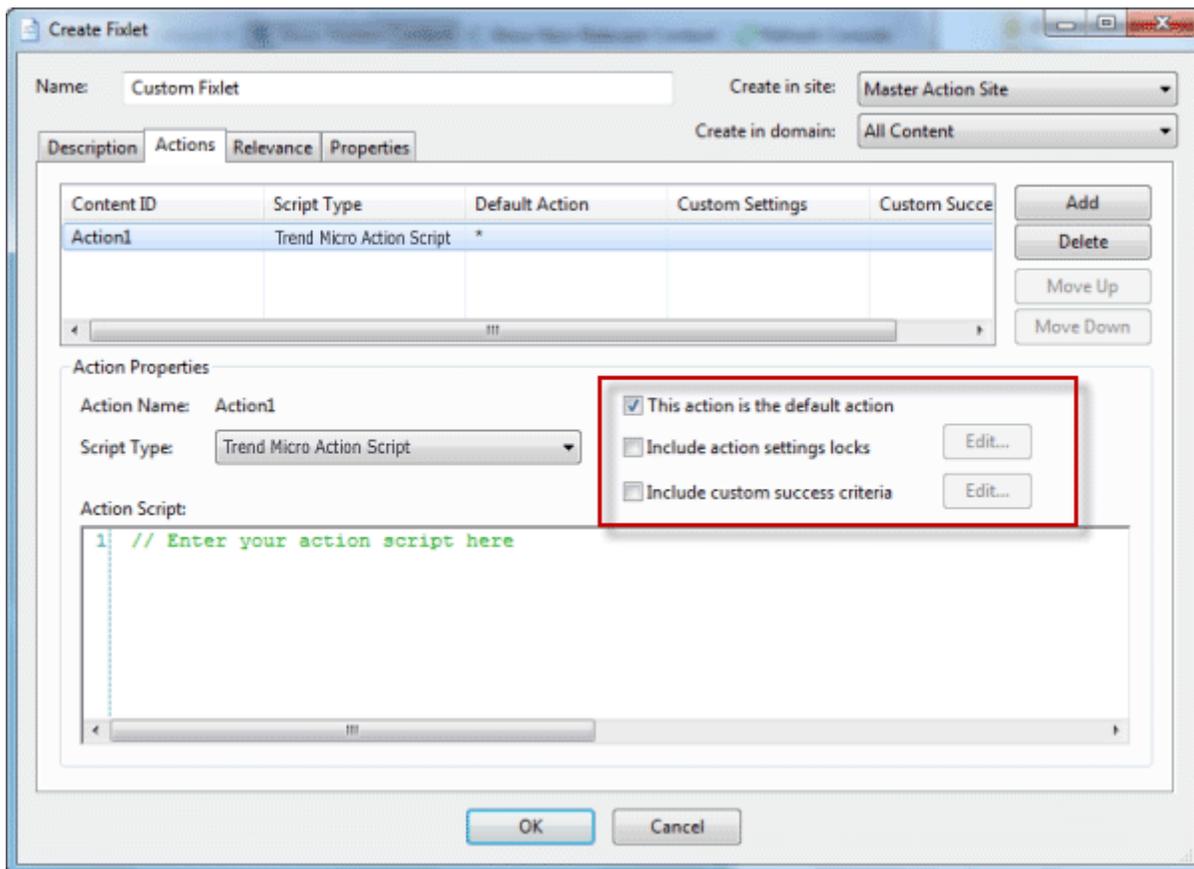
- Select **Edit > Create Custom Copy** (or right-click the item and select **Create Custom Copy** from the context menu). The appropriate creation dialog appears, only this time it is filled with the original content.



Either way, the Create dialog provides the same options. Enter the name of your customized message in the top left text box. This will serve as the title when the Fixlet or Task is displayed. You can use the name for sorting and filtering, so it's worth creating a consistent naming convention to make your content more manageable. Then choose the Site and Domain to host it from the drop-down menus.

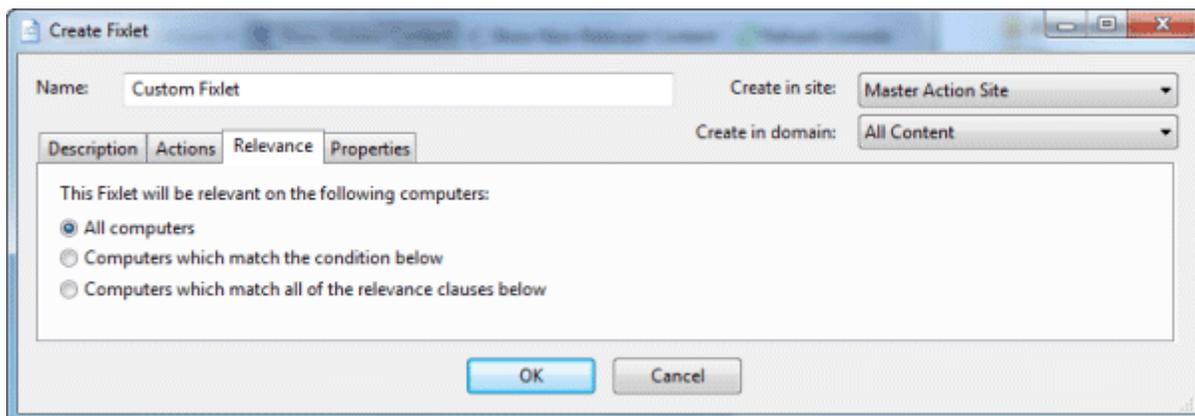
Next, click through each of the tabs to define your Fixlet or Task:

- **Description:** Enter your descriptive text in this box. You can use the text manipulation toolbar at the top of the dialog to enhance the formatting.
- **Actions:** Define your action in this dialog. Use the buttons at the right to add, delete or change the position of the action. Below that is an area to customize the properties of the action. Choose the **Script Type** from the drop-down menu. Below that is a text box where you can enter a new action script or modify the original. There are three check boxes you can use to modify the action:

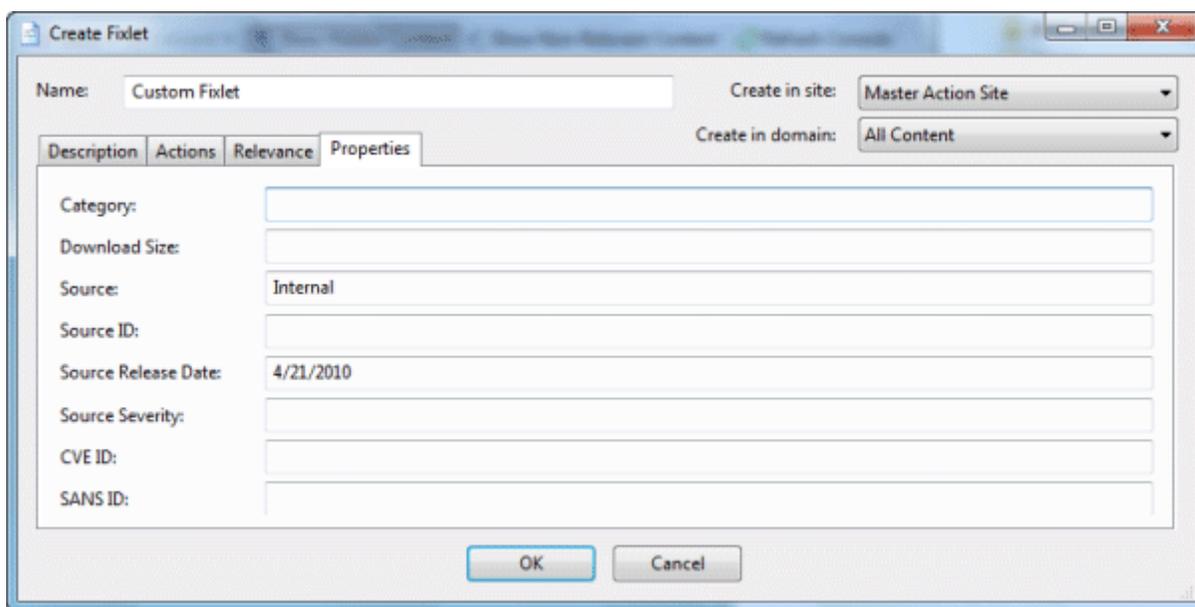


- **This action is the default action.** Click this box to create a **default action**.
- **Include action settings locks.** Click the Edit box to the right of this check box to customize the action setting locks, including start time, end time, day exclusions and more. This screen also includes failure and reapplication behaviors.
- **Include custom success criteria,** which allows you to specify the conditions that will define the success of the action.

**Relevance:** Simply leave the default of applying to **All computers**, or click a different button and enter a condition or a relevance statement in the dialog below. This is how you target your Fixlet or Task to relevant computers. For more information on the relevance language, refer to the BigFix Inspector Libraries.



**Properties:** Set the properties of your Fixlet or Task, including the category, download size, date, severity and more. You can also include the SANS (SysAdmin, Audit, Network, Security) or CVE (Common Vulnerabilities and Exposures) ID numbers.



When you are satisfied with your definitions, click **OK**. Your Fixlet or Task needs to be propagated, so you will be prompted for your private key password. Once you enter it and click **OK**, it will be sent to all the BigFix Clients, which will evaluate it for relevance and report back their status. You will then be able to follow the deployment of your new content in real-time from the BigFix Console.

## Hiding Fixlets and Tasks

You can hide a Fixlet or Task with the following procedure:

1. From any Fixlet or Task List Panel, select the message(s) you want to hide.
2. Right-click the desired item and select **Globally** or **Locally Hide** from the pop-up menu (or select **Edit > Hiding > Globally/Locally Hide**).



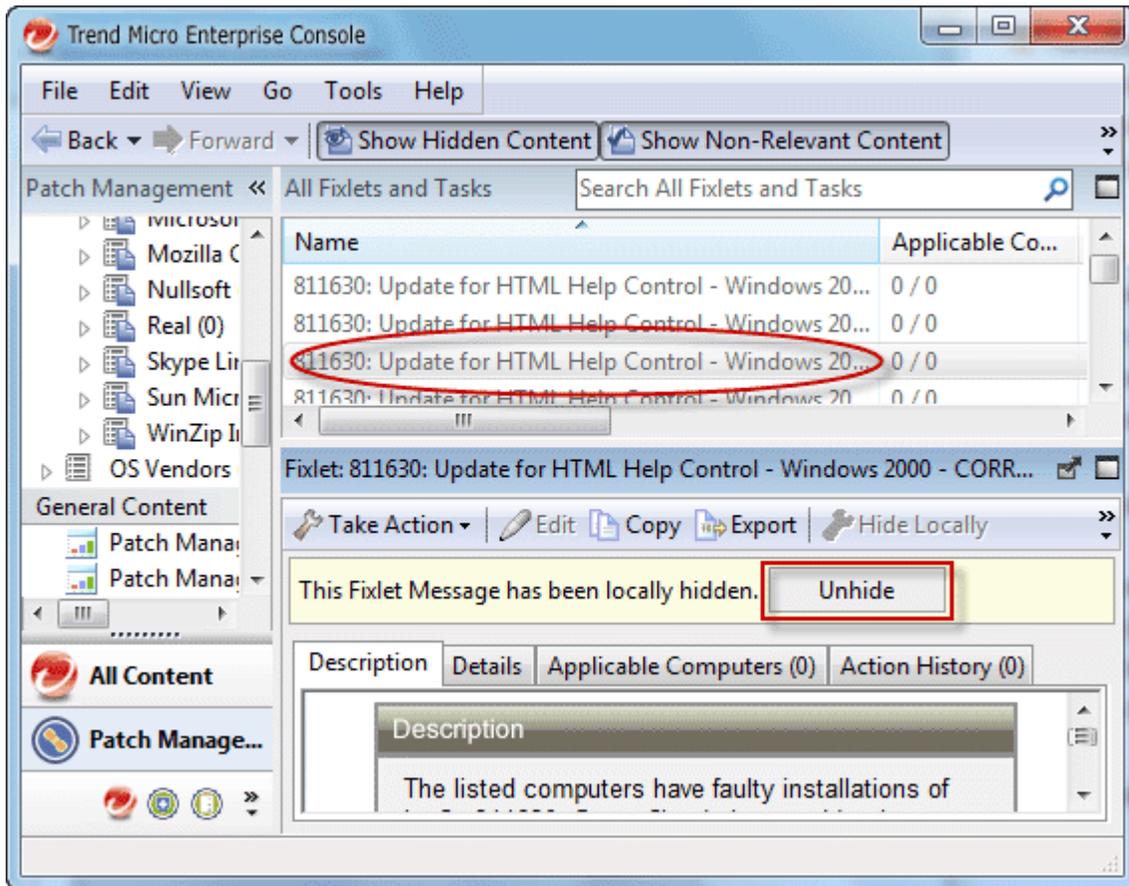
The selected Fixlet or Task will no longer be displayed in the list. If you elected to hide the item locally, it will still be visible to other BigFix Console users. If you are a master operator, you can hide a Fixlet or Task globally, so it will also be hidden to all non-master users.

Fixlet or Tasks that are hidden are still available and you can restore or "unhide" them at any time. Here's how:

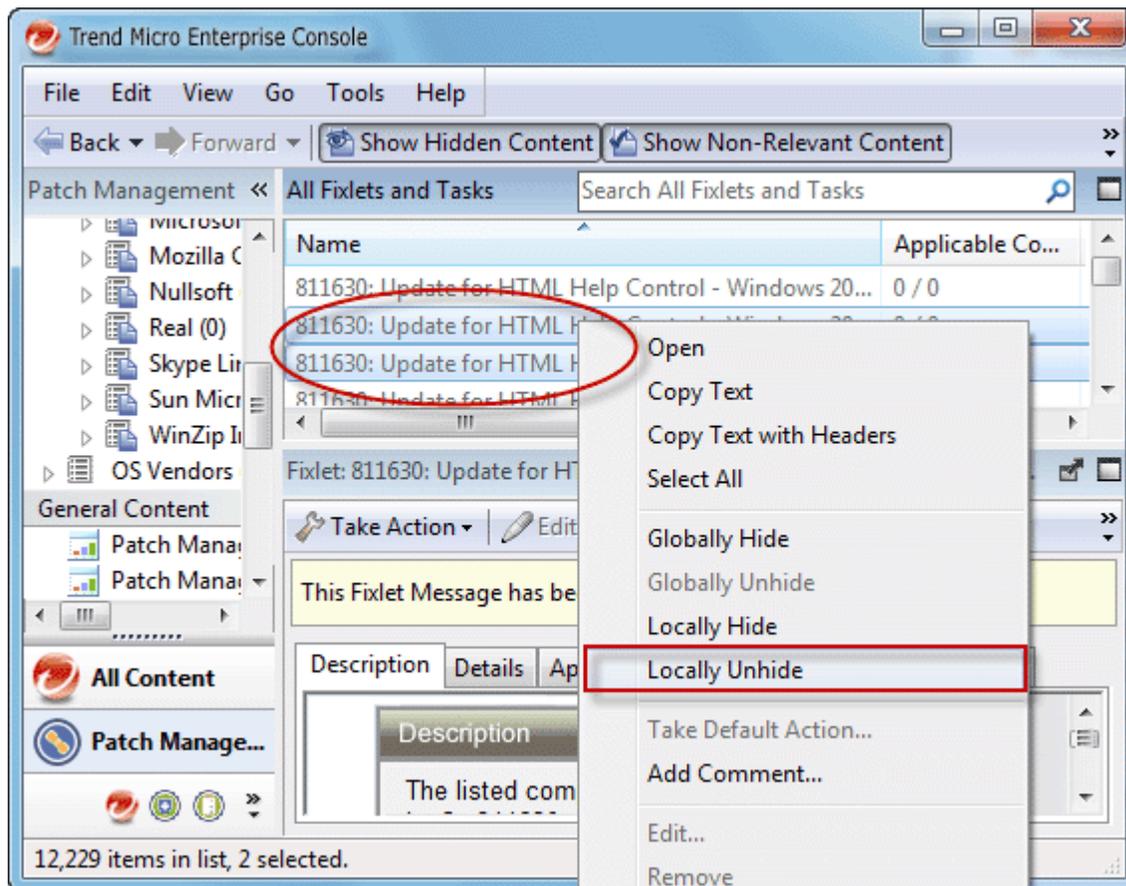
1. Click the Show Hidden Content button in the Console Toolbar. All content, including hidden content, will listed as long as this button is selected.



2. A single Fixlet or Task can be unhidden by clicking it from a list. In the resultant Work Area you will see an **Unhide** button. Click it to return the item to its normal state.



3. Multiple Fixlets or Tasks can be unhidden by selecting them, right-clicking the group and choosing **Unhide** from the context menu. Or select multiple items and select **Edit > Hiding > Globally/Locally Unhide**.



Generally speaking, it isn't necessary to hide Fixlets or Tasks, as you can simply ignore them. The main reason for hiding one is if you think the content will *never* be relevant to your network and you want to avoid viewing it.

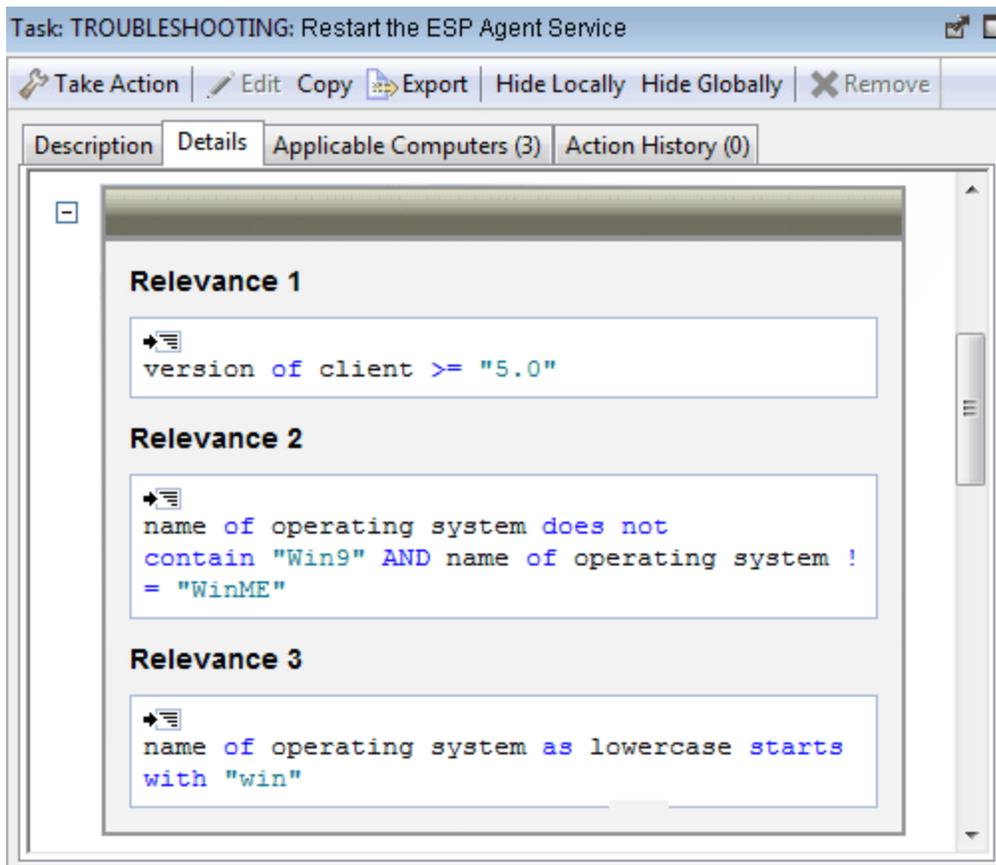
## Viewing Relevance Expressions

When a Fixlet message becomes relevant to some computer on your network, you'll want to know exactly what triggered it, and what action is suggested. This is easy to investigate, because these items are written in the BigFix Relevance Language, which is a human-readable language for probing and acting on computers.

To view Relevance Expressions:

1. Click a Fixlet message from any Fixlet List Panel to bring up a detailed Fixlet document in the Work Area below.
2. Select the **Details** tab.

This opens a page listing various Properties and below that, the **Relevance** clauses and Action scripts:



This window shows you how the computer is interrogated and why it has been triggered as relevant. Typically there are multiple Relevance clauses that are all ANDed together to determine if a given BigFix Client is affected.

## Introducing Relevance

In order to quickly inspect various aspects of a computer, BigFix developed the Relevance Language. This human-readable language is at the heart of the program and allows Fixlet authors to target actions to just those computers that need the fix -- and no others. Thus you can feel confident that only broken machines are being fixed and that the rest are never bothered.

The Relevance Language can query an exhaustive set of computer properties, and do it quickly. Most BES Console operators will rely on third parties to write Fixlet messages, and so their exposure to the Relevance Language is not critical to operating the BES Console. However, as a power user, you can customize the Console with short lines of code from the Relevance Language (called Relevance Expressions) which grant you an unprecedented amount of control over the BES Client computers on the network.

A typical Relevance Expression might be:

**vendor name of processor**

This expression will return the name of the manufacturer of the CPU (Intel or AMD, for instance), which can then be used to determine relevance.

You can use Relevance Expressions to create retrieved properties which you can then use to organize and filter the BES Clients on the network. For example, here are some possible properties that might be useful to know about your BES Client computers:

Property name	Relevance Expression	Result
Pentium	family name of main processor contains "Pentium"	True if the processor is a Pentium.
Small drive	Total space of drive "c:" < 2000000000	True if the drive is smaller than 2GB.
Bad clock	absolute value (now - apparent registration server time) > 1 hour	True if the clock is off by more than one hour.
IE Version	file version of application "iexplore.exe" of the registry	Version number of Internet Explorer on a Windows computer.
Mailto App	application of key "HKEY_CLASSES_ROOT\mailto" of the registry	On a Windows computer, the name of the app that handles mailto requests from a browser.
Running Word	exists running application whose (name of it as lowercase is "winword.exe")	True if Word is running on a Windows BES Client computer.
Bios date	date of Bios	BIOS date on a Windows computer, if it exists.
Processors	number of processors	The total number of processors in the BES Client computer.

Use the **Manage Properties** dialog to see how these custom properties work. Click the **Add New** button, supply the property name, and type in the Relevance Expression in the text box.

There are literally thousands of useful Retrieved Properties — far too many to list here. For a more extensive list of retrieved properties, check the BigFix Website. For an in-depth discussion of Relevance, refer to the ***BigFix Relevance Language Reference***.

## Sites

### Introducing Sites

Sites are collections of Fixlet messages that are created internally by you, by BigFix, Inc., or by other third parties. You subscribe to a Site and agree on a schedule for downloading the latest batch of Fixlet messages.

You can view and manage your collection of Sites by navigating to them and opening them in the Domain Panel. You can add a new Site subscription by acquiring a Masthead file from a vendor or from BigFix. Sites are generally devoted to a single topic, such as security or the maintenance of a particular piece of software or hardware. However, several sites may share characteristics and will then be grouped into Domains which are designed to be in accordance with the typical job duties of your various Console managers. For instance, the person in charge of patching and maintaining a common operating environment will find BigFix Support sites and Patching sites for various operating systems all bundled in the Patch Management Domain.

You can set up your own custom Site and populate it with Fixlets that you have developed specifically for your own network. You and other operators can then send and receive the latest in-house patches and quickly deploy them to the appropriate locations and departments.

### Selecting Sites

Upon installation, BES is automatically set up to subscribe to the **BES Support** Site. Depending on the terms of your license, you may have subscriptions to other sites as well. This means that content from those Sites will automatically flow into your enterprise and will be evaluated for relevance on all computers running the BES Client. These sites, in turn will automatically be registered with an appropriate Domain, providing a simple way to divide the content into functional sections.

To subscribe to a site, follow these steps:

1. First, find an appropriate Site. Finding a Site is equivalent to finding a Site masthead file, which has an extension of **.efxm**. There are several ways to do this:
  - **BigFix Sites:** BigFix may post links list to new Sites as they become available.
  - **Fixlet Subscriptions:** Sometimes a Fixlet message might offer a subscription. Just click the Fixlet action to initiate the subscription.
  - **Download Mastheads:** You can also subscribe to a Site by downloading a masthead file from a vendor's web site. Once the masthead is saved to your computer, you can activate it in one of two ways.
    - Double-click the masthead, or
    - Select **Add External Site Masthead** from the **Tools** menu, browse to the folder containing the masthead and click **Open**.
2. You will be prompted for your private key password. Type it in and click **OK**.

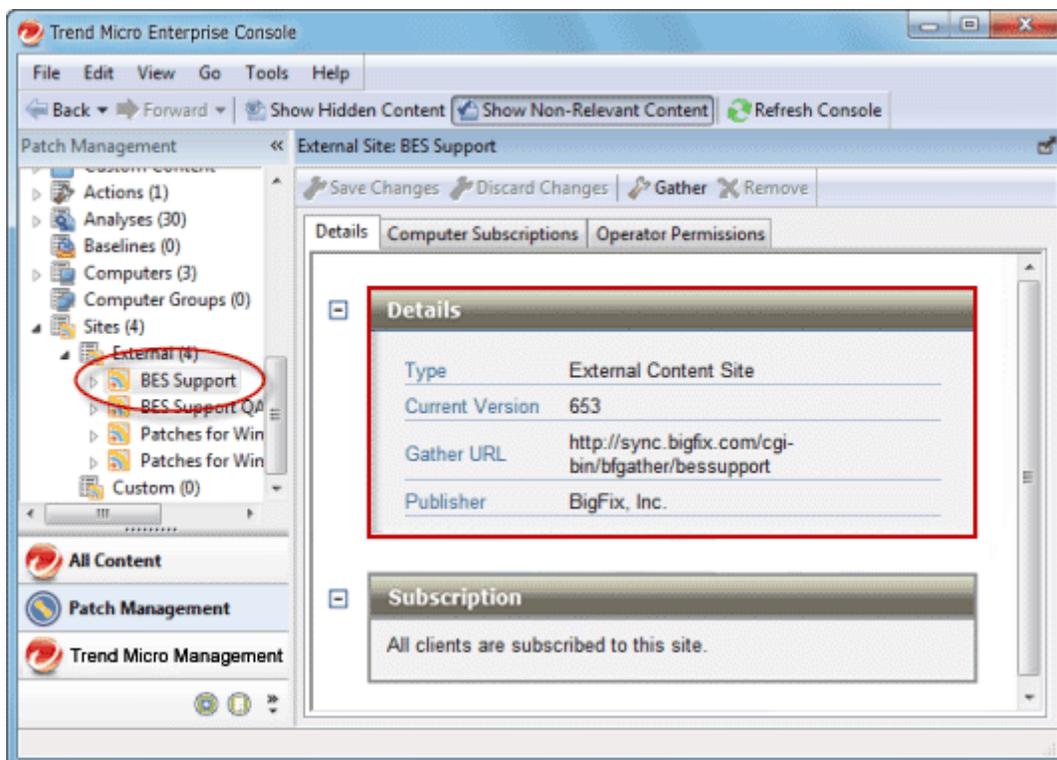
The masthead is propagated to all BES Clients, which will immediately begin to evaluate the Fixlet messages from the new site.

### Viewing Site Properties

After initiating a subscription, you may want to inspect its properties and signing authorities. This can be useful when tracking down the origin of a particular Fixlet message or action. Here's how:

- Click the site from the Domain Panel on the left.

The **Site Properties** will appear in the Work Area, detailing information about the site publisher and the precise URLs from which the content has been gathered.

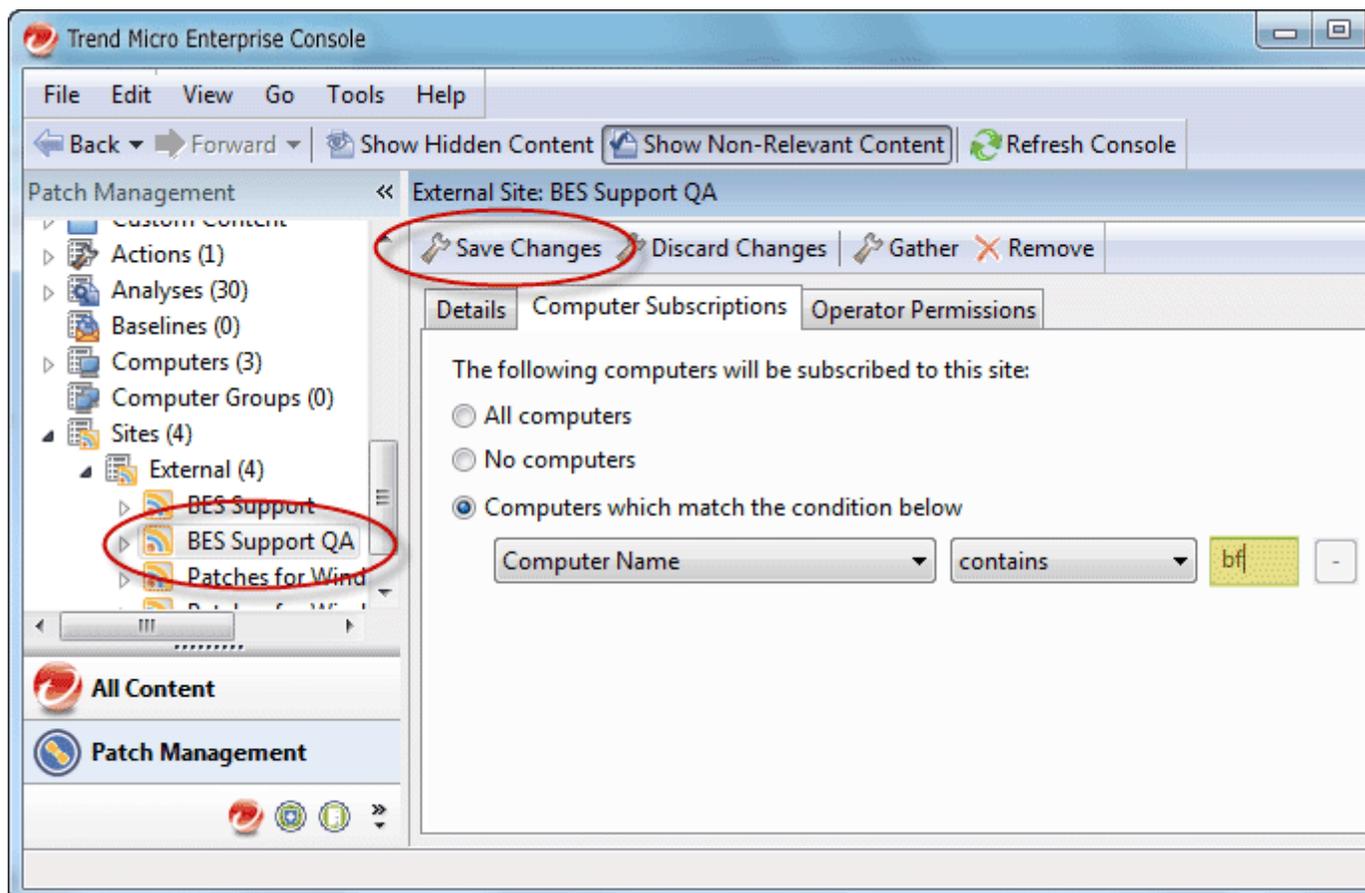


Depending on its type, a site may have other properties as well. A custom site will let you assign permissions for owning, writing and reading a Site. External sites (except BES Support) can have restrictions placed on both computers and operators, letting a Master Operator fine-tune the domain of a Site. To access these extra properties, click the appropriate tab.

## Restricting Computers

There may be occasions where a BES Client or a group of Clients is storing redundant Fixlet messages, typically due to an overlap in site content. In addition, some BES Clients may collect superfluous Fixlet messages, as when a Linux machine retrieves Windows Fixlets. This poses no problem to the operation of BigFix, which knows to ignore irrelevant or redundant Fixlet messages, but it may consume precious Client disk space. The **Site Subscription** dialog lets you narrow down the number of clients subscribed to the selected external Site. Here's how:

1. Select the desired site from the **Domain Panel**.



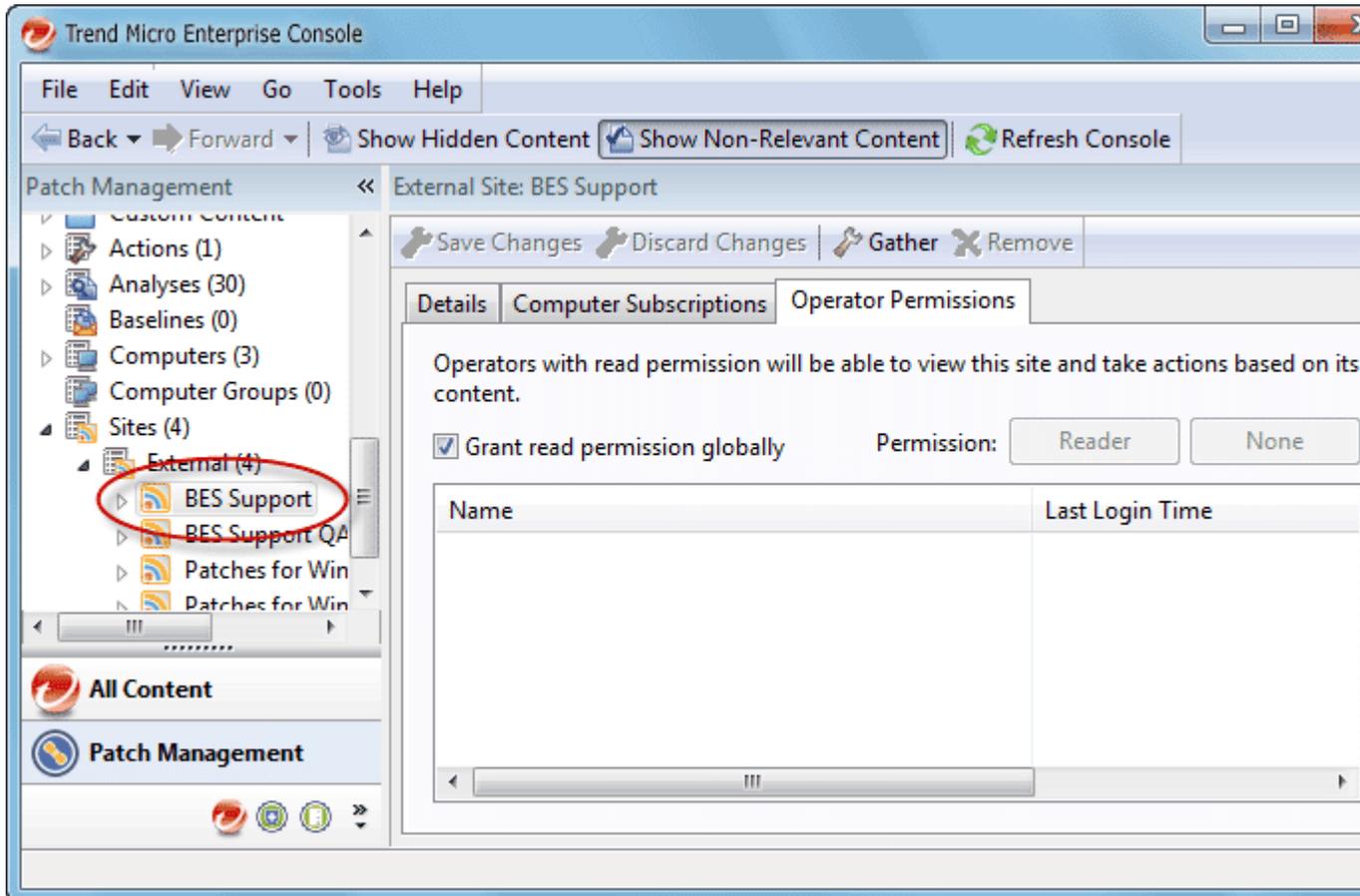
2. Select the **Computer Subscriptions** tab. You have three choices for selecting computers.
  - **All computers.** Click this button to automatically subscribe all BigFix Clients to this site. This is the default action.
  - **No computers.** Click here to unsubscribe all BigFix Clients.
  - **Computers which match the condition below.** Click here and then create a condition that must evaluate to TRUE for the BigFix Client to be subscribed to the site. The default is to parse computer names, but the pull-down list contains several properties that you can use as useful subscription criteria. Press the plus sign to add more criteria. You can combine conditions by ANDING or ORing them.
3. When you are satisfied with how your computers will subscribe to this site, click **Save Changes** from the Work Area Toolbar. Enter your private password to propagate the subscription request to your network.

## Restricting Readers

Restrictions can be placed on Sites to limit access. As with operator permissions on Custom Sites, you can restrict both the operators and computers of most external Sites.

Not all operators need to know about all sites, and some sites may be most easily managed by a single operator, such as an appointed Anti-Virus Czar or the Finance IT Manager. If you have Master Operator privileges, you can limit how many Non-Master Operators are able to view any specified Site. Here's how:

1. Select the desired site from the **Domain Panel**.

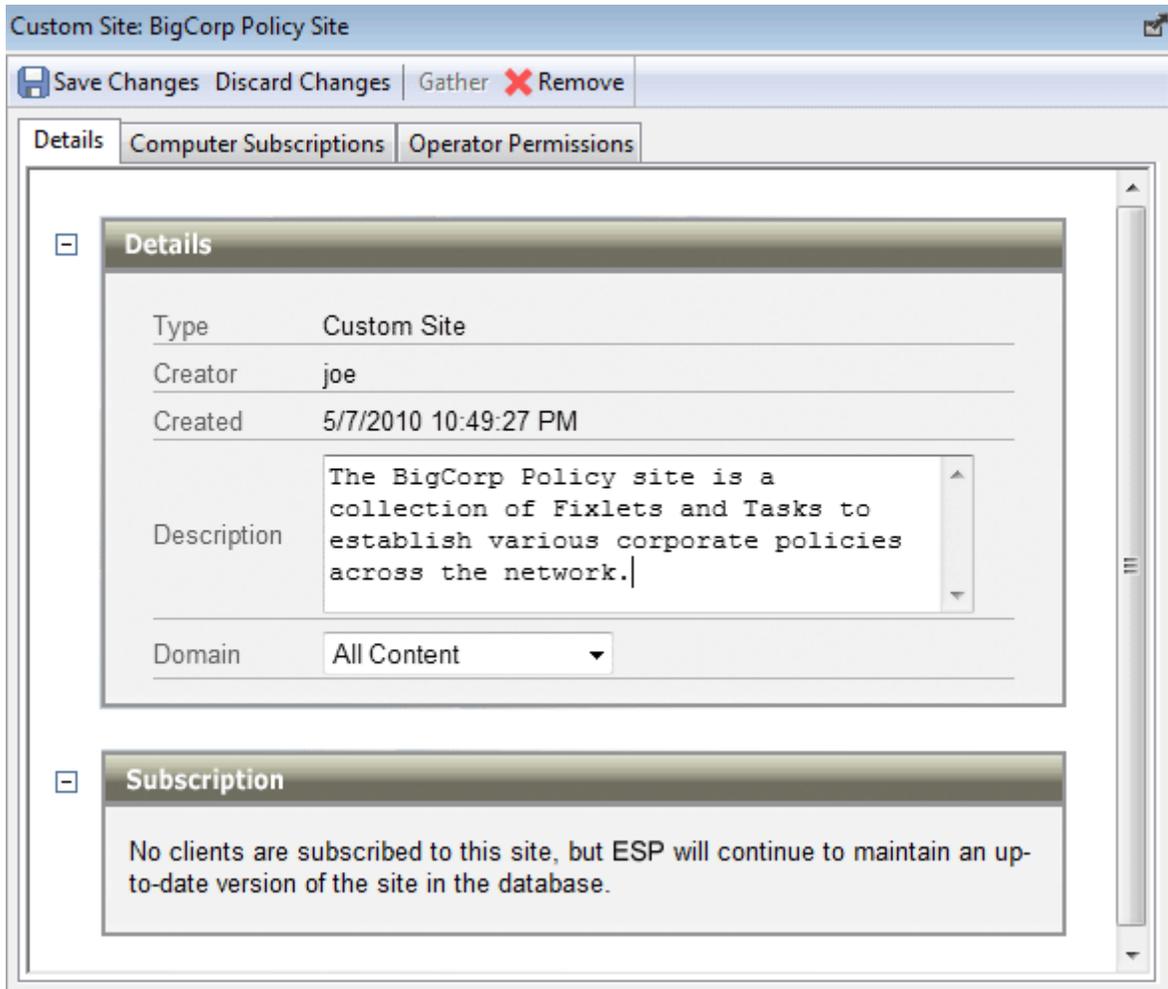


2. The site properties open in the Work Area. Click **Operator Permissions**.
3. The default is to allow only Master Operators to gain access to the selected site. You can't delete Master Operators, but you can **Remove** All Non-Master Operators and then add back any group of operators you desire. Click the **Add operator** button and use Ctrl and Shift-click to select eligible operators from the list.
4. When you're satisfied with your selection, click **OK**.

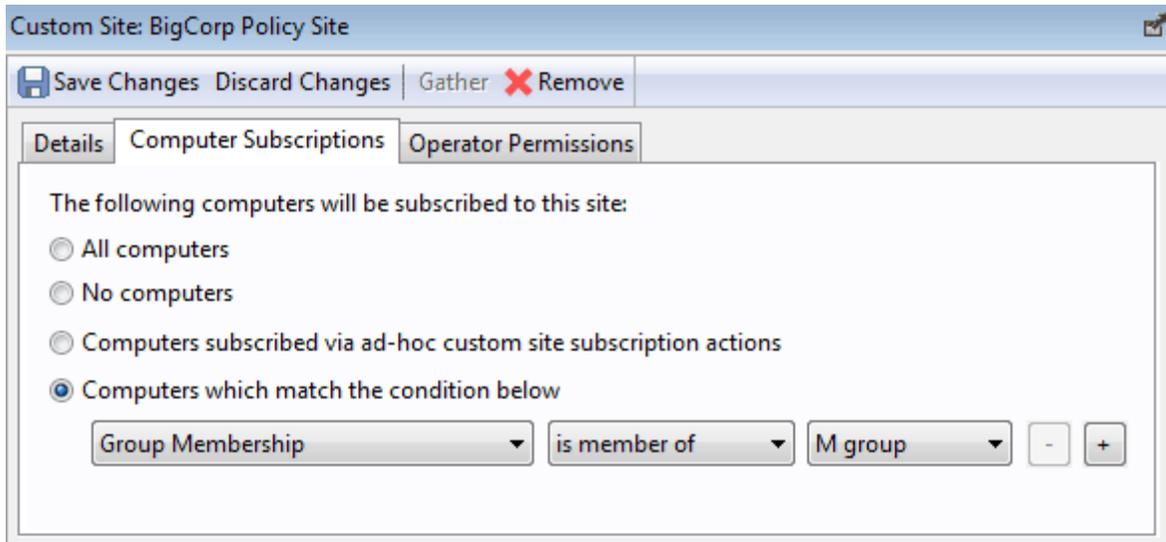
## Creating Custom Sites

You can create a Custom Site to host your own Fixlet messages that are pertinent to your network. Here's how:

1. Select **Tools > Create Custom Site**.
2. You will be prompted for a name for your custom site. Enter a name and click **OK**.
3. In the work area that appears, you can define your site.

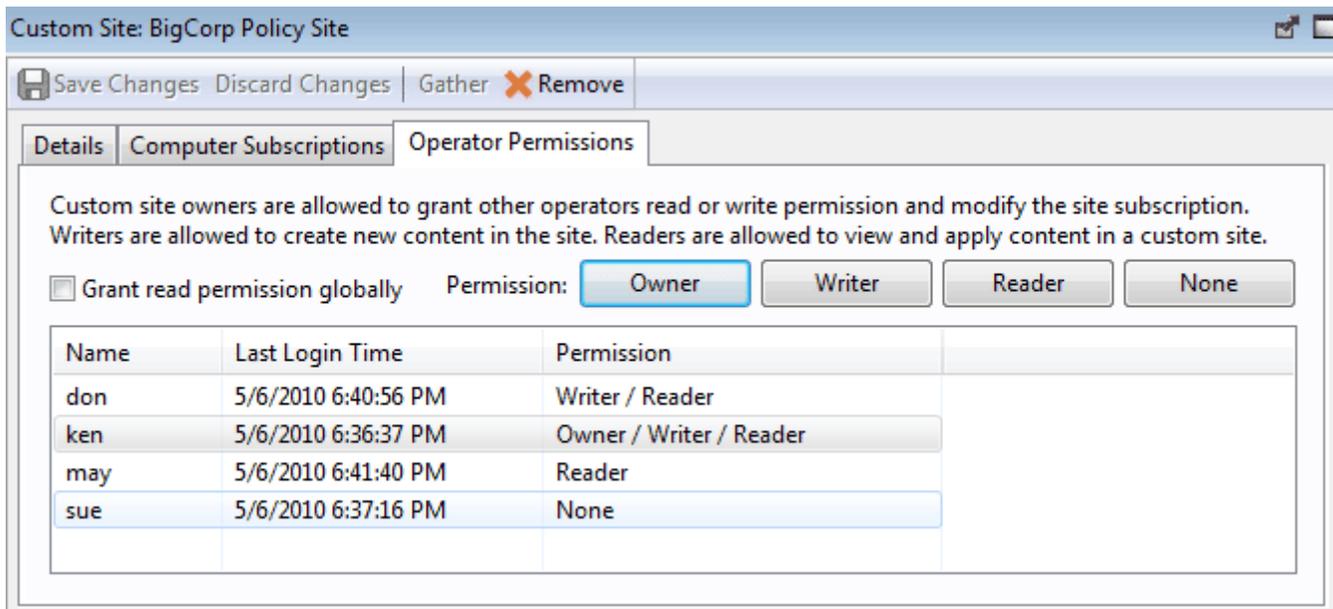


- From the **Details** tab, enter a description of your site. From the **Domain** pull-down menu, select a Domain to house your site.
4. From the **Computer Subscriptions** tab, indicate which subset of your BigFix Client computers you wish to subscribe to this site.



There are several choices:

- **All Computers.** Click this button to automatically subscribe all BigFix Clients to this site.
  - **No Computers.** Click this button if you are not yet ready to subscribe any computers.
  - **Computers subscribed via ad-hoc custom site subscription actions.** This choice requires you to create an Action that will subscribe relevant computers to the site.
  - **Computers which match the condition below.** This choice allow you to describe a set of criteria that must all evaluate to TRUE before a BigFix Client will be subscribed. From the pull-down menu, you can select from dozens of properties to test for inclusion.
5. From the Operator Permissions tab, you can grant specific access permissions to specific operators.



There are several options:

- **Grant read permission globally.** Click this button to provide read permission to all operators.

- Or click specific Operators from the list and assign them specific rights, such as **Owner**, **Writer**, **Reader** or **None**.
6. Click the **Save Changes** button above the work area to complete the description of your site. You must enter your password to propagate your new custom site.

## Canceling a Subscription

You can afford to be adventurous in trying out Site subscriptions for your organization, since no actions are ever taken without your approval. Nevertheless, if you find that a subscription isn't useful, you can cancel it by removing the site from the domain that it resides in, as follows:

1. In the Domain Panel, expand the icon containing **Sites**. From the **External** or **Custom** icon, select the site you wish to delete.
2. Open the site and from the Work Area Tool bar, click the **Remove** button.
3. Click **Yes** on the confirmation dialog, and enter your password to complete the site removal.

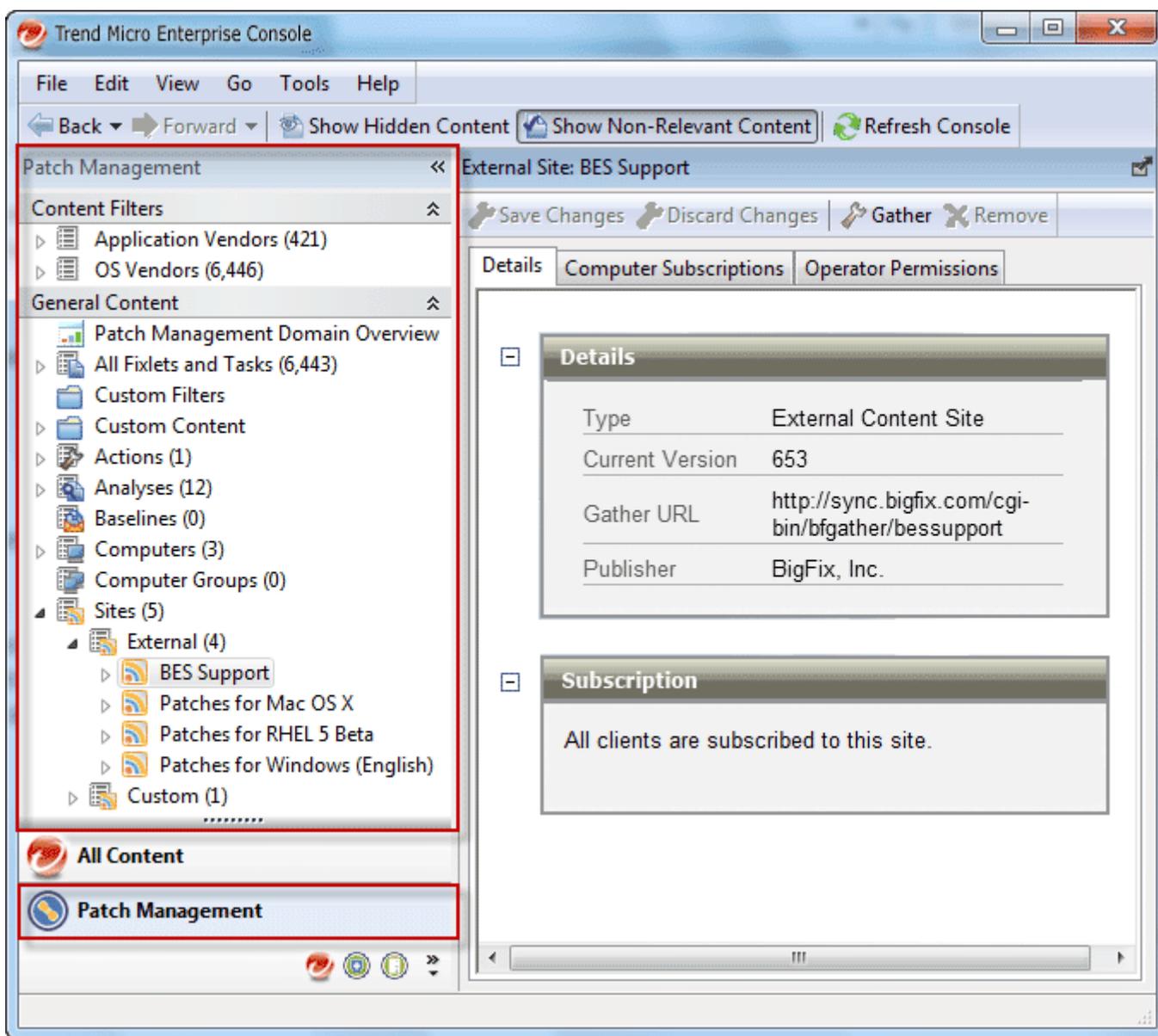
**NOTE:** You can't unsubscribe from the BES Support site — it's needed to upgrade and manage licensing issues in the BES Console program.

## Domains

### Introducing Domains

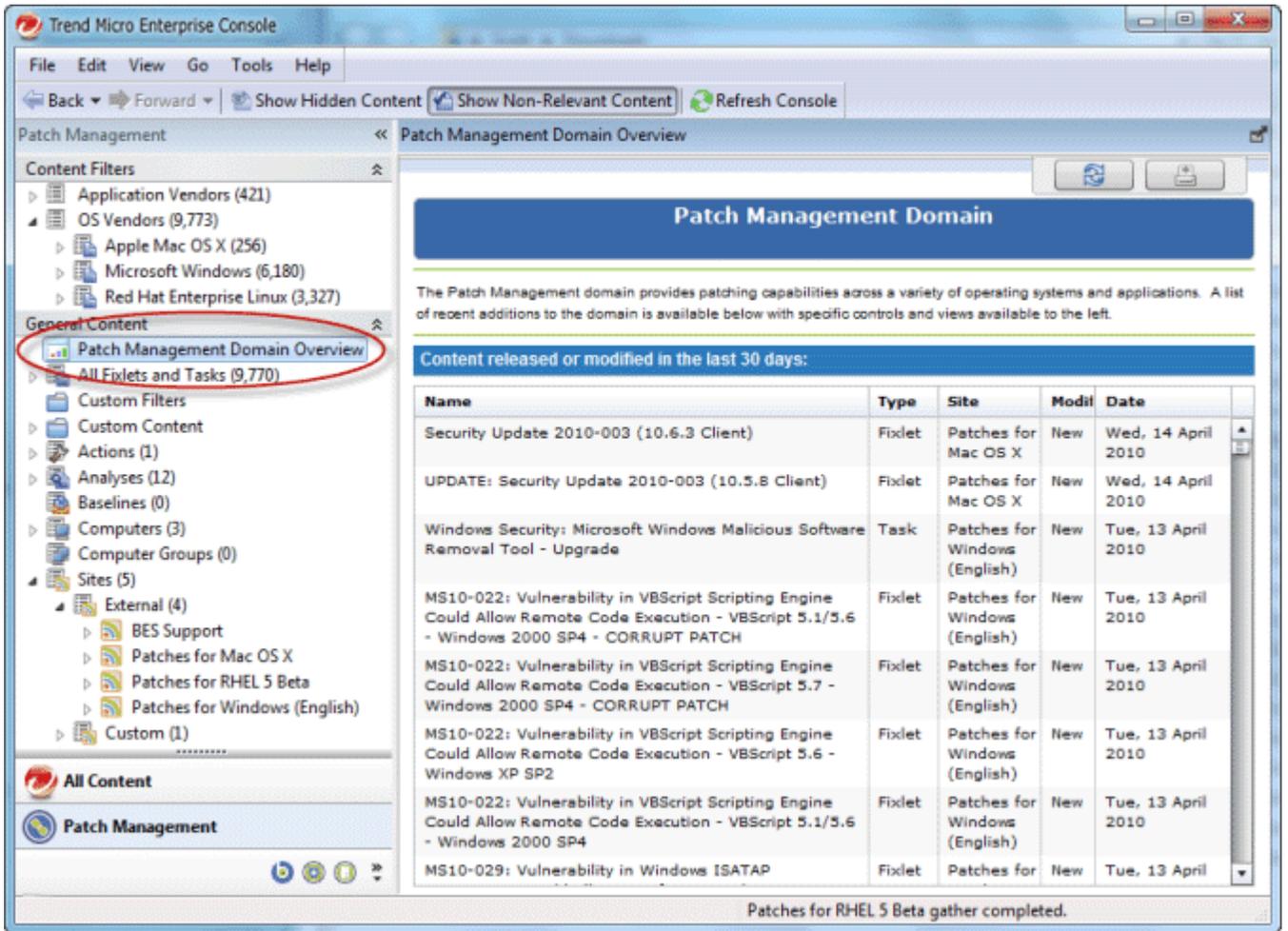
Domains represent the major organizing principle in the BigFix Console. Domains contain a set of related sites, such as Patch Management for various operating systems. Domains are designed to reflect the duties of specific Console Operators, such as Patch Management, AntiVirus Management, Power Management, etc.

Domains are situated on the leftmost panel of the BigFix Console.



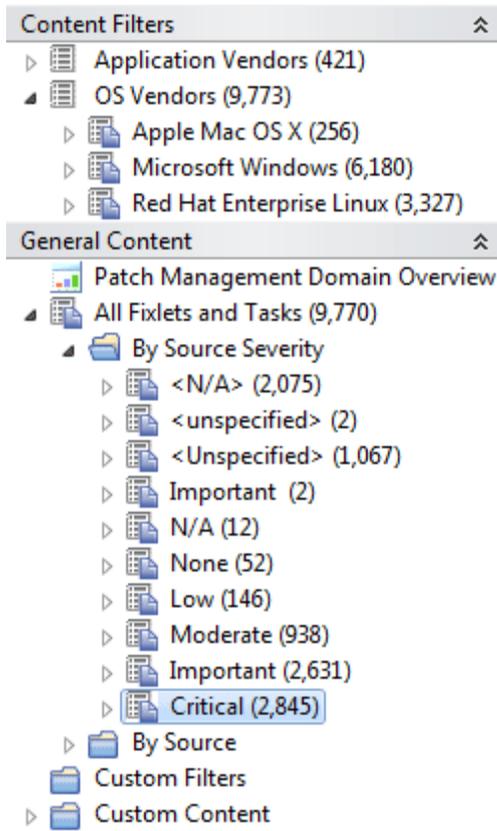
Select the desired Domain from the buttons at the bottom of the panel. The contents of the domain are then displayed. Some Domains have extra structure, such as in this example that includes two Content Filters. Here there is a filter for Application Vendors and another for Operating System Vendors. These allow you to narrow down the viewable content by Vendor.

Generally there will be a Domain Overview, to help you understand the extent of the content.



This particular overview shows you at a glance what new Fixlets, Analyses, Tasks, etc. have recently been added to the Domain.

In the **General Content** section, the information available can be further broken down by opening the various topics, content types and folders. For most topics here, a single click will cause the contents to show up in the List Panel, top right. On items with a disclosure icon (plus/minus or triangle icon), you can click it to open up filtering options. Drill down through any folders to reach a leaf node that represents a subset of the original topic. Now, in the List Panel, only the specified subset will be displayed.

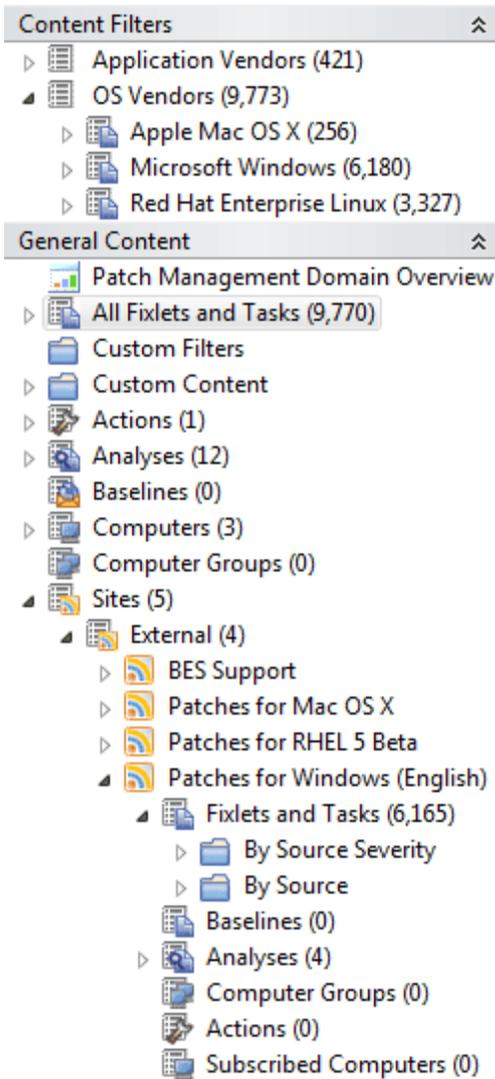


Here the **Fixlets and Tasks** have been opened to disclose the **Source Severity** folder. Within that folder, only the **Critical** Fixlets have been selected, making the ultimate List Panel shorter and easier to deal with.

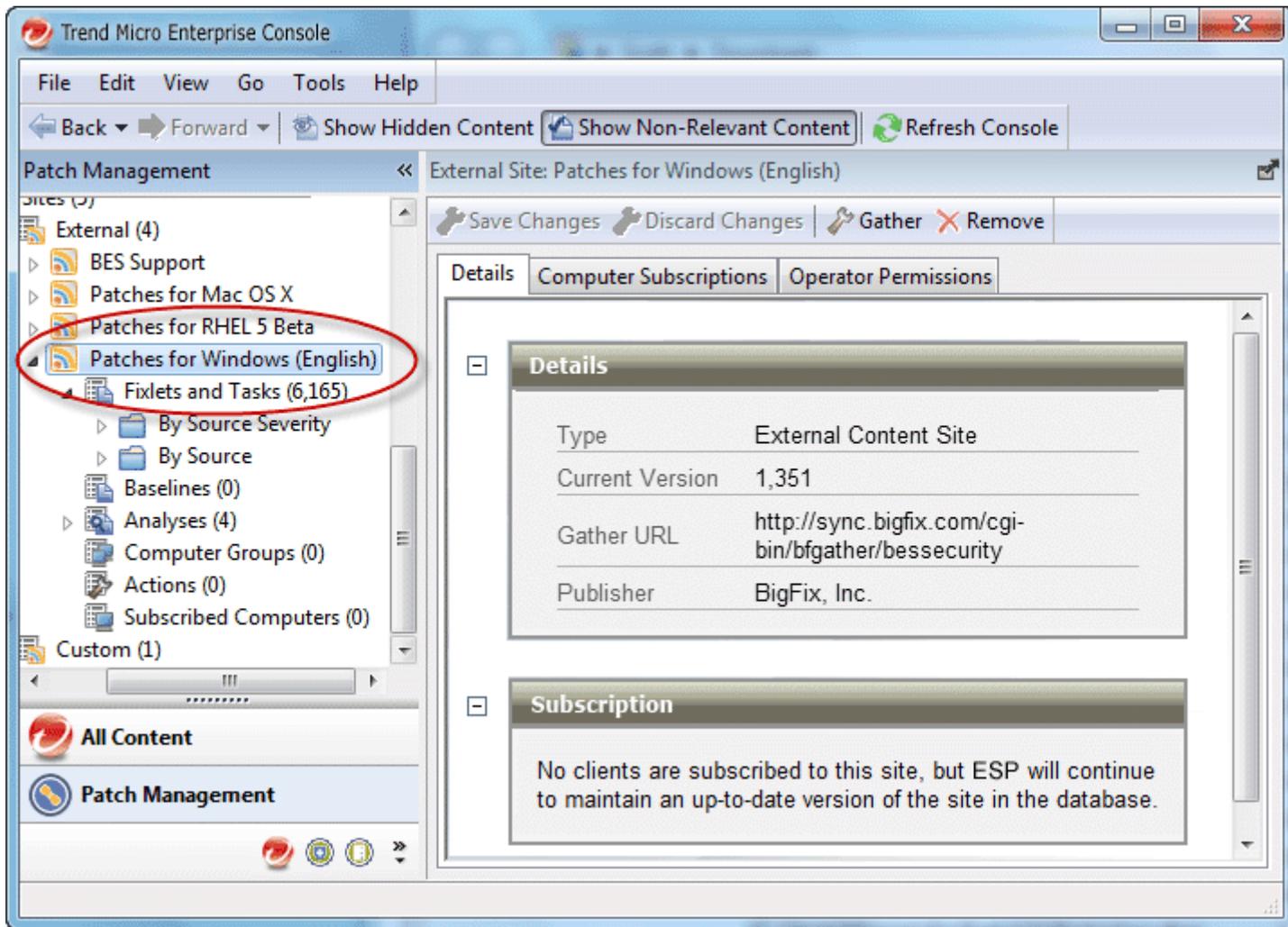
In general, there will be a **Sites** section that you can open to examine the sites individually should you need. Different domains will have different structures, so feel free to explore them.

## Domain Sites

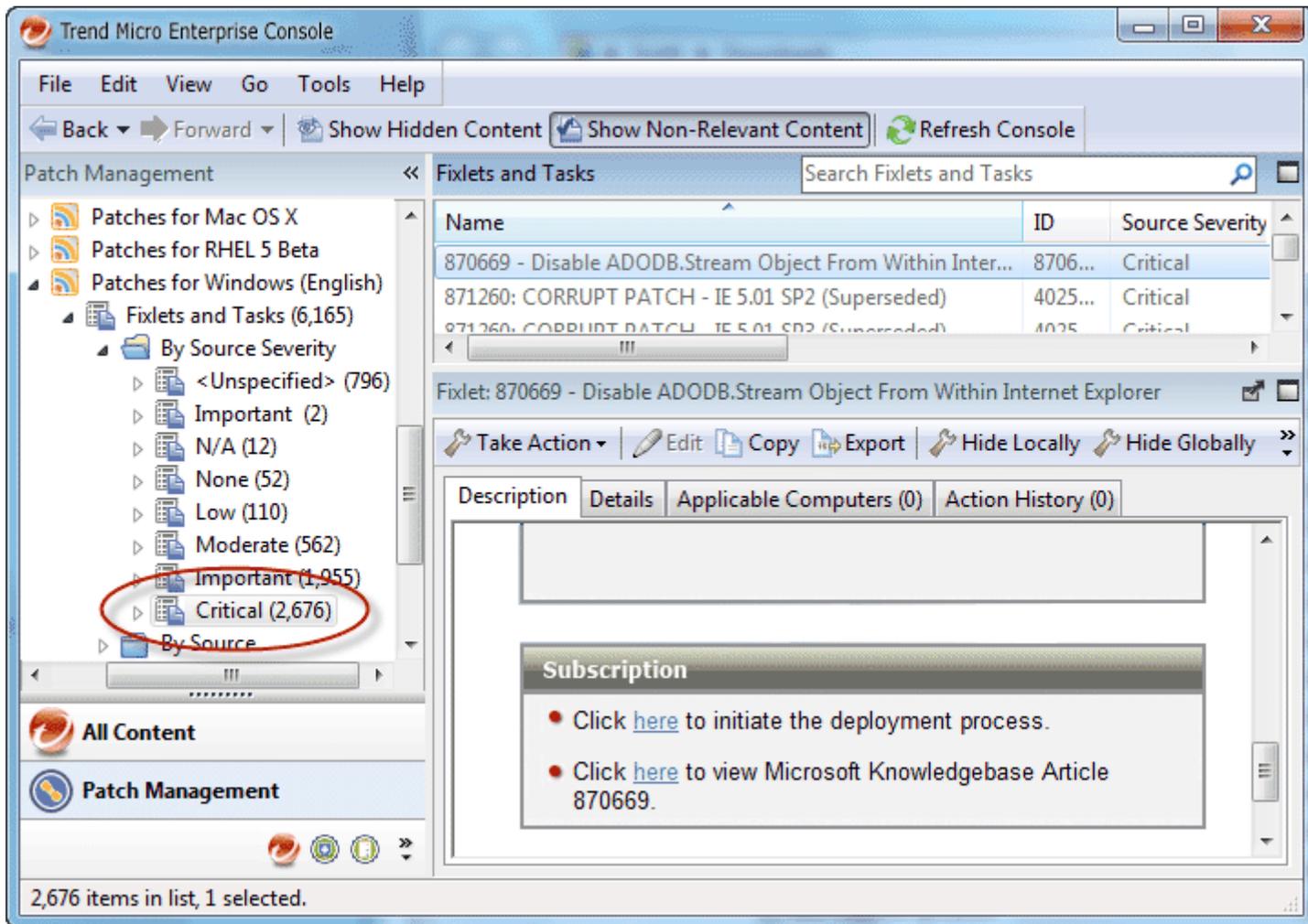
Domains are composed of related sites, grouped together for convenience and because they share a similar structure. You can easily examine the Sites that compose a Domain.



Simply find the **Sites** topic and click the disclosure icon, opening the navigation tree to **External** and **Custom** sites. Click the disclosure icon next to External to view the various Sites. Each site is clickable if you wish to look at its top-level properties.

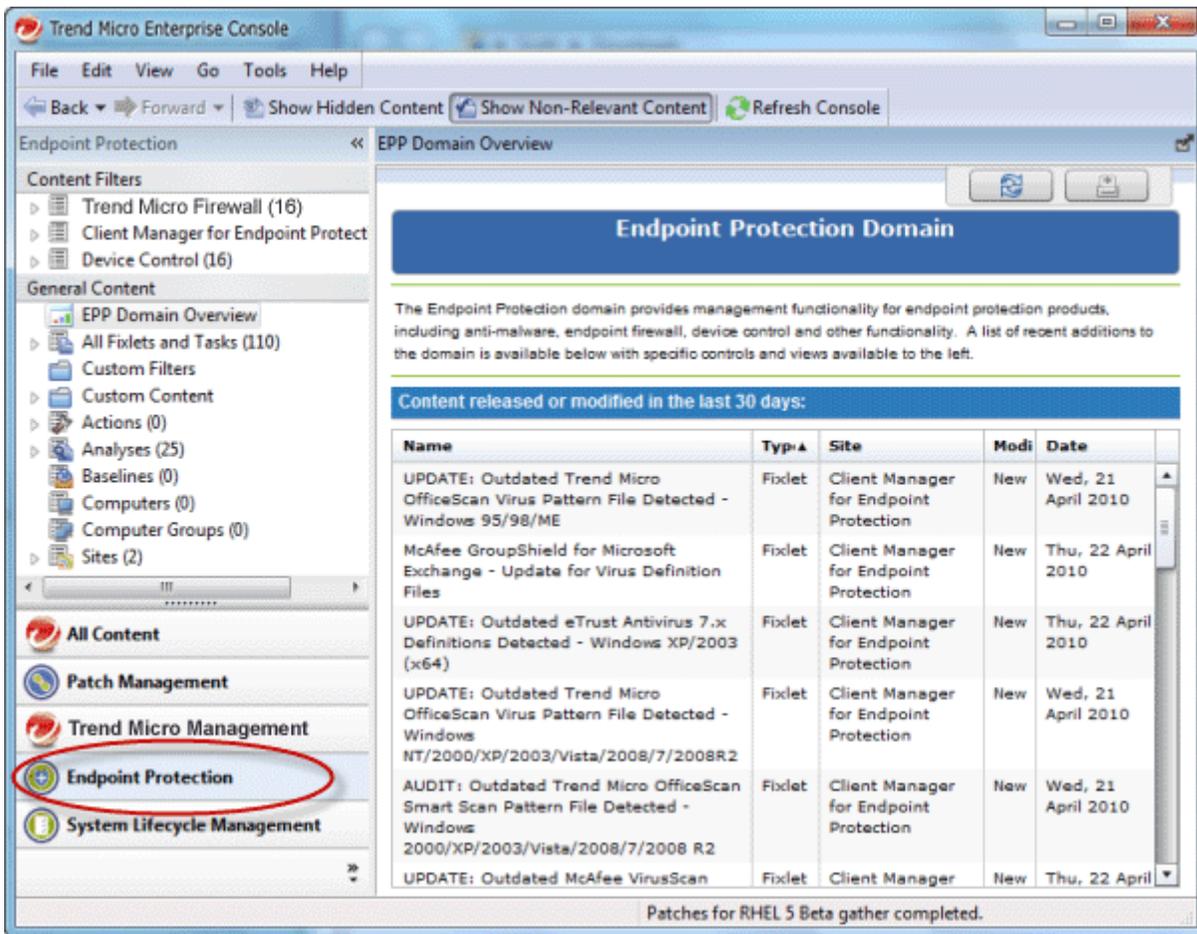


Click the disclosure icon to the left of the site icon to examine subsets of the data. You can continue to drill down until you reach a leaf node, allowing you to examine specific subsets of each site. When you finally reach the subset you desire, the content is displayed in the List Panel.



## Selecting Domains

You will typically have several Domains available to you, each covering a group of related tasks that fall into the purview of a specified Console Operator. As you add sites to your Console, they will naturally find their way into the appropriate Domains, and they will create new Domains when needed. The Domain Panel is on the left side of the BigFix Console, and buttons corresponding to the Domains appear at the bottom of that panel.



When you click a Domain Button, an Overview is typically displayed in the Work Area. It often presents a list of the most recent additions to the content for a quick appraisal.

At the bottom of the button list is a pull-out menu that lets you adjust the number of buttons you wish to display.

## Navigating Domains

Domains are a logical collection of sites that all have similar purposes and structure. As a consequence, each Domain will reflect that unique structure and display its contents appropriately. Nevertheless, all sites have certain similarities in how they manage content, and a simple domain is sufficient to explore most of their options and how to navigate amongst them. The example used here is Patch Management.

The screenshot shows the Trend Micro Enterprise Console interface. The left sidebar is highlighted with a red box, showing a tree view of Content Filters and General Content. The main area displays a table of fixlets and tasks, with one fixlet selected and its details shown in a pane below.

**Content Filters**

- Application Vendors (421)
- OS Vendors (9,773)
  - Apple Mac OS X (256)
  - Microsoft Windows (6,180)
  - Red Hat Enterprise Linux (3,327)

**General Content**

- Patch Management Domain Overview
- All Fixlets and Tasks (9,770)
- Custom Filters
- Custom Content
- Actions (1)
- Analyses (12)
- Baselines (0)
- Computers (3)
- Computer Groups (0)
- Sites (5)
  - External (4)
    - BES Support
      - Fixlets and Tasks (306)
      - Baselines (0)
      - Analyses (8)
      - Computer Groups (0)

**All Content**

- Patch Management

**All Fixlets and Tasks**

Name	ID	Source Severity
811630: Update for HTML Help Control - Windows ME	8116...	<Unspecified>
811630: Update for HTML Help Control - Windows ME - C...	8116...	<Unspecified>
811630: Update for HTML Help Control - Windows NT 4.0	8116...	<Unspecified>
811630: Update for HTML Help Control - Windows XP	8116...	<Unspecified>
811630: Update for HTML Help Control - Windows XP - C...	8116...	<Unspecified>
828026: Update for Windows Media Player Script Comma...	8280...	<Unspecified>
828026: Update for Windows Media Player Script Comma...	8280...	<Unspecified>
828026: Update for Windows Media Player Script Comma...	8280...	<Unspecified>

Fixlet: 811630: Update for HTML Help Control - Windows 98

Take Action | Edit | Copy | Export | Hide Locally | Hide Globally

Description | Details | Applicable Computers (0) | Action History (0)

appear in the HTML Help window. Installing this patch will eliminate this bug.

**Note:** Affected computers will report back as 'Fixed' once the patch has run successfully, but the vulnerability will not be closed until the affected computer is restarted.

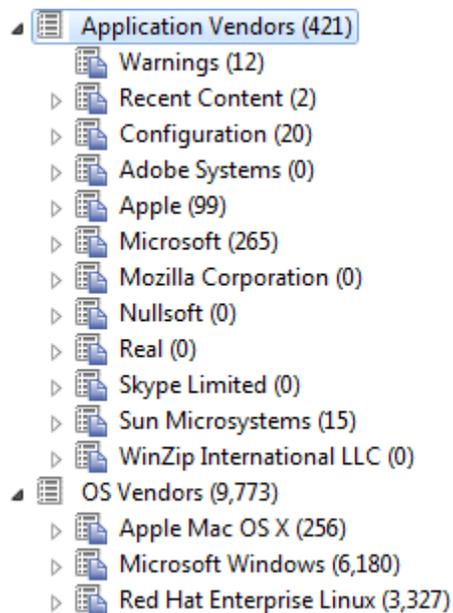
**File Size:** 735 KB

**Actions**

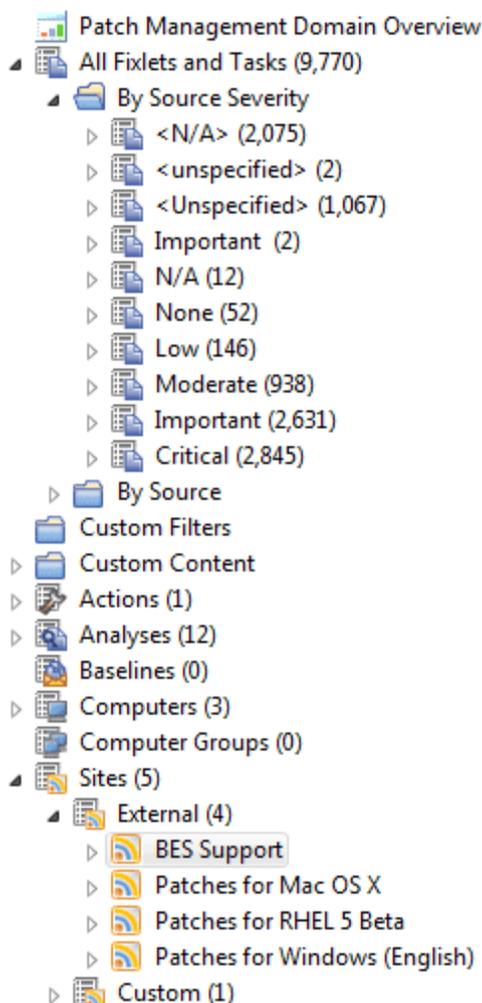
- Click [here](#) to initiate the deployment process.
- Click [here](#) to view Microsoft Knowledge Base Article 811630.

4 9,770 items in list, 1 selected.

Click the Domain button to view it in the Domain Panel. For this example, there is a section at the top labeled **Content Filters**. Not all domains have a section like this, but sections are fairly common when there is a benefit to grouping the information into logical partitions. Here, there is a way to group the content based either on the vendor (such as Adobe, Microsoft, etc.) or the OS (Mac, Windows, Linux, etc.). You can click the disclosure icon (either a plus-minus icon or a rotating triangle icon, depending on your operating system) or double-click the tree node itself to open it up and explore its subheaders.



The second section, **General Content**, presents the domain content in a more generic fashion.



At the top of the General Content section of the Domain Panel is an icon for the **Domain Overview**. Click this icon to see general information about the domain, typically including some of the latest additions.

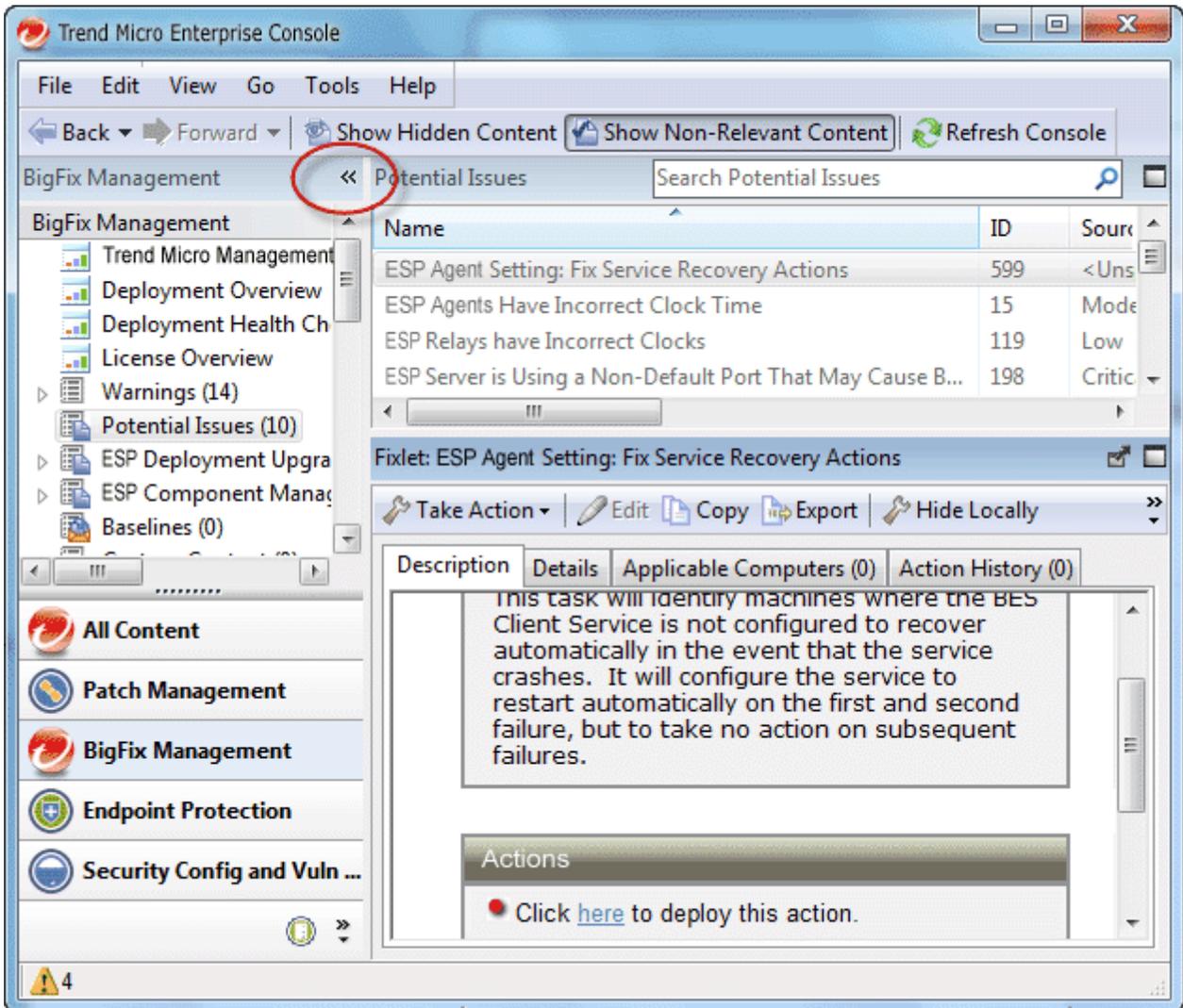
Below that is an icon corresponding to **All Fixlets and Tasks**. This icon represents the main content of the domain, and is created by a union of Fixlets and Tasks combined from all the sites that make up this domain. You can open this category and drill down by sources or severity. Under the **Source Severity** folder is a breakdown of the content that allows you to select only critical, important or other categories of Fixlet severity to concentrate on. Click on these icons once to see all the content that fits this criteria show up in the List Panel to the right. Click twice to open the icon for further winnowing of the content by source. Finally, at the leaf node, you can click the icon to produce a list of the filtered content in the List Panel.

All of these navigation icons work the same. A single click will highlight the particular category and a double click will open it for further refinement. In general, each icon can be a destination or the head of a new tree to examine. When you click it, the particular subset of data implied by that icon will open in the List Panel to the right.

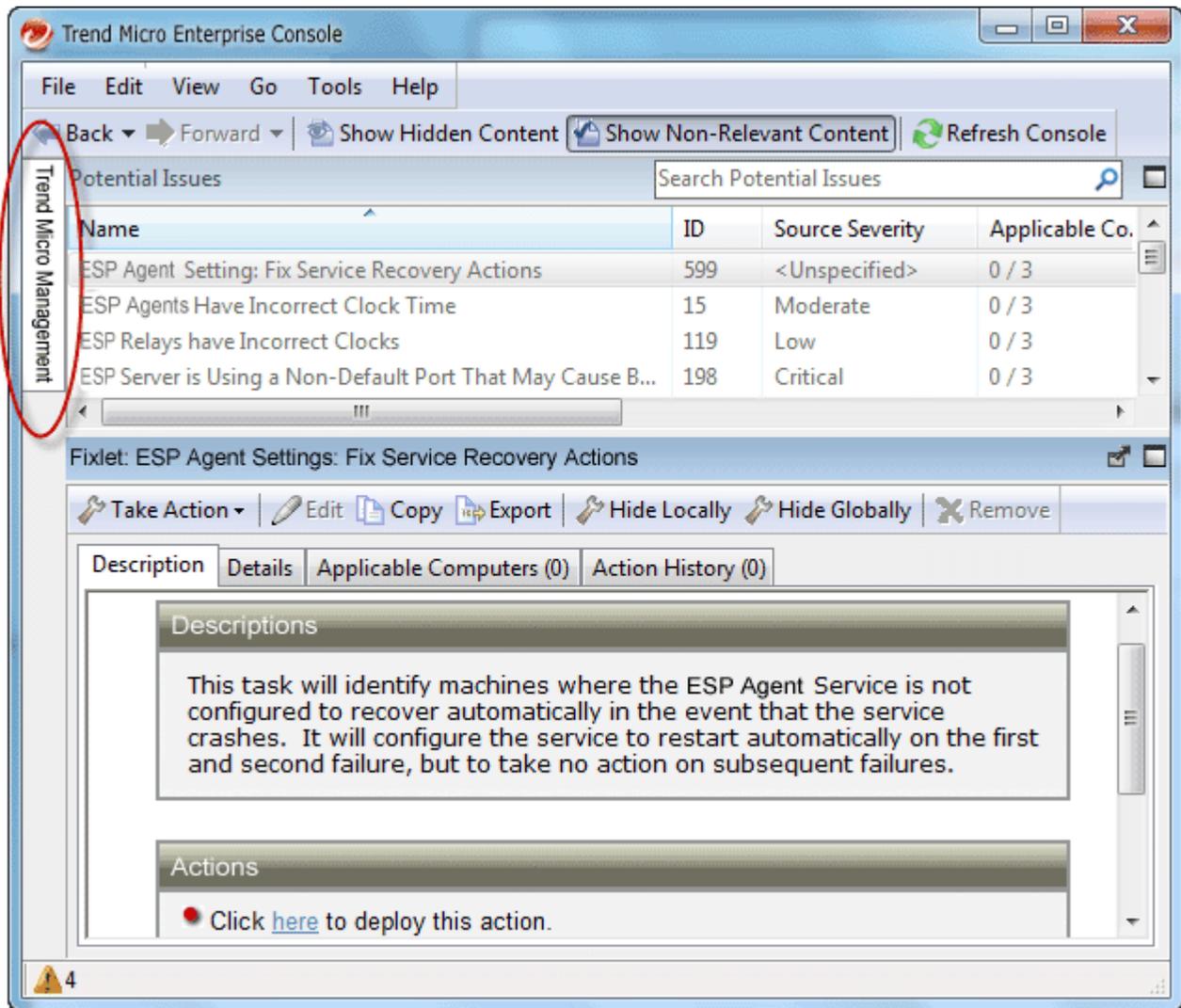
Note that **Fixlets, Tasks, Analyses, Actions, Baselines, Computers** and **Computer Groups** are almost always represented in the main navigation tree of any given Domain. Other content, such as filters, custom content and custom sites are often represented as well. As the Operator in charge of a Domain, you will find it easy to see the overall structure at a glance. From there, drilling down to filter and narrow your selections will quickly become second nature.

## Minimizing the Domain Panel

Should you find yourself needing more screen real estate, you can minimize the Domain Panel by clicking the minimize icon at the upper right of the panel.

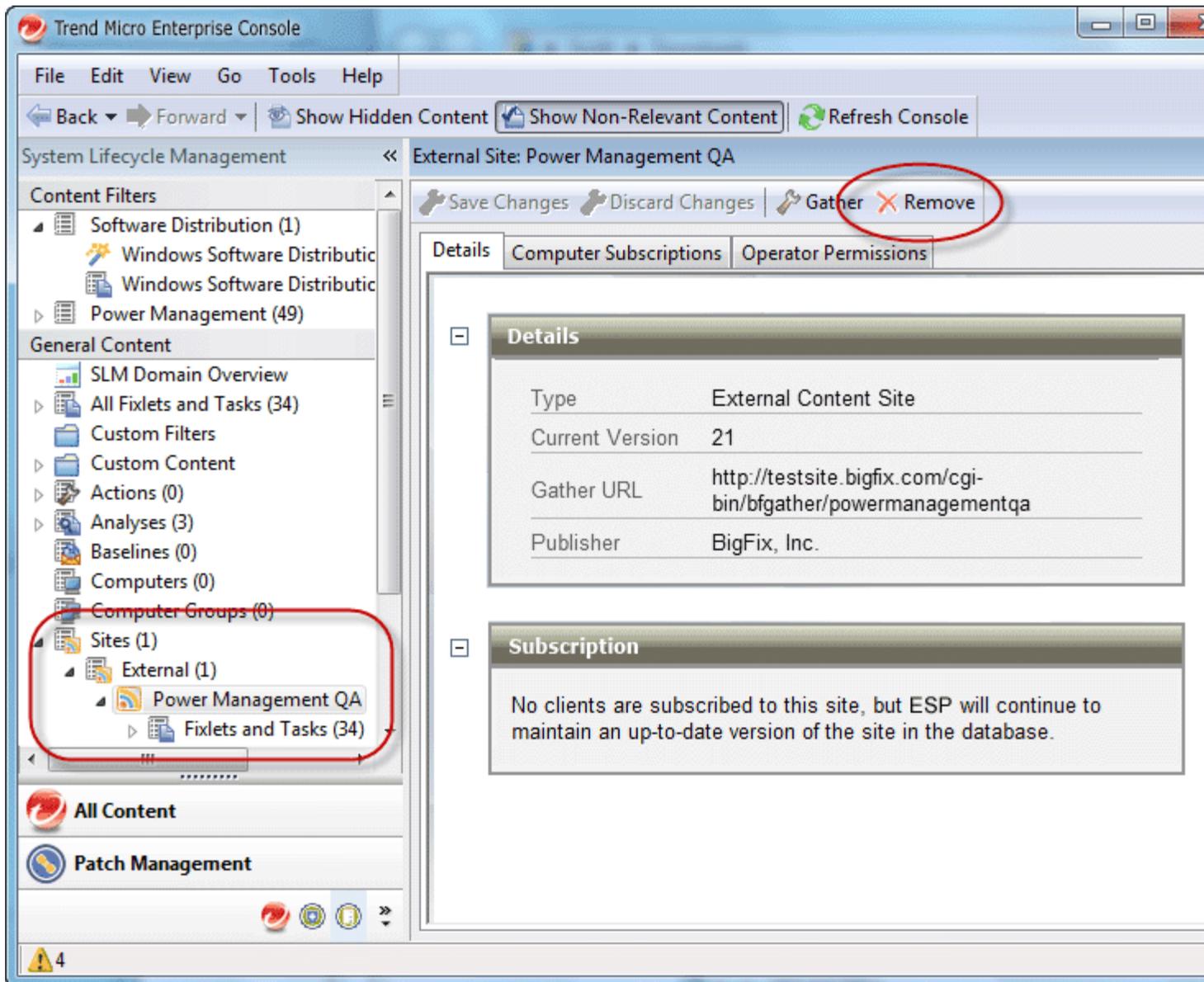


That will reduce the panel to a small stub at the left of the Console window. To restore the Domain Panel, click the stub.



## Deleting Domains

A Domain can be deleted once it is created by deleting all of its constituent sites. In the Domain Panel, find the icon for the collection of sites.



Open up the site icon, and navigate to External sites. Double click each site in turn and use the **Remove** button at the top of the Work Area to delete all of the sites that exist there. Do the same for any Internal sites. The Domain should disappear at that point.

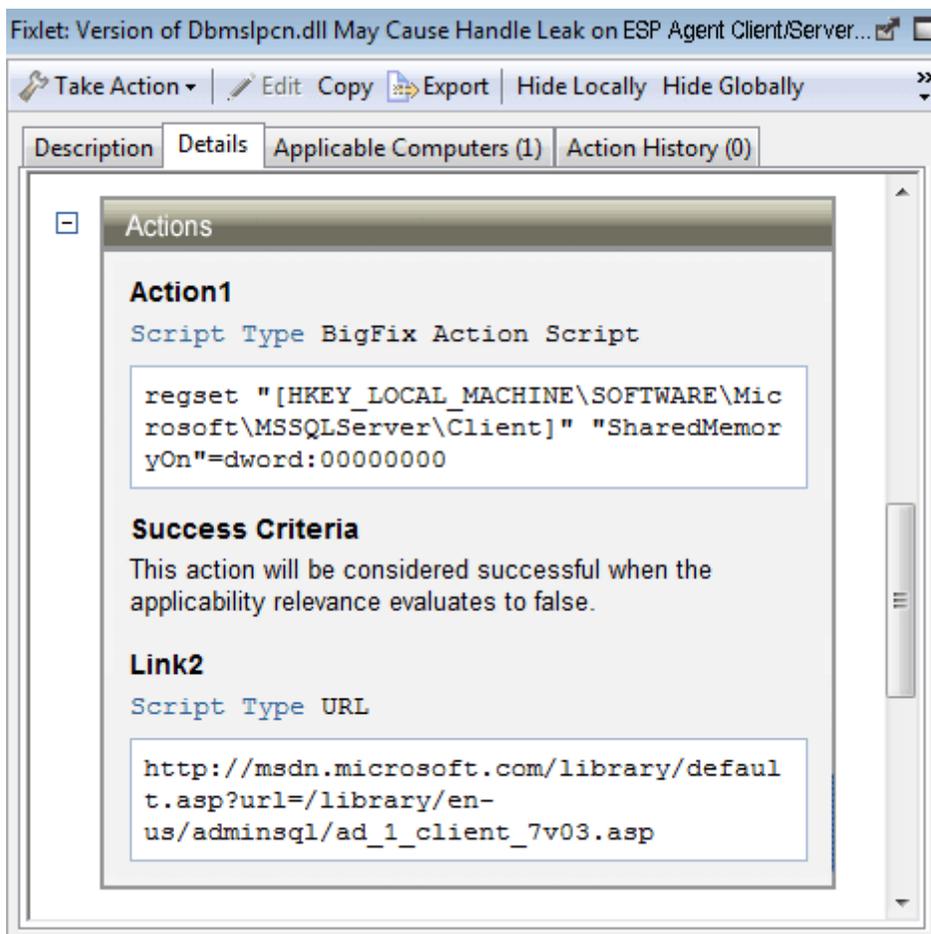
## Actions

### Introducing Actions

Actions represent the core functionality of the BigFix system. Fixlet messages, Tasks, and Baselines depend on Actions to execute their remediation mission.

Actions are typically scripts that can customize a specific solution for each BigFix Client, using the power of Relevance expressions. Although the Relevance language itself can't alter a Client, it can be used to direct Actions in a way that parallels the original trigger. For instance, a Fixlet might use the Relevance language to inspect a file in the system folder. Using a similar Relevance clause, the Action can then target that same file without knowing explicitly where that folder resides. This allows the Action author (and issuer) to concentrate on the issue at hand without worrying about the vagaries of each individual computer system.

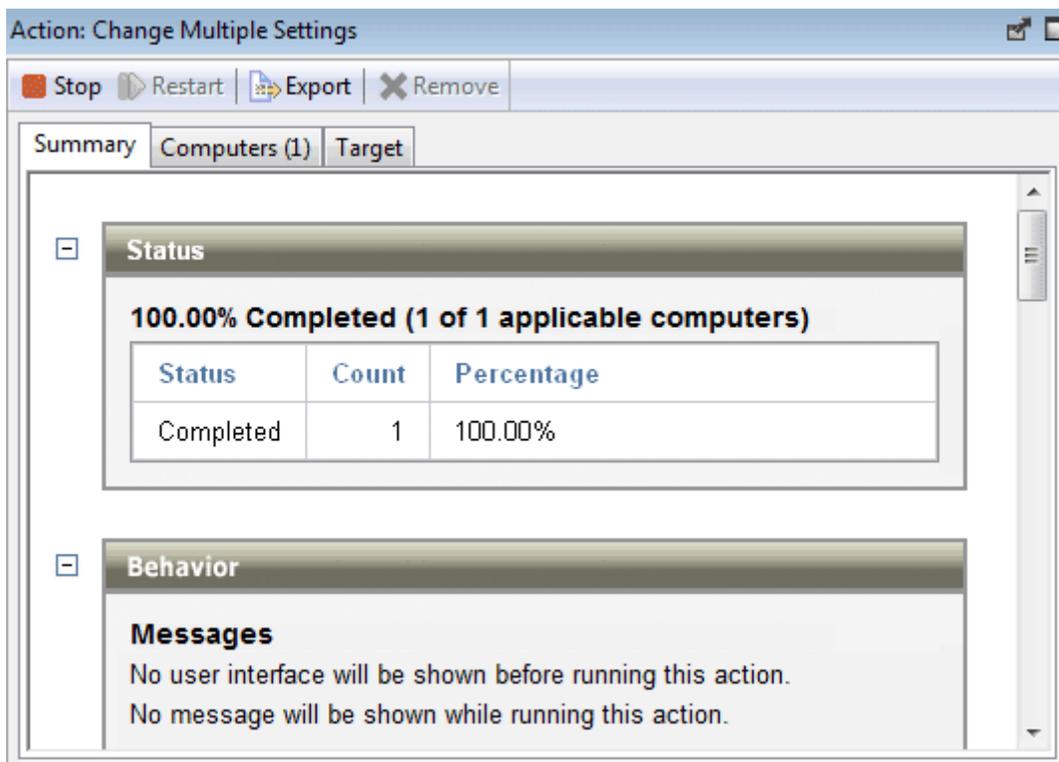
You can inspect an Action script before you execute it by looking at the **Details** tab of Fixlet messages and Tasks.



You can also write your own custom Action scripts. For more information, see the ***BigFix Action Language Reference***.

## Viewing Actions

To view information about an Action, click the desired Action from any **Action** List Panel.



At the top is a toolbar with four icons.

- **Stop:** Click this button to halt the deployment of the Action.
- **Restart:** Once stopped, you can click this button to restart it.
- **Export:** Click this button to save a copy of this Action, which you can then hand-edit and import as a custom Action.
- **Remove:** Delete this Action from the database. This button is available for any stopped Action.

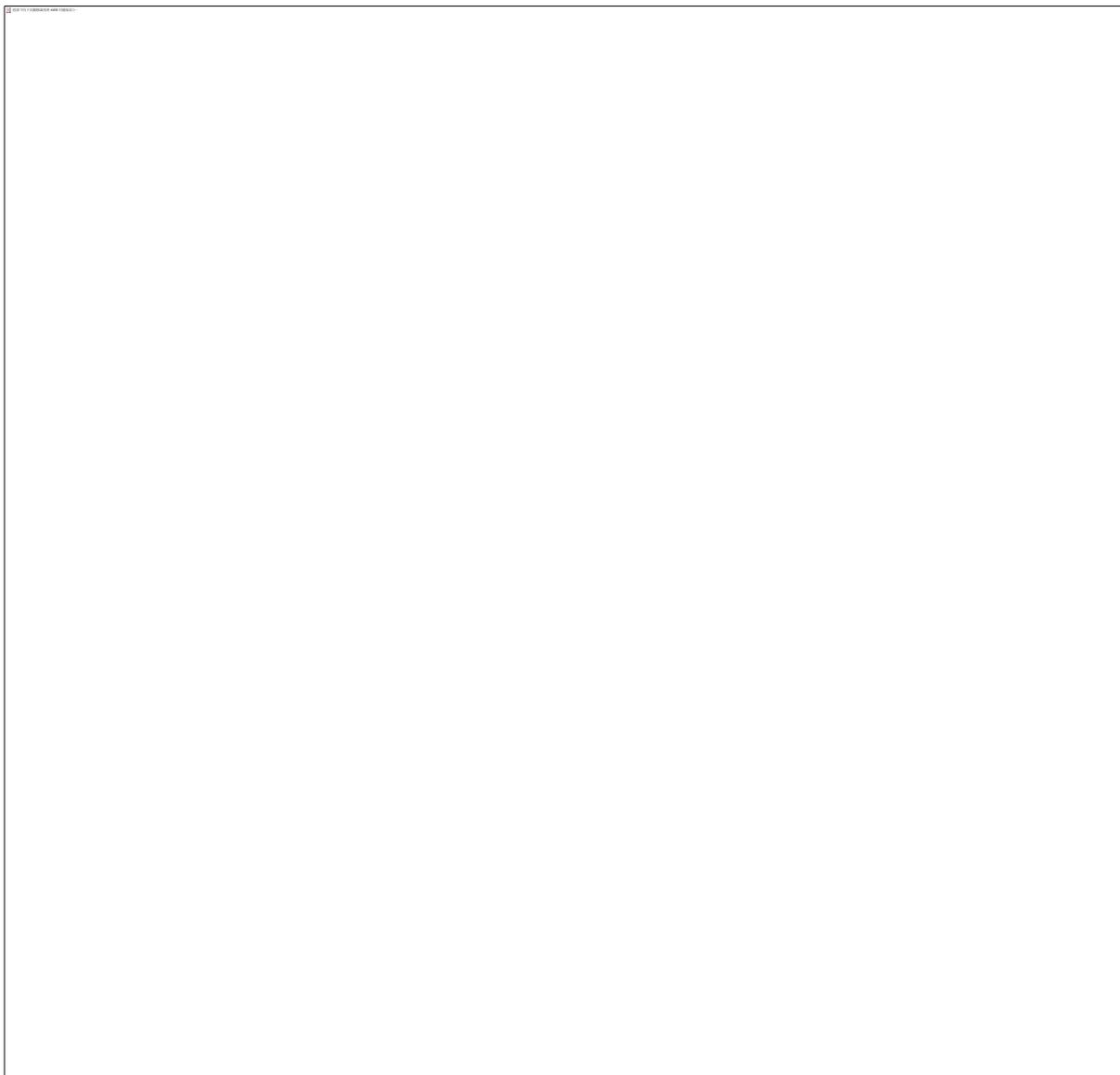
In the bottom panel, there are three tabbed dialogs.

- **Summary:** This tab summarizes the Action, with sections on the status of the Action and the progress of the download. There is information on the behavior of the Action, including users, execution options and post Actions. You can also view the actual relevance clause and the text of the Action script. At the bottom of this dialog is a text box where you can insert a comment that will attach to this Action.
- **Computers:** This tab shows you the computers that are reporting in for this Action. If the Action was originally targeted to specific computers, then a result will be shown for each targeted computer. However, if the Action was originally targeted by properties, only computers that respond are displayed, and the tab is labeled **Reported Computers**.
- **Target:** This tab lets you look at the set of computers that were targeted for this Action.

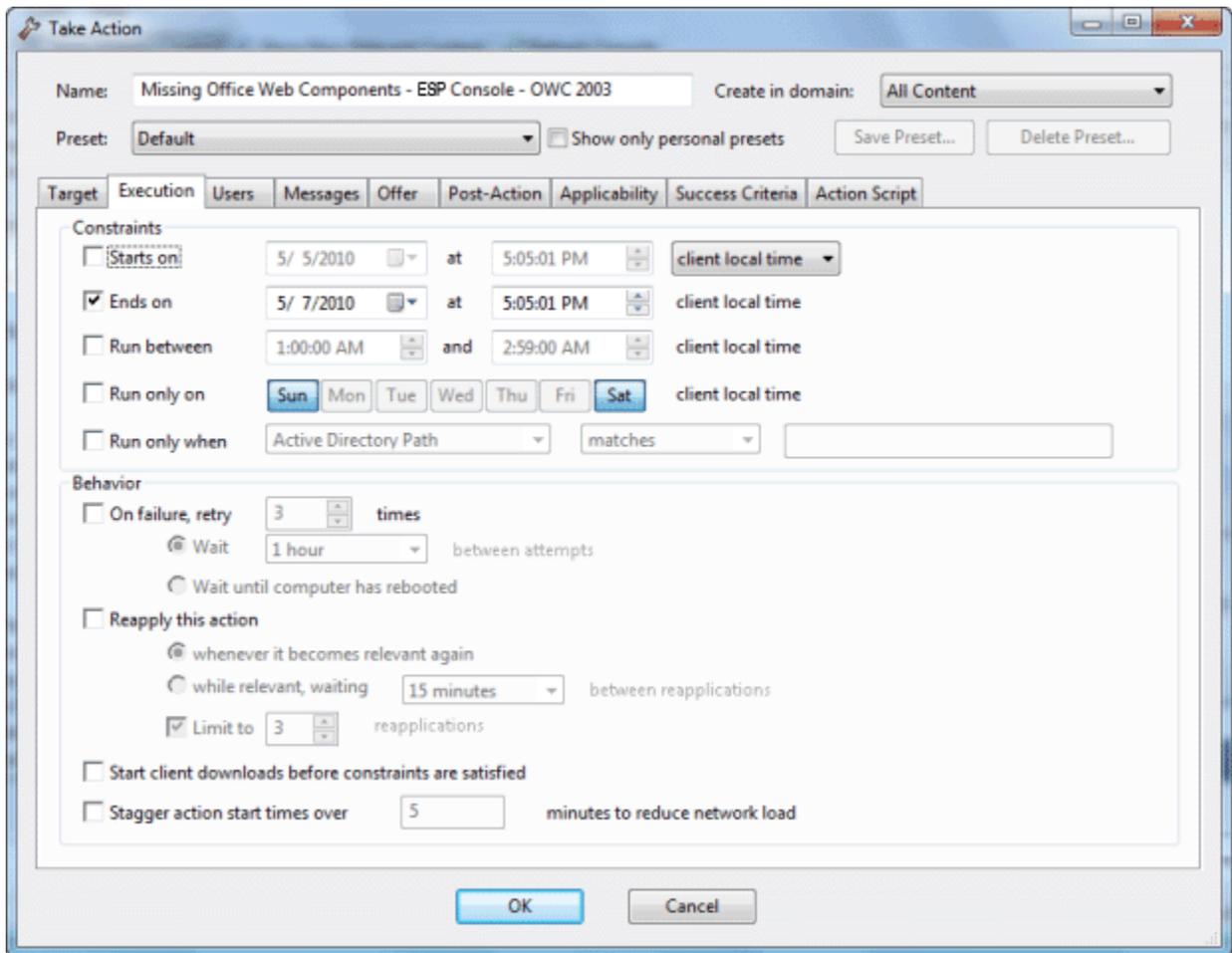
## Deploying the Action

At the heart of the BigFix system is the ability to deploy Actions to fix one or many computers. Actions are scripts that direct the application of updates, registry changes and other remediation to BigFix Clients. Fixlet messages, Tasks and Baselines all have attached Actions that you can target to any of the computers in your BigFix network. Here's how:

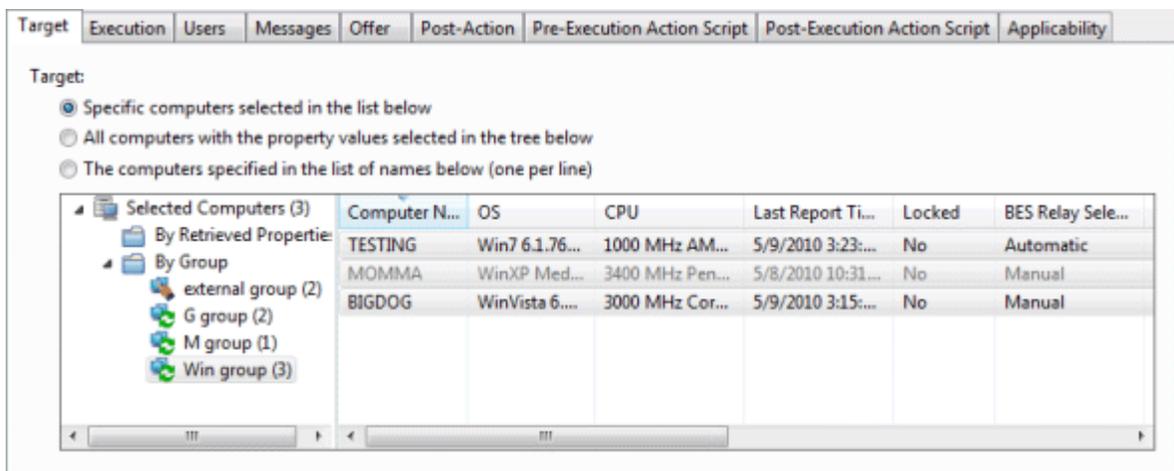
1. Open a relevant Fixlet or Task from the List Panel by clicking it. Make sure the **Description** tab is selected.



- Read the description carefully.
2. Click on the **Details** tab and research the Action. Examine the Relevance section and the Action script itself.
  3. From the **Description** tab, click the link or button corresponding to the Fixlet Action. The **Take Action** dialog box will appear.



- It will list the name of the action at the top.
4. In the Preset pull-down, you can accept the default setting or select **Policy** to establish an open-ended Action with no expiration date.
  5. If you wish, you can fine-tune the list of targeted computers using the **Target** tab.



- Use the computer tree in the left panel to filter the list in the right panel.
6. Create an optional message that will show up on BigFix Client computers using the **Messages** tab.
  7. Set the various scheduling constraints and behaviors with the **Execution** tab. Use the other tabs in this interface to further modify the Action settings.
  8. Any BigFix Operator with Custom Authoring permissions can modify the **Action Script** as well.
  9. Click the **OK** button at the bottom of the Take Action dialog box. You will be asked for password authentication.
  10. Enter the authentication password and click **OK**.

The action will be propagated to all the computers targeted in the **Take Action** dialog. Once the action has executed and the targeted computers are fixed, those computers should no longer report this Fixlet message as relevant.

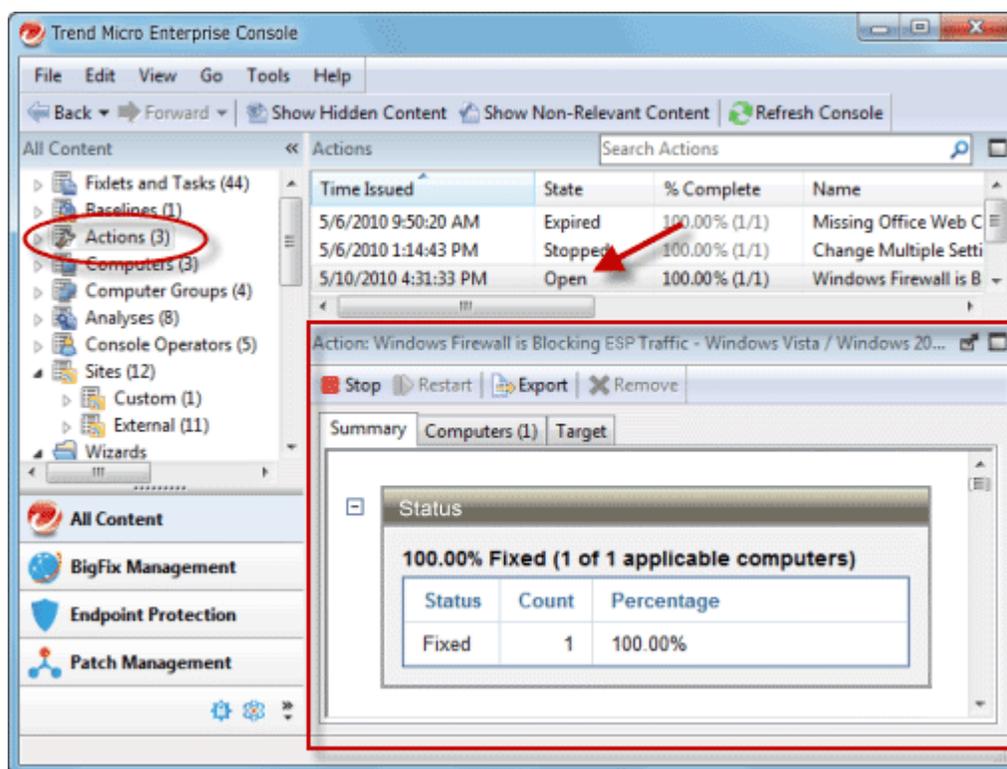
## Monitoring Actions

When you decide to take a proposed Action you have several deployment options. For example, you might schedule the Action to take place unattended after midnight or to take place explicitly with user involvement during the day.

After Actions have been scheduled, the BigFix Server attempts to signal individual computers that Actions are waiting for them. Ideally, the BigFix Client gathers the Action information from the Action site and carries it out immediately. More typically however, some computers are powered off and others are mobile and undocked at the time of the deployment. As soon as these computers are powered on or docked to the network, the remedial Actions will be applied to them as well.

To monitor a deployed Action:

- Click the **Actions** icon in the Domain Panel navigation tree.



If you haven't yet deployed an Action or all Actions have completed, this list will be empty. Otherwise, click any Action to view its status, whether it is evaluating, waiting, running, fixed or failed. You can, among other things, add comments to the Action, either for yourself or other operators.

The Actions may go through several states as they are collected, evaluated and run by the clients. These states include:

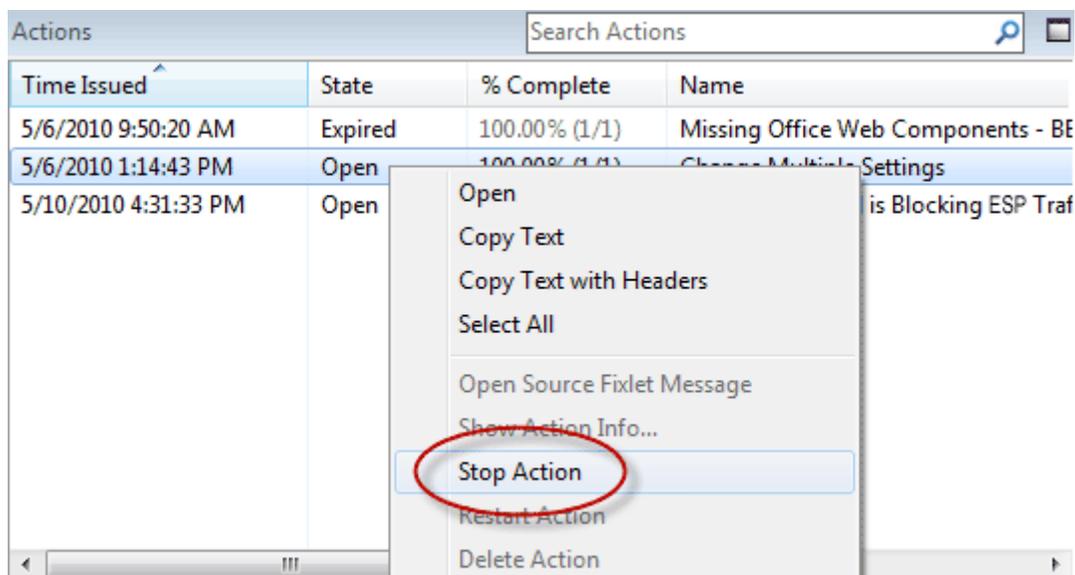
- **Running:** The Action is currently executing.
- **Evaluating:** The Action is still evaluating its relevance.
- **Failed:** The Action has failed to execute properly.
- **Cancelled:** The user has cancelled the Action.
- **Download Failed:** The Action failed to complete the download.
- **Locked:** The computer is locked and can't execute the action.
- **Offers Disabled:** Offers cannot be presented on the specified client, so the Action will never run.
- **Waiting:** The Action is waiting on a user response.
- **Pending Downloads:** The Action is waiting on downloads.
- **Pending Restart:** The Action is waiting for a restart from the Client computer.
- **Pending Message:** The Action is waiting for the user to accept the Action message.
- **Pending Login:** The Action is waiting for the user to login for a user-assisted Action.
- **Pending Offer Acceptance:** The Action is waiting for the user to accept the offer.
- **Constrained:** The Action has been constrained by a Relevance statement set in the Execution tab of the Take Action Dialog.
- **Expired:** The Action has passed its expiration date.
- **Postponed:** The Action has been postponed by the Client.
- **Invalid Signature:** The Action can't run due to an invalid signature.
- **Not Relevant:** The Action is not relevant on this Client.

- **Not Reported:** The Action has not reported its success or failure.
- **Error:** The Action has resulted in an error.
- **Fixed:** The Action has completed, resolving the issue.

## Stopping an Action

Should you ever find it necessary to stop execution of an action that has already been deployed but hasn't expired yet, follow these steps:

1. Click on the **Actions** icon in the Domain Panel navigation tree. This will bring up a List Panel of all current and previous actions. You can filter or sort them by **State** or **Time Issued** to help you find the action you wish to stop.
2. Right-click the action and choose **Stop Action** from the pop-up menu.



Alternatively, select **Stop Action** from the **Edit** menu or click the Action and from the Work Area toolbar click the **Stop** button.

3. You will need to enter your password to confirm the Action halt.

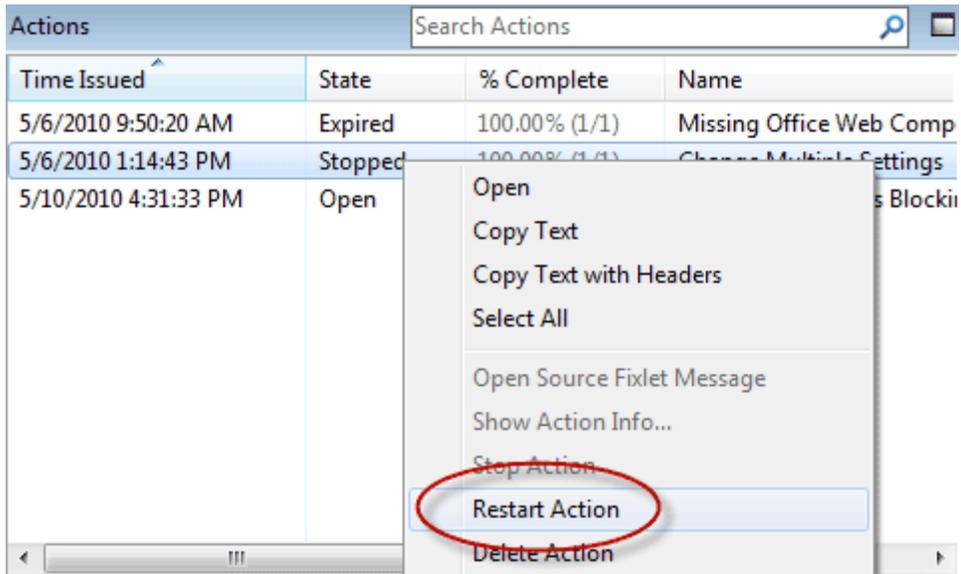
This will remove the action from the BigFix Server, which — subject to details of a given computer's network connectivity and gather frequency — will quickly terminate the action on each computer in your BigFix network.

If you want to *modify* an action that has been deployed but hasn't finished running, you must first stop the action as described here and then start a new action with the desired characteristics. There is no way to modify the targeting or scheduling of an action once the deployment is initiated.

## Restarting an Action

If you have stopped an action before it finished, you can start it up again with this command:

- Select **Restart Action** from the **Edit** menu. Alternatively, you can select the same command from the right-click context menu, or select the **Restart** button from the open Action in the Work Area below.

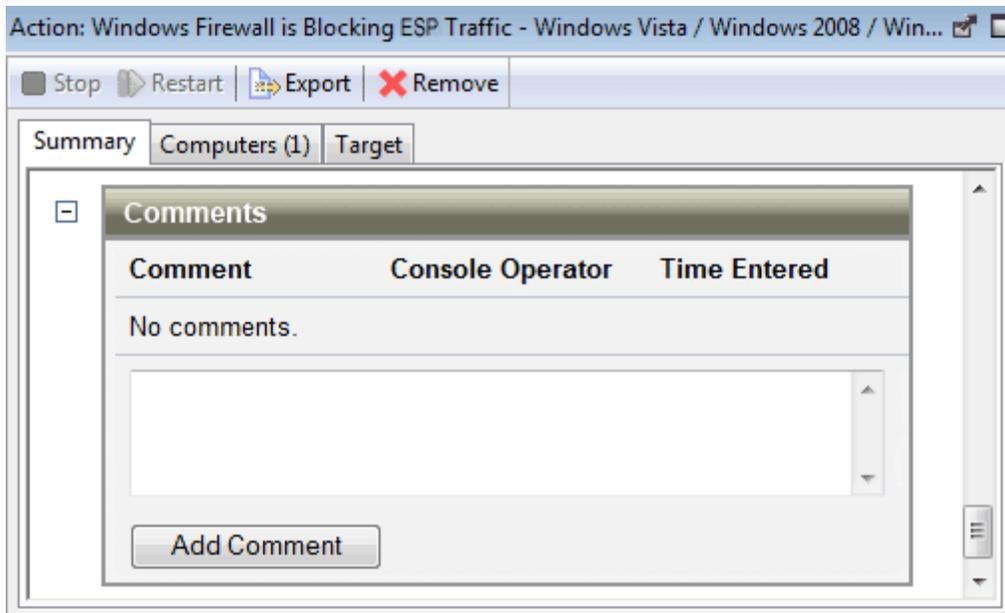


This will place the action back on the server, which will then begin to target the action to the relevant machines.

## Commenting on Actions

You can attach a comment to Actions that other operators can read.

1. Select the **Actions** icon in the Domain Panel navigation tree and choose one of the categories in the drop-down to narrow down your list.
2. Select an Action from the list on the right by clicking it.
3. Click on the **Summary** tab.



Scroll to the bottom of the dialog to the Comments section.

4. Type your comment into the text box and click the **Add Comment** Button.

Your comment will be name- and time-stamped for other operators to view it. As well as with Actions, you can attach comments to Fixlets, Tasks, Computers and Analyses.

## Default Actions

Many Fixlet messages (but not all) have a default Action. Such a message can have its Action execute automatically, simplifying the interface:

- Right-click a Fixlet, Task or Baseline object and choose **Take Default Action** from the pop-up menu. Or click and select **Edit > Take Default Action**. (This option is only available when the chosen Fixlet or Task has a default action).

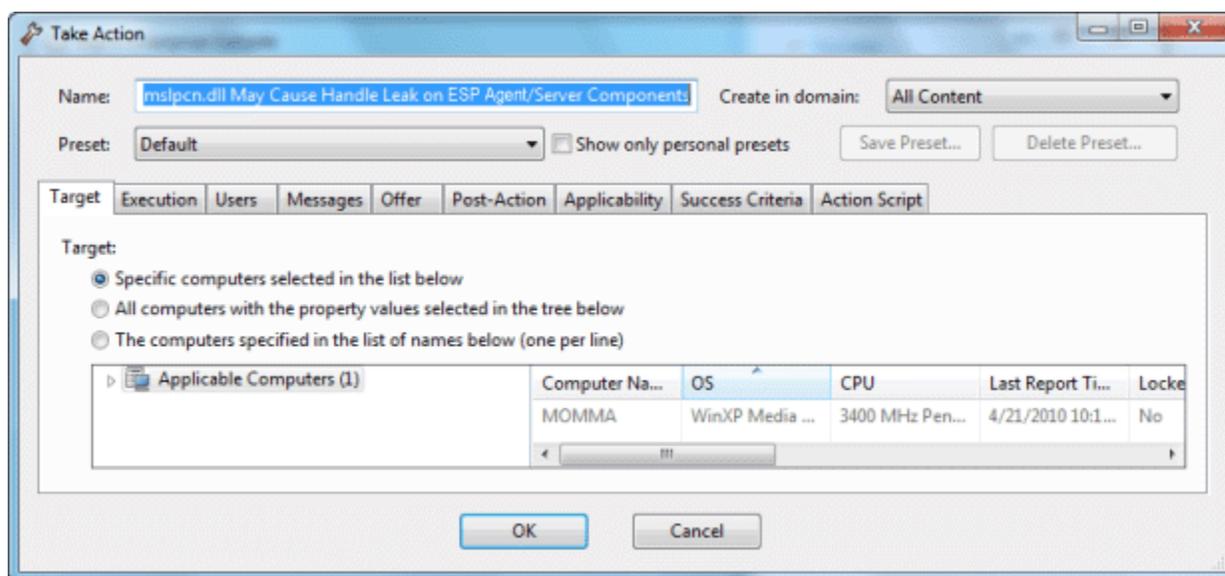
Often, a suite of related Fixlet messages becomes relevant all at once. If they each have default actions, you can apply all of them as a **Multiple Action Group**. This is a powerful technique that allows you to fix multiple vulnerabilities across multiple machines with a couple of mouse-clicks. As with all power tools, you should exercise caution. Here's how to automate multiple Action deployments:

1. Select (using shift- or ctrl-click) the set of Fixlet messages you want to group.
2. Right-click one of the highlighted Fixlet messages and choose **Take Default Action** from the pop-up menu.
3. From the dialog that pops up, you can refine the targeting of the actions, set an onscreen message, modify the deployment schedule and more.
4. Typically, if any Action in a group fails, the other Actions are stopped as well. If you want to continue with the other Actions anyway, then check the box labeled **Run all member actions of action group regardless of errors** from the **Execution** tab.
5. Click **OK** to execute the default action(s).

## Custom Actions

You can create custom actions to fix problems or address issues across your network that are not covered by the standard content. Although the process is simple to describe, there are a large range of actions and targeting techniques at your disposal. To create a custom action:

1. Log on to the BigFix Console as an Operator with Custom Content permissions.
2. Select **Tools > Take Custom Action**.
3. The **Take Action** dialog pops up. At the top is a place to provide a **Name** for your custom action.



This field can be sorted and filtered, so a good naming convention will let you get the most out of your lists and reports.

4. Under the Name field is a pull-down menu that allows you pick a **Preset** customized action, saving you time and ensuring accuracy. You can also save your current input as a preset for later use. There are two built-in presets: **Default** and **Policy**. Normally, you will select Default, but if you wish to create an Action that has no expiration date, select Policy. The Preset interface includes the following fields and buttons:

- **Preset:** Select a preset from the pull-down menu.
- **Show only personal presets:** Filter the list of presets to just your personal ones.
- **Save Preset:** Save the current set of action options for later use. This button isn't active until you make a change to one of the options somewhere in this dialog. When you click this button, a dialog pops up prompting you for the name of your preset. A check box below that lets you save it as a public or private preset.
- **Delete Preset:** Removes this preset from the selectable list. It brings up a confirmation dialog allowing you to cancel this command.

Under the Presets, there are several tabbed dialogs:

- **Target:** Select the targets from the provided list, or use properties or a specific list of computers to target the action.
- **Execution:** Lets you constrain the execution schedule and allows you to specify the retry behavior for execution and failure.
- **Users:** Lets you run an Action based on user presence. You can also expose specific users or groups of users to a Client User Interface.
- **Messages:** Lets you provide a message to precede and accompany the Action.
- **Offer:** Allows you to advertise the existence of programs or patches that your networked BigFix Clients can opt into. This grants extra control to your users to customize their setup.
- **Post-Action:** Describe what actions need to be done to complete the action, including restarts or shutdowns.
- **Applicability:** This tab allows you to modify the original relevance clause.
- **Success Criteria:** This tab allows you to determine what constitutes a successful outcome for the action.
- **Action Script:** This tab allows you to create an action script.

Click on the **Action Script** tab and type in an action script. For more information on the Action Script dialog, refer to the **BigFix Action Guide**.

Click on the **Applicability** tab if you would like to fine-tune the targeting of your action script. For more information about the Relevance language, see the *BigFix Relevance Language Reference* and the *BigFix Inspector Guides*.

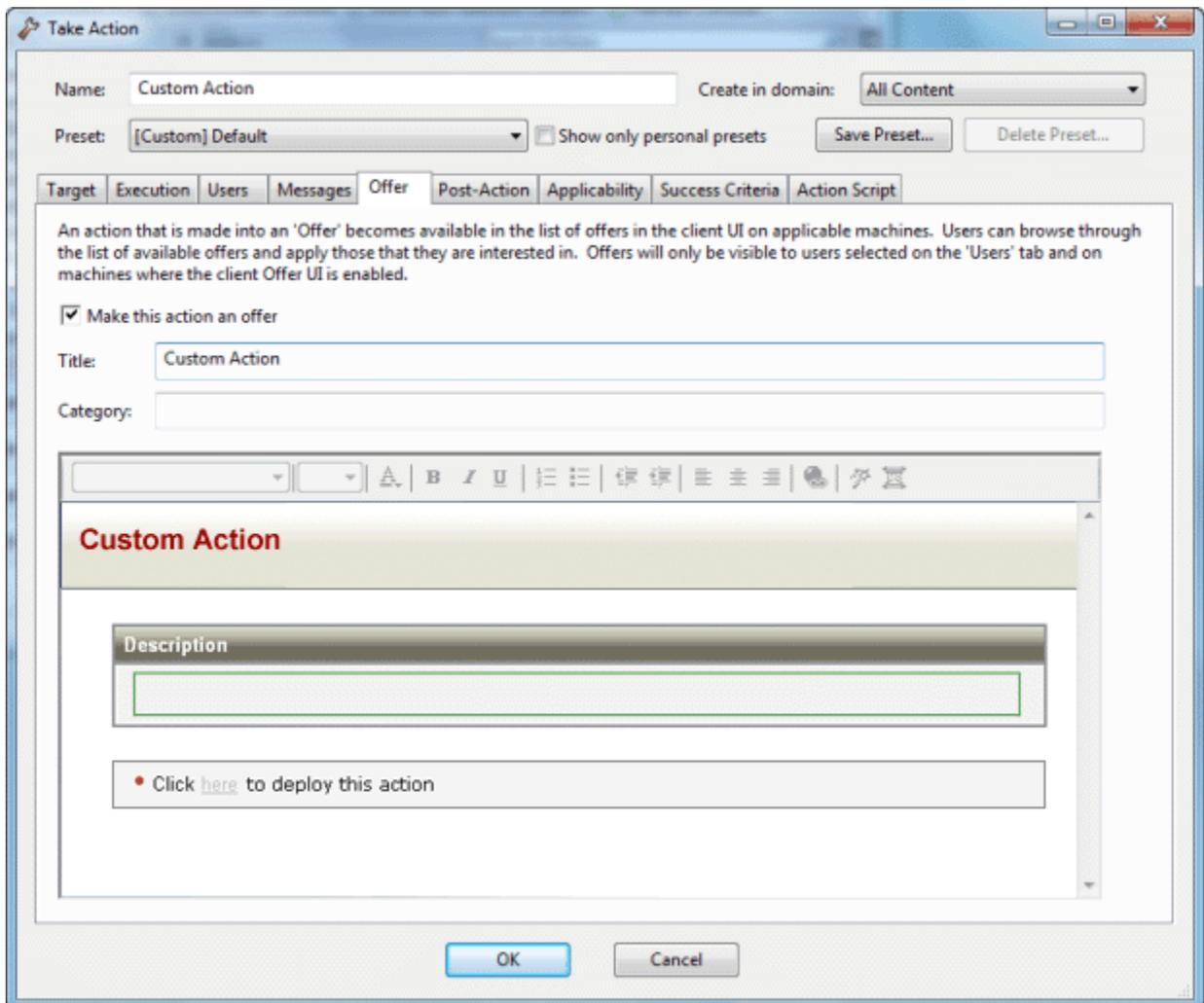
Click on the **Users**, **Messages**, **Execution** or **Post-Action** tabs to further customize your action. When you are ready to deploy your custom action, click **OK**.

Your custom action will be distributed to all the computers that have been selected or targeted. The actions will be applied using whatever execution constraints and schedules you've specified.

## Making an Offer

You can offer your BigFix Clients a set of downloads or other actions that they can select at their own discretion (also referred to as self-provisioning). These offerings are delivered as a type of Custom Action, so they include all the targeting and scheduling you would expect from a typical Action. To advertise such an offer, follow these steps:

1. Select **Tools > Take Custom Action**.
2. The **Take Action** dialog pops up. Click on the **Offer** tab.



- At the top of this tabbed dialog is a place to provide a **Name** for your Action Offering. This field can be sorted and filtered, so a good naming convention will let you get the most out of your lists and reports.
3. Check the box labeled **Make this action an offer**. This will make the rest of the dialog editable.
  4. Enter a **Title** for the offering in the text box. This is how your BigFix Clients will first see the offering, so the title should be aimed at them.
  5. Enter a **Category** for this offering in the text box. This is an extra field for Client bookkeeping purposes. One company may want offering categories like Installers and Uninstallers; another might want Applications and Updates.
  6. Enter a **Description** in the appropriate HTML area, outlining the nature of your Offer. As with the other HTML editors in BigFix, you can change fonts, sizes, styles, numbering, and formatting to customize the description.
  7. Click on the other tabs in the Take Action dialog to further customize the Action that will advertise your offering.
  8. When you're ready to deploy your Offering, click **OK**.
  9. Your Action Offer will be distributed to all the computers that have been specifically targeted. This select group of users will then be presented with your Offer and prompted to accept it on their own schedule.

## Client Computers

### Introducing Client Computers

Client Computers represent those computers in your network running the BigFix Client. Once the client software is installed, you have a high level of control over these machines, allowing you to maintain common operating environments, roll out the latest patches, detect spyware, view and summarize properties, create reports, and much more.

Client computers can have settings applied to handle a multiplicity of features, including the ability to define and organize corporate departments. Client computers can be automatically grouped according to these settings or other computer properties, allowing you to target specialized remediation to distinct domains. Settings are used to define Relays, bandwidth, idle time, buffers and much more.

The Computers icon in the Domain Panel navigation tree in the main interface lets you quickly stay on top of your network, with the ability to filter and sort large numbers of computers by dozens of properties.

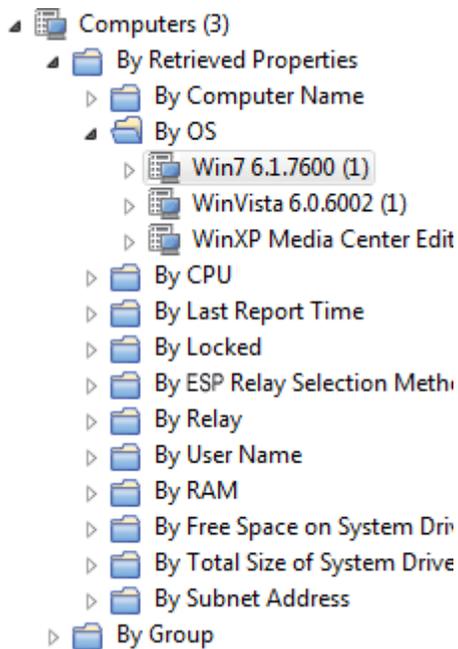
The Visualization Tool allow you to quickly monitor large, globally distributed networks, so you can follow remediation deployments and compliance, corporate-wide. Web Reports allow operators with access to a browser to view audit trails and generate listings and graphical reports with just a few mouse-clicks.

### Monitoring Computer Status

Although BES is primarily a preventive maintenance tool, it can also be used to *analyze* the computers in your network. Using the BigFix Relevance Language, you can query any BigFix Client and get a real-time response. This can be invaluable for analyzing trends and potential problem areas on your network. To view the computers on your network, sorted and filtered by various properties, follow these steps:

1. Select the **Computers** icon in the Domain Panel navigation tree. Your networked BES Client computers appear in the List Panel, ready to be sorted and filtered by various properties.

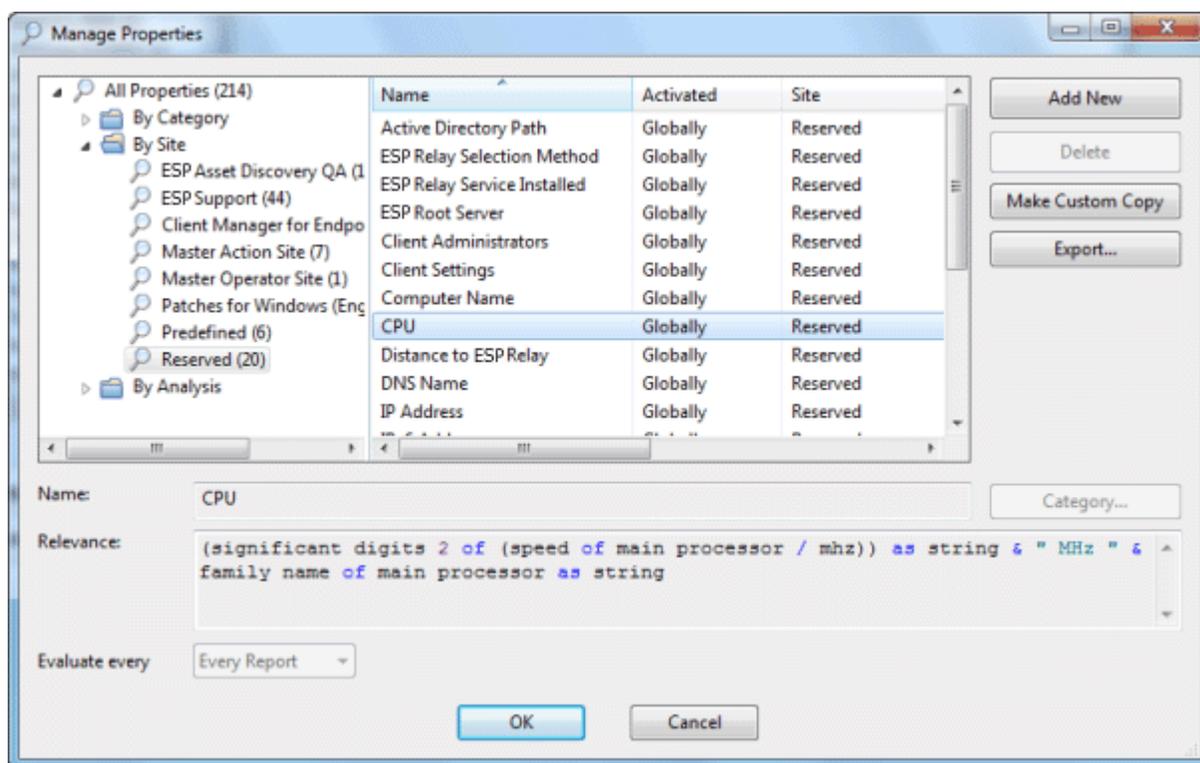
2. Click on **By Retrieved Properties** (in the navigation tree under the **Computers** icon) and open up folders to filter the list.



Click on the desired column headers (in the resulting List Panel) to sort the list. Click again to reverse the sort order.

The folder names and column headers represent important, continuously updated properties of your networked computers, called retrieved properties. To view the Relevance Expressions that define the column headers:

1. Select **Manage Properties** from the **Tools** menu. A dialog pops up, initially listing the default properties that come predefined by BigFix, such as **OS**, **CPU**, **Computer Name** and so on.
2. Click on a retrieved property. In the text box underneath, you can view the Relevance Expressions that are used to define this column.



For example, the column heading **CPU** is generated by the following Relevance Expression:

**(significant digits 2 of (speed of main processor / mhz)) as string & "Mhz" & family name of main processor...**

That is, **CPU** is a concatenation of relevance expressions and strings that will produce an output like:

**2800 Mhz Pentium 4**

- Each property has an evaluation period. The shorter the period, the more often the client will evaluate it. That makes the Console more up-to-date, but it may impact client performance. Make sure long periods are allocated to time-consuming or slowly changing Relevance evaluations.

You can quickly select which properties to display by right-clicking the column headers of any Computer List Panel. A pop-up menu is displayed that allows you to simply check or uncheck the properties you want to display. Notice that when you delete a property from the headers, it also disappears from the navigation tree under the Computers tab.

## Grouping Computers

BES Console allows you to group your computers so that you can target them more efficiently. You might want to group your development computers, for instance, to make sure you don't interfere with certain legacy software projects. There are several ways to group computers, but the two most common techniques are **Manual Grouping** and **Automatic Grouping**. Manual groups are static, but automatic groups can change dynamically, depending on the current values of the inclusion properties.

Once grouped, you have provided yourself with a simple way to filter and separate your networked computers. Open the Computers icon in the Domain Panel navigation tree and select the folder named **By Group**. Then you can select the group or groups you want to list. Alternatively, you can click the **Computer Groups** icon and select groups under that icon as well.

Whenever a list of computers is presented, you should find the **By Group** folder/filter. For instance, when you click an Action button in a Fixlet or Task, you will see the **Relevant Computers** icon, listing just those computers that are affected by the selected Fixlet. Open the **By Group** folder to narrow the list of computers down to just the selected group(s).

**NOTE:** A computer can belong to more than one group.

## Commenting on Computers

You can attach a comment to a BigFix Client Computer that other operators can read.

1. Select the **Computers** icon in the Domain Panel navigation tree and open it if you wish to choose one of the Computer subcategories to narrow down your list.
2. Select a computer from the List Panel on the right by clicking it.
3. From the document panel below, select the **Summary** tab.
4. Scroll to the bottom of the page, type your comment into the text box and click the **Add Comment** Button.

Your comment will be name- and time-stamped for other operators to view it. As well as Computers, you can attach comments to Fixlets, Tasks, Actions and Analyses.

## Creating Retrieved Properties

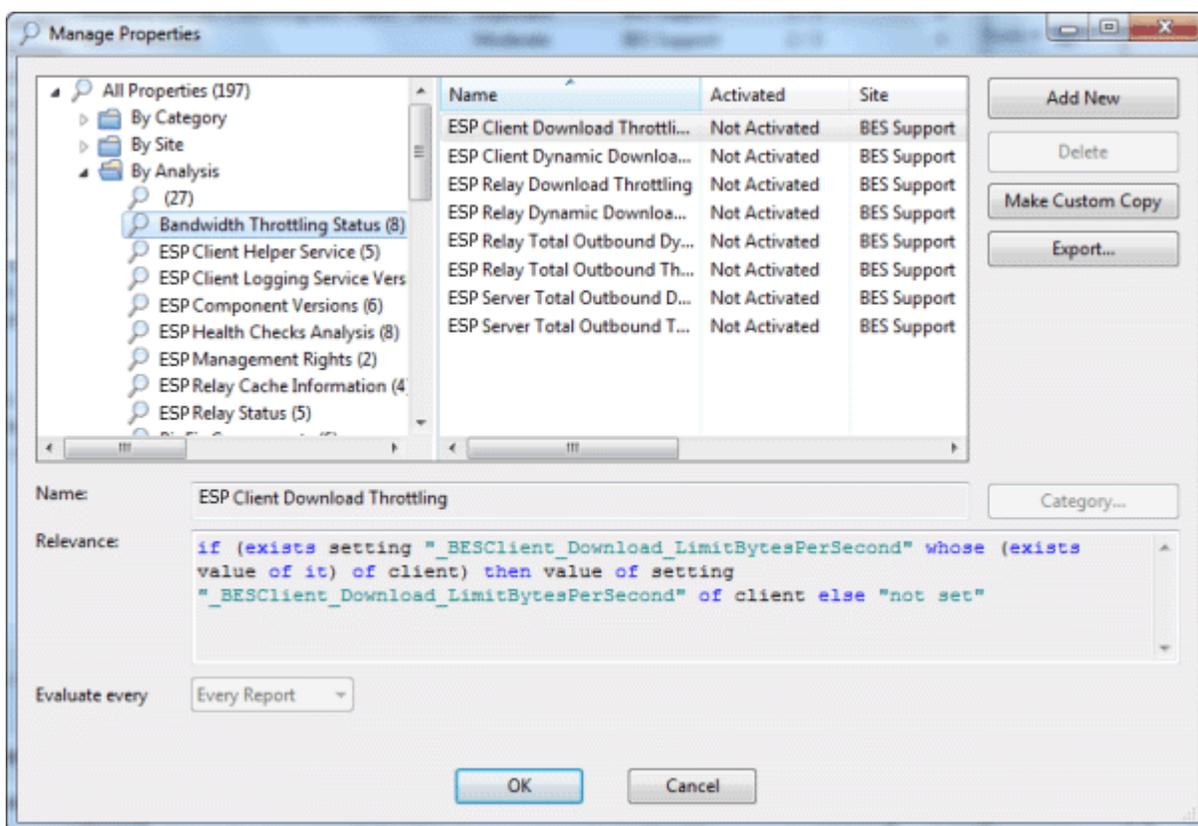
You can collect information from BigFix Clients by defining various **retrieved properties**. An impressive range of computer attributes can be monitored as retrieved properties. There are several reasons why you might want to create some custom retrieved properties of your own:

- Once you create a retrieved property it can be used as a filter in all subsequent computer listings, allowing you to tame datasets that might otherwise be difficult to visualize.
- Your newly-created properties will be added to the column headers of computer listings, allowing you to sort on their values.
- Retrieved properties can be used to fine-tune the targeting of Fixlet actions.
- Retrieved properties can also be used and charted in BES Web Reports.

BigFix ships with a predefined set of retrieved properties which are sufficient to group computers by many frequently requested criteria. There are times, however, when you may want even more control over how your BigFix Clients are grouped and sorted.

To create a custom retrieved property, follow these steps:

1. Choose **Tools > Manage Properties**. The Manage Properties dialog is displayed.



You can filter the properties by using the left filter panel to select a subset of the properties to view on the right.

2. If you can't find what you want in this list, create a new property: click **Add New**, type in the name of your new retrieved property and create a Relevance Expression to evaluate. This can access hardware characteristics, registry entries and even data in specific files on the client computers. After you define the new property, the BigFix Clients will automatically compute the value of the corresponding relevance expression and return it to the BigFix Database.
3. Click the **OK** button.

**Note:** Some of these properties are aimed at specific operating systems and will return a blank string for other operating systems. If more than one result is retrieved for a property, the entire list is retrieved.

## Creating Client Dashboards

You can create custom Client Dashboards, similar to those in the BigFix Console. Dashboards are HTML files with embedded Relevance clauses that can analyze the local computer and print out the current results. BigFix Clients with a dashboard have an extra tab to display the resulting report.

To create a Client Dashboard, you must create a new folder named \_\_UISupport (note the leading underlines) in the \_\_BESData folder. This is a subfolder of the BigFix Client folder, so the final pathname looks like:

**Program Files/BigFix Enterprise/BES Client/\_\_BESData/\_\_UISupport**

Place the Dashboard file (named `_dashboard.html`) and any accompanying graphics files into this folder. The next time the Client starts up, it will incorporate these files into its interface, adding a tab labeled **Dashboard**. When the user clicks on this tab, the Dashboard will calculate the latest values of each Relevance clause and display them.

The Relevance statements are embedded in the HTML inside special tags with the form:

```
<?relevance statement ?>
```

For instance, to find and print the time, use the following:

```
<?relevance now ?>
```

When the BES Client displays the page containing this statement, the BES Client evaluates the Relevance clause "now" and substitutes the value for the tag. The following sample HTML prints out the word "Date:" and then the current date and time:

```
<html>
<body>
  Date: <?relevance now ?>
</body>
</html>
```

To allow the user to refresh the Relevance evaluation, add this line to the file:

```
<html>
<body>
  Date: <?relevance now ?>
  <A
href="cid:load?page=_dashboard.html">Refresh</A>
</body>
</html>
```

This link, labeled Refresh, causes the page to reload. When it does, it reevaluates the relevance clauses. It is easy to see how you would add other Relevance expressions to this page. For instance, to print out the OS and the computer name, add these two lines:

```
<html>
<body>
  Date: <?relevance now ?>
  Operating System: <?relevance name of operating
system ?>
```

```

Computer Name: <?relevance computer name ?>
  <A href="cid:load?page=_dashboard.html"> Refresh </A>
</body>
</html>

```

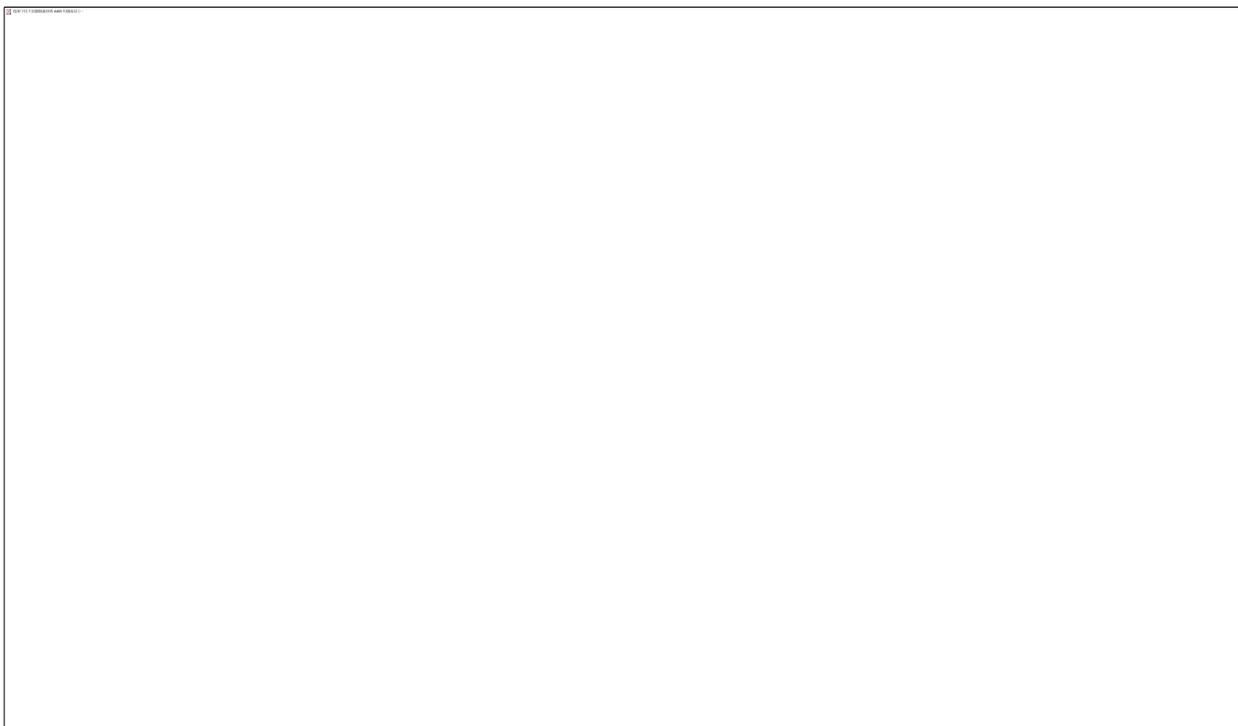
You can use style sheets to format the output. You can even use the default style-sheet, **offer.css** for some preset formatting. Here is an example of a Dashboard with a title, a header, a refresh link and a section of retrieved property values:

```

<html>
  <head>
    <link type="text/css" rel="stylesheet" ref="offer.css"></link>
    <title>BigFix Dashboard Example</title>
  </head>
  <body>
    <div class="header">
      <div class="headerTitle">
        <font size="6"><?relevance computer name ?></font></div>
      <div class="headerCategory">
        <font size="1">(Last updated: <?relevance now ?>)</font><BR>
      <div>
        <font size="1"><a
href="cid:load?page=_dashboard.html">Refresh</a></font>
      </div>
    </div>
  </div>
  <div class="section">
    <div class="sectionHeader">Computer Information</div>
    <div class="subsection">
      <table>
        <tr><td valign="top"> OS: </td>
        <td><?relevance operating system ?></td></tr>
        <tr><td valign="top"> RAM: </td>
        <td><?relevance (size of ram)/1048576 ?> MB</td></tr>
        <tr><td valign="top"> DNS Name: </td>
        <td><?relevance dns name ?></td></tr>
      </table>
    </div>
  </div>
</body>
</html>

```

This dashboard file produces an output like the following:



To learn more about Relevance expressions, see the ***BigFix Relevance Language Reference***.

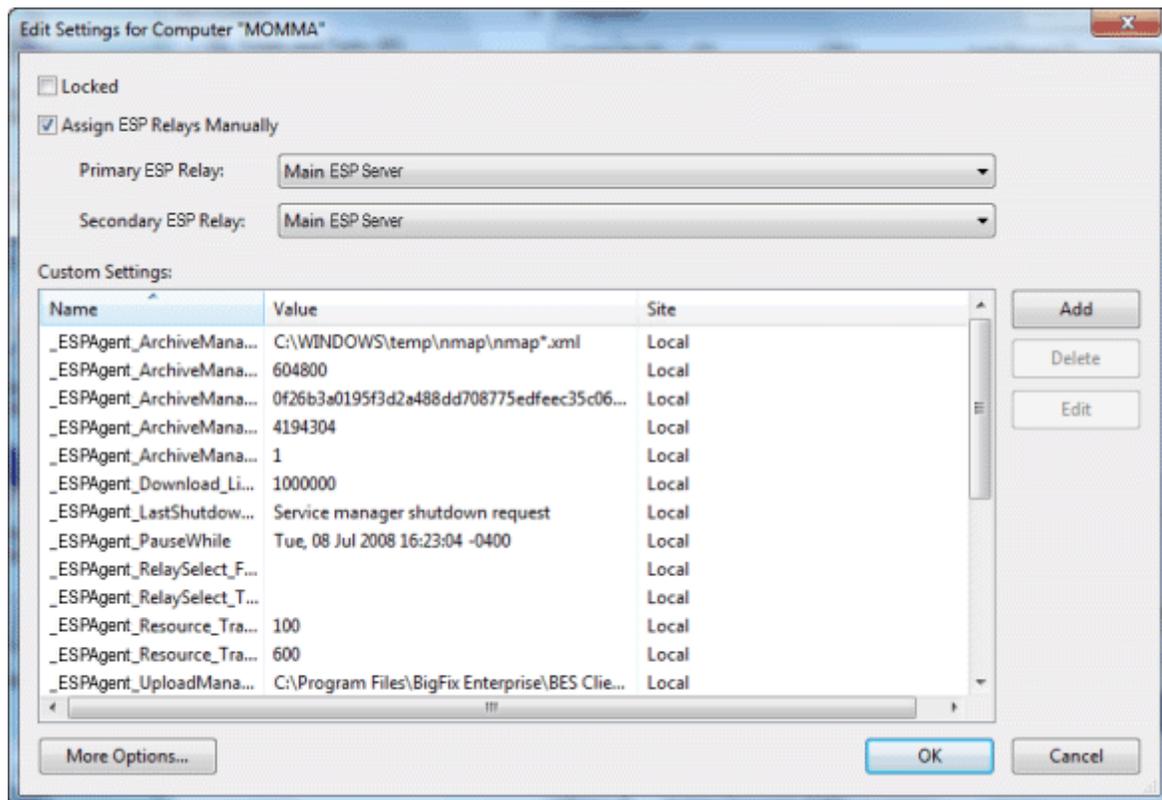
## Locking Computers

You can **change the locked status** of any BigFix Client in the network. This lets you exclude specific computers or groups of computers from the effects of Fixlet actions. This could be useful, for instance, if you want to insulate certain development computers from any changes or updates. It also provides a powerful technique for testing new Fixlet actions on a limited set of unlocked computers, while keeping the rest of the network locked down. Client computers can be locked forever (until explicitly unlocked) or for a defined period of time.

Changes are made to the locked status of a BigFix Client by sending an action. As a consequence, the BigFix Console operator must supply proper authentication in order to lock or unlock any computer. Even though a BigFix Client is locked, there is still a subset of actions that can be accepted by the client. These include clock changes and unlock actions as well as actions from the BigFix Support site.

In order to lock or unlock a computer, follow these steps:

1. Click on the **Computers** icon in the Domain Panel navigation tree to bring up the List Panel of networked BigFix Client computers.
2. Select the computer(s) that you wish to lock.
3. Right-click and select **Edit Computer Settings** from the pop-up menu. (Or select **Edit Computer Settings** from the **Edit** menu). The Edit Setting dialog appears.



4. The Edit Settings dialog pops up. Click the checkbox to either lock or unlock the computer.

Although the Console doesn't provide an explicit interface for setting an expiration date on the lock, you can create a custom Action to do so. For more information, see the **BigFix Action Guide**.

## Removing Computers

This feature allows you to remove computers which you believe are no longer reporting to BigFix, such as decommissioned computers. When you remove a computer from the database, you do not need to uninstall or unsubscribe the client. Should the client get reactivated and report back to the Console, the computer will reappear in the database with its old information intact. Until then, the client will simply not be listed in the BigFix Console.

To remove a computer from the BigFix database, follow this procedure:

1. Click the **Computers** icon in the Domain Panel navigation tree to bring up a list of BigFix Clients in the List Panel.
2. Right-click a Computer in the list and select **Remove from Database** from the context menu (or select **Remove** from the **Edit** menu).
3. Confirm the removal in the subsequent dialog.

This computer will no longer be visible in the BigFix Console unless reactivated by the BigFix Client itself.

## Computer Groups

### Introducing Computer Groups

Grouping your BigFix Client computers can simplify the maintenance of large networks. There are many ways to group computers, from simple manual selection to more flexible automatic grouping.

A simple grouping technique is to manually select members of a group from the listing in the Computers List Panel. For a quick look at a manual selection, click **View as Group** from the right-click context menu. This will bring up an **Ad-Hoc Computer Group** document in the Work Area where you can quickly analyze various properties of the group. Ad-hoc groups are temporary, but you can create persistent groups by choosing **Add to Manual Group** from the same context menu. These techniques are simple, but in a network with many thousands of computers, they can be tedious.

A more powerful technique is to define criteria for Automatic Grouping. From the **Tools** menu, select **Create New Automatic Group**.

The screenshot shows a dialog box titled "Create Automatic Computer Group". It has a close button in the top right corner. The dialog contains the following fields and controls:

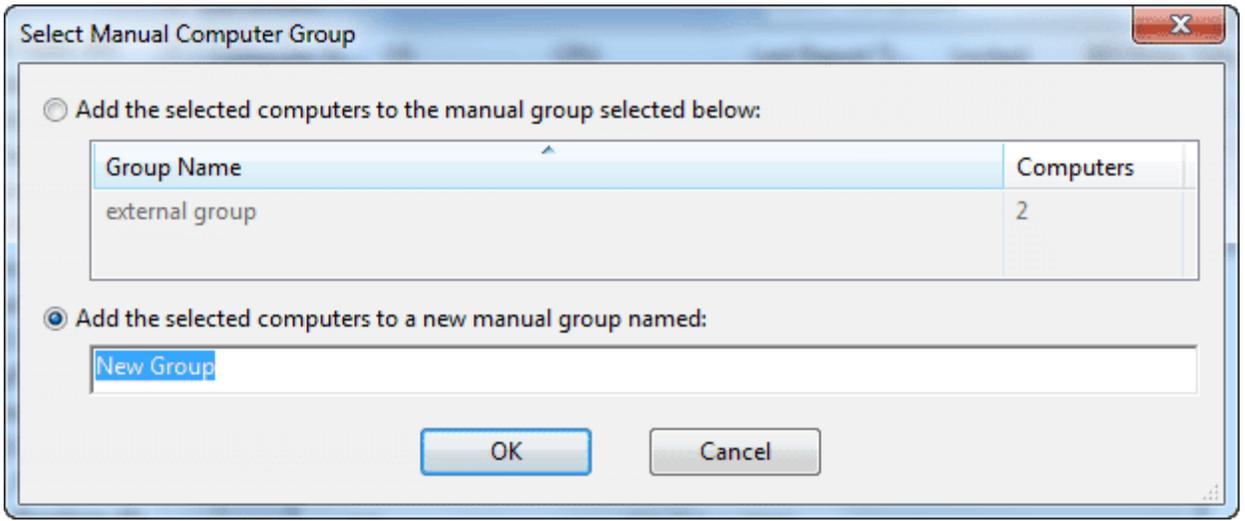
- Group name:** A text input field containing "Tokyo Accounting".
- Create in site:** A dropdown menu with "Master Action Site" selected.
- Create in domain:** A dropdown menu with "All Content" selected.
- Include computers with:** A dropdown menu with "all" selected.
- of the following properties:** A section with two rows of criteria:
  - Row 1: "Location" dropdown, "contains" dropdown, and a text box with "Tokyo".
  - Row 2: "Computer Name" dropdown, "contains" dropdown, and a text box with "acct".
- Buttons:** "Create" and "Cancel" buttons at the bottom right.

Here you can define membership in a group based on the values of specific computer properties. You could, for instance, group computers by IP address ranges, operating systems, applications and thousands of other criteria using Relevance expressions. Groups created this way have the benefit of automatic enrollment and expulsion, so that a computer that is repurposed to a different task or department will automatically switch groups without operator intervention.

### Creating Manual Computer Groups

To Manually create a computer group, follow this procedure:

1. Click the **Computers** icon in the Domain Panel navigation tree and in the resulting List Panel, shift- and ctrl-click to select the computers you want group together.
2. Right-click the computers you've chosen and select **Add to Manual Group** from the pop-up menu.
3. From the **Select Manual Computer Group** dialog, you can choose to add your selected computers to an existing group or create a new group for them.



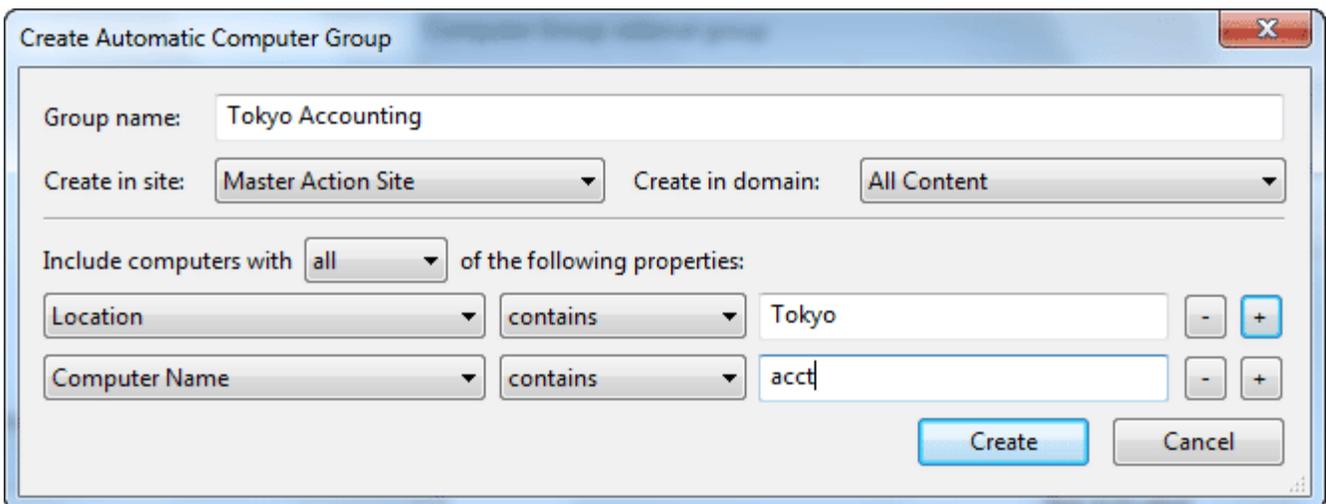
- Select an existing group or name a new one and click **OK**.
4. Enter your password to propagate the new manual group.

This computer group is added under the Computer Group icon in the Domain Panel navigation tree and will help you subdivide your networked computers down into more reasonably sized chunks.

## Creating Automatic Computer Groups

To create a group that will automatically enlist computers, follow this procedure:

1. Click **Tools > Create New Automatic Group**.
2. From the **Create New Automatic Computer Group** dialog, enter the name of your group and select the site and domain you want it to reside in.



3. Enter a property, a relation and a value into the three boxes at the bottom of the dialog. For instance to create a group that will automatically enlist Windows computers, select **OS contains Win**. Click the +

button to add new properties that you can AND (include **all** properties) or OR (include **any** properties) together to identify group membership.

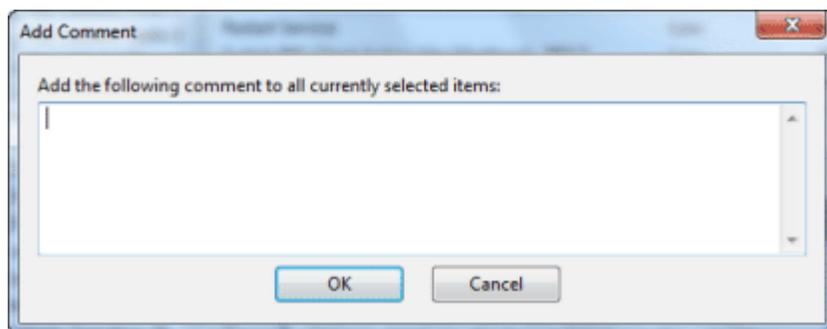
4. When you are done, click **OK** and enter your password to propagate the group settings.

You now have a new Automatic Computer Group that will be listed under the Computer Groups icon in the Domain Panel navigation tree and can be used to subdivide your network into more workable chunks. Unlike Manual Groups which are statically defined, Automatic Groups will change their population depending on the evaluation of the group properties.

## Commenting on Computer Groups

You can attach a comment to a Computer Group that other operators can read.

1. Open the **Computer Groups** icon in the Domain Panel navigation tree and choose one of the categories under the icon to narrow down your list.
2. Select a computer from the resulting List Panel on the right by clicking it.
3. From the document panel below, select the **Description** tab.
4. Scroll to the bottom of the page, type your comment into the text box and click the **Add Comment** Button.



Your comment will be name- and time-stamped for other operators to view it. As well as Computer Groups, you can attach comments to Fixlets, Tasks, Actions and Analyses.

## Removing Computer Groups

To remove a computer from BES administration, follow this procedure:

1. Click the **Computer Groups** icon in the Domain Panel navigation tree.
2. Right-click a Computer Group from the resultant List Panel and select **Remove** from the context menu (or select **Remove Computer Group** from the **Edit** menu).
3. Provide your password to confirm the deletion.

This computer group will be deleted from the list.

## Operators

## Introducing Operators

When you install BES, you will also set up specific personnel to act as Operators. There are three classes of operator:

- The **BES Site Administrator** is responsible for installing and maintaining the BES components, as well as managing the certificates and keys. Only the Administrator can create new users.
- The **BES Console Master Operators** can assign management rights to other operators.
- The **BES Console Operators** are the day-to-day managers of their own domains, but they can't assign management rights.

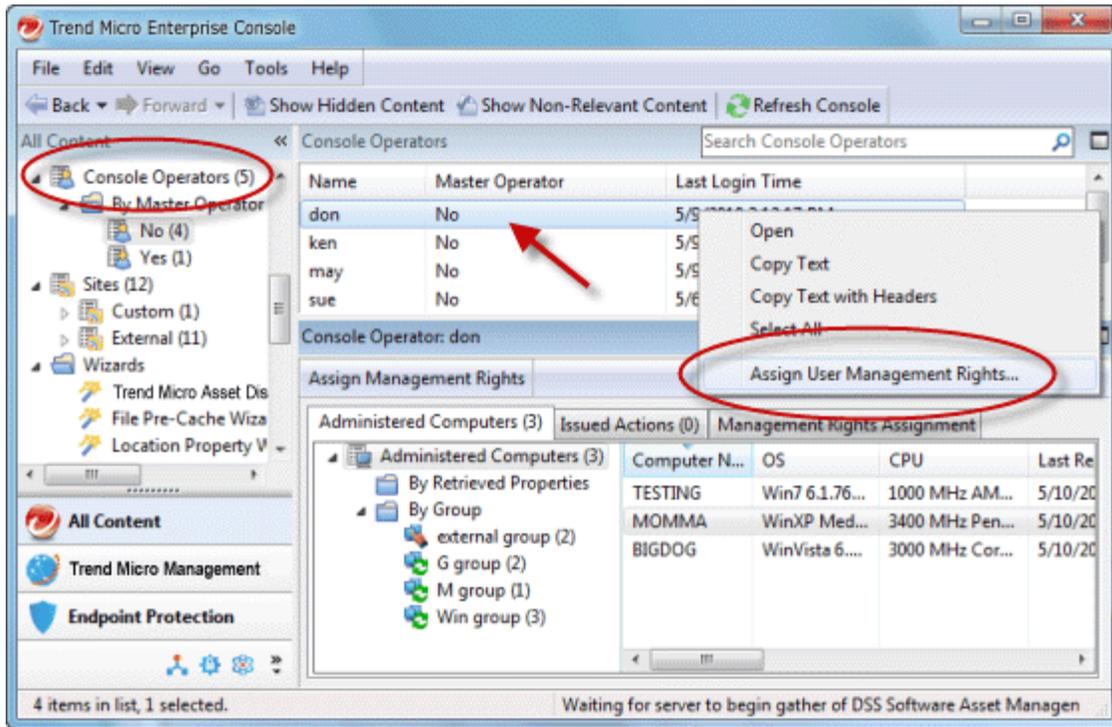
Often these administrative roles will overlap and one person may be assigned multiple duties.

## Assigning Management Rights

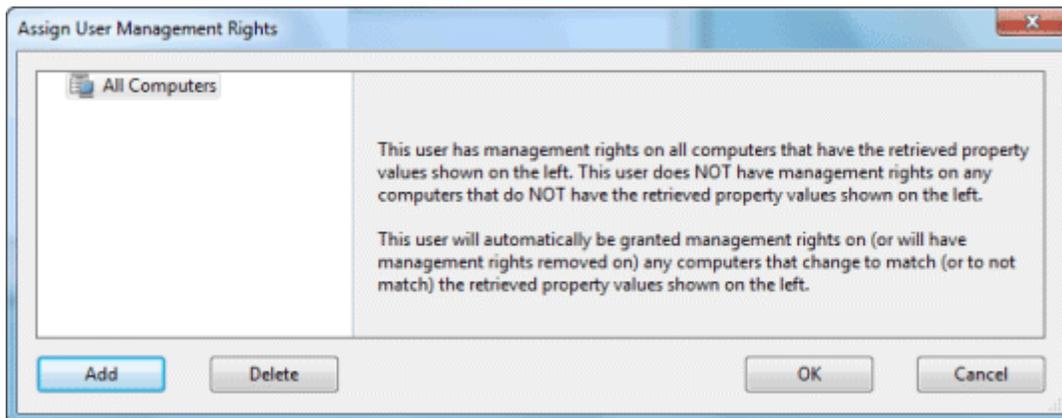
In a typical BES deployment, there may be thousands of computers sharing a centralized Fixlet database. If they are all administered by a single BES Console, there may be an overwhelming amount of information to view and the response rate may suffer. In addition, most companies wish to limit the actions of various managers to specific domains or departments. Each department head can be assigned management rights to his or her own departmental computers. For even larger networks, these departments can be broken down again. Because different managers can be assigned to overlapping groups of computers, any kind of configuration is possible. Managers only receive information from their assigned computers, dramatically improving responsiveness.

Here's how to grant or revoke management rights:

1. Log in to the BES Console as a Master Operator (you must have a properly-authorized user name created with the BES Administration Tool). If you don't have the proper authorization, you will not be allowed to edit management rights.
2. Click on the **Console Operators** icon in the Domain Panel navigation tree to bring up the List Panel of all authorized BES Operators. (If you don't have the proper authorization, this icon may not be available).



3. Right-click an operator and select **Assign User Management Rights** from the pop-up menu. (Or select **Assign User Management Rights** from the **Edit** menu).
4. From the dialog, you can grant specific management rights to the selected operator. Click the **Add** button, which will bring up a computer filter.



5. Using retrieved properties as a filter, select the desired subset of computers you wish to have administered by this Console operator, and click **OK**.
6. You can also revoke management rights using this dialog box. Simply click the Delete button which will bring up another computer filter. Select the computers you want to *remove* from this operator's administration and click **OK**.
7. Click the **OK** button to finalize the setting.

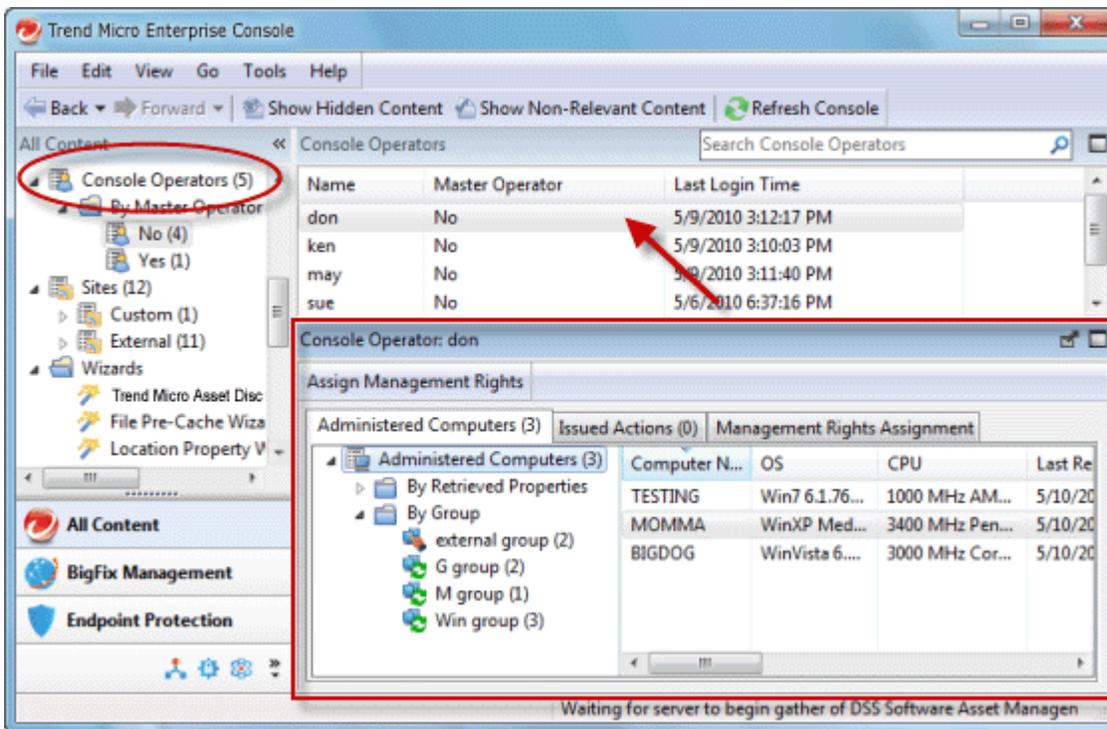
Management rights are distributed as Actions, so you will see a brief Action Progress dialog as the new rights are deployed.

## Monitoring Operators

If you are a Master Operator (you must have a properly authorized user name created with the BES Administration Tool), you can monitor what other operators are doing and what computers they are authorized to administer.

Each operator is represented by a **Name**, **Master Operator** status and **Last Login Time**. To view the list of Console Operators, select the **All Content** Domain and then click the item labeled **Console Operators** from the Domain Panel. In the List Panel on the right, all the current Operators will be listed.

Click any desired operator from the appropriate List Panel to open the **Console Operator** work area.



There are three tabs:

- **Administered Computers:** This tab presents a list of computers that are currently assigned to the selected BigFix Console operator.
- **Issued Actions:** This tab presents a list of actions that have been issued by the selected BigFix Console operator.
- **Management Rights Assignment:** This tab displays the current assignment of rights to this Operator.

## Analyses

### Introducing Analyses

Analyses allow the BigFix Operator to view and summarize various properties of BigFix Client computers across a network. There are several pre-made Analyses supplied by BigFix that examine important aspects of your networked computers, including their hardware, applications and Server/Relay/Client relationships.

Studying these default Analyses can be instructive when you want to make your own or customize existing ones. Custom Analyses can help you monitor aspects of your network that are vital to your company's operation.

The Retrieved Properties that underlie each Analysis are created using Relevance expressions. For instance, to make sure you have fully deployed the most recent BigFix Client software, you might use an expression such as **version of client**. This simple expression will be evaluated on every computer where the analysis is targeted, allowing you to see explicitly which version of the BigFix Client is running on each computer, or to view a summary of how many machines are running each version.

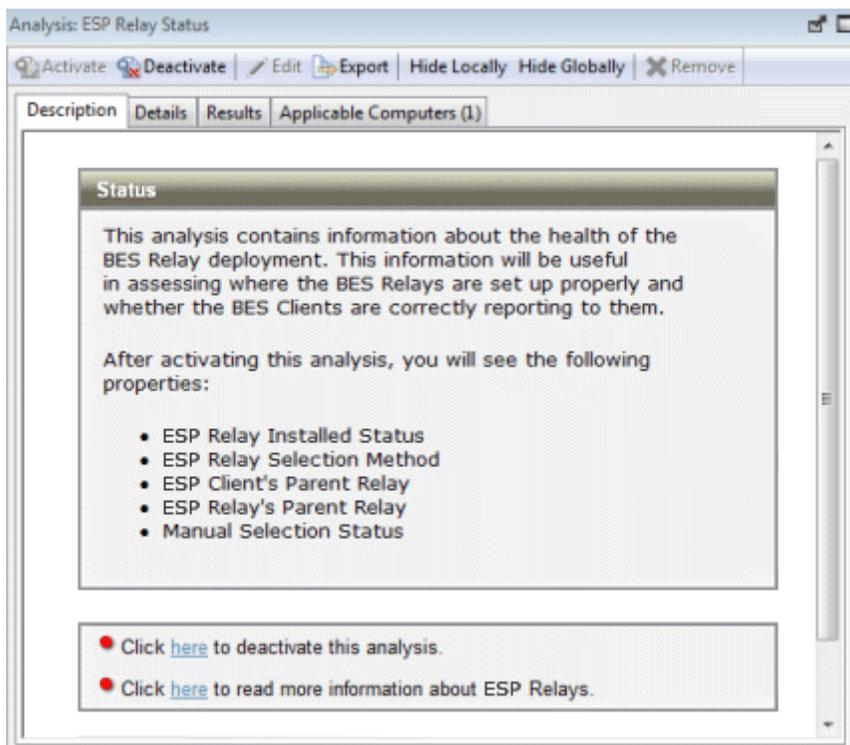
Analyses are *targeted* with yet another Relevance statement -- which may be as simple as TRUE, which would include all connected Clients. Generally, you'll want to narrow the scope with a Relevance statement such as **name of operating system as lowercase starts with "win"**, which would limit the Analysis to Windows computers only.

## Viewing Analyses

To display an Analysis,

1. Click the Analyses icon in the Domain Panel navigation tree.
2. Click an entry in the resulting **Analysis** List Panel.

The body of the Analysis shows up in the Work Area below the list (click the **Description** tab if not already selected).



The Analysis display region has several tabs:

- **Description:** This is an HTML page providing a description of the analysis.
- **Details:** This screen provides a property-by-property listing of the chosen analysis, as well as the Relevance statement that is being used to target the chosen computers. At the bottom is a text box for entering a comment that will become attached to this analysis.
- **Results:** This dialog lists the actual results of the analysis, which can be filtered and sorted by the pre-assigned properties (this tab is only available if the Analysis is activated).
- **Applicable Computers:** This is a filter/list of all the computers where the selected analysis is applicable. You can filter the list by selecting items from the folders on the left, and sort the list by clicking on the column headers.

## Monitoring Analyses

When an analysis is activated, BigFix will add it to the list displayed by the **Analyses** icon in the Domain Panel navigation tree. The Analysis List Panel contains entries that can be sorted by the following column headers:

- **Name:** The name assigned to the Analysis by the author.
- **Status:** The activation state of the Analysis.
- **Site:** The name of the site that is generating the relevant Analysis.
- **Applicable Computer Count:** The number of BES Clients in the network currently being analyzed.
- **Activated By:** The name of the Console operator who has activated this analysis.
- **Time Activated:** The date and time the analysis was activated.

As with all the icons in the Domain Panel navigation tree, you can filter this list by opening the Analyses icon and selecting any of the icons beneath it. Each icon you click will narrow down the list of Analyses on the right. Then, in the listing area itself, you can sort the Analyses by clicking a column heading.

For example, you might filter the list by opening the **Activated Analyses** sub-icon, then opening the **Activated By** folder and selecting a specific BigFix Operator to see the subset of analyses that have been activated by that Operator.

## Commenting on Analyses

You can attach a comment to an Analysis that other operators can read.

1. Select the **Analyses** icon in the Domain Panel navigation tree and choose one of the subcategories underneath it to narrow down your list.
2. Select an Analysis from the resultant List Panel on the right by clicking it.
3. In the Work Area below, select the **Details** tab. Scroll to the bottom of this dialog to the comments text box.
4. Type your comment into the text box and click the **Add Comment** button.

Your comment will be name- and time-stamped for other operators to view it. As well as Analyses, you can attach comments to Fixlets, Tasks, Actions and Computers.

## Creating Analyses

Analyses allow you to create and track specified properties of your managed BigFix clients. These properties can be extracted from any subset of your network, which simplifies the process of managing inventory, licensing, security and policies. Using Web Reports, you can view a history of each analysis.

Analyses are also the only way for Non Master Operators to create retrieved properties, since they don't have access to the **Manage Properties Dialog**.

To create your own custom Analysis follow these steps:

1. Select **Tools > Create New Analysis...**
2. This brings up the **Create Analysis** dialog with a text box for entering the name of your new Analysis.

You can use the name for sorting and filtering, so it's worth creating a consistent naming convention to make your Analyses more accessible. Enter the name and then select the host site and domain for the Analysis from the drop-down menus at the right. The dialog contains three tabs. Click through each to define your Analysis:

- **Description:** In this dialog, you can enter the text that will describe your Analysis. You can choose from the text editing tools at the top of the text box to create your custom content.
- **Properties:** Add the retrieved properties that form the core of your Analysis by clicking the **Add Property** button, then providing a name and a Relevance expression that will be evaluated to create the returned property value.
- **Relevance:** Enter another Relevance expression that will determine which computers will be selected for this Analysis.

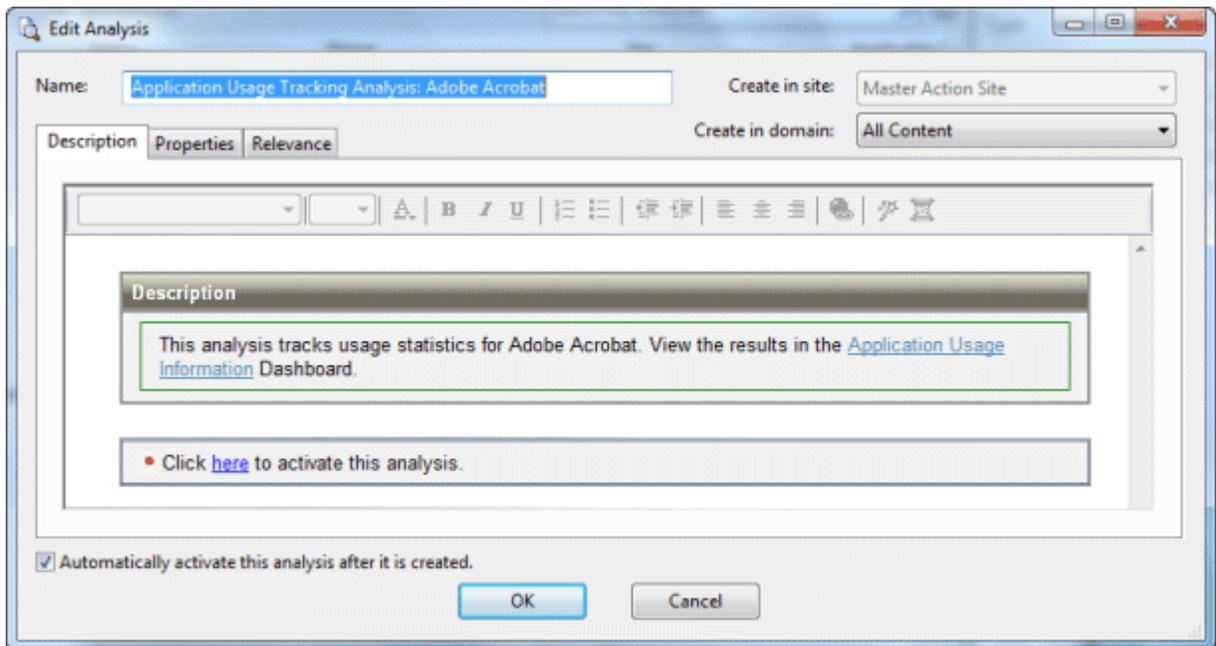
Check the box at the bottom of the dialog if you want to automatically activate the Analysis. When you're satisfied with your Analysis definitions, click **OK**.

Your Analysis needs to be propagated, so you will be prompted for your private key password. Once you enter it and click **OK**, your Analysis will be sent to all the BigFix Clients, which will evaluate it for relevance and report back their status. You will now be able to monitor specific properties of your networked BigFix Clients from the Console.

## Editing Analyses

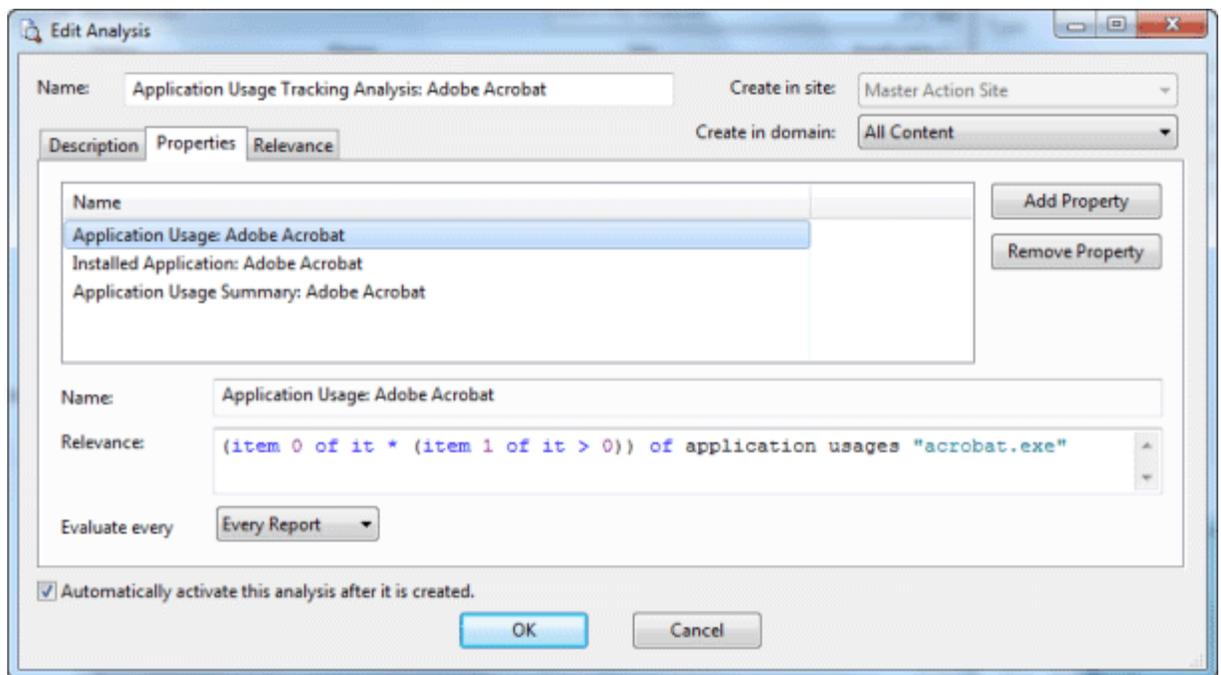
To edit an Analysis, follow these steps:

1. Open the **Analyses** icon in the Domain Panel navigation tree, and select **My Analyses** as a filter. In the resultant List Panel, select the Analysis you want to edit. Note that not all Analyses are editable.
2. Select **Edit > Edit Custom Analysis** (or right-click the Analysis and select **Edit Custom Analysis** from the pop-up menu).
3. This brings up the **Edit Analysis** dialog.



Enter the **Name** of the Analysis and then select the hosting site and domain from the pull-down menus. Below this, there are three tabs. Click through each to customize your Analysis:

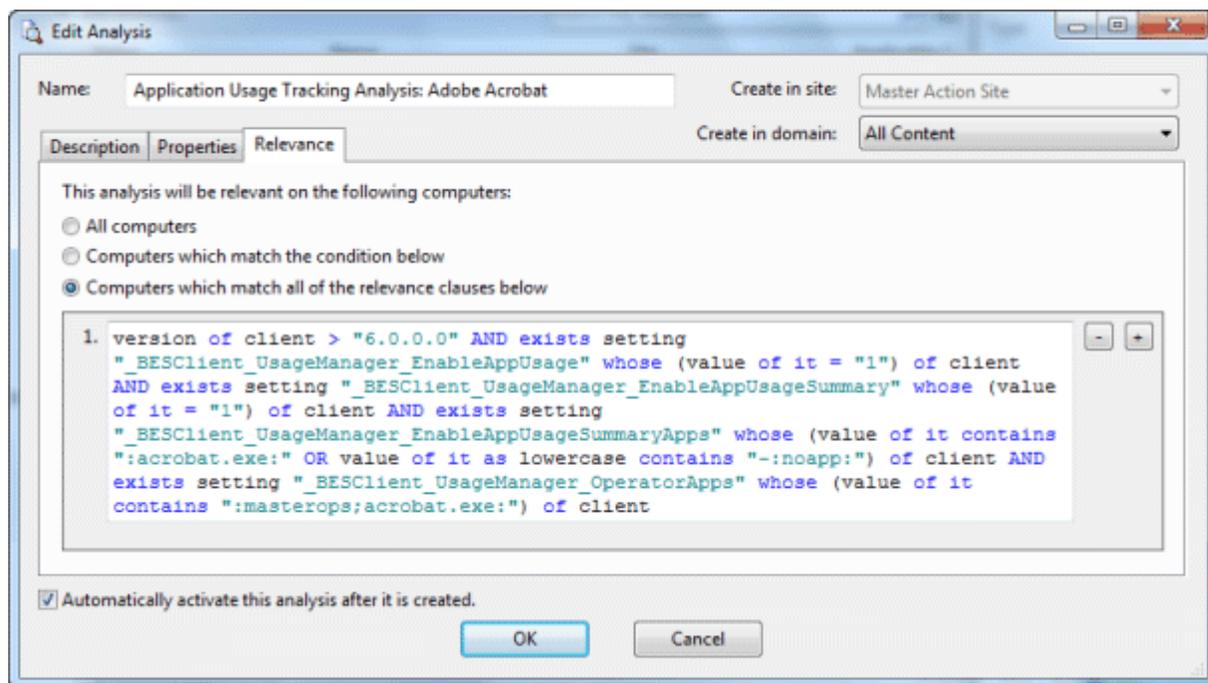
- **Description:** Enter the description of the Analysis, explaining the properties that are being analyzed.
- **Properties:** This is the crux of the Analysis.



Click **Add Property** or choose an existing property and the relevance box becomes editable. If you are adding a new property, enter its name and relevance to define it. Otherwise, edit the

existing text. The Relevance clause will be evaluated to provide the retrieved property value. You can add more properties, or click the **Remove Property** button to delete the highlighted one.

- **Relevance:** Here is where you define a Relevance statement to target specific computers for your Analysis.



Simply select **All computers** or enter an expression that will target just a subset of your networked BigFix Clients.

When you are satisfied with your edits, click **OK**.

Your Analysis needs to be propagated, so you will be prompted for your private key password. Once you enter it and click **OK**, your edited Analysis will be sent to all the BigFix Clients.

## Hiding Analyses

You can hide an Analysis with the following procedure:

1. From any Analysis List Panel, select the Analysis you want to hide.
2. Right-click the Analysis and select either **Globally Hide Analysis** or **Locally Hide Analysis** from the context menu (or select these same choices from the **Edit** menu).

The selected Analysis will no longer be displayed in the Analysis list. If you elected to hide the Analysis locally, it will still be visible to other Console users. If you are a master operator, you can hide an Analysis globally, so it will also be hidden to all non-master users.

Items that are hidden are still available and you can restore or unhide them at any time. Here's how:

1. Click on the **Show Hidden Content** icon in the Console toolbar.

2. Right-click the Analysis you wish to restore and select the appropriate action from the pop-up menu. You can unhide or switch the hiding scope between global and local.

## Relays and Servers

### Understanding BigFix Relays

**BigFix Relays** are optional network components that can significantly improve the performance of your BigFix installation. Downloads and patches, which are often large files, represent by far the greatest fraction of BigFix-related bandwidth. Relays are designed to take over the bulk of the download burden from the BigFix Server. Rather than downloading patches directly from a BigFix Server, Clients can instead be instructed to download from designated BigFix Relays, significantly reducing both server load and client/server network traffic. Relays help in the upstream direction as well, compiling and compressing data received from the BigFix Clients before passing it on the BigFix Server. Any Windows 200x, Windows 7, Vista or XP-based client can serve as a Relay.

A BigFix Relay simultaneously mitigates two bottlenecks:

- **Relieves the Load on BigFix Servers.** The BigFix Server has many duties, among them the taxing job of distributing patches and other files. A BigFix Relay can be set up to ease this burden, so that the BigFix Server does not need to distribute the same files to every BigFix Client. Instead, the file is sent once to the BigFix Relay, which in turn distributes it to several BigFix Clients. The overhead on the BigFix Server is reduced, on average, by the ratio of relays to clients.
- **Reduces Congestion on Low-Bandwidth Connections.** If you have a BigFix Server communicating with a dozen computers in a remote office over a slow VPN, designate one of those computers as a BigFix Relay. Then, instead of sending patches over the VPN to every BigFix Client independently, the BigFix Server only sends a single copy to the BigFix Relay. That BigFix Relay, in turn, distributes the file to the other computers in the remote office over its own fast LAN. This effectively removes the VPN bottleneck for remote groups on your network.

**Note:** BigFix Relays also work well to reduce total network usage when used on subnets connected through switches on your LAN. Please ask your BigFix support technician for more details.

Assigning BigFix Relays is simple, and BigFix Clients can be made to automatically discover and link to them. Automatic discovery is recommended because it ensures optimal performance even while computers and relays are being disconnected and reconnected across the network.

### BigFix Relay requirements

A BigFix Relay takes over most of the download duties of the BigFix Server. If several BigFix Clients simultaneously request files from a BigFix Relay, a significant amount of the computer's resources may be used to serve those files. Other than that, the duties of the BigFix Relay are not too demanding. The requirements for a BigFix Relay computer vary widely depending on three main factors:

- The number of connected BigFix Clients that will be downloading files.
- The size of each download.
- The period of time allotted for the downloads.

The BigFix Relay system requirements are similar to those for a workgroup file server. A computer with 1 GHZ CPU, 256 MB RAM, and 5 GB of free space on the hard drive should be able to act as a BigFix Relay for as many as one thousand computers - provided that the BigFix Console operator distributes the file downloads over an appropriate length of time. Here are some further requirements and recommendations:

- The BigFix Relay can only be installed on computers running under Windows 200x, 7, Vista or XP as well as Red Hat Enterprise Linux 4/5/6 and Solaris 10.
- The BigFix Relay can be installed on an ordinary workstation, but if several BigFix Clients simultaneously download files, it may slow the computer down.
- Workgroup file servers and other server-quality computers that are always turned on are good candidates for installing a BigFix Relay.

## Setting Up A BigFix (BES) Relay

To set up a BigFix Relay, you need to designate a Windows 200x, Windows 7, Vista or XP client computer to take over some server duties. Once a BigFix Relay has been set up, computers on the network can automatically find them and connect to them (or, if you need, you can manually assign BigFix Clients to point at specified relays).

This significantly reduces the client/server communication necessary for patch application and management. BigFix Clients will start to download from these designated relays, minimizing the load on thin connections to the BigFix Server. The BigFix Clients will also upload their status information to the BigFix Relay, which will compile and compress it before passing it on up to the server.

To configure a client computer as a BigFix Relay, follow these steps:

1. Click on the **Tasks** tab in the main BigFix Window.
2. Double-click the task labeled **Install BES Relay**. A task window will open up below. Make sure the Description tab is selected. There are three choices for where to place the BigFix Relay install folder:
  - **Install to the default location.** This is the recommend action. It will automatically find the optimal location for the install folder.
  - **Install to a given path** This option allows you to specify another path for the BigFix Relay install folder.
  - **Install on the drive with most free space.** This action lets you automatically choose the most capacious drive for the installation folder.

After the relays have been created, BigFix Clients can be made to automatically discover and connect up to them, always seeking the Relay that is the fewest hops away.

If you need to manually configure your BigFix Clients, you must notify each computer that it should use a specific relay to point to, as described in **Using BigFix Relays**.

## Using BES Relays

**Once you've set up a BES Relay** you need to direct BES Clients on your network to gather from that relay, instead of from your BES Server. This is actually a perfect job for a computer, and BES can automatically assign your relays for you. This is not without risks (see the Administrator's Guide or visit <http://support.bigfix.com> for more information), but it can be a good idea for two reasons:

- BES Clients can determine which relays are the fewest number of hops away, so your topology is optimized.
- Your network configuration is constantly shifting as laptops dock and undock, as computers start up or shut down, or as new hardware is added or removed. BES Clients can dynamically assess your configuration to maintain the most efficient connections as your network changes.

## Automatic Relays

Here's how you can ensure that your BES Client computers are automatically signing up to the nearest relays:

1. Click on the **Computers** tab to bring up a filter/list of BES Client computers.
2. Select the set of computers that you want to automatically connect to the optimal BES Relay.
3. Right-click the highlighted computers and select **Edit Computer Settings** from the pop-up menu.
4. Check the box labeled **BES Relay Selection Method**.
5. Select the button labeled **Automatically Locate Best BES Relay**.
6. Click the **OK** button.

## Manually Assigning Multiple Clients

You can select all the computers (or any given subset) of the local net to gather from a specified relay. The procedure is different for setting a single computer or multiple computers. Here's how to set multiple computers to point to a relay:

1. Click on the **Computers** tab to bring up a filter/list of BES Client computers.
2. Select the set of computers that you want to connect to the BES Relay. Use the filter panel on the left to narrow down the computer list, if desired.
3. Right-click the highlighted computers and select **Edit Computer Settings** from the pop-up menu.
4. Check the box labeled **Primary BES Relay**.
5. Select the name of the desired BES Relay from the pull-down menu.
6. Click the **OK** button.

## Manually Assigning Single Clients

Here's how to set a single computer to point to a relay:

1. Click on the **Computers** tab to bring up a filter/list of BES Client computers.
2. Right-click the single computer that you want to connect to the BES Relay.
3. Select **Edit Computer Settings** from the pop-up menu.
4. Check the box labeled **Assign BES Relays Manually**.
5. From the **Primary BES Relay** pull-down menu, select the desired Relay.
6. Click the **OK** button.

## Adjusting the BES Server and Relays

To get the best performance from BigFix, you may need to adjust the server and the relays. There are two important ways of adjusting the flow of data throughout your BigFix network -- throttling and caching:

**Throttling Outgoing Download Traffic:** Throttling allows you to set the maximum data rate for the BES Server. Here's how to change the data rate:

1. Click the **Fixlets and Tasks** icon in the Domain Panel navigation tree.
2. Find and click the task labeled **BES Server Setting: Throttle Outgoing Download Traffic**. A task window will open up below. Make sure the **Description** tab is selected. There are three choices:
  - **Set the limit on total outgoing download traffic.** This choice allows you to directly set the maximum number of kilobytes per second you wish to grant the server.
  - **Disable the setting.** This option lets you open the download traffic on the BigFix Server to full throttle.
  - **Get more information.** This option opens a browser window with more detailed information on bandwidth throttling.
3. If you select a throttle limit, then from the subsequent **Take Action** dialog you can select the desired set of computers to throttle. Click **OK** to propagate the task.

**Download Cache Size:** BigFix Servers and Relays maintain a cache of the downloads most recently requested by BigFix Clients, helping to minimize bandwidth requirements.

1. Click the **Fixlets and Tasks** icon in the Domain Panel navigation tree.
2. Find and click the task labeled **BES Relay / BES Server Setting: Download Cache Size**. A task window will open up below. Make sure the **Description** tab is selected. Select the link to change the download cache size on the listed computers. This list may include BES Relays as well as the BES Server.
3. Enter the number of megabytes to cache. The default is 1024 MB, or a gigabyte.
4. From the subsequent **Take Action** dialog, select the desired set of computers and click **OK**.

## Dynamic Bandwidth Throttling

When a large download becomes available, each link in your BES deployment may have unique bandwidth issues. There are server-to-client, server-to-relay and relay-to-client links to consider, and each may require individual adjustment. As explained elsewhere, it is possible to simply set a maximum value (throttle) for the data rates, and for this there are broad-based policies you can follow. You might, for instance, throttle a BES Client to 2Kb/s if it is more than three hops from a BES Relay. However, the optimal data rates can vary significantly, depending on the current hierarchy and the network environment.

A better technique is to use dynamic bandwidth throttling, which monitors and analyzes overall network capacity. Whereas normal throttling simply specifies a maximum data rate, dynamic throttling adds a “busy time” percentage. This is the fraction of the bandwidth that you wish to allocate when the network is busy. For instance, you could specify that BES downloads should not use any more than 10% of the available bandwidth whenever BES detects existing network traffic. Dynamic throttling also provides for a minimum data rate, in the case the busy percentage is too low to be practical.

When you enable dynamic throttling for any given link, BES monitors and analyzes the existing data throughput to establish an appropriate data rate. If there is no competing traffic, the throughput is set to the maximum rate. In the case of existing traffic, BES will throttle the data rate to the specified percentage or the minimum rate, whichever is higher. You must enable dynamic throttling on both the server and the client side in order for it work properly.

You control dynamic bandwidth throttling with computer settings. There are four basic settings for each link:

- **DynamicThrottleEnabled:** This setting defaults to zero (disabled). Any other value enables dynamic throttling for the given link.

- **DynamicThrottleMax:** This setting usually defaults to the maximum unsigned integer value, which indicates full throttle. Depending on the link, this value sets the maximum data rate in bits or kilobits per second.
- **DynamicThrottleMin:** This setting defaults to zero. Depending on the link, this value sets the minimum data rate in bits or kilobits per second. This value places a lower limit on the percentage rate given below.
- **DynamicThrottlePercentage:** This setting defaults to 100%, which has the same effect as normal (non-dynamic) throttling.. It represents the fraction of the maximum bandwidth you wish to use when the network is busy. It typically has a value between five and ten percent, to prevent it from dominating existing network traffic. (A zero for this setting is the same as 100%.)

As with any other setting, you can create or edit the dynamic bandwidth settings by right-clicking on an item (or group of items) in any computer list and choosing **Edit Computer Settings** from the context menu.

The specific variable names include the BES Server/Relay settings:

```
_BESRelay_HTTPServer_DynamicThrottleEnabled  
_BESRelay_HTTPServer_DynamicThrottleMaxKBPS  
_BESRelay_HTTPServer_DynamicThrottleMinKBPS  
_BESRelay_HTTPServer_DynamicThrottlePercentage
```

The BES Client settings:

```
_BESClient_Download_DynamicThrottleEnabled  
_BESClient_Download_DynamicThrottleMaxBytesPerSecond  
_BESClient_Download_DynamicThrottleMinBytesPerSecond  
_BESClient_Download_DynamicThrottlePercentage
```

The BES Gathering settings:

```
_BESGather_Download_DynamicThrottleEnabled  
_BESGather_Download_DynamicThrottleMaxBytesPerSecond  
_BESGather_Download_DynamicThrottleMinBytesPerSecond  
_BESGather_Download_DynamicThrottlePercentage
```

**NOTES:** For any of these settings to take effect, you must restart the affected services (BES Server, Relay or Client).

If you set a BES Server and its connected BES Client to differing maximums or minimums, the connection will choose the smaller value of the two.

## Baselines

### Introducing Baselines

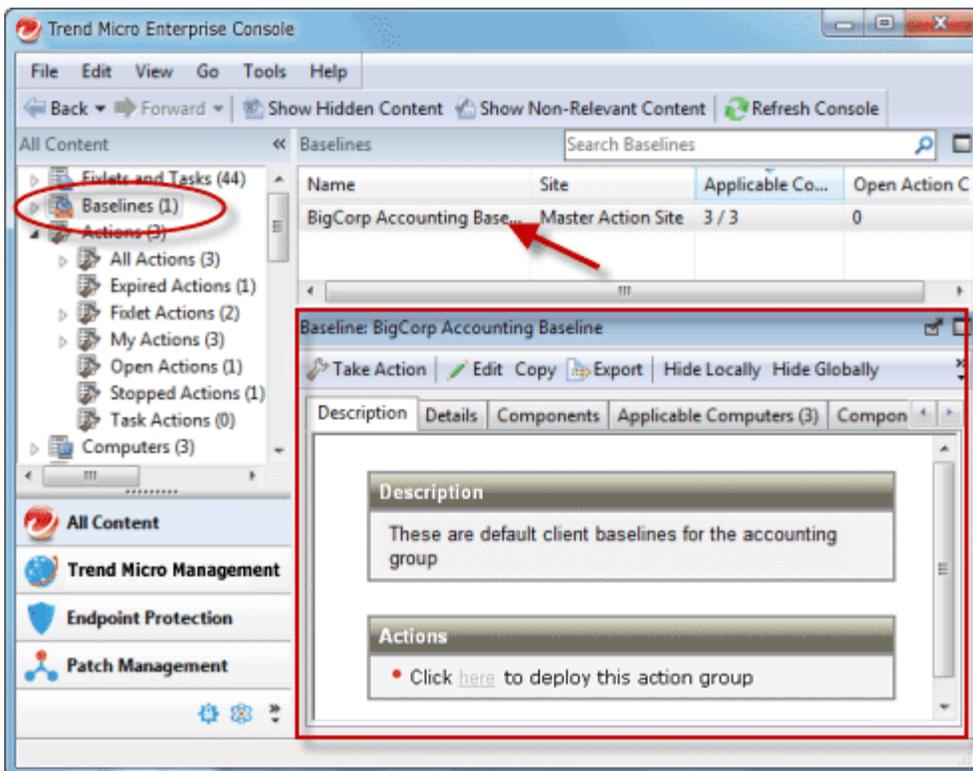
Baselines are collections of Fixlet messages and Tasks. They provide a powerful way to deploy a group of Actions across an entire network with a single command.

Baselines provide a way to maintain a common operating environment, making sure that all users in any given domain have the same software, patches and drivers. Baselines are easy to set up, simply by selecting the Fixlet messages, Tasks and other Baselines that you wish to be a part of the group. To limit the scope of a Baseline, a Relevance expression can be used to target any subset of your network, using IP addresses, computer names, operating systems and many other qualifiers.

For instance, you might make a Baseline named "All critical hotfixes," and populate it with all the current critical hotfixes available in the Fixlet list. Or you might create one named "Finance department baseline," designed to keep that particular group of computers updated with the latest financial programs, financial tables, updates and patches.

## Viewing Baselines

**Baselines** allow you to group Fixlet messages and Tasks into a group for simple, one-click deployment. To display an existing Baseline, click the Baselines icon in the Domain Panel navigation tree. From the resulting List Panel, click an item. The body of the Baseline will show up in the Work Area below.



The Baseline display region has several tabs:

- **Description:** This is typically an HTML page providing a descriptive explanation of the problem and an action to fix it.

- **Details:** This tab lists the Baseline Properties, a section detailing the code behind the Relevance expressions and the Baseline actions, along with other Baseline properties. Scroll to the bottom to enter a comment as a note for yourself or other BigFix Console operators.
- **Components:** This tab lists the components, namely the Fixlet messages, Tasks and other Baselines that are grouped into this Baseline. Baselines make a copy of the components, so it is possible for one of these copies to get out of sync with the underlying Fixlet or Task that spawned it. If this happens a message will appear saying that the source differs from the copy and allowing you to synchronize with the current source.
- **Applicable Computers:** This is a filter/list of all the computers targeted by the selected Baseline. You can filter the list by selecting items from the folders on the left, and sort the list by clicking on the column headers.
- **Component Applicability:** This is a filter/list of the various components of the Baseline. It displays the number of computers where the Baseline is currently applicable and, after a slash, the number where it is not. Double-click an item in the list to bring it up for inspection.
- **Action History:** This is a filter/list of any Actions that have been deployed from this Baseline. If the Baseline is new, there won't be any Actions in the list. Like the other filter/lists in the BigFix Console, you can filter the actions using the left panel, and sort them by clicking the column headers.

## Monitoring Baselines

When Baselines become relevant somewhere on your network, the BigFix Console will add them to the list of Baselines to be displayed under the **Baselines** icon in the Domain Panel navigation tree. You can filter this list by opening the icon and selecting one of the subsets. In the resulting List Panel on the right, you can sort the Baselines by clicking one of the column headings that may include the following fields:

- **Name:** The name assigned to the Baseline by the author.
- **ID:** A numerical ID assigned to the Baseline by the author.
- **Site:** The name of the site that is generating the relevant Baseline.
- **Applicable Computer Count:** The number of BES Clients in the network currently targeted by the Baseline.
- **Open Action Count:** The number of actions open for the given Baseline.

If you don't see one of the columns listed above, right-click in the Baseline header and select it from the pop-up menu.

## Commenting on Baselines

You can attach a comment to a Baseline that other operators can read.

1. Select the **Baselines** icon in the Domain Panel navigation tree and open it if you want to choose one of the Baseline subcategories to narrow down your list.
2. Select a Baseline from the List Panel on the right by clicking it.
3. From the document panel below, select the **Details** tab and scroll to the bottom of the page.
4. Type your comment into the text box and click the **Add Comment** Button.

Your comment will be name- and time-stamped for other operators to view it. As well as Baselines, you can attach comments to Fixlets, Actions, Computers and Analyses.

## Creating or Customizing Baselines

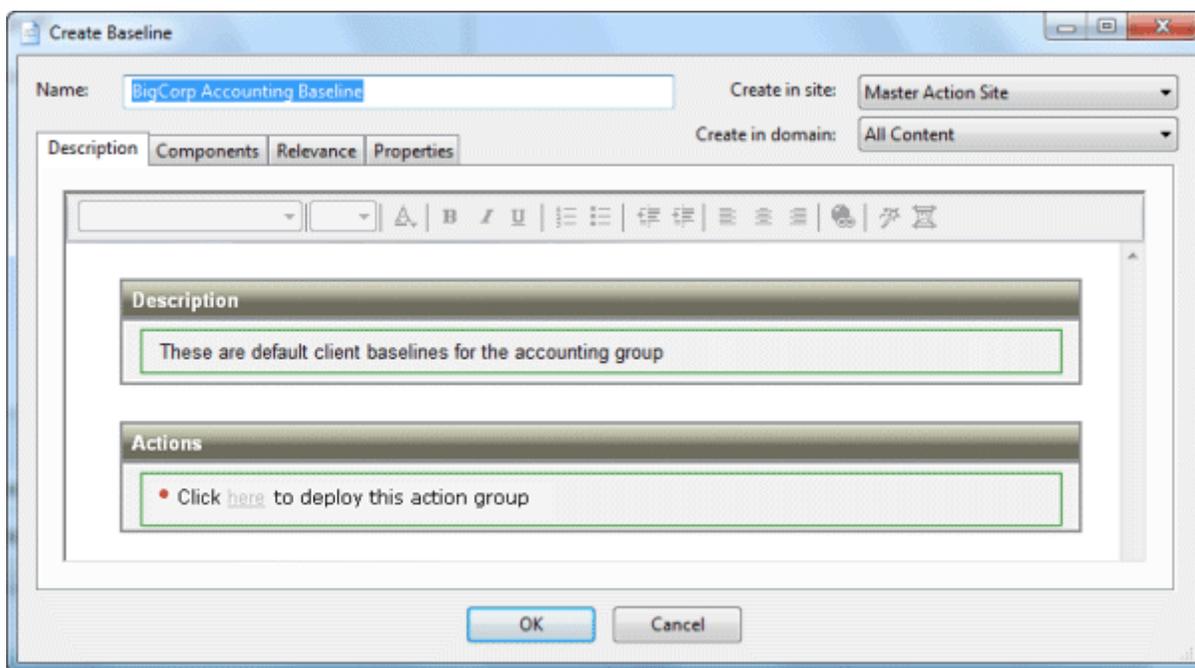
Baselines allow you to gather multiple Fixlets and Tasks into groups that can be applied at once to any set of target computers. The name Baseline was chosen to suggest a minimal set of conditions that could be applied across your network to ensure compliance with corporate guidelines. To create your own custom Baseline from scratch, follow these steps:

- In a Fixlet or Task list, highlight one or more items and select **Add To New Baseline** from the context menu. You can also select **Create New Baseline** from the **Tools** menu.

To clone off a Baseline and customize it, first select the Baseline in any list, then:

- Select **Edit > Create Custom Baseline Copy** (or right-click the Baseline and select **Create Custom Copy** from the pop-up menu).

Either way, this brings up a dialog with four tabs.



At the top of the dialog, you can specify the name of your custom Baseline as well as the Site and Domain that will host the Baseline. Click through each of the tabs below to define your Baseline:

- **Description:** This dialog lets you describe your custom Baseline as an HTML page. Edit the text, using the text modification bar at the top.
- **Components:** You can add or customize the components of a Baseline. To add a new component, click the **add components to group** link. From the resulting dialog, you can select new Fixlet messages, Tasks and other Baselines to add to the existing Baseline group.
- **Relevance:** Enter your relevance statement here, or modify the existing relevance statement. This allows you to further constrain your Baseline to specific computers. By default, this Relevance statement is simply TRUE, which leaves the job of targeting to the individual Fixlets and Tasks that make up the Baseline. For more information on the relevance language, refer to the BigFix Inspector Libraries.

- **Properties:** Customize the properties of your Baseline, or accept the original properties. Since you have customized the Baseline, you should update the source fields to reflect the new authorship. There are fields here specify the category, download size, source info and the CVE/SANS ID codes.

When you are satisfied with your Baseline modifications, click **OK**. Your customized Baseline needs to be propagated, so you will be prompted for your private key password. Once you enter it and click OK, your Baseline will be sent to all networked BigFix Clients, which will evaluate it for relevance and report back their status. You will now be able to follow the deployment of your own custom Baselines from the BigFix Console.

## Hiding Baselines

You can hide a Baseline with the following procedure:

1. From any Baseline List Panel, select the Baseline you want to hide.
2. Right-click the Baseline and select **Globally** or **Locally Hide Baseline** from the pop-up menu (or from the **Edit** menu).

The selected Baseline(s) will no longer be displayed in the Baseline list. If you elected to hide the Baseline locally, it will still be visible to other Console users. If you are a Master Operator, you can hide a Baseline globally, so it will also be hidden to all non-master users.

Items that are hidden are still available and you can restore or unhide them at any time. Here's how:

1. Click the Show Hidden Content button in the Console toolbar.
2. Click on the **Baselines** icon in the Domain Panel navigation tree, which will now show all the hidden content.
3. From the List Panel, choose the desired Baseline and choose **Edit > Hiding > Locally/Globally Unhide** or right-click and choose the same option from the context menu. You can also open the hidden Baseline and click the Unhide button in the Work Area below.

Generally speaking, it isn't necessary to hide Baselines, as you can simply ignore them. The main reason for hiding a Baseline is if you feel that the message isn't relevant to your network and could never be useful and you want to avoid viewing the Baseline every time you launch the Console.

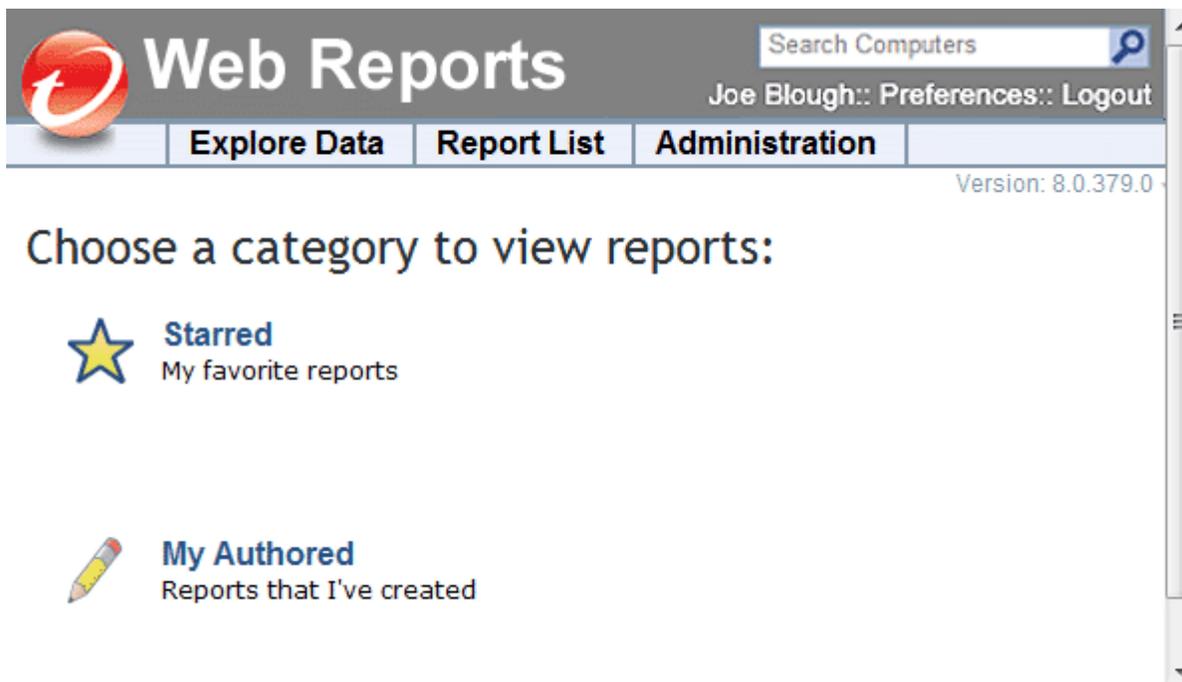
## Displays and Reports

### Web Reports

The BigFix **Web Reports** program can monitor, print or archive the status of the local database. It enables you to get an overview of your relevant Fixlet messages and any subsequent remediation efforts. You can create charts summarizing the number of administered computers in your network and your overall vulnerability status. In addition, you will find comprehensive statistics and a list of the most common issues detected. You can drill down into these commonly relevant Fixlet messages at any time to see them in greater detail.

Web Reports also has the ability to read the databases of other BigFix Servers and aggregate the data. That offers you a top-level view of a large or far-flung enterprise with multiple database servers. Aggregation servers allow you to view information from multiple networks with hundreds of thousands of computers.

You can view the data in the BigFix database from several different points of view and save or print the output. You may also export the output to Excel for further manipulation. These features are provided by the BES Web Reports program, which can be run at any time from the desktop by selecting **Tools > Launch Web Reports**. You will need to supply your credentials to log in. When you do, you are greeted by the intro screen:



There are three main links at the top of the screen.

- **Explore Data:** Click this link to look at a group of predefined reports and charts that you can easily filter and customize. This section provides you with an instant overview of the most basic data managed by BigFix, including Computers, Actions, Operators and more.
- **Report List:** Click this link to get a look at basic reports organized around your Fixlet content. Create and customize reports with a simple, intuitive interface. Some commonly-requested reports are built-in, such as Operating System Distribution and Vulnerability Trends. Select them for display by clicking their titles in the list. You can create your own custom reports and save them as either public or private (viewable only by you). Your public reports will be added to the reports list; your private reports will only be available when you log in with a correct password.
- **Administration:** Click this link to gain access to various administrative functions, including scheduling activities, managing filters, operators, database settings and users.

In addition, there are two report categories to get you started.

- **Starred:** This link takes you directly to favorite reports that you have flagged as starred.
- **My Authored:** This link takes you to a list of those reports you have personally created.

Here is a snippet of a typical report, summarizing the computers on your network by their properties.

Computer Name	BIOS	CPU	Free Space	OS	RAM	Total Size of System Drive
MOMMA	10/11/04	3400 MHz Pentium 4	86283 MB	WinXP Media Center	1024 MB	238409 MB
TESTING	12/09/06	1000 MHz AMD Athlon(tr	15231 MB	Win7 6.1.7600	2048 MB	142290 MB
BIGDOG	02/24/09	3000 MHz Core 2 Duo	149777 MB	WinVista 6.0.6002	8192 MB	397899 MB

BES Web Reports can be viewed at any time from the BigFix Console under **Tools > Launch Web Reports**.

Any BES Web Report server can be set up to aggregate data from the other BigFix Servers. Talk to your BigFix Site Administrator about setting up an aggregation server. Refer them to the **BES Administrator's Guide** for further information.

The Web Reports interface is very rich and its complete documentation is beyond the scope of this guide. For more in-depth information, see the **Web Reports Guide**.

## Viewing Dashboards

Depending on the sites you are subscribed to, you may have a folder icon labeled **Dashboards** in your Domain Panel navigation tree (click the **All Content** domain to see them all). This folder contains a list of reports that update in real-time, like a dashboard gauge in your car. These reports tap into the BigFix Database to provide you with timely and compact high-level views of your network.

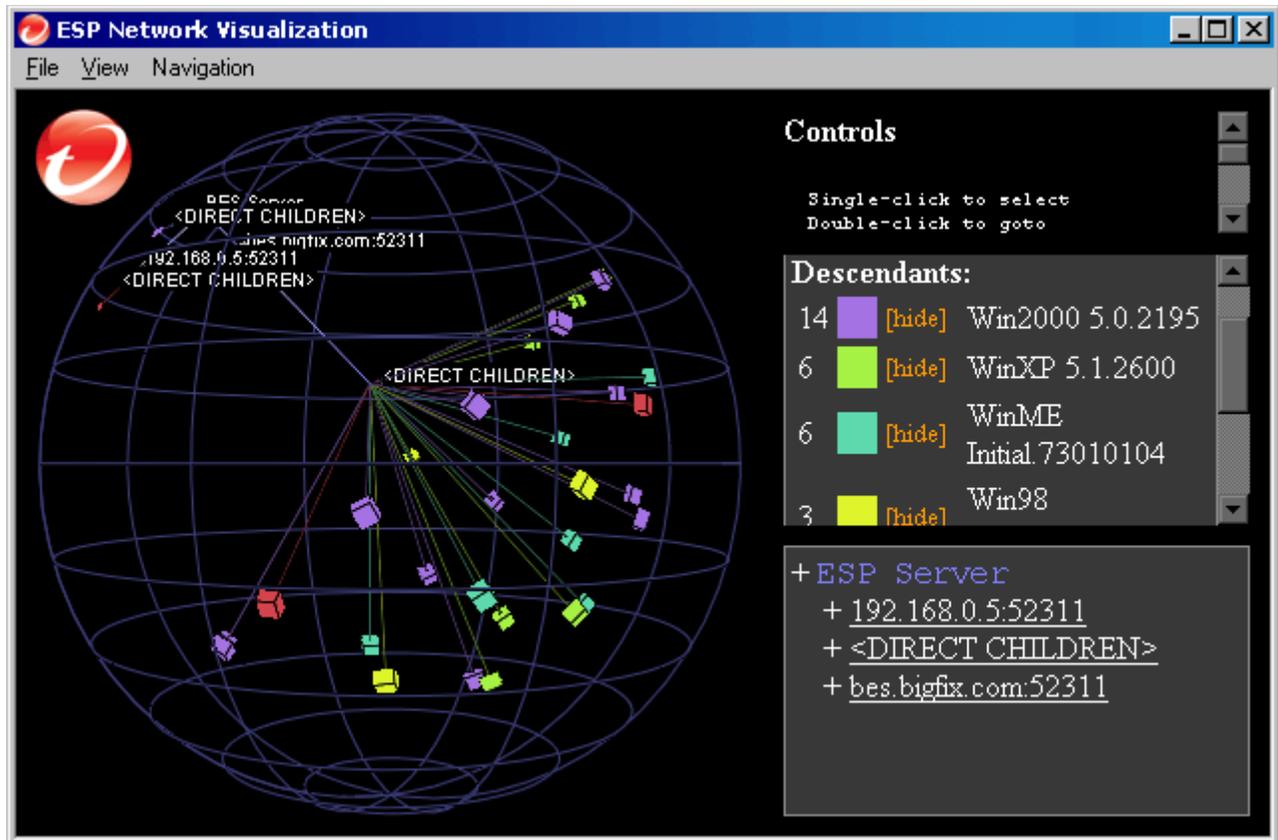
Different sites make these Dashboards available. For instance the **BES Inventory and License** site contains the **Application Usage** Dashboard, which shows you constantly updated statistics about various executables on your client computers. Other Dashboards may report on the BES Deployment, or the status of your Patch rollouts.

To run a Dashboard, simply select it from the **Dashboards** icon in the Domain Panel navigation tree. It will show up in the Work Area at the right of the screen.

## Visualizing Data

The **Visualization Tool** allows you to view and manipulate data across your entire managed network. It lets you visualize various hierarchical relationships in your network, using an interactive 3D sphere to map the data.

The Visualization Tool makes it possible to view a real-time graphical network map showing Fixlet relevance, Action status, and Retrieved Properties.



As an example, you could view all computers that are currently unpatched for MS04-011 across an enterprise network, displayed as an Active Directory hierarchy. Then you could watch the clients change from red to green as they get patched in real-time across your network. As another example, you could view all BES Clients that are currently using Microsoft Office, colored according to version.

Or you can create your own hierarchy. You could assign settings on all your machines named 'city', 'building' and 'floor'. You could then create a dynamic setting called 'location' that concatenates these properties:

```
set setting location = (value of setting 'city' & ';' & value of setting 'building' & ';' & value of setting 'floor')
```

Specify a semi-colon as the delimiter of this setting to visualize your computers as a location-based hierarchy -- from each networked city down to the floor of every building.

To create your own custom view of the data, follow these steps:

1. Select **Tools > Launch Visualization Tool...**
2. There are three tabs in the Visualization Parameters dialog:
  - **General:** Specify the desired display hierarchy from among BES Relays, Active Directory, IP Address or Retrieved Property.
  - **Colorization:** Indicate how you want to color-code the client nodes. You can base your color scheme on Fixlet Relevance, Baseline Relevance, Retrieved Properties, Action Status or a custom Relevance clause.
  - **Computers:** Limit the computers you want to display, using Active Directory and Retrieved Properties as filters. To show all the computers under BES management, click **Show all computers**.

Click **OK** to generate your customized visualization of your network.

A graph of your network, mapped onto a 3D sphere, is displayed. You can now use the **Controls** listed in the upper right corner to change your view of the data.

Double-click a computer node to bring it to the forefront. Drag the elements in the graph to tweak the viewpoint.

You can continuously rotate the model by selecting **View > Spin Mode**.

Use the **Navigation** menu to move through the hierarchy, from each selected computer to its sibling, parent or child.

# Interface Elements

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## Menus

### File Menu

The **File Menu** offers the following commands:

<b>Import</b>	Import .bes files, which can be default Tasks, Actions, Baselines or other content that you may have created or customized.
<b>Export</b>	Export a Task, Action, Fixlet, Baseline, etc. that you or another Console user can subsequently import. Exporting provides a useful mechanism for creating customized content. Simply export the content, edit it with any text editor, and then import the customized version.
<b>Preferences...</b>	Set refresh, BES Client heartbeat, colorizing, caching and other persistent Console preferences.
<b>Change Database Password...</b>	Change the sign-in password for the currently connected user.
<b>Exit</b>	Quit the program.

### Edit Menu

The **Edit Menu** offers the following commands:

<b>Cut</b>	Cut text and put in clipboard. This command is for use in the various text boxes that the BES Console uses for data input.
<b>Copy Text</b>	Copy text and put it in the clipboard.
<b>Copy Text with Headers</b>	Copy text, including any associated headers, and put it in the clipboard.
<b>Paste</b>	Insert the contents of the clipboard. This option is only activated when there is an editable text box on the screen.
<b>Select All</b>	Select all items in the current window. Depending on the window, this can be text from the Work Area or items in the List Panel.
<b>Hiding &gt;</b>	<p>Remove the selected objects, either Fixlets, Tasks, Baselines or Analyses, from the List Panel. The object itself is not actually deleted, and may be retrieved by clicking <b>Show Hidden Content</b> in the Console Toolbar. These options only become available when you click objects in the List Panel. Alternatively, you can right-click the objects and select hiding options from the context menu. There are four options</p> <p><b>Globally Hide:</b> This hides the object across all BES Consoles.</p> <p><b>Globally Unhide:</b> Relist the selected objects (either Fixlets, Tasks, Baselines or Analyses). To find the object, click the <b>Show Hidden Content</b> button.</p> <p><b>Locally Hide:</b> Hide the object on the current BES Console only -- other Consoles will still display the object. The object itself is not actually deleted, and may be retrieved by clicking the Show Hidden Content button and selecting it from the navigation tree.</p> <p><b>Locally Unhide:</b> After clicking the Show Hidden Content button, you can choose to unhide locally hidden content with this command.</p>
<b>Create Custom Object Copy...</b>	Create a customized clone of the currently selected object (either Fixlet, Task, Baseline, Computer Group or Analysis). For each copy, you can create a header name and compose a message to describe the associated actions. You can also customize or add relevance expressions to refine the targeting of the Fixlet or Task.
<b>Remove Custom Object</b>	Remove a customized object (either Fixlet, Task, Baseline, Computer Group or Analysis) from its list. Confirming this choice will permanently remove the customized object from the list.
<b>Edit Custom Object...</b>	Edit the Message, Action, Relevance and Properties of a customized object (either Fixlet, Task, Baseline, Computer Group or Analysis).

<b>Add Comment...</b>	Attach a comment to an object, such as a Fixlet, Task, Baseline or Action. This is a shortcut menu selection, equivalent to opening an object, selecting the Details tab and entering a comment at the bottom of the page.
<b>Show Action Info</b>	View information about a selected action's execution.
<b>Take Default Action...</b>	Execute the default action for this particular Fixlet message.
<b>Activate Analysis</b>	Activate an Analysis, so that the targeted clients are being queried on a regular basis. You will need to supply your private key password.
<b>Deactivate Analysis</b>	Stop the continuing Analysis of the clients.
<b>Edit Computer Settings...</b>	Edit the settings (locking, BES Relays and custom settings) for the selected computer(s). Typically, you will edit settings on a computer by computer basis, but you can also set multiple computer settings at the same time.
<b>Modify Custom Site Subscriptions...</b>	Change the set of computers that are subscribed to a custom site. Select a group of computers and click this menu item to subscribe or unsubscribe them from the specified custom site.
<b>Send Refresh</b>	Refresh the displayed list of computers by querying the database.
<b>Groups &gt;</b>	<p>Manage groups of computers. This item expands to include:</p> <p><b>View as Group:</b> Create an ad-hoc group from a selected set of computers. You may then view the Fixlets, Tasks, Baselines, Actions and Analyses that pertain to this particular group.</p> <p><b>Add to Manual Group...:</b> Add the selected computer(s) to a named group. You can either attach the computer to an existing group or create a new named group. You must supply a password to propagate the new group name to the selected clients.</p> <p><b>Remove From Manual Group:</b> Remove a computer from the specified group. First, select the group from the navigation tree on the left, then select a computer from the list. You must supply a password to propagate the change.</p>
<b>Stop Action</b>	Stop the selected action(s).
<b>Restart Action</b>	Restart the selected action(s).
<b>Assign User</b>	Bring up a display that lets you grant and revoke management rights on a

<b>Management Rights...</b>	computer-by-computer basis.
<b>Find...</b>	Bring up a dialog that prompts you for the desired search field and search string. You can search for fields that either contain or don't contain the desired search string. In addition, for objects that can be hidden, such as Fixlets, Tasks, Baselines or Analyses, you can search based on visibility.

## View Menu

The **View Menu** offers the following commands:

<b>Show Hidden Content</b>	Allow hidden content, including Fixlet messages, Tasks, Analyses, etc. to be viewed. Content can be hidden locally (on this Console only) or globally (on all Consoles). In order to view this content, select this item or click the button in the Console Toolbar with the same name. From the navigation tree, all content will become visible and you can select hidden items to unhide them if you choose.
<b>Show Non-Relevant Content</b>	Allow non-relevant content, such as Fixlet messages and Tasks, to be viewed. Typically BigFix operates by displaying only those items that are relevant to your network. Thus, out of the thousands of available Fixlets, for instance, only a few are brought to your attention for remediation. When an item has been remediated across your entire BigFix network, it is no longer relevant and simply disappears. This menu item allows you to examine these items, which can be useful if you want to clone or repurpose one for your own uses.
<b>Show Status Bar</b>	Display the number of relevant messages and the connected database in the status bar at the bottom of the BES Console window. Select this menu item to toggle its state.
<b>Refresh</b>	Fetch the latest information from the BES database. Typically, your information is updated automatically based on a schedule determined by your administrator (and by your choice in the Preferences dialog). Since refreshing causes a database access, you should use it with restraint.

## Go Menu

The **Go Menu** allows you to quickly select Domains and to change the focus area of the Console. It offers the following commands:

<b>All Content</b>	Open the top-level Domain that contains a combination of all Domains.
<b>Other Domain Names</b>	Open the specified Domain. The next few entries in this menu include the various Domains you have created, depending on the specific Fixlet sites you have subscribed to.
<b>Current List</b>	Move the focus of the Console to the List Panel at the top right of the Console.
<b>Current Document</b>	Move the focus of the Console to the current document in the Work Area at the bottom right of the Console.

## Tools Menu

The **Tools Menu** offers the following commands:

<b>Take Custom Action...</b>	Execute a custom command, targeted to any desired subset of BigFix Client computers.
<b>Create New Fixlet...</b>	Create a custom Fixlet message, complete with targeting and actions.
<b>Create New Task...</b>	Create a custom Task, similar to a Fixlet message, but used by the Console operator to install software, update settings or establish other local policies.
<b>Create New Baseline...</b>	Create a custom Baseline, allowing you to establish a grouping of Tasks, Fixlet messages and other Baselines that can be applied with a single click to any grouping of computers.
<b>Create New Analysis...</b>	Create a custom analysis, based on the specified properties of the BigFix Client computers.
<b>Create New Automatic Computer Group...</b>	Create an automatically defined grouping of computers, based on various client properties, such as name, CPU, IP Address, etc.
<b>Add External Site Masthead...</b>	Start a new Subscription to a BigFix Fixlet site. This command opens a browser window for you to select a masthead file, typically with an extension of .efxm.
<b>Create Custom Site...</b>	Create a custom site containing your own content. You can create custom Fixlets, Tasks, Analyses, etc.
<b>Create Custom Filter...</b>	Create a named filter that will allow you to include specific custom content, based on various properties. The objects available to filter include Fixlet messages, Tasks, Analyses, Computers and more.
<b>Manage Properties...</b>	Create and manage properties to retrieve from your BigFix Clients, using Relevance clauses. These properties will get included in the column headers on client listings. There is a default set of properties, but you may add or delete them. Properties are used to filter or select subsets of BigFix Clients for Fixlet action deployment.
<b>Manage Signing Key...</b>	Present a dialog box to input and manage the signing key for the Action Site.
<b>View Recent Comments</b>	View the list of comments made by the BigFix Console operators, sorted from most recent to oldest. This list includes all comments, regardless of the underlying object.
<b>Launch Web</b>	Provide access to data reports which are collected from various BigFix Servers and aggregated into a set of HTML reports summarizing the history and status of Fixlet

<b>Reports...</b>	messages and actions across extended networks of computers.
<b>Launch Visualization Tool...</b>	Run a tool to visualize the hierarchy of your BigFix installation, from the servers down through the relays to the client computers.

## Help Menu

The **Help Menu** offers the following commands:

<b>Contents</b>	Provide integrated help.
<b>Visit support.bigfix.com</b>	Launch a browser to view the BigFix support site.
<b>Customer Feedback Options</b>	Allow BigFix to learn from your experience. Click the button to participate in an anonymous survey to help us learn more about how people use the program. This information is used to improve your BigFix experience.
<b>About BES Console...</b>	Display the version number of the program, along with a URL for support.

## Dialogs

### About BES Console

The **About** dialog displays the version of the BigFix Enterprise Suite (BES) Console. It also includes a URL for tech support.

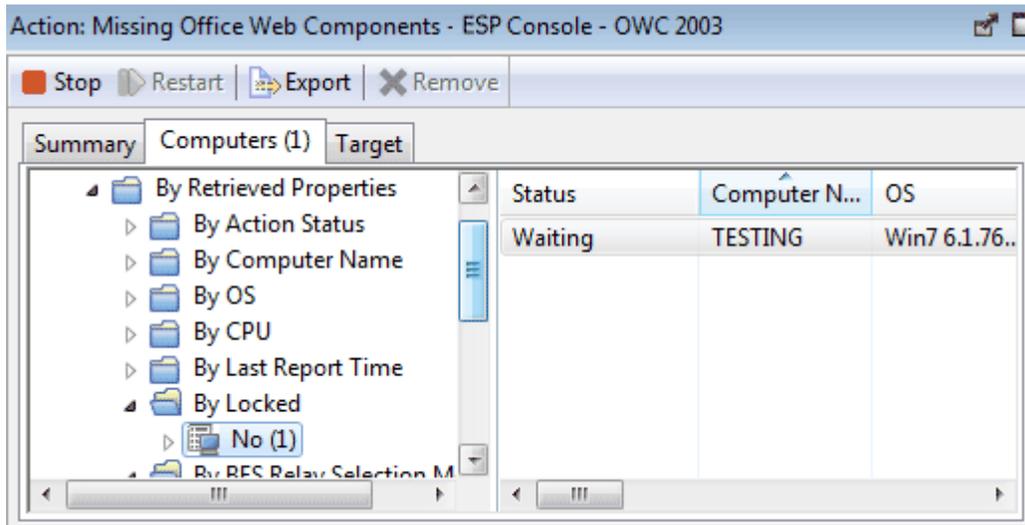


This dialog is available by selecting:

- **Help > About BES Console...**

### Action: Computers

You can view the status of an action as it is deployed across your network. After selecting Actions from the navigation tree, click an Action from the List Panel. The Action will open up in its own document window in the Work Area below, displaying details of the deployment.



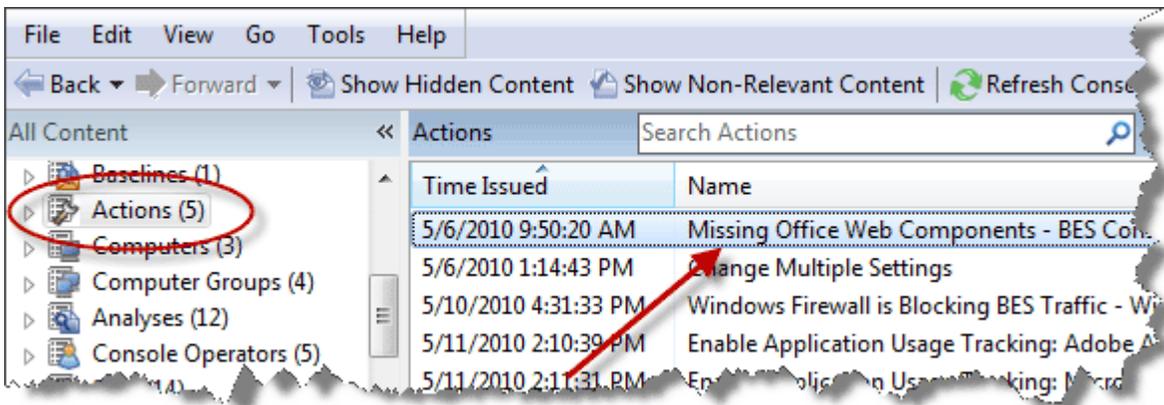
The **Computers** tab of the **Action** document shows the number of computers affected by the specified action directly in the tab for easy viewing. The window displays a filter/list of the computers targeted by the action, along with the current status of each. By clicking through the filter list, you can narrow down the list of computers for easier analysis. The list of computers can be sorted by clicking on the appropriate header. You can view more detailed information about the targeted computer by double-clicking a computer in the list.

This set of computers was targeted when the action was initially specified, either explicitly from a list or indirectly by retrieved property. The deployed actions progress through a series of well-defined stages on a given computer. This dialog lets you track all the stages of each action across all targeted computers.

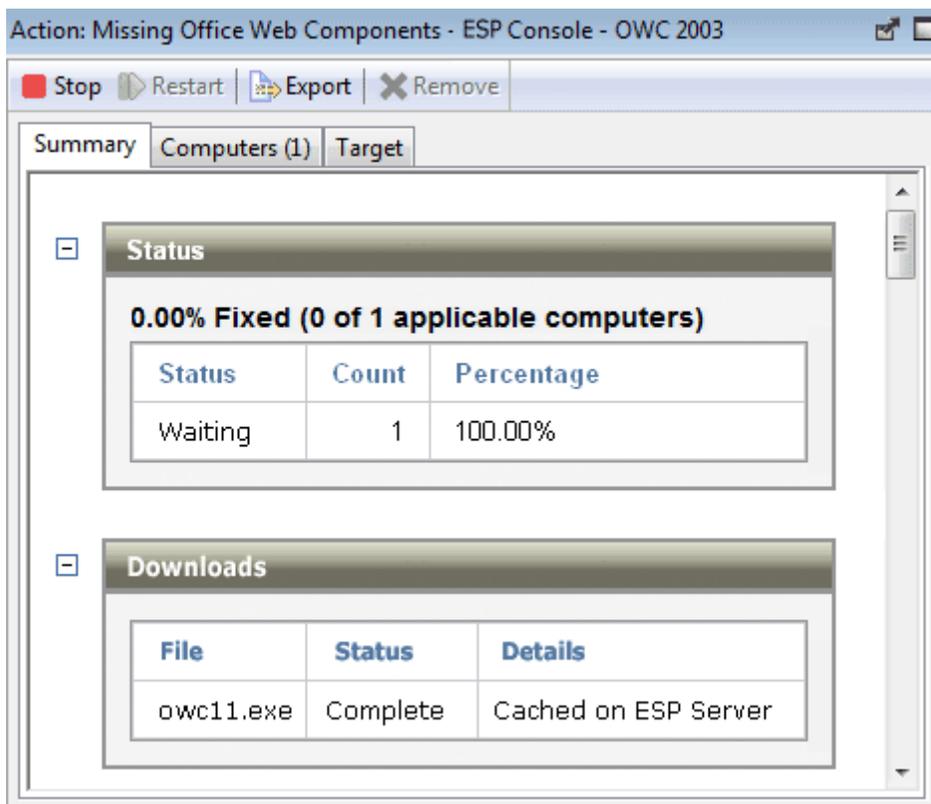
This dialog is available by selecting **Actions** from the Domain Panel navigation tree and then selecting a specific Action from the List Panel. In the Work Area below, click the **Computers** tab.

### Action List and Document

A list of Actions is displayed when you click **Actions**, or any of its child nodes, from the Domain Panel navigation tree.



An **Action document** is displayed in the Work Area of the BES Console when you click any item in this list.



At the top of the Action document you'll find a description of the Action. Below that is a toolbar presenting you with options to **Stop**, **Restart**, **Export** or **Remove** the Action.

There are three tabs in an Action document. They are:

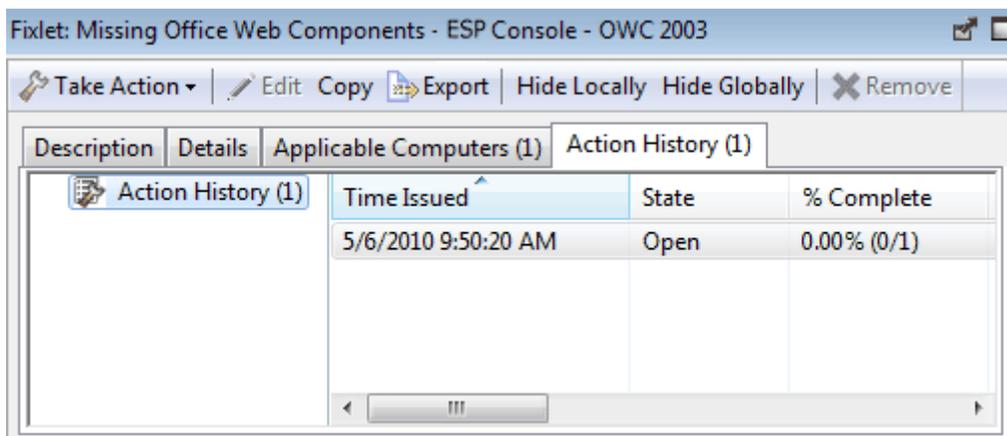
- **Summary:** An HTML display of various action attributes, including Status, Behavior (Message, Users, Execution, Post-Action), Relevance, Success Criteria and Action Script. At the bottom of the page is a text box for entering a comment.
- **Computers:** A list of the BES Clients that have responded to this action. This is a typical filter/list panel for computers; click a filter in the left panel to narrow down the list of computers in the right panel. When an action has propagated, this tab changes to **Reported Computers**.
- **Target:** Shows what subset of computers was originally targeted by the action.

To display an Action list, click the **Actions** item (or any of its child nodes) in the Domain Panel navigation tree.

An **Action document** is opened whenever you click an item in an Action list.

## Action History Tab

The **Action History** tab lists the deployment history of the action(s) associated with the selected **Fixlet**, **Task** or **Baseline** document.

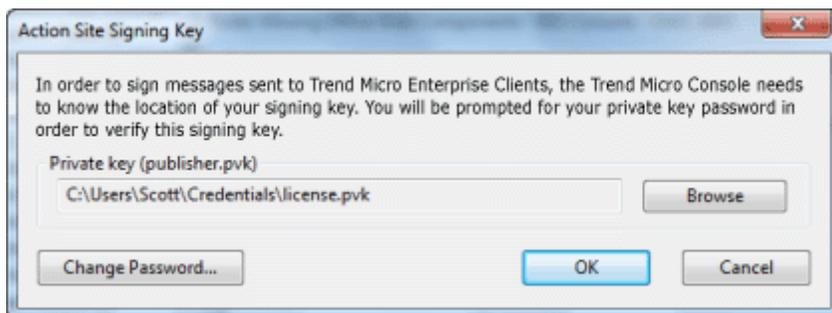


In order to see something in this dialog, you must have issued an Action. The Action History list can be sorted by clicking the headers, which include the **ID**, **Time Issued**, **State**, **% Complete** (based on the number of BES Clients reporting success), **Name Site**, **Issued By** and **Type**.

This dialog is available by selecting a Fixlet, Task or Baseline icon from the Domain Panel navigation tree, clicking an item from the List Panel and clicking the **Action History** tab in the Work Area below the list.

## Action Site Signing Key

This dialog allows you to manage the location of your private key (.pvk), or to change the **password** for your Action signing key.



The BigFix Console operator must obtain a private key (publisher.pvk or license.pvk) from the BigFix Site Administrator, who must first create it using the BES Admin Tool. Once these keys have been created, the BigFix Site Administrator will hand them out to authorized personnel, who can then propagate Actions. To sign an action, the authorized BigFix Console operator must browse to the appropriate private key (typically stored on a removable disk or memory stick) and provide a password.

You can see this dialog by selecting **Tools > Manage Signing Key**.

## Action Parameter

This dialog box makes a request for extra information required by the Action or group of Actions before execution. Typically there is a prompt and a text box for you to fill in with a parameter. Click **OK** to continue the Action deployment. This will typically bring up the Take Action dialog, where you can further specify deployment options.

## Action Progress Report

This dialog box shows the progress of an action as it is applied across the Fixlet network. First, it shows the progress of any downloads (patches, updates, etc.). If there are files to download, it displays the name of the downloaded file, the total number of bytes, the current amount downloaded, the transfer rate and the estimated time to completion.

The Actions may go through several states as they are collected, evaluated and run by the clients. These states include:

- **Running:** The Action is currently executing.
- **Evaluating:** The Action is still evaluating its relevance.
- **Failed:** The Action has failed to execute properly.
- **Cancelled:** The user has cancelled the Action.
- **Download Failed:** The Action failed to complete the download.
- **Locked:** The computer is locked and can't execute the action.
- **Offers Disabled:** Offers cannot be presented on the specified client, so the Action will never run.
- **Waiting:** The Action is waiting on a user response.
- **Pending Downloads:** The Action is waiting on downloads.
- **Pending Restart:** The Action is waiting for a restart from the Client computer.
- **Pending Message:** The Action is waiting for the user to accept the Action message.
- **Pending Login:** The Action is waiting for the user to login for a user-assisted Action.
- **Pending Offer Acceptance:** The Action is waiting for the user to accept the offer.
- **Constrained:** The Action has been constrained by a Relevance statement set in the Execution tab of the Take Action Dialog.
- **Expired:** The Action has passed its expiration date.
- **Postponed:** The Action has been postponed by the Client.
- **Invalid Signature:** The Action can't run due to an invalid signature.
- **Not Relevant:** The Action is not relevant on this Client.
- **Not Reported:** The Action has not reported its success or failure.
- **Error:** The Action has resulted in an error.
- **Fixed:** The Action has completed, resolving the issue.

## Action Script Tab

The **Action Script** tab of the **Take Action** dialog lets you create your own action scripts. We highly recommend that you use the action scripts that come with each Fixlet. But should you want to customize the scripts for any reason, you can do it here. There are two buttons in this dialog:

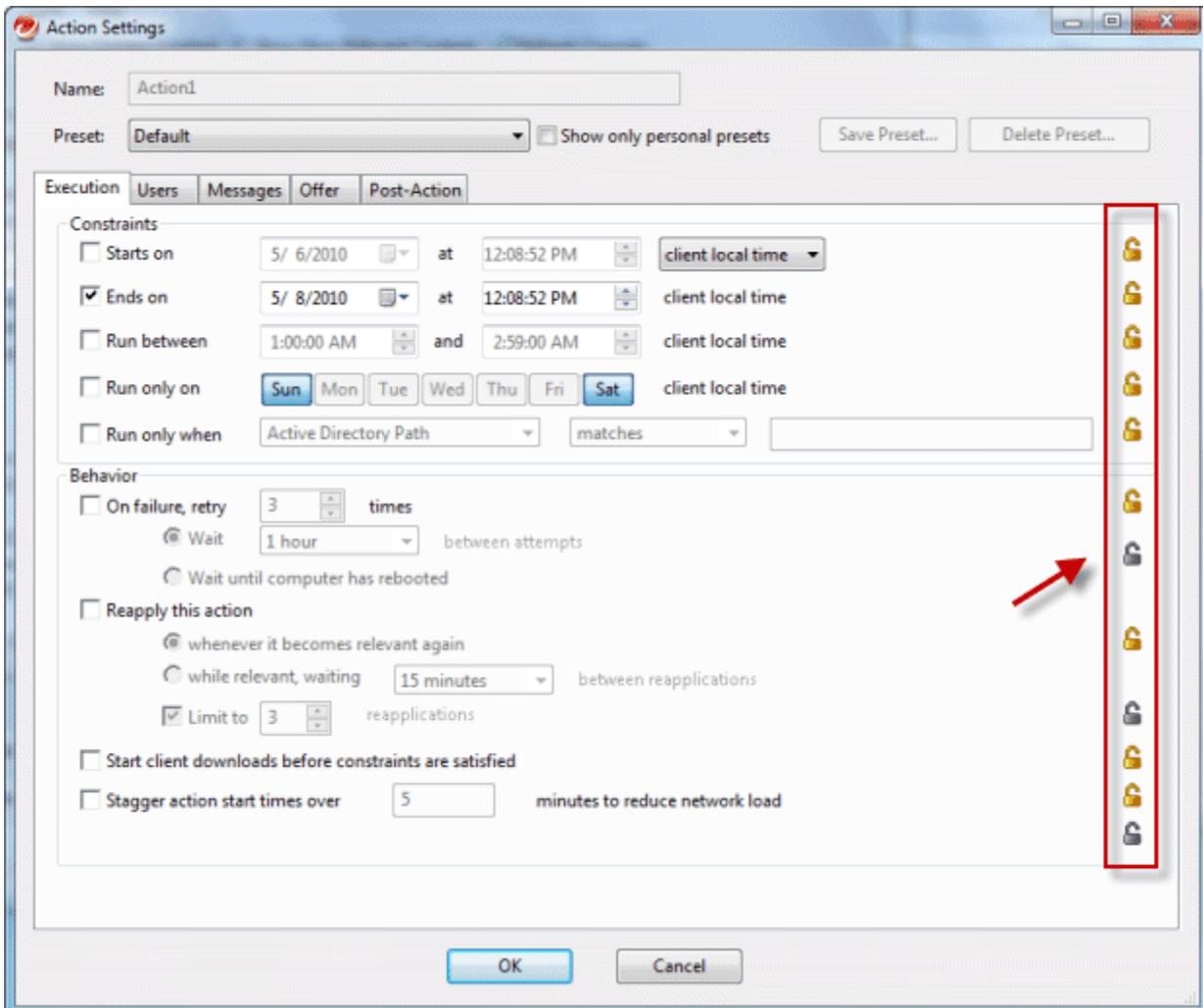
- **Use the action script from the original Fixlet or Task message:** This is the default for most Fixlet actions, and is the recommended option.
- **Use the following action script:** If you opted to create a custom action script when you deployed this action, this button will be selected, and the following two items will determine the course of the action:

- **Action Script Type:** The type of action script you want to use for this script. Some of the options include:
  - **BigFix Action Script:** This is the standard scripting language for BigFix actions.
  - **AppleScript:** This is Apple's scripting language for controlling computer resources.
  - **sh:** indicates that the action is a shell script, intended to be run by a linux / unix / bsd shell.
- **Action Script:** Type your action script into this text box. The default is the prepackaged action script that came with the original Fixlet message. You can modify the existing script, or enter an entirely new script. Scripting is powerful and can have huge ramifications. Make sure to test your action on a small scale before you deploy it on your entire network!

This dialog is available by selecting a Fixlet message from any list, then clicking an action button. From the **Take Action** dialog, select the **Action Script** tab.

## Action Settings

The **Action Settings** dialog lets you apply lockable Action Settings to a new or customized Fixlet message, Task or Baseline.



Using the lock icons to the right of the screen, you can lock the individual items in under each of the tabs of this dialog to force the action to be run with the selected constraints.

- At the top of this dialog is the **Name** of the Action. Depending on the context it may be editable, should you wish to rename it or add extra information to it.

Below the Name box are some buttons that allow you to save or re-use your Action values:

- **Preset:** This is a pull-down menu with the names of your existing presets, if any. Click on one to automatically fill out your Action settings.
- **Show only personal presets:** Check this box to limit the presets to your own personal presets.
- **Save Preset:** After creating custom settings for an Action, you can save them for later re-use.
- **Delete Preset:** Select a preset and then click this button to delete it.

This body of the dialog contains several tabs, including:

- **Execution:** This tab allows you to set constraints on the Action, including starting and ending dates and run windows. You can also set up retry counts (in case the Action fails or reverts) and allow the deployment to be distributed over a period of time to minimize the network load.
- **Users:** Allows you to specify whether or not you require a logged-on user (or specified group of users) to be present before running the Action.
- **Messages:** Specify informative messages to be displayed on the targeted BES Clients, along with options for end user interaction.
- **Offer:** This tab allows you to convert this Action into an Offer, which will trigger the display of an HTML user interface on select BES Clients. The user has the option to select these Offers from a list.
- **Post-Action:** Specify a follow-up behavior for the Action, such as a restart or shutdown, including appropriate warning messages.

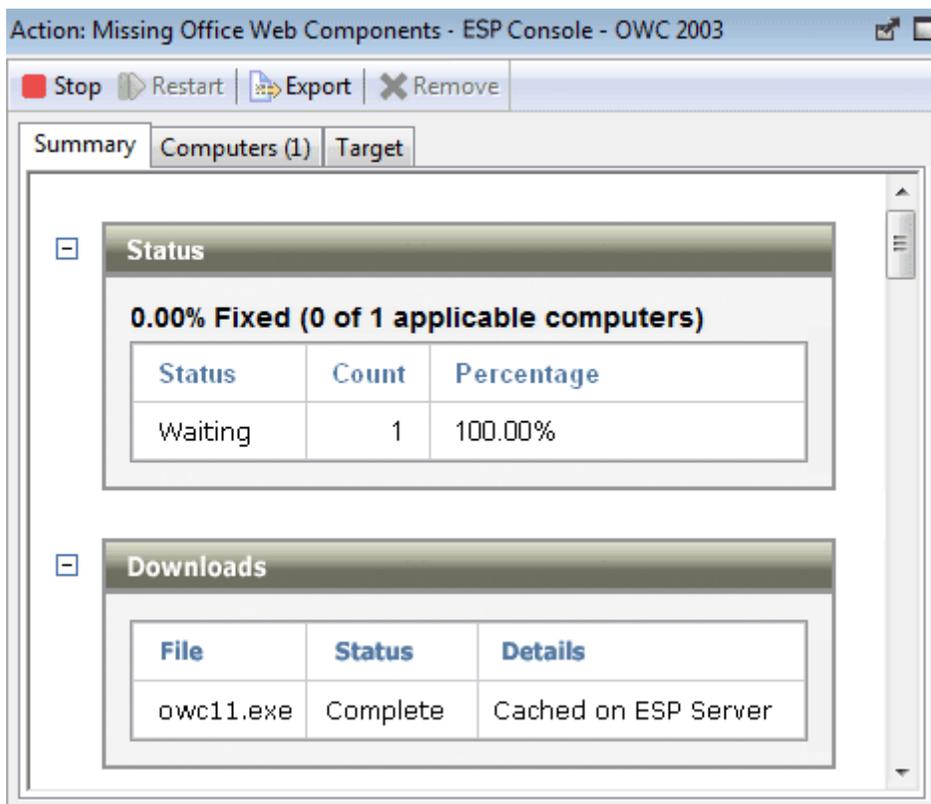
To lock or unlock any of the items under these tabs, simply click the lock icons to the right.

When you've finished specifying your Action settings, click **OK**. Before the BigFix Console can issue the Action, you will need to enter your password . When you do, a progress dialog will pop up to keep you posted on the deployment.

This dialog is available when you create or customize a Fixlet message, Task or Baseline. For Tasks and Fixlet messages, select the **Actions** tab, check the box next to **Include action settings locks** and click the **Edit** button to see this dialog. When creating or customizing a Baseline, click the **Components** tab, check the box next to **Use custom action settings** and click the **set action settings** link.

## Action: Summary

The **Summary** tab of the **Action** document shows various attributes of the selected Action.



These settings were created when the Action was initially specified. (To change these values, see **Take Action**). To view this information for a specific Action, click the Action icon in the navigation tree and select the desired Action from the List Panel. Information about the Action will be displayed in the bottom window. Click on the Summary tab. You will see the following summary:

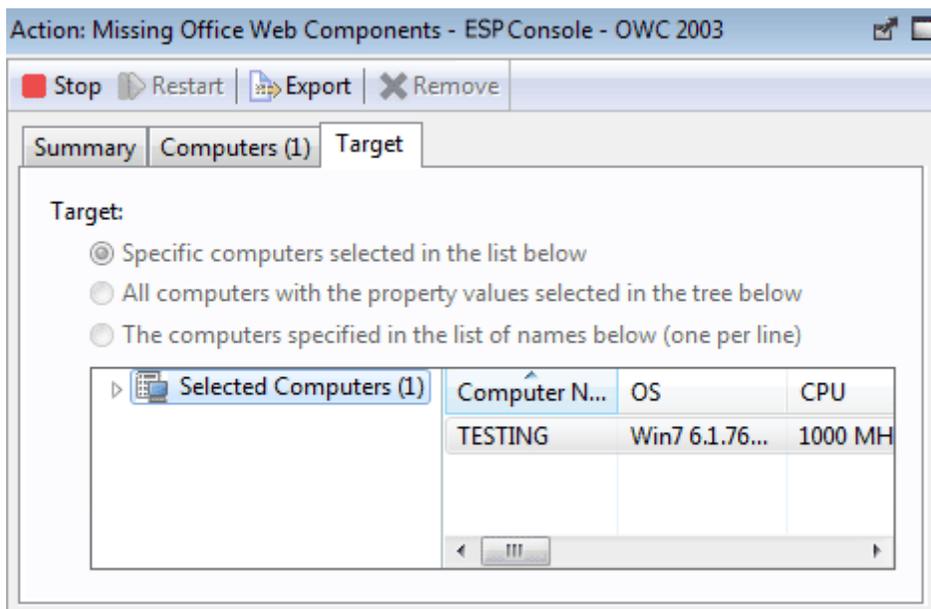
- **Status:** Shows the basic status, indicating how many computers have Reported, or are Waiting, Running or Finished with this Action.
- **Downloads:** This section indicates the disposition of the download (if applicable), on the BigFix root server.
- **Source:** This section displays the Fixlet that gave rise to this Action. It includes a link to the Fixlet should you wish to see more information.
- **Behavior:** This section displays certain behavioral information about the Action, including:
  - **Messages:** Describes any messages that should be displayed either before or during the execution of the specified Action.
  - **Users:** Lists the requirements for user intervention in the Action. Allows a user interface to be presented to select user groups.
  - **Execution:** Contains information about the execution of the Action, including ending time, reapplication and what should happen if the Action fails.
  - **Post-Action:** Provides information about what should happen -- including restarting or shutting down -- after the application of the Action.
- **Details:** This section displays information about the underlying Relevance expressions and Action scripts.
  - **ID:** The ID of the Action
  - **Domain:** The name of the Domain hosting this Action.
  - **Type:** Typically Single Action.
  - **State:** One of the many states of an Action as it deploys.

- **Issued:** The date of issuance and the operator who issued the Action.
- **Relevance:** This is a full listing of the relevance statement that will determine the targeting of this Action.
- **Action Script:** This is a listing of the script that will be executed if this Action is relevant to the client computer.
- **Success Criteria:** Describes what criteria will be used to determine the successful conclusion of the Action.
- **Comments:** This is a text box that allows you to view or attach a comment to the Action.

This dialog is available by picking an Action from the navigation tree in the Domain Panel and then clicking on an Action from the List Panel. Then click the **Summary** tab in the Work Area below.

## Action: Target

The **Target** tab of the **Action** document presents a read-only display of the computers targeted by the specified Action..



The dialog shows which computers are currently targeted by the Action. The original targeting was set by the **Take Action - Target** dialog. Depending on the targeting method, this list of computers can be static or dynamic. There are three read-only radio buttons at the top of this dialog which correspond to the targeting choices made when the Action was deployed.

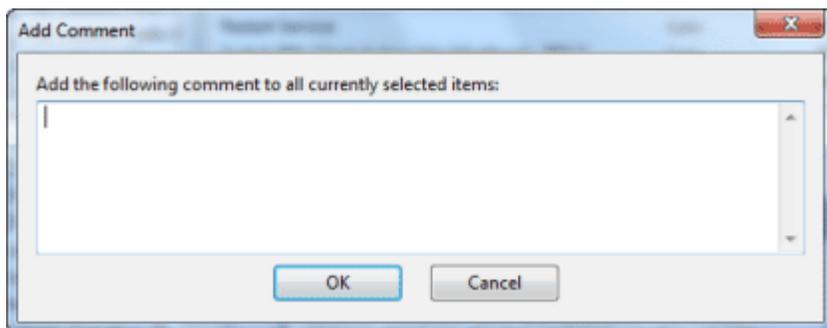
- **Specific Computers selected in the list below.** The currently displayed computer list (typically just the relevant computers) will guide the application of Actions if this choice has been selected. This is the default behavior.
- **All computers with the property values selected in the tree below.** This button indicates that the Action was targeted by the specified retrieved properties. In essence, an action targeted like this is waiting for any BES client computer to change some retrieved property, like its OS or its disk space. Short-term or one-time Fixlets will typically need an expiration date (look under the **Execution** tab). Policy Fixlets, on the other hand, are often open-ended.

- **The computers specified in the list of names below.** If this option was selected, you will see a list of computers that have been targeted for this action.

This dialog is available by clicking the **Actions** icon in the Domain Panel navigation tree and then clicking on an Action from the List Panel. Then click the **Target** tab in the Action Work Area below.

## Add Comment

The **Add Comment** dialog lets you attach an explanatory comment to Fixlet messages, Tasks, Baselines, Actions, Computers, Computer Groups and Analyses.

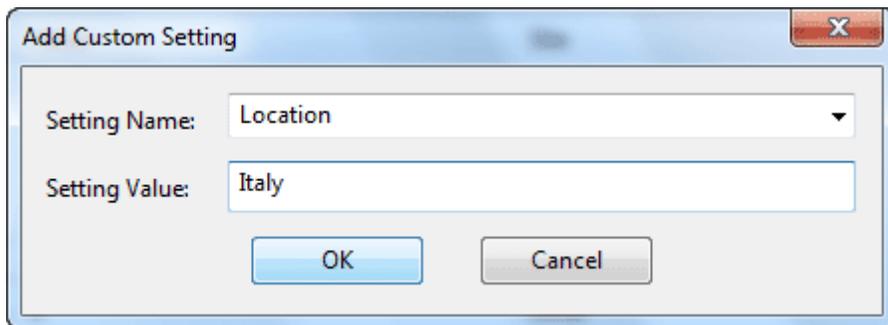


The comment you enter here will then appear in the Description or Summary tab when you open one of the associated items in the workspace.

This dialog is available by right-clicking an item from the List Panel and selecting **Add Comment** from the context menu.

## Add Custom Setting

This dialog box lets you create a custom Name/Value setting that will apply to the selected computer.

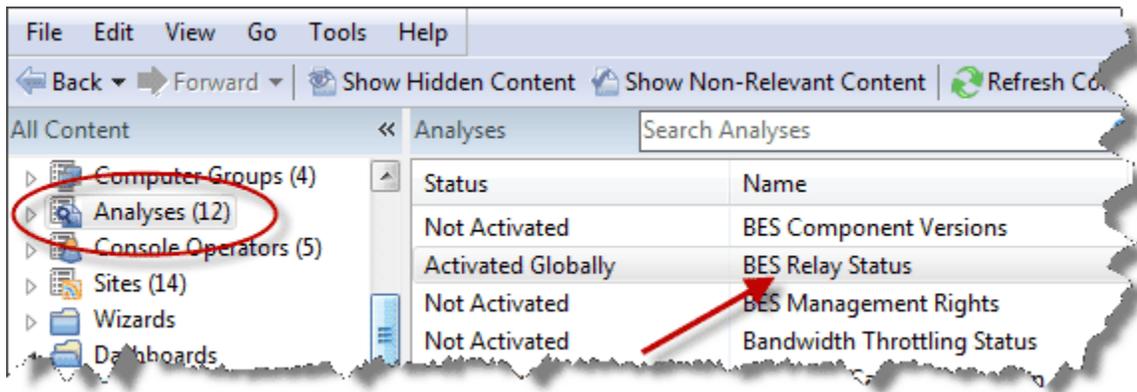


Type a name for the variable in the first input box, and type the value of the variable in the second box. This can be useful for naming or otherwise attaching text or numeric values to a computer or set of computers.

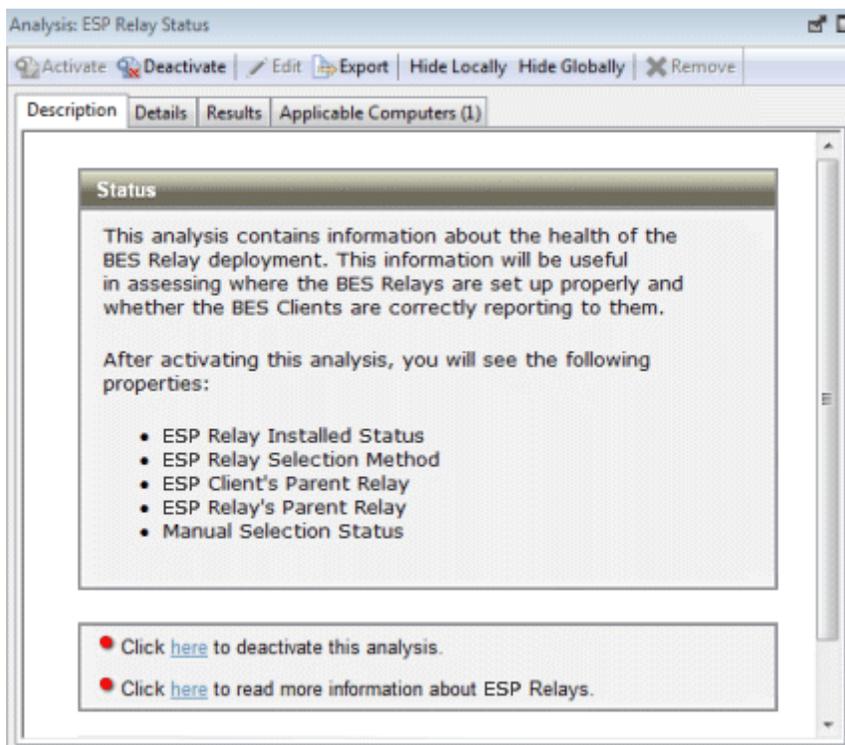
This dialog is available from the Edit Computer Settings dialog. Right-click a computer from any listing, select **Edit Computer Settings** from the pop-up menu and then click the **Add** button.

## Analysis List and Document

A list of Analyses is displayed when you click **Analyses**, or any of its child nodes, from the Domain Panel navigation tree.



An **Analysis document** is displayed in the Work Area of the BES Console when you click an item from this list.



At the top of the Analysis document is the name of the analysis. There is a toolbar at the top of the window, with the following choices:

- **Activate:** Start the specified Analysis. This option is only available if the Analysis is currently deactivated.

- **Deactivate:** Stop the specified Analysis. This option is only available if the Analysis is currently activated.
- **Edit:** Make changes to this Analysis. This option is only available if this is a custom Analysis.
- **Export:** Save a copy of this Analysis in order to import it into a different Console or deployment or to edit it in an external editor.
- **Hide Globally:** Hide this Analysis from all Consoles.
- **Hide Locally:** Hide this Analysis from the local Console only.
- **Remove:** Delete the Analysis. This option is only available for custom Analyses.

There are several tabs in an Analysis document. They include:

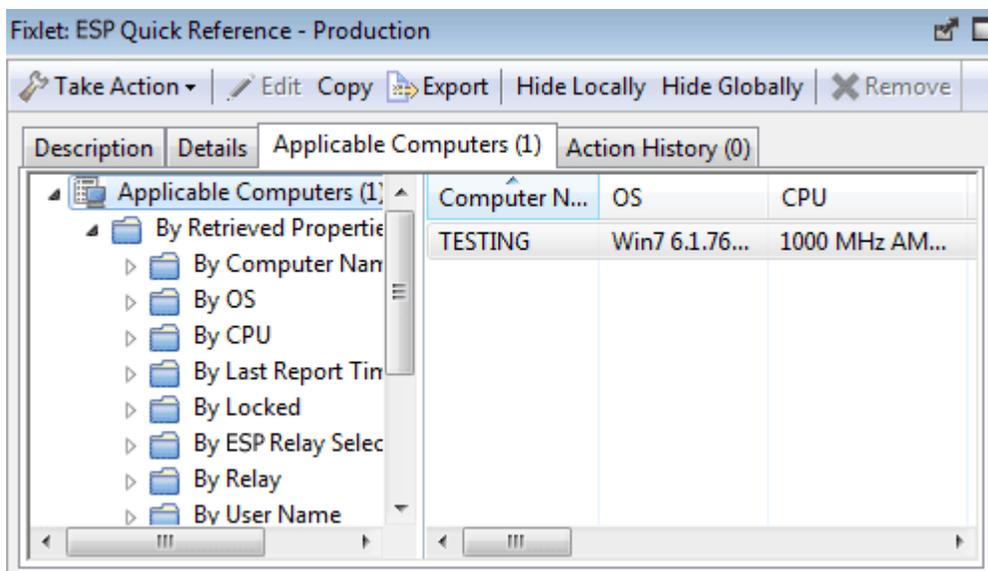
- **Description:** An HTML page describing the Analysis, along with a link to activate or deactivate the Analysis.
- **Details:** An HTML page listing the various Analysis attributes, including Properties and Relevance. At the bottom of the page is a text box for entering a Comment attached to the Analysis.
- **Results:** A dialog displaying the results of the Analysis. This tab is only visible for an activated Analysis.
- **Applicable Computers:** A list of the BES Clients where this Analysis is applicable. This is a typical filter/list panel for computers; click a filter in the left panel to narrow down the list of computers in the right panel.

To display an Analysis list, click the **Analyses** icon (or any of its child nodes) in the Domain Panel navigation tree.

An **Analysis document** is opened whenever you open an item in an Analysis list.

## Applicable Computers Tab

The **Applicable Computers** tab displays all the networked computers that are affected by the currently selected **Fixlet**, **Task**, **Analysis** or **Baseline** object.



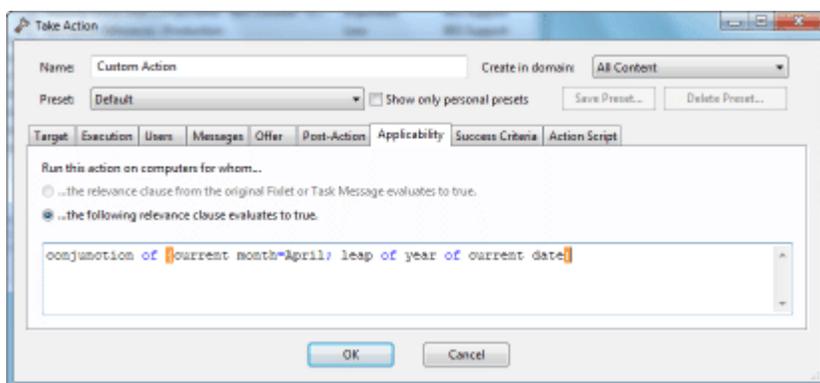
This is a filter/list view with a filter panel on the left, allowing you to narrow down the displayed list of computers. To do so, open a retrieved property or group from the left panel and select a value to filter the list.

Like other filter/lists in the BigFix Console, you can sort it by clicking on the column headers. You can add or remove header properties by right-clicking in the header row.

This dialog is available by opening a Fixlet, Task, Analysis or Baseline from the List Panel and clicking the **Applicable Computers** tab in the Work Area below.

## Applicability Tab

The **Applicability** tab can be found in various Action dialogs. It lets you determine what criteria will be used to judge the relevance of a Fixlet Action.



It is strongly recommended that you use the original Relevance expression, but you may want to customize it to better suit your needs. For instance, you might want to AND the entire expression with inclusion in a specified computer group to narrow its scope.

### Run this action on computers for whom:

- **The relevance clause from the original Fixlet or Task Message evaluates to true.** This is the default action, and the one most recommended.
- **The following relevance clause evaluates to true.** In certain circumstances, you may wish to define a more or less restrictive criteria for applicability.

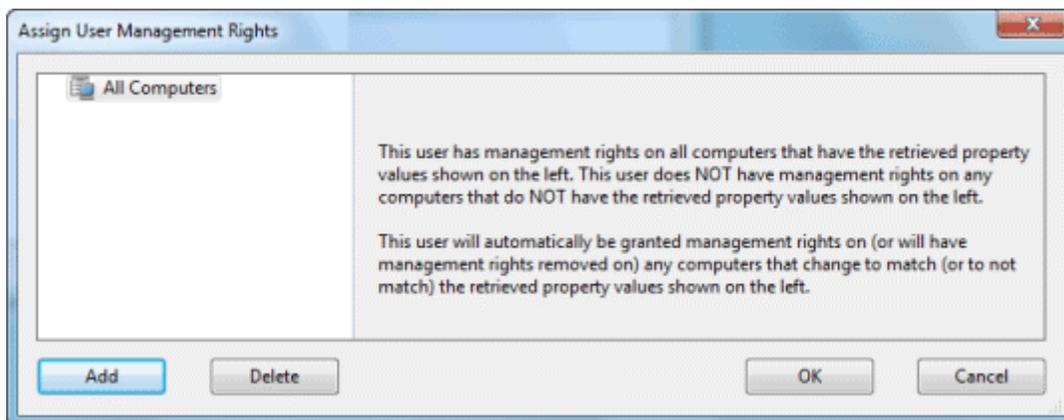
If you opt for the second choice, the text box below becomes editable and you can revise the original Relevance clause, which is the default value.

This tab is available from several different dialogs:

**Take Action, Take Multiple Actions, and Edit Computer Settings.**

## Assign User Management Rights

The **Assign User Management Rights** dialog lets you choose which computers an operator can manage.



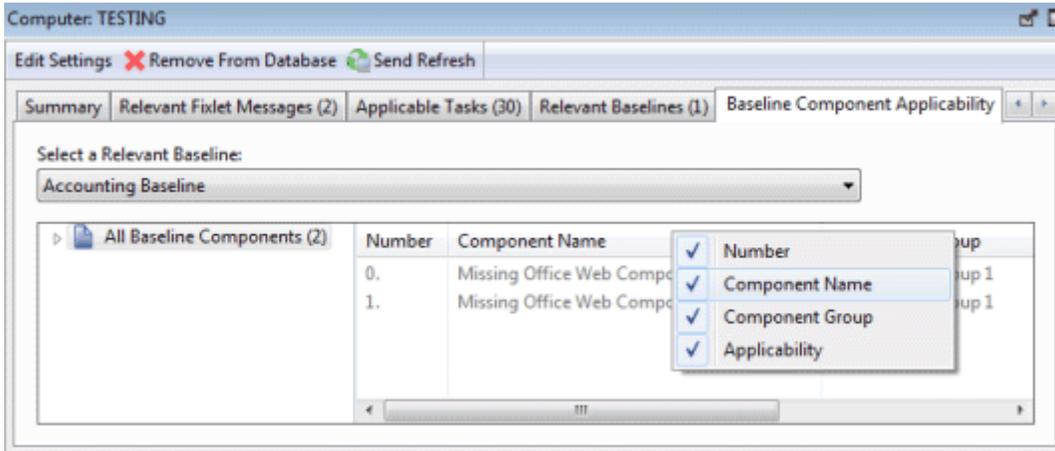
This dialog displays the current set of computers that can be managed by the selected Console operator and lets you add or delete computers from that set. There are two buttons in this dialog:

- **Add:** Add new computers to the set of computers that the operator can manage. This brings up a standard filter/list box of the computers on your network. Use the values of the retrieved properties to filter down the group of computers for this operator. The use of retrieved properties -- including custom properties -- makes it simple to group computers. For instance, you may want to group computers by their operating system or cpu type. Or you might create a special computer setting, like department or location, and use that to parcel out management rights to the selected operator. Or there may be computers using particular applications that you want to assign to specialists in your organization.
- **Delete:** This button lets you remove computers from the set of computers that the operator can manage. It will bring up a dialog that will let you choose which retrieved property filters you want to delete. (If a single filter was defining the rights, when you select Delete, it will do so without bringing up this dialog.)

This dialog is available by selecting **Console Operators** from the Domain Panel navigation tree, right-clicking any operator in the List Panel and choosing **Assign User Management Rights** from the context menu (or choose **Assign User Management Rights** from the **Edit** menu). You must have logged in with Administrator rights to view this tab.

## Baseline Component Applicability Tab

The **Baseline Component Applicability** tab of the **Computer** document displays a list of Baseline Components that are applicable to the selected computer.

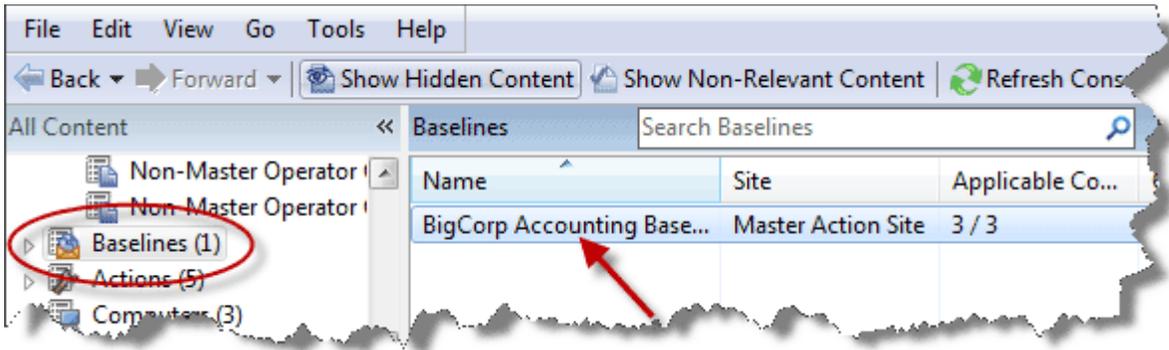


The components are listed by their number as defined in the Baseline, the name of the component, the group it is associated with and whether or not it is relevant to the specified computer. Right-click the header to see what fields are available to display and sort by.

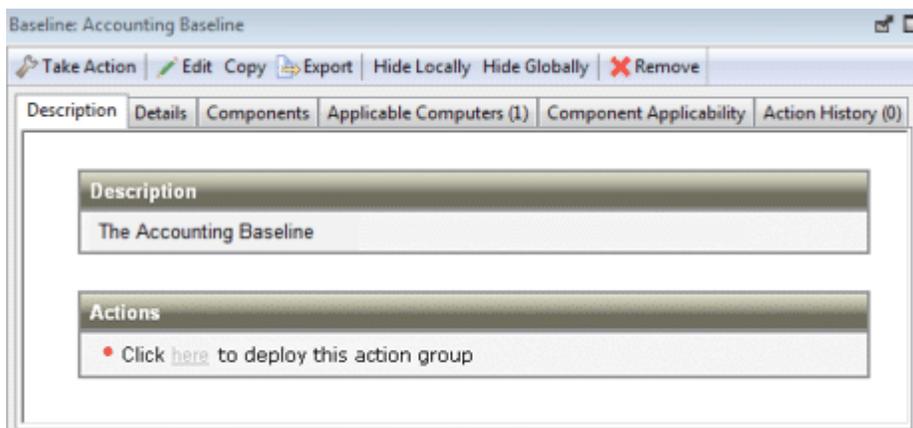
This dialog is available by selecting **Computers** from the Domain Panel navigation tree, clicking a computer from the List Panel and clicking the **Baseline Component Applicability** tab.

### Baseline List and Document

A list of Baselines is displayed when you click **Baselines**, or any of its child nodes, from the Domain Panel navigation tree.



A **Baseline** document is displayed in the Work Area of the BES Console when you click an item from this list.



At the top of the Baseline document you'll find the Baseline name and a toolbar containing several tools:

- **Take Action:** Click this button to execute the default Actions in this Baseline Group.
- **Edit:** Bring up the Edit Baseline dialog to make changes to this Baseline.
- **Copy:** Bring up the Create Baseline dialog to make and edit a copy of this Baseline.
- **Export:** Save this Baseline to import into another Console or deployment or to edit it in an external editor.
- **Hide Locally:** Hide this Baseline from the Local Console.
- **Hide Globally:** Hide this Baseline from all Consoles. It can be retrieved later by clicking the **Show Hidden Content** button on the Console toolbar.
- **Remove:** Delete this Baseline from the database.

There are several tabs in a Baseline document. They include:

- **Description:** An HTML page describing the Baseline and a set of Actions (implemented as links) that are designed to address the problem described.
- **Details:** An HTML page describing the Properties and Relevance clauses behind the Baseline. At the bottom of the page is a text box to enter a comment to attach to the Baseline.
- **Components:** Lists the Fixlet messages and Tasks that have been grouped into this Baseline.
- **Applicable Computers:** Shows what subset of computer components this Baseline targets. This tab also indicates the current count of Applicable Computers for instant viewing.
- **Component Applicability:** Lists the numbered components of the Baseline. In the Applicable Computer column, displays the number of computers where the Baseline component is applicable and following the slash, the total number of computers where the Baseline is applicable.
- **Action History:** Shows the history of any Actions that have been invoked by this Baseline. This tab also indicates the current count of executed Actions for easy viewing.

To display a Baseline list, click the **Baseline** icon (or any of its child nodes) in the Domain Panel navigation tree.

A **Baseline document** opens whenever you click an item in a Baseline list.

## Change Database Password

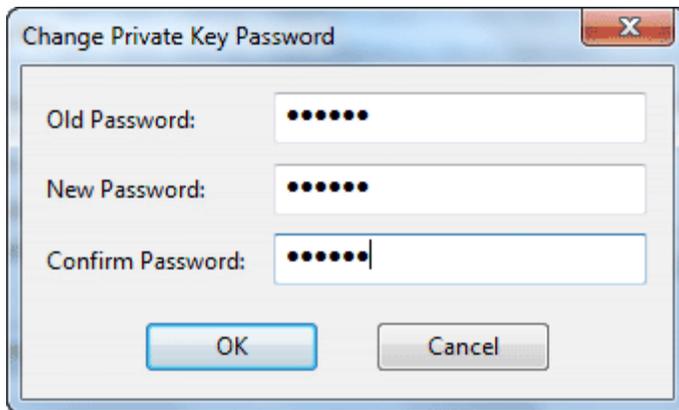
The BES Console allows you to change the database password if you have the proper authorization. Enter the current password, then enter and validate the new password.

**Note:** This dialog is not available if you are using NT Authentication and thus aren't using a password to connect to the database.

This dialog is available when you select **File > Change Database Password**.

## Change Private Key Password

The BES Console allows you to change your private key password.



Enter your current password, then enter and validate the new password.

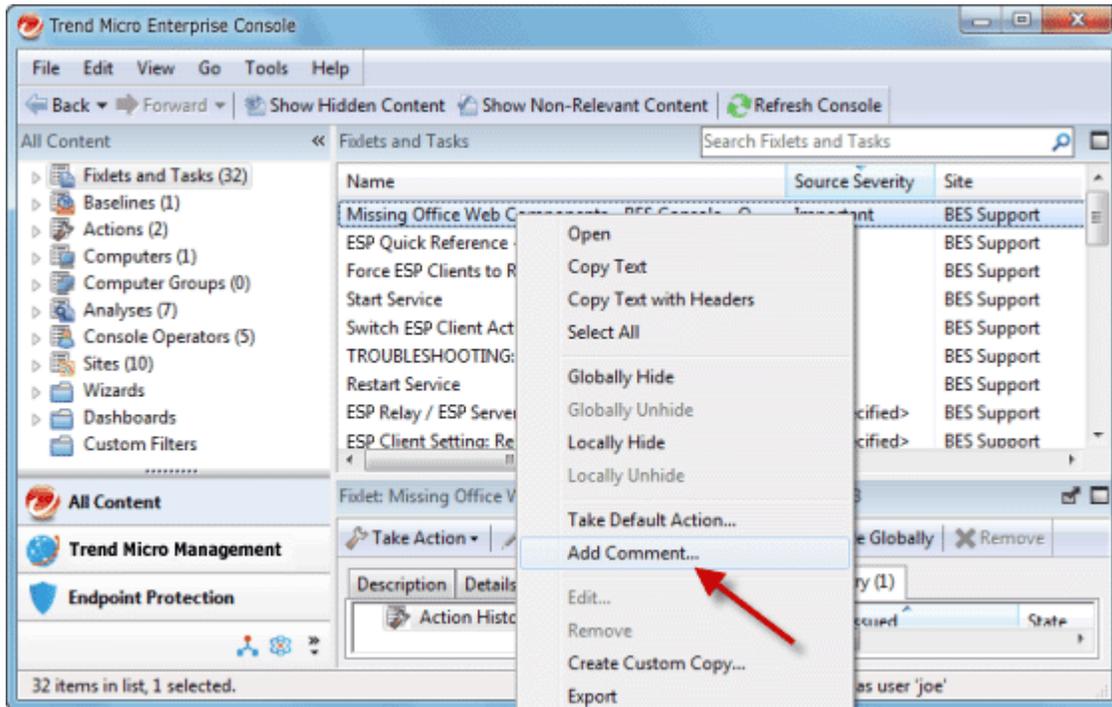
This dialog is available when you select **Tools > Manage Signing Keys > Change Password**.

## Comments

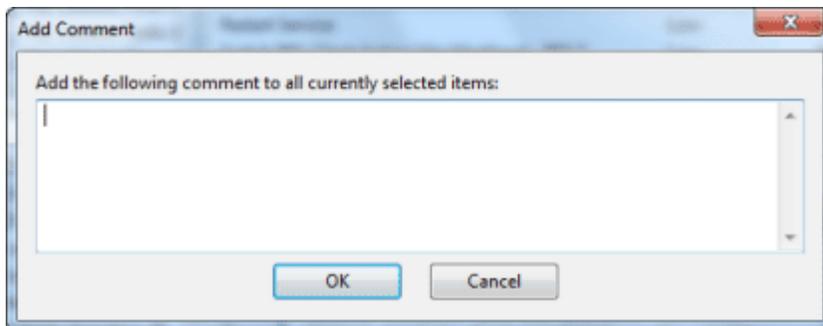
BES Console Operators can make comments on most of the BES objects, including Fixlets, Tasks, Actions, Computers, etc. These comments can be created whenever an object like a Fixlet is selected and displayed in the main BES window. Here's how to create a comment for a Fixlet message:

1. Click on the **Fixlets and Tasks** icon in the Domain Panel navigation tree.

2. Right-click the desired Fixlet and select **Add Comment**.



3. Type your comment into the dialog box that pops up.



4. Alternatively, you can double-click a Fixlet message, select the **Details** tab and enter your comment at the bottom of the page.

Similarly, you can attach comments to Tasks, Actions, Computers and Analyses. These comments can include keywords or operating notes. You might want to have special information about certain computers, or usage pointers for special Tasks. This is a free-form field, so you can make up your own rules for commenting.

To view an aggregated list of all comments, select **View Recent Comments** from the **Tools** menu.

Object	Comment	Console Operator	Time Entered
<a href="#">Start Service</a>	Only used for Development clients	joe	5/6/2010 4:37:45 PM
<a href="#">Missing Office...</a>	Executed per Policy #25	joe	5/6/2010 4:37:10 PM
<a href="#">Stop Service</a>	'joe' has marked this object as hidden.	System	5/5/2010 1:33:54 PM
<a href="#">Restart Service</a>	'joe' has marked this object as visible.	System	5/5/2010 1:26:01 PM

This dialog lists all the comments created to date, sorted by time-stamp, with the most recent comments at the top. The name of the Console Operator responsible for the comment is listed next to the description. Each comment contains a link that will open up the original object in the main window, allowing you to view the description and other aspects of the object.

## Component Applicability Tab

The **Component Applicability** tab of the **Baseline** document displays a list of how many computers have been targeted by the specific component.

Description	Details	Components	Applicable Computers (1)	Component Applicability	Action History (0)
All Component Groups					
Component Group 1					
		Number	Component Name	Applicable	
		0.	Missing Office Web Components - ESP Co...	1/1	
		1.	Missing Office Web Components - ESP Co...	1/1	

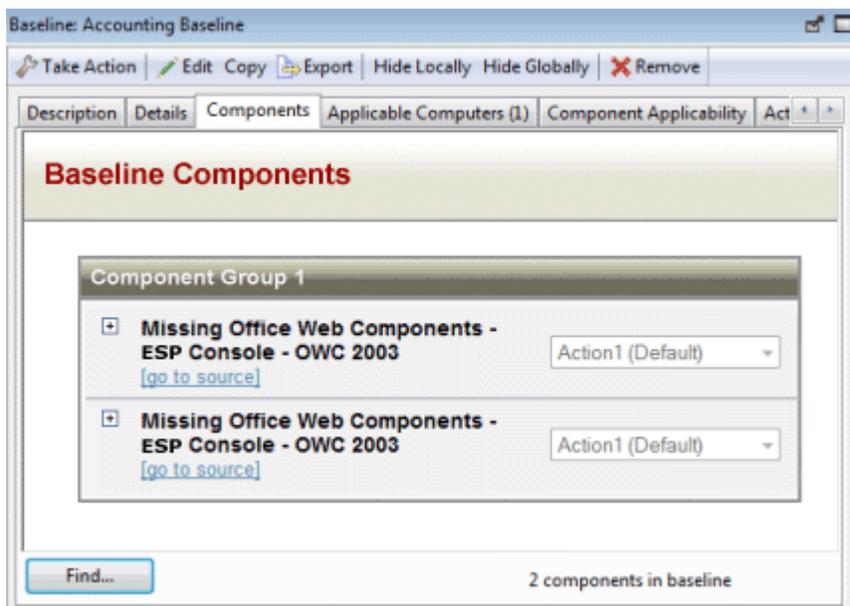
The components are numbered, corresponding to their order under the Components tab.

Following the number is the name of the component and then the Applicable Computer Count. This column is composed of multiple numbers in a form like '35/50 (4 unknown)'. The first number is the count of computers where the component is applicable, the second is the total number of computers targeted by the Baseline.

This dialog is available by choosing the **Baseline** icon in the Domain Panel navigation tree, opening an item from the resulting List Panel and clicking the **Component Applicability** tab.

## Components Tab

The **Components** tab of the **Baseline** document displays a list of all the component Fixlet messages and Tasks that have been grouped into this particular Baseline.



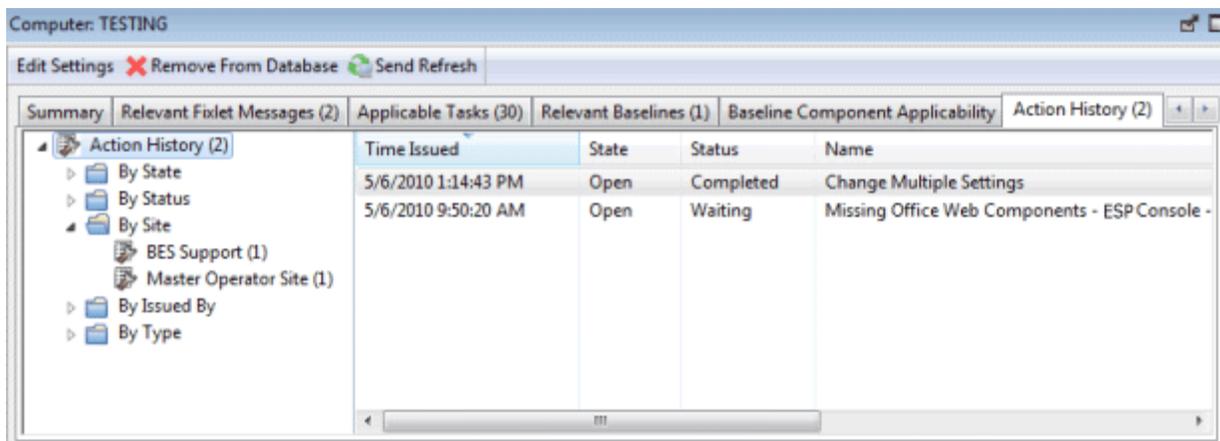
Click on the links beneath each component to view the source Fixlet or Task, or to see the actual code behind the Relevance statements and Action scripts.

The components of a Baseline are copies of the original Fixlet or Task, not pointers. As such, if the underlying Fixlet or Task should change, the Baseline may become out of sync with the original. If this happens, the message **Source Fixlet differs** will show up in the component listing.

This dialog is available by choosing the **Baseline** icon in the Domain Panel navigation tree, opening an item from the resulting List Panel and clicking the **Components** tab.

## Computer: Action History

The **Action History** tab provides a listing of all the actions that have been deployed on the specified computer.



Note that unlike the general action list for all computers available from the main Actions Tab, this list contains only actions targeted to the selected computer.

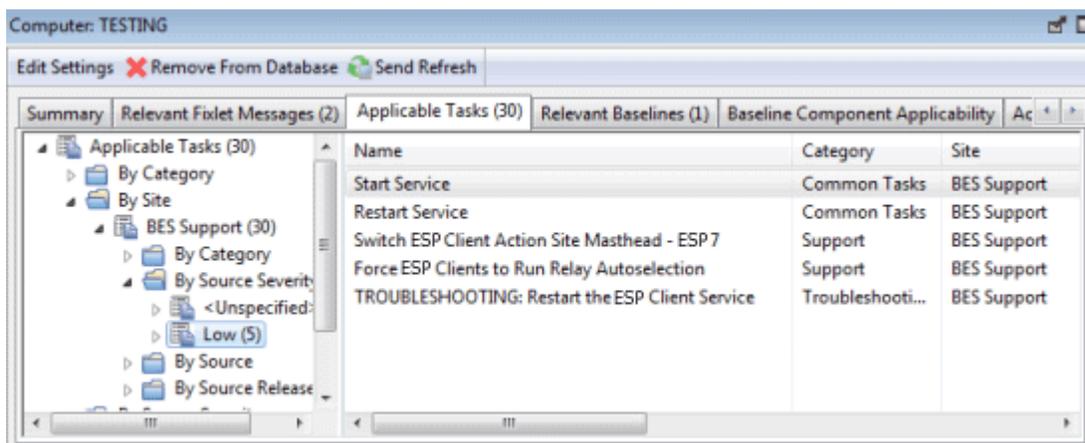
The Action History list has options similar to the any Action List Panel.

To view more information about a particular action, double-click it. That will bring up the corresponding **Action document** in the Work Area.

This dialog is available by choosing the **Computers** icon from the Domain Panel navigation tree and then clicking a computer from the list. Then click the **Action History** tab in the Computer document window.

## Computer: Applicable Tasks

The **Applicable Tasks** tab of the Computer document lists all the Tasks that are relevant to the selected computer.



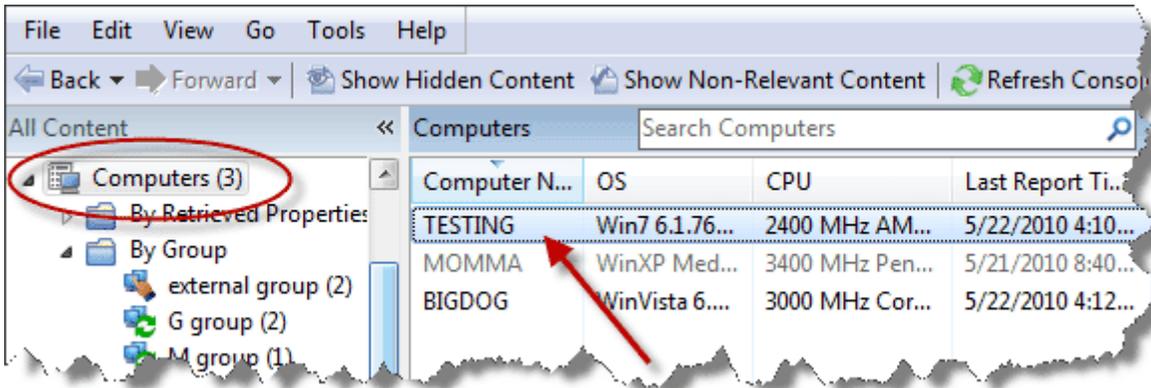
This filter list is updated in real-time, refreshing its display as Tasks are reevaluated. You can filter the list by clicking on items in the left pane, and sort the tasks by clicking on the appropriate headers.

This dialog has the same options as the any Task List Panel.

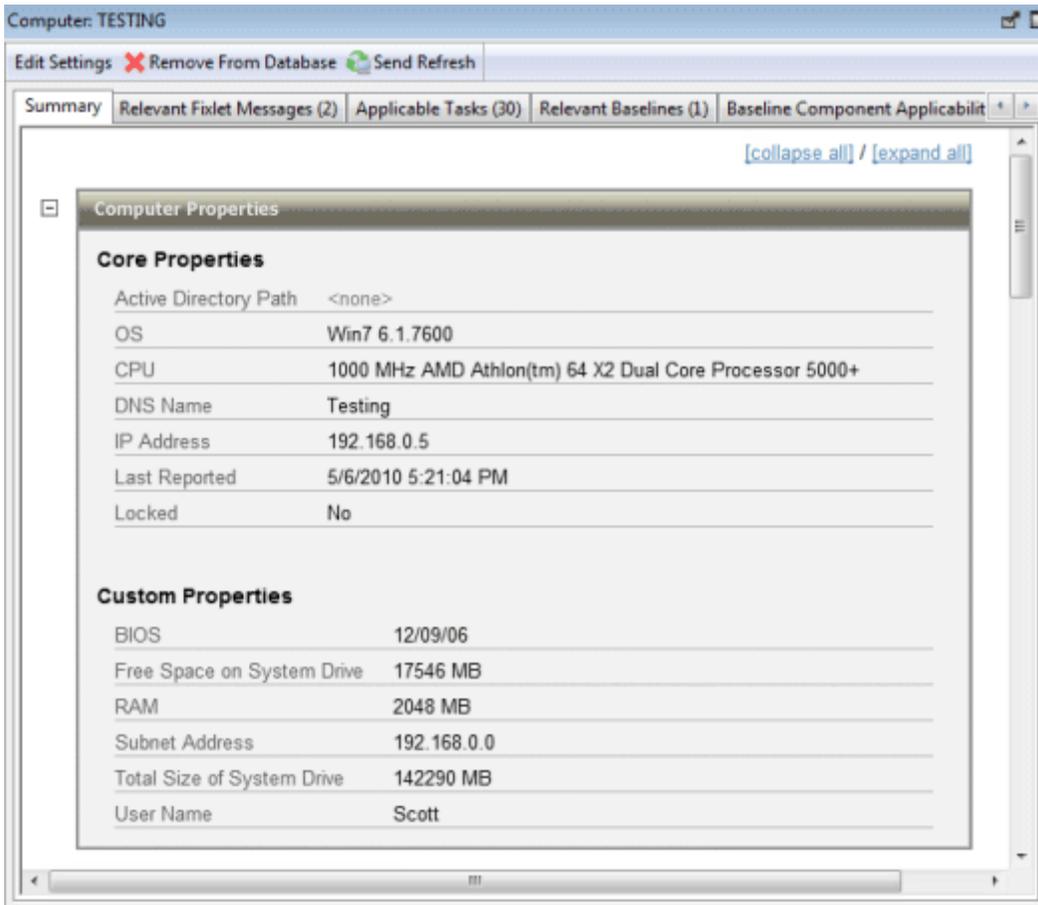
This dialog is available by clicking the **Computers** icon in the Domain Panel navigation tree and then clicking on a computer from the resulting List Panel. Then click the **Applicable Tasks** tab in the Computer document window.

## Computer List and Document

A list of Computers is displayed when you click **Computers**, or any of its child nodes, from the Domain Panel navigation tree.



A **Computer document** is displayed in the bottom window of the BES Console when you click any item from this list.



Click on the **Summary** tab to see essential information about this computer. Here you'll find the name, information about the processor and operating system. Scroll down to see more information, including how many Fixlet messages are relevant to this computer and how many actions are open.

There are several tabs in a Computer document. They include:

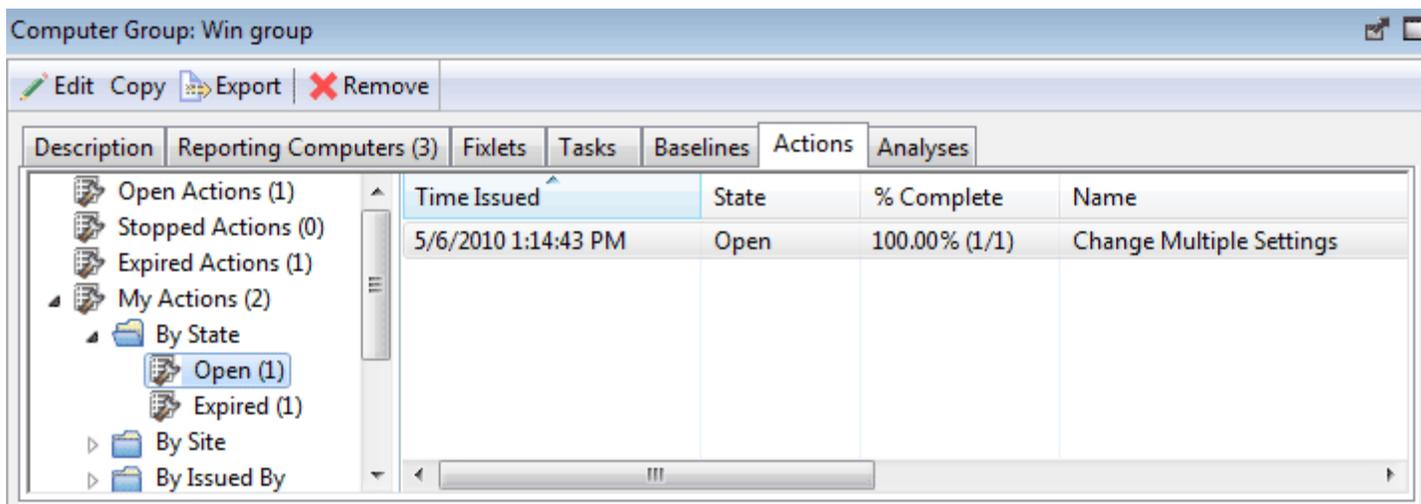
- **Summary:** Displays a list of properties that are being retrieved from this computer, as well as the Client Relay Status, Group Memberships, Custom Sites, Settings and Comments.
- **Relevant Fixlet Messages:** A list of the Fixlet messages that are currently relevant on this computer. These can be winnowed down using the filter tree in the left panel, then sorted by clicking on the column headers. The current number of relevant messages is indicated in the tab itself, so you can see it at a glance.
- **Applicable Tasks:** Lists the Tasks that apply to this computer. The current number of tasks is indicated in the tab.
- **Relevant Baselines:** Lists the Baseline items (Fixlets and Tasks) that have been assigned to this computer. The current number of baselines is indicated in the tab.
- **Baseline Component Applicability:** Shows what components of specified Baselines are applicable to this computer.
- **Action History:** Shows what Actions have been applied to this computer. The current number of Actions is indicated in the tab.
- **Management Rights:** Displays the names of the authorized operators for this computer. The current number of operators is indicated in the tab.

A computer list is displayed when you click on the **Computers** icon (or any of its child nodes) in the Domain Panel navigation tree.

A **Computer document** is opened whenever you click an item in any list of Computers.

## Computer Group: Actions

The **Actions** tab of the **Computer Group** document provides a listing of all actions that target any member computer of the specified group.



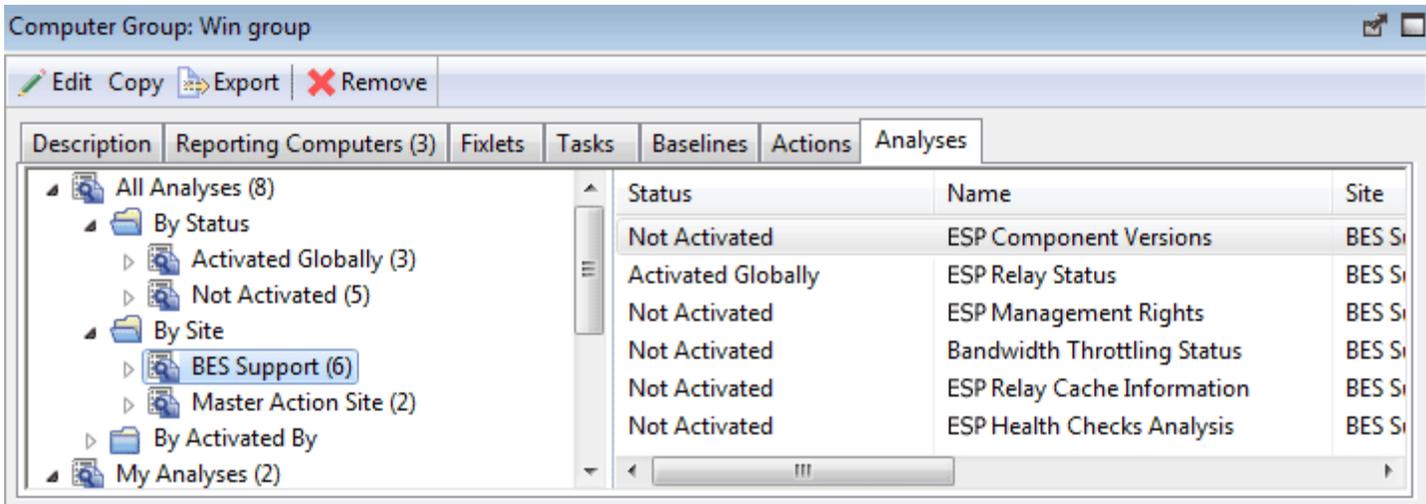
This dialog has the same options as the any Actions List Panel, but contains only Actions targeted to the selected Computer Group.

To view more information about a particular Action, double-click it. That will bring up the corresponding **Action document** in the bottom panel.

This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking on a Computer Group from the resulting List Panel. Then click the **Actions** tab in the Computer Group Work Area.

## Computer Group: Analyses

The **Analyses** tab of the **Computer Group** document provides a listing of all the Analyses that have been deployed and allows you to filter them for the specified Computer Group.



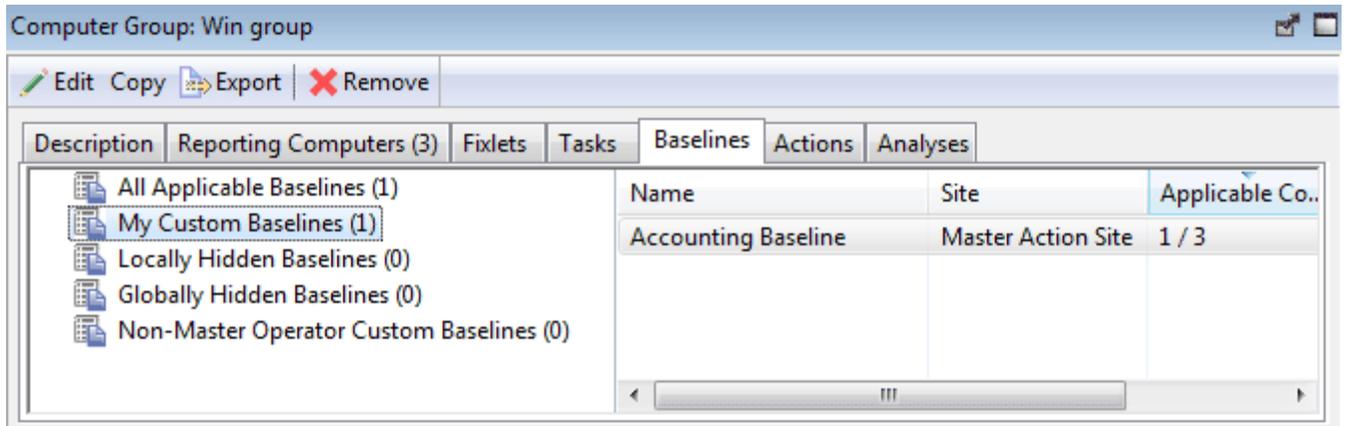
This dialog has the same options as the any Analyses List Panel.

To view more information about a particular Analysis, click it. That will bring up the corresponding **Analysis document** in the bottom panel.

This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking a Computer Group from the resulting List Panel. Then click the **Analyses** tab in the Computer Group document window.

## Computer Group: Baselines

The **Baselines** tab of the **Computer Group** document provides a listing of all the Baselines that have been deployed on the specified Computer Group.



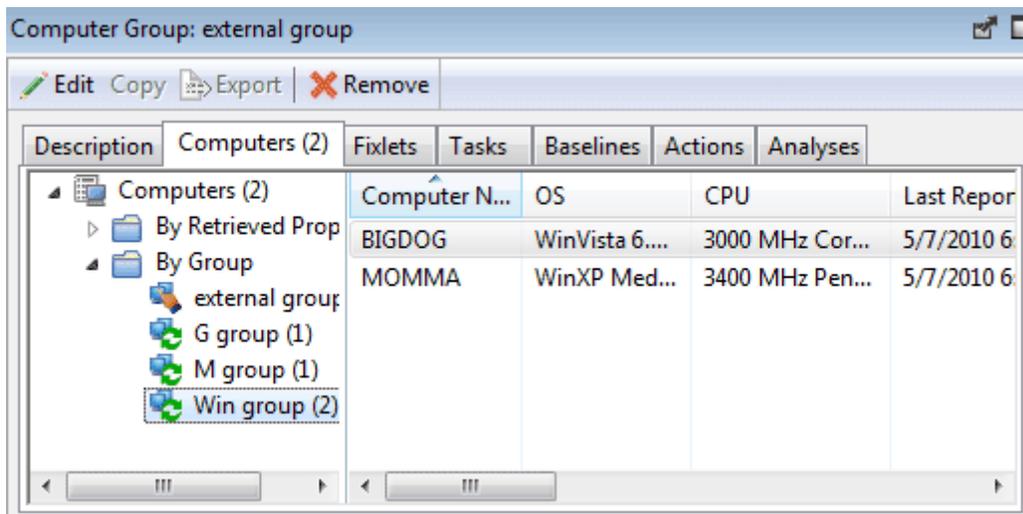
This dialog has the same options as any Baseline List Panel, but contains only Baselines targeted to the selected Computer Group.

To view more information about a particular Baseline, double-click it. That will bring up the corresponding **Baseline document** in the Work Area.

This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking a Computer Group from the List Panel. Then click the **Baselines** tab in the Computer Group Work Area.

## Computer Group: Computers

The **Computers** tab of the **Computer Group** document provides a listing of all the computers that have been *manually* selected to be a part of the specified Computer Group.



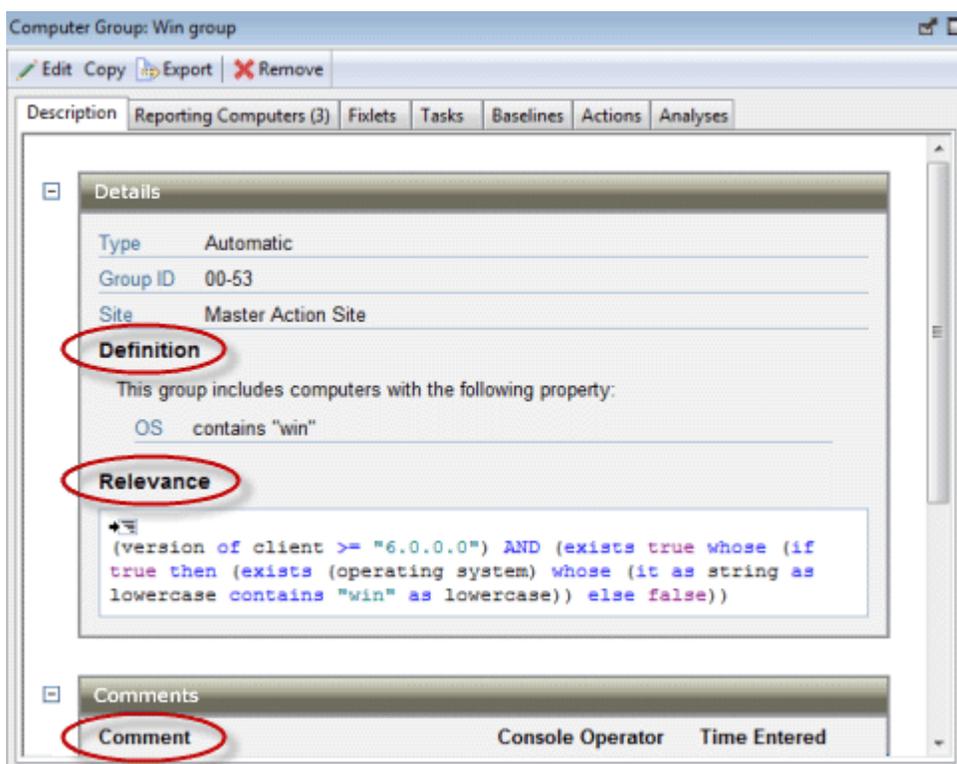
This dialog is displayed for *Manual Computer Groups only*. It has options similar to other Computer lists, but contains only computers belonging to the selected Manual Computer Group. Note that the number of reporting computers is available in the tab itself, for viewing at a glance.

To view more information about a particular Computer, double-click it. That will bring up the corresponding **Computer document** in the bottom panel.

This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking a *Manual* Computer Group from the List Panel. Then click the **Computers** tab in the Computer Group Work Area.

## Computer Group: Description

The **Description** tab of the **Computer Group** document provides information about a selected Computer Group. This is the dialog for an Automatic Computer Group.



It contains different information depending on whether the group is Automatic or Manual:

**Automatic** Computer Groups contain several sections:

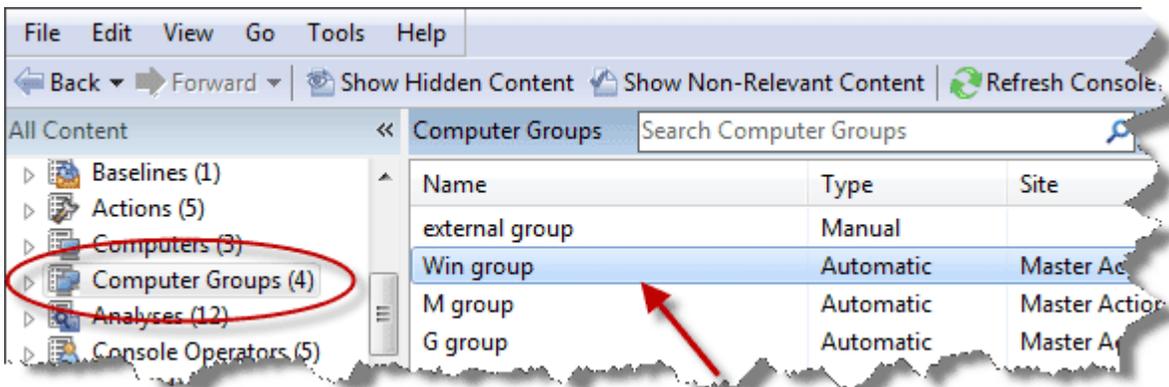
- **Group Definition:** This is a listing of the properties that specify the inclusion of a computer into the group. Each is a clause of the form <property> <relationship> <value>. For instance, **OS contains "win"**, would create an Automatic Computer Group consisting of Windows machines.
- **Targeting Relevance:** This is the full Relevance expression that implements the property evaluation described above. Click on **show indented relevance** to see a formatted version of the expression.
- **Comments:** This is a text box to enter a comment that will be attached to the Computer Group for other operators to view.

**Manual** Computer Groups only contain a **Comment** box. The information you enter here will be attached to this Computer Group and become available to other BES Console operators.

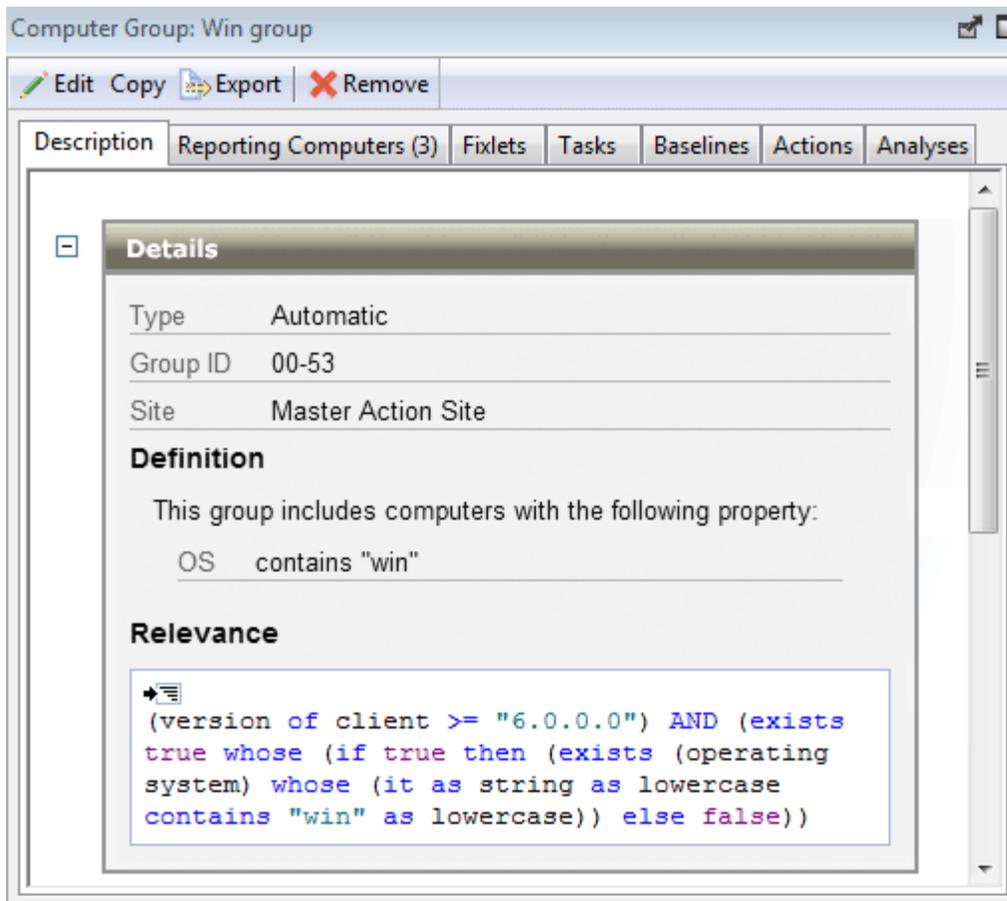
This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking a Computer Group from the List Panel. Then click the **Description** tab in the Computer Group document window.

## Computer Group List and Document

A list of Computer Groups is displayed when you click **Computer Groups**, or any of its child nodes, from the Domain Panel navigation tree.



A **Computer Group document** is displayed in the Work Area of the BES Console when you click any item from this list.



At the top of the Computer Group document is the name of the group. Under that is the Computer Group toolbar. It includes:

- **Edit:** Open up a dialog that allows you to edit the criteria for this group.
- **Copy:** Create a copy of this group and edit it.
- **Export:** Save this group for editing by an external editor.
- **Remove:** Delete this group from the list.

There are several tabs in a Computer Group document, and they may differ according to the group type. They include:

- **Description:** For an Automatic group, this tab will display the Group Definition (as a list of property-associated Relevance expressions), the Targeting Relevance clause that implements the group definition, and a comment box. For a Manual group, this tab will display a comment box only.
- **Reporting Computers:** Only displayed for Automatic groups, this tab is a list of the computers that are currently considered members of the group, based on properties and Relevance. This is a filter/list panel, allowing you to narrow down the list by selecting from the filtering folders on the left side.
- **Computers:** Only displayed for Manual groups, this tab is a list of the computers that have been manually selected to be members of the group. This is a filter/list panel, allowing you to narrow down the list by selecting from the filtering folders on the left side.
- **Fixlets:** Lists all the Fixlet messages that apply to this Computer Group.
- **Tasks:** Lists all the Tasks that apply to this Computer Group.

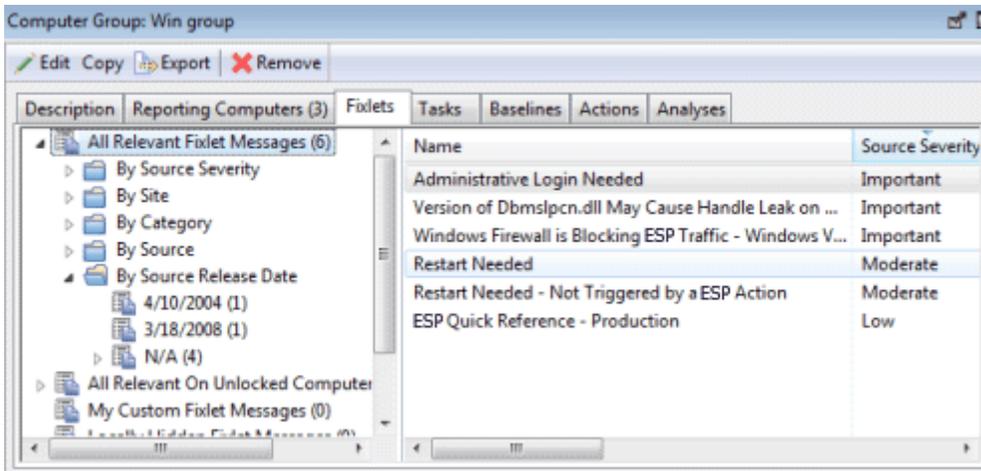
- **Baselines:** Lists all the Baselines that apply to this Computer Group.
- **Actions:** Lists all the Actions that target any member of this computer group.
- **Analyses:** Lists all the Analyses and allows you to filter them by Computer Group.

To display a Computer Group list, click the **Computer Groups** icon (or any of its child nodes) in the Domain Panel navigation tree.

A **Computer Group document** is opened whenever you click an item in a Computer Group list.

## Computer Group: Fixlet messages

The **Fixlets** tab of the **Computer Group** document provides a listing of all the Fixlet messages that have been targeted to the specified Computer Group.



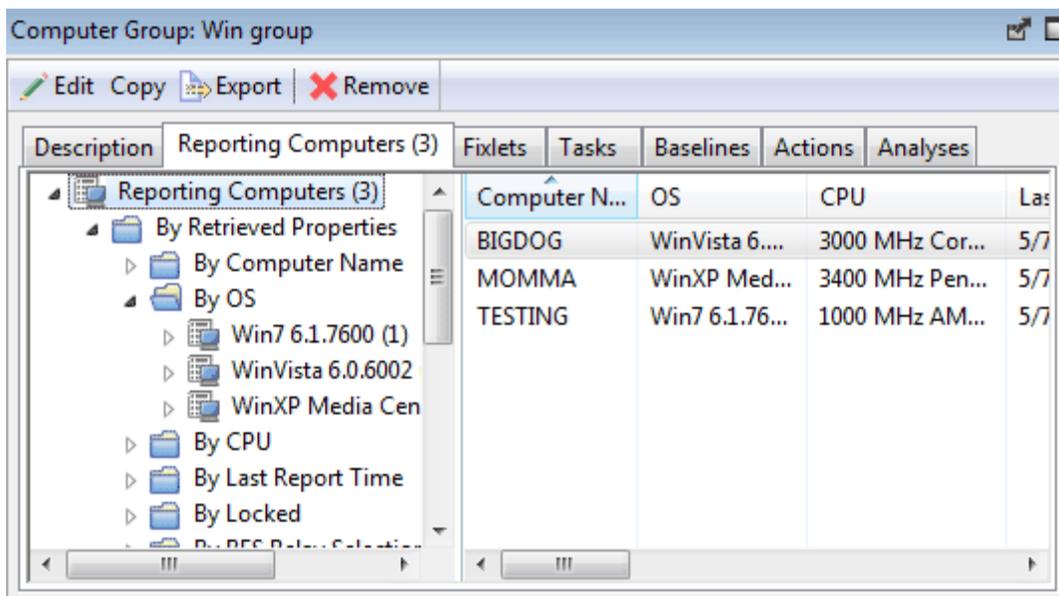
This dialog has the same options as any Fixlet List Panel, but contains only those Fixlet messages targeted to the selected Computer Group.

To view more information about a particular Fixlet message, double-click it. That will bring up the corresponding **Fixlet message document** in the Work Area.

This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking a Computer Group from the List Panel. Then click the **Fixlets** tab in the Computer Group Work Area.

## Computer Group: Reporting Computers

The **Reporting Computers** tab of the **Computer Group** document provides a listing of all the computers that have been *automatically* chosen to be a part of the specified Computer Group by virtue of their property values.



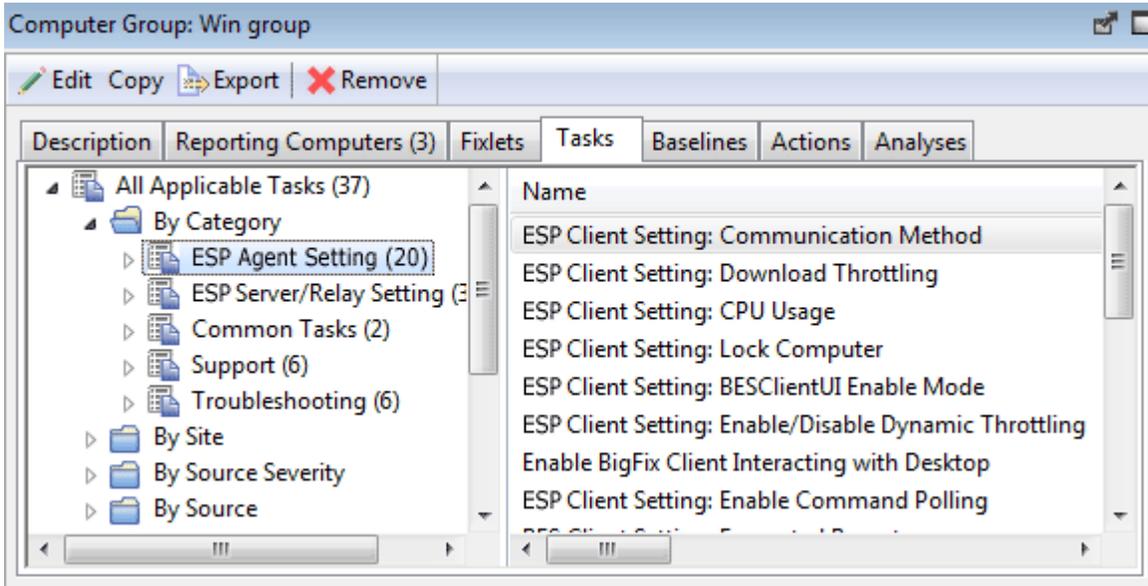
This dialog is displayed for *Automatic Computer Groups only*. It has the same options as any Computer List Panel, but contains only computers reporting to the selected Computer Group.

To view more information about a particular Reporting Computer, double-click it. That will bring up the corresponding **Computer document** in the Work Area.

This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking an *Automatic Computer Group* from the List Panel. Then click the **Reporting Computers** tab in the Computer Group Work Area.

## Computer Group: Tasks

The **Tasks** tab of the **Computer Group** document provides a listing of all the Tasks that are applicable to one or more computers in the specified Computer Group.



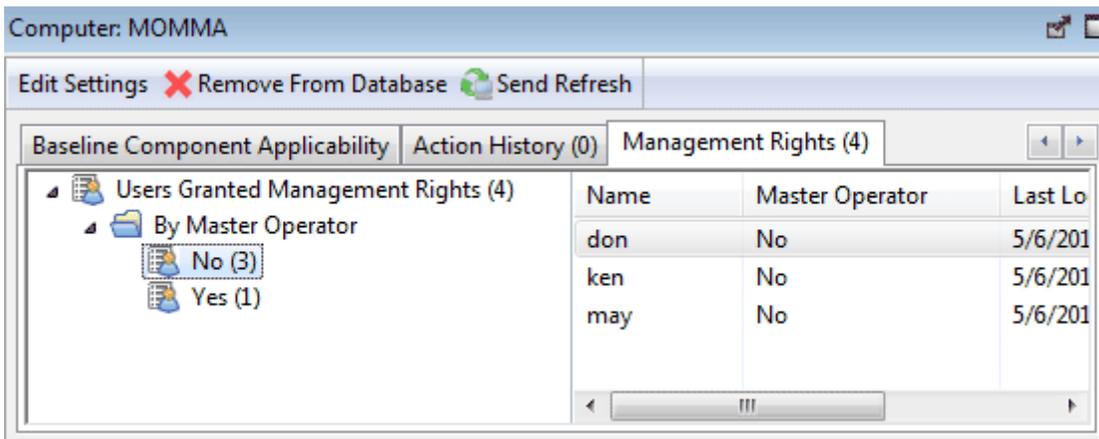
This dialog has the same options as any Task list. Click any header to sort the list.

To view more information about a particular Task, double-click it. That will bring up the corresponding **Task document** in the Work Area.

This dialog is available by clicking the **Computer Groups** icon in the Domain Panel navigation tree and clicking a Computer Group from the List Panel. Then click the **Tasks** tab in the Computer Group Work Area.

## Computer: Management Rights

The **Management Rights** tab of the **Computer** dialog lists the operators who are currently granted management rights to apply actions to the specified computer.



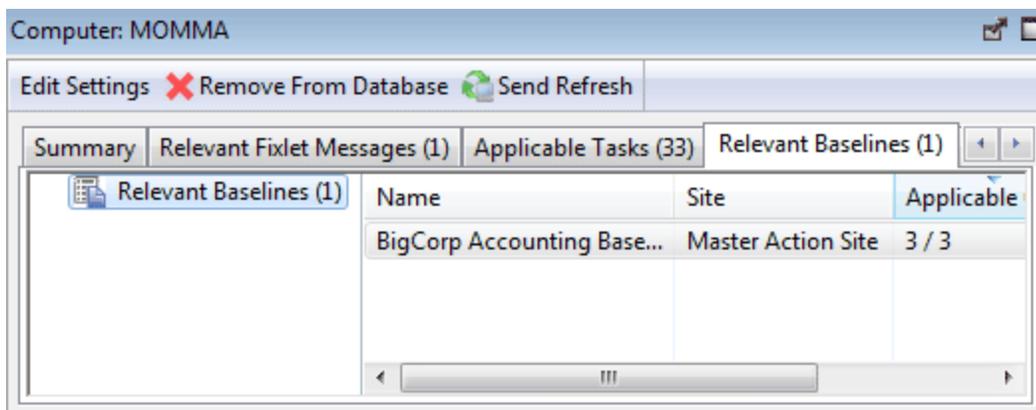
You can filter this list by using the filter tree in the left panel. The list has three headers that you can use to sort the list:

- **Name:** The name of the Console operator who has been granted rights.
- **Master Operator:** A Yes or No flag that indicates if the rights manager is also a BES Master Operator.
- **Last Login Time:** The last time this operator logged in to the BES System

This dialog is available by clicking the **Computers** icon in the Domain Panel navigation tree and then clicking on a computer in the resulting List Panel. Then click the **Management Rights** tab in the Work Area below.

## Computer: Relevant Baselines

The **Relevant Baselines** tab of the Computer document lists all the Baselines that are applicable to the selected computer.



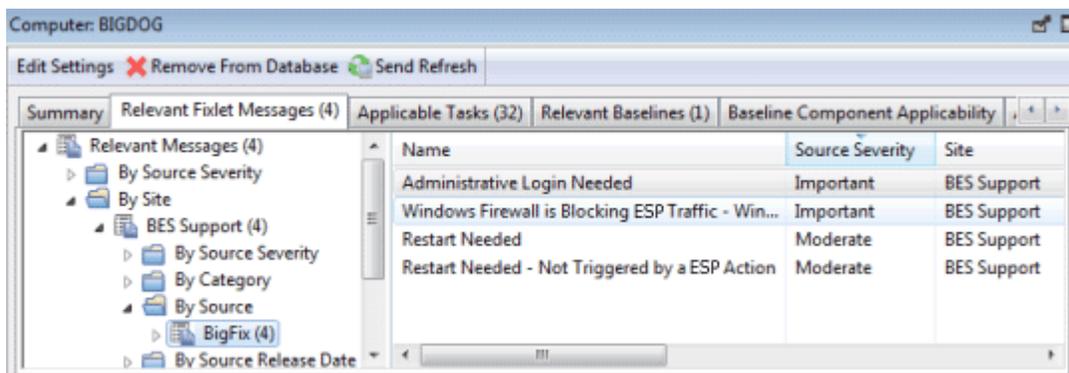
This filter/list is updated in real-time, refreshing its display as Baselines are reevaluated. The number of Baselines that are currently relevant are listed in the tab itself for easy viewing. Since Baselines contain content such as Fixlets that are targeted to computers based on relevance, different Baselines may apply to different computers, depending on current applicability.

This dialog has the same options as any Baseline List Panel, and can be sorted by the same headers. You can open up and view individual Baselines by double-clicking them from this list.

This dialog is available by clicking an item in any Computer list. Then click the **Relevant Baselines** tab in the Computer Work Area.

## Computer: Relevant Fixlet Messages

The **Relevant Fixlet Messages** tab of the Computer document lists all the Fixlet messages that are relevant to the selected computer.



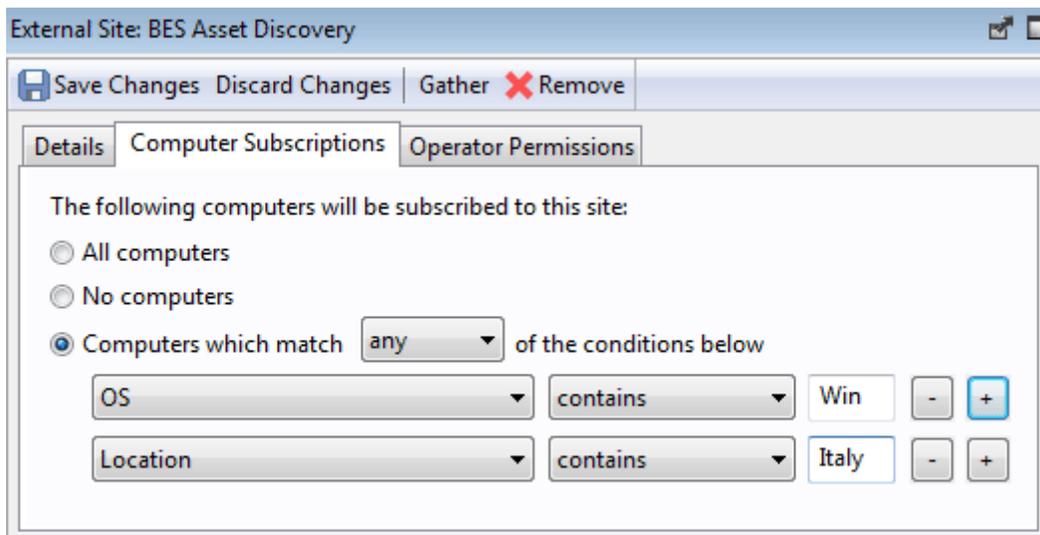
This filter list is updated in real-time, refreshing its display as Fixlet messages are reevaluated. The number of Baselines that are currently relevant are listed in the tab itself for easy viewing.

This dialog has the same options as any Fixlet List Panel and may be sorted by the same headers.

This dialog is available by clicking the **Computers** icon in the Domain Panel navigation tree and clicking a computer from the List Panel. Then click the **Relevant Fixlet Messages** tab in the Computer Work Area.

## Computer Subscriptions Tab

The **Computer Subscriptions** tab of the Sites document lets you establish criteria for subscribing BigFix Clients to the specified site.



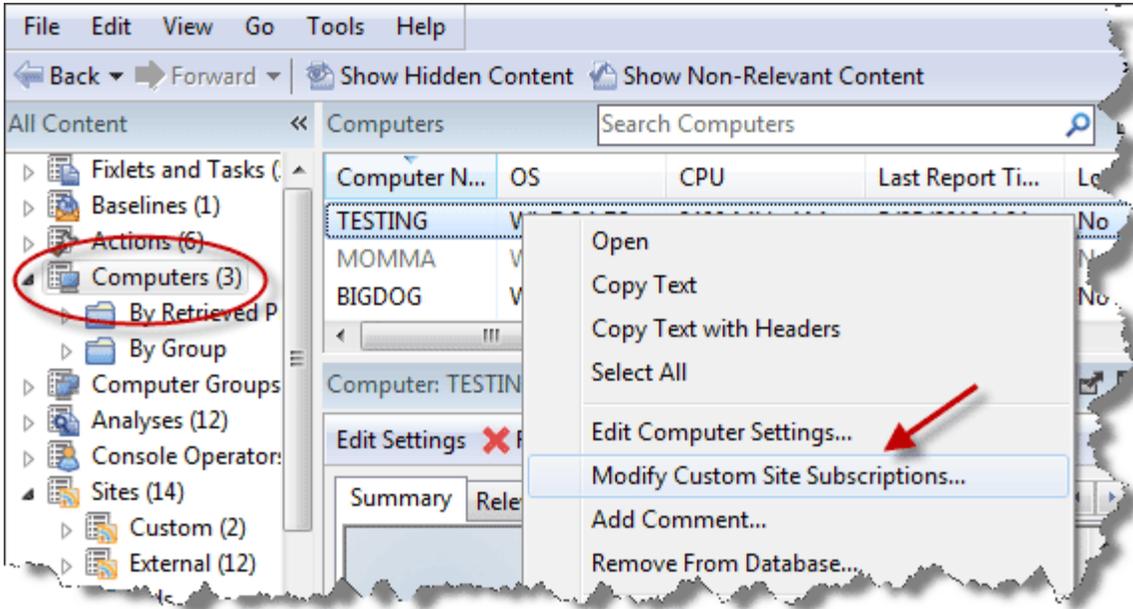
There are three buttons available for external sites.

- **All computers.** Subscribe all available clients to the specified site.
- **No computers.** Don't subscribe any clients to the site.
- **Computers which match...** Set criteria for subscription based on client properties. This is a flexible technique to subscribe only those computers that satisfy the properties you specify in a property /

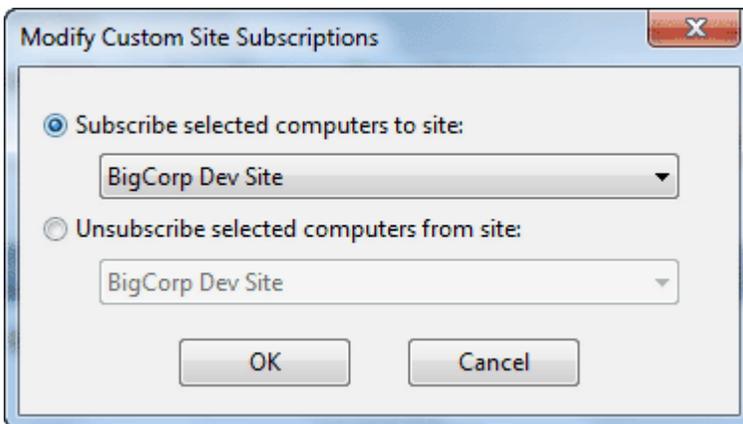
operator / value trio. You can select **any** or **all** from the pull down to OR or AND the criteria together. Use the plus button to add another criterion and the minus button to delete one.

For custom sites, there is another button.

- **Computers subscribed via ad-hoc custom site subscription actions.** With this option all computers start out unsubscribed. To subsequently subscribe a computer, you must bring up the list of computers (click **Computers** from the Domain Panel navigation tree) and then right-click the desired set of computers. From the context menu, select **Modify Custom Site Subscriptions**.



From the resulting dialog, select sites to subscribe or unsubscribe.

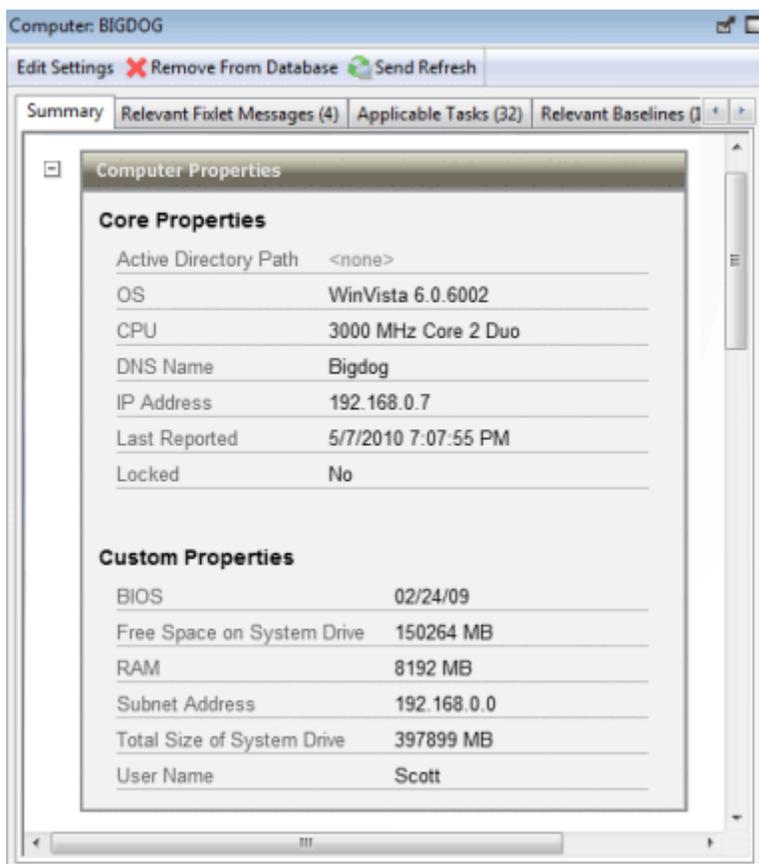


Only those sites where the ad-hoc option has been set will be available for subscription in the pull down menu. Note that this dialog also allows you to unsubscribe computers from an ad-hoc grouping.

This dialog is available by clicking the **Sites** icon in the Domain Panel navigation tree, clicking an item from the resulting List Panel and then clicking the **Computer Subscriptions** tab.

## Computer: Summary

The Computer **Summary** tab lists several items of interest, including Properties, Relay status, Grouping, Custom Sites, Settings and more.



The **Properties** section of the Summary lists various properties of the given computer, derived from Relevance Expressions. These properties help you define subsets, sorting fields, reports and grouping criteria for the various client computers under BES administration.

The default properties include, but are not limited to:

### Core Properties

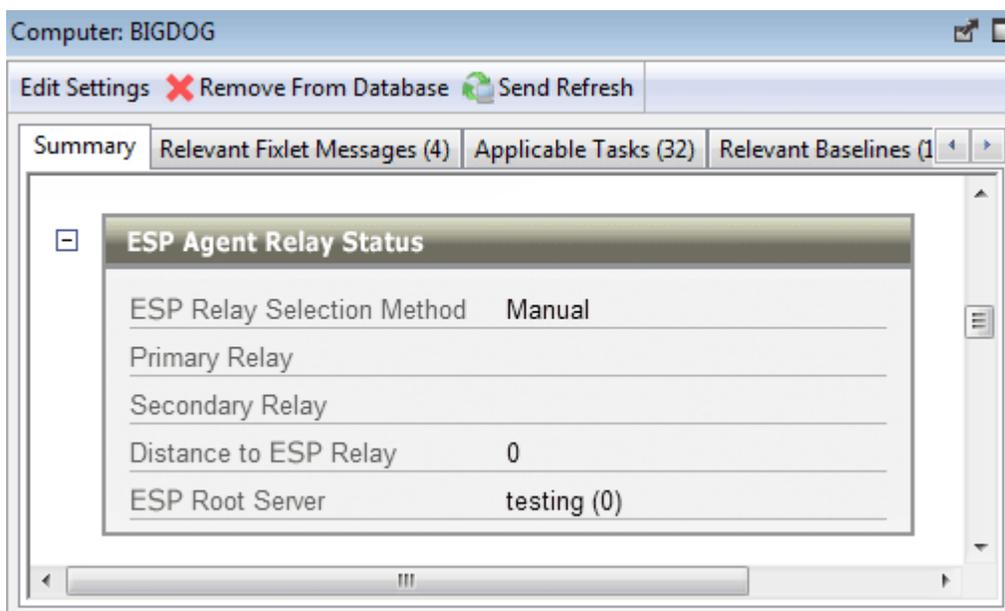
- **Active Directory Path:** The position of the BES Client within the Active Directory hierarchy.
- **OS:** The operating system of the given computer.
- **CPU:** The speed and type of CPU.
- **DNS Name:** The name of the computer.
- **IP Address:** The current IP Address of the computer.
- **Last Report Time:** The time that the computer last reported.
- **Locked:** The locked status (Yes or No) of each computer.

### Custom Properties

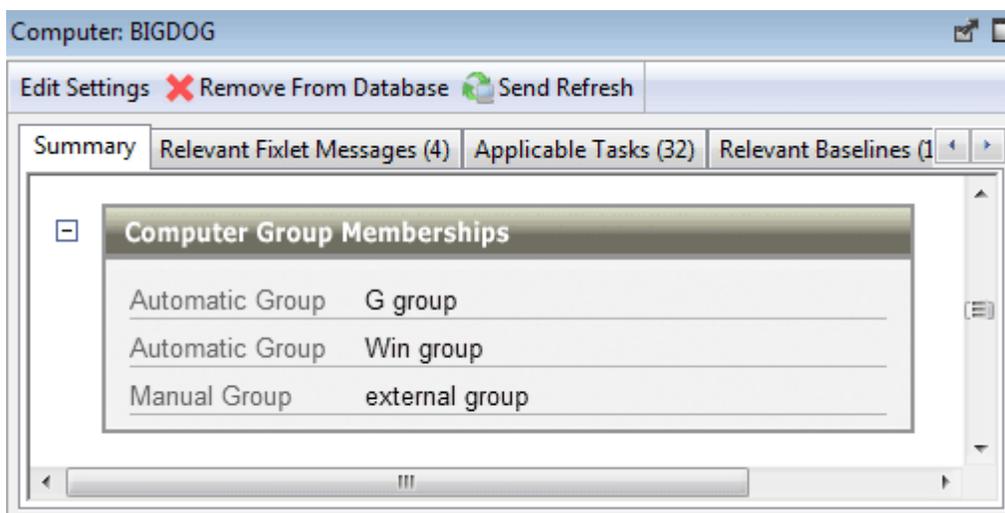
- **BIOS:** The version and date of the Basic Input/Output System.
- **Free Space on System Drive:** How much room is available on drive C of the given computer.
- **RAM:** The amount of RAM in the given computer.
- **Subnet Address:** The subnet IP Address of the given computer.
- **Total Size of System Drive:** The total size of the drive containing the OS on the given computer.
- **User Name:** The name of the BES Client user.

You can find out more about these predefined properties in the sections on computer properties and Relevance Expressions.

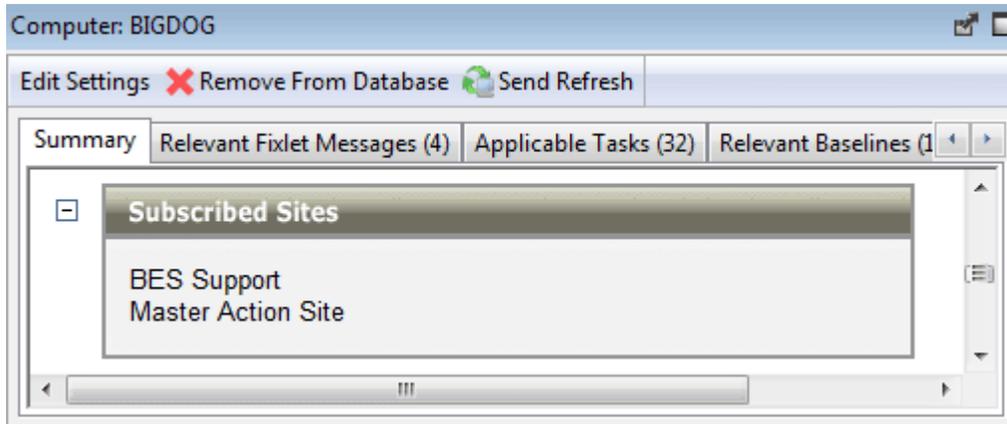
The next section in the Computer Summary is the **BES Client Relay Status**, which identifies the status of the chosen computer as a Server, Relay or Client.



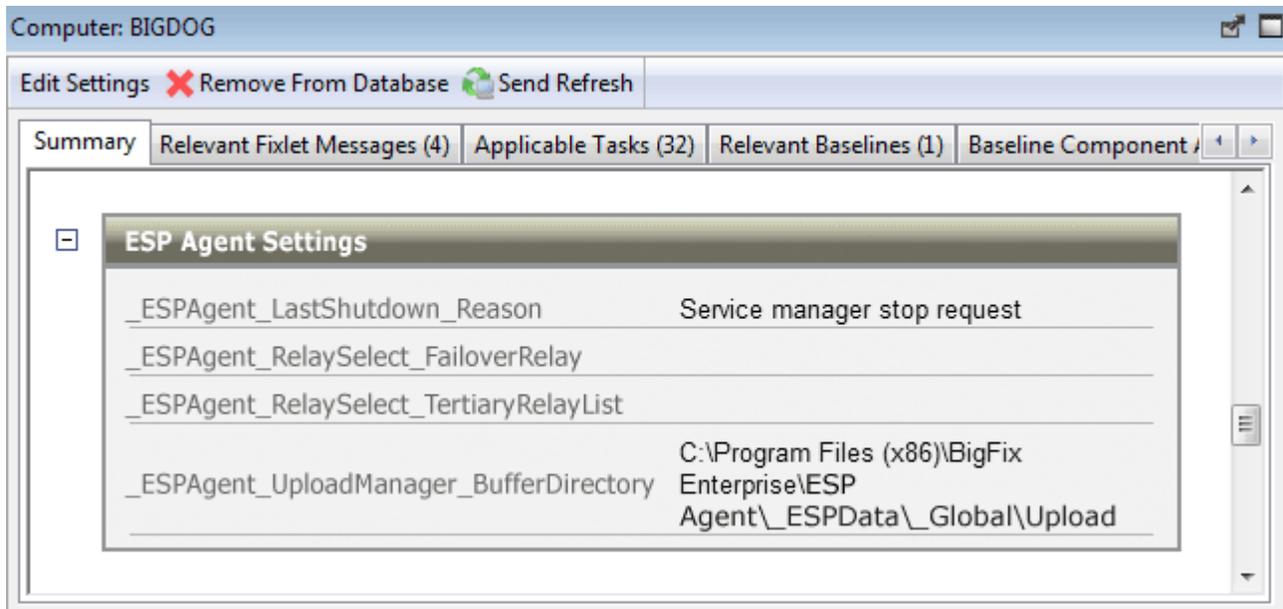
The next section lists any **Groups**, automatic or manual, that this computer is a member of.



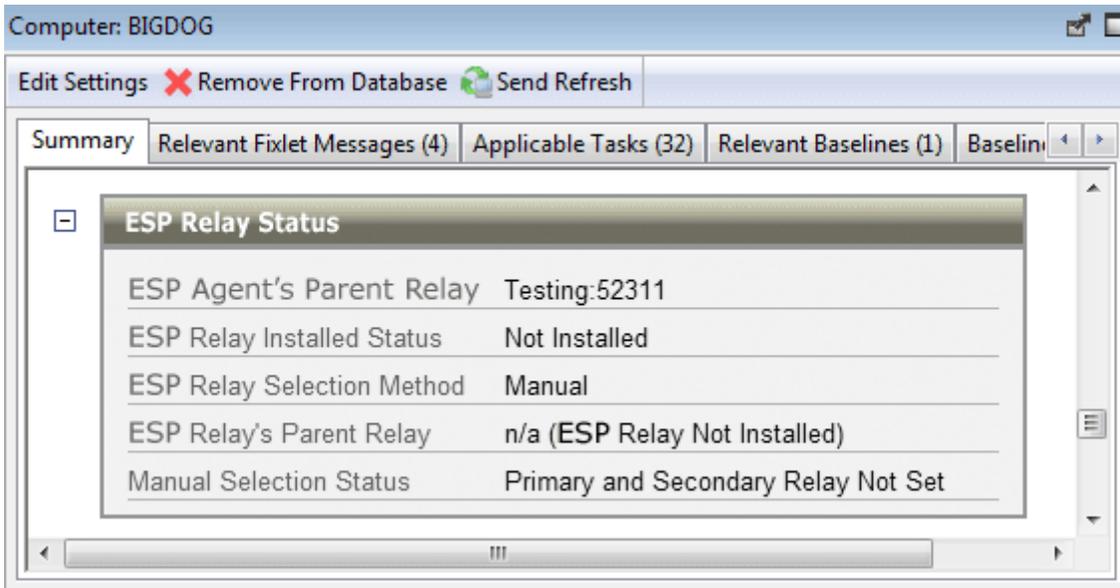
The following section lists any **Sites** that this computer is subscribed to, including external sites, operator sites and custom sites.



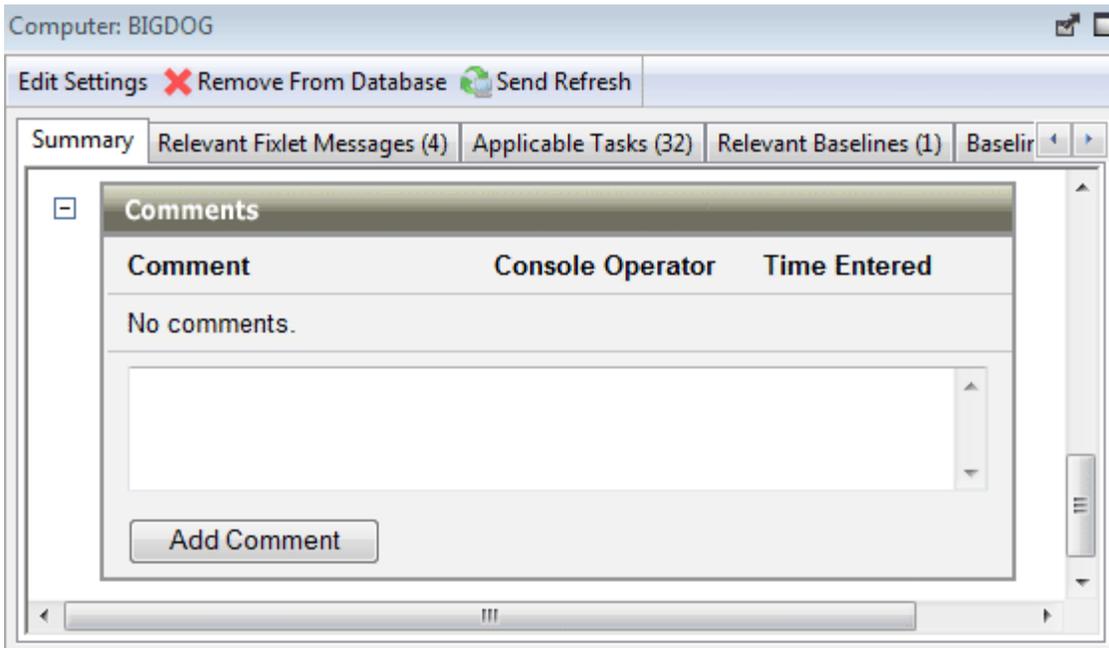
The next sections contain a list of **Settings** for this computer, including Client, Relay, Server, Gather and WebReport settings and the **versions** of the BES software running on this computer.



Below that is the BES Relay Status, which contains information about the parent Relays of this computer.



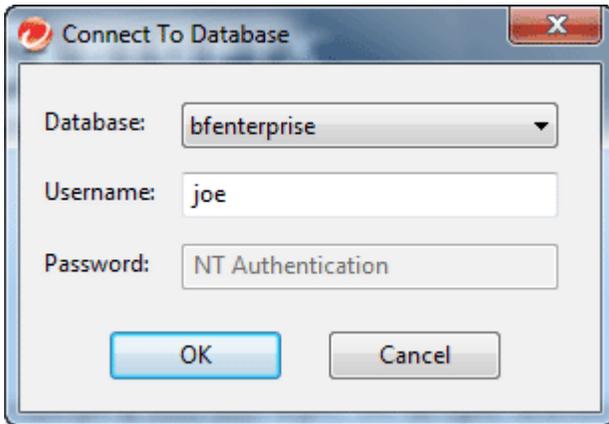
At the bottom of the page is a text box where you can enter **comments** that will be attached to this computer for future reference.



This dialog is available by clicking the **Computers** icon in the Domain Panel navigation tree and clicking a computer from the right-hand List Panel. Then click the **Summary** tab in the Computer Work Area.

## Connect to Database

The **Connect to Database** dialog pops up when you start the BES Console.



It lets you select which BES Database you wish to manage.

**Database:** Select the desired database from the pull-down menu.

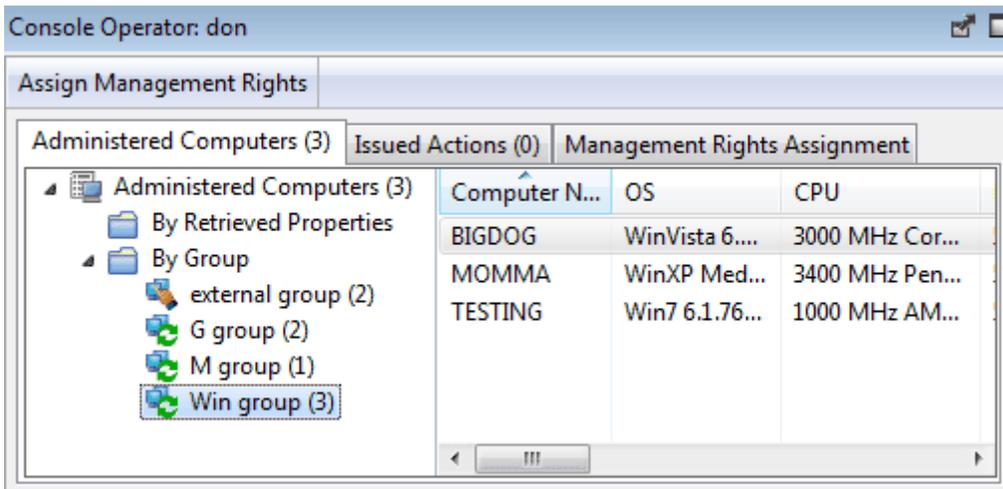
**Username:** Enter the user name that will allow you to access the database. The set of allowed users is maintained by the BES Site Administrator using the BES Administration Tool.

**Password:** Enter the password that corresponds to the user name above. In some cases, NT will authenticate for the user. If this is the case, the password box will be grayed out.

This dialog is available when launching the BES Console.

## Console Operator: Administered Computers

The **Administered Computers** tab of the **Console Operator** document displays a filter/list of all the computers administered by the selected operator.



Note that the number of computers is displayed in the tab itself for viewing at a glance. As with any Computer List Panel, you can filter and sort it by retrieved properties and groups. That means you can use your own

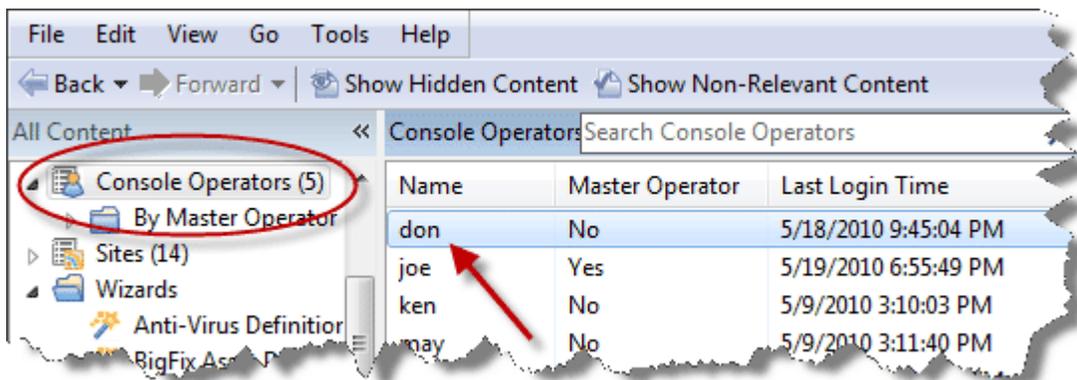
custom-created properties or groupings to parcel out administrative rights. You might use a retrieved property, for instance, to match up specific applications to experts in your organization. Or you could connect departmental IT managers to their own domains, automatically.

This list is similar to other computer lists in the BES Console, but it is specific to the selected operator, letting you focus on one person at a time.

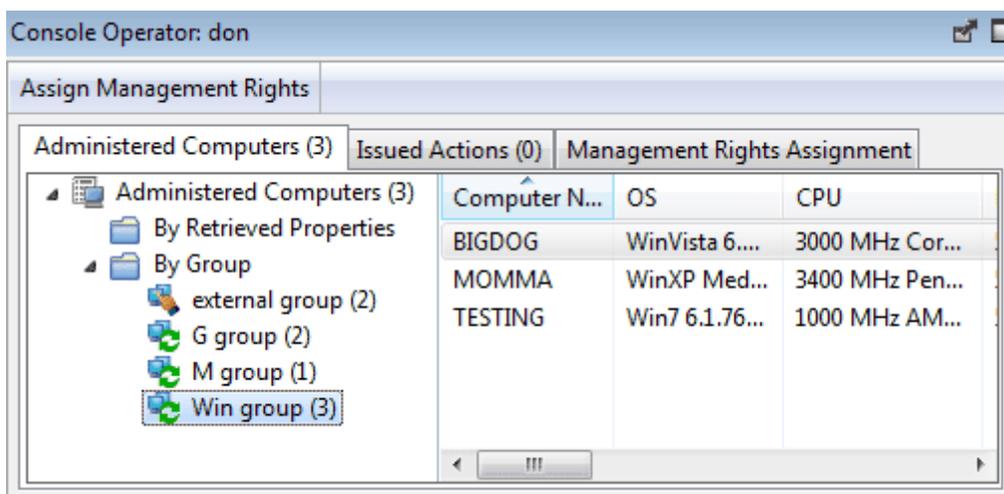
This dialog is available by clicking an operator from any Console Operator list and selecting the **Administered Computers** tab.

## Console Operator List and Document

A list of Operators is displayed when you click **Console Operators**, or any of its child nodes, from the Domain Panel navigation tree.



A **Console Operator document** is displayed in the Work Area of the BigFix Console when you click any item from this list.



At the top of the Console Operator document is the name of the operator. Beneath that is the toolbar for Operators, containing a button that allows you to **assign management rights** to the specified operator if you

are a Master Operator. The tabs underneath display at a glance how many computers are being administered by this operator and how many actions this operator has issued.

The tabs in a Console Operator document include:

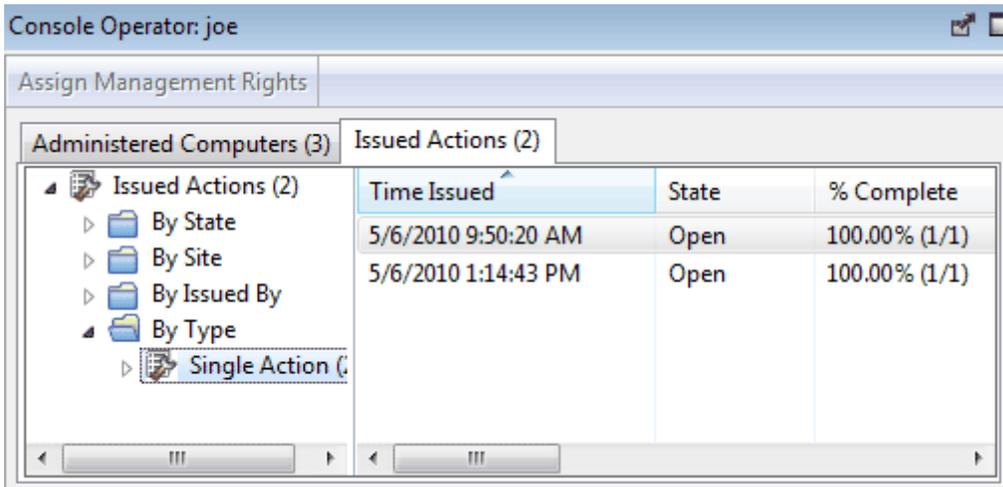
- **Administered Computers:** A typical filter/list window containing all the computers under this operator's administration.
- **Issued Actions:** Shows what Fixlet actions have been applied by this Console Operator.
- **Management Rights Assignment:** Shows the management rights that have been assigned to this Console Operator (This tab is only available if you have logged in to the BES Console with the proper credentials).

To display a Console Operator list, click the **Console Operators** icon (or any of its child nodes) in the Domain Panel navigation tree.

A **Console Operator document** is opened whenever you click an item in a Console Operator list.

## Console Operator: Issued Actions

The **Issued Actions** tab of the **Console Operator** document displays a filter/list of all the Actions that have been deployed by the selected operator.



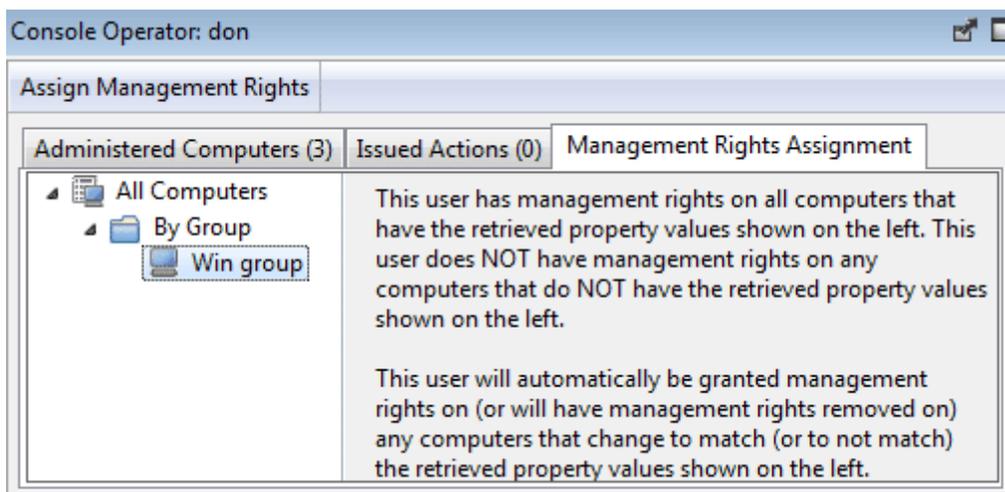
At the top of the dialog is the name of the operator. As with any Action list, you can filter and sort it by various properties, including State (open, expired) and Site. The current number of issued actions for this operator is displayed in the tab itself for easy viewing.

This list is similar to other Action lists in the BES Console, but it is specific to the selected operator, letting you focus on one person at a time.

This dialog is available by clicking an operator from any Console Operator list and selecting the **Issued Actions** tab.

## Console Operator: Management Rights Assignment

The **Management Rights Assignment** tab of the **Console Operator** document displays a retrieved property tree.



This tab is only available if you have logged in to the BigFix Console as a Master Operator. If there were any management rights assigned on the basis of a retrieved property (for instance, based on a computer setting named "department") you will see them here. In this example, as people changed from one department to another, they would automatically be handed over to a new Console operator.

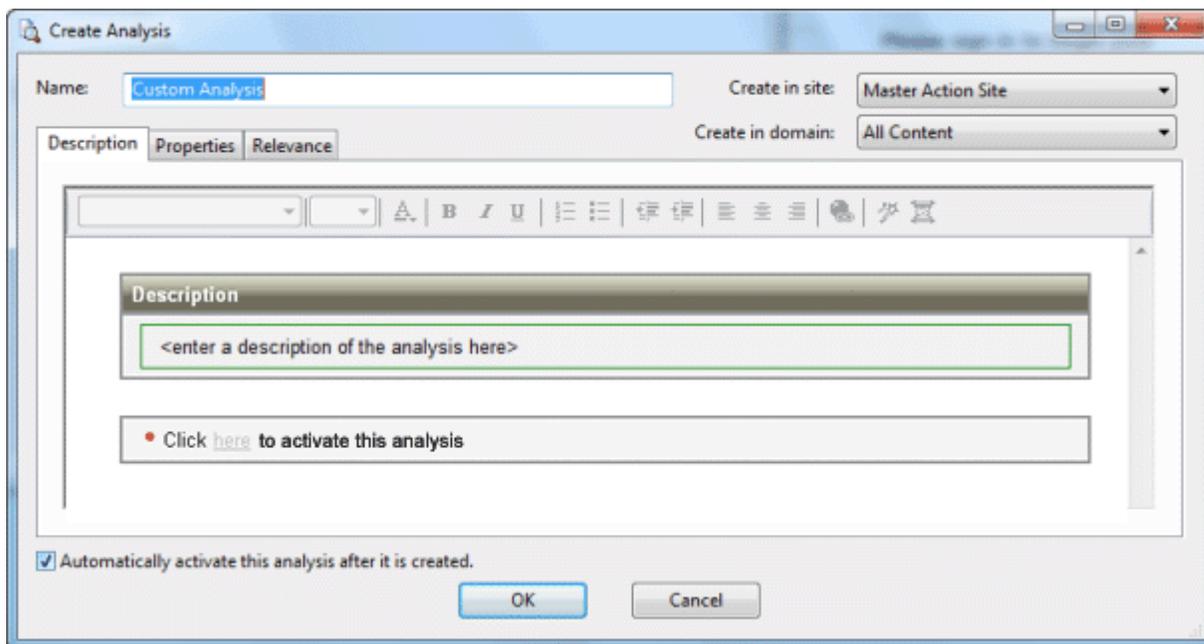
This is a read-only display. To alter these settings, click **Assign User Management Rights** button in the toolbar.

This dialog is available by clicking an operator from any Console Operator list and selecting the **Assign User Management Rights** tab.

## Create Analysis

The **Create Analysis** dialog lets you deploy your own custom Analyses to monitor and audit properties across your managed network. You can create an Analysis from scratch or you can edit an existing custom Analysis by selecting it from the list and choosing **Edit > Edit Custom Analysis**.

To create an original Analysis, choose **Tools > Create New Analysis**. The **Create Analysis** dialog pops up.



There are three items at the top to help you identify your Analysis:

- **Name:** Enter the name of your custom Analysis.
- **Create in site:** From the pull-down menu, select the BigFix site (typically the Master Action Site) you want to host it.
- **Create in domain:** From the pull-down menu, select the Domain you want to house the Analysis.

Beneath these data fields, there are three tabs:

- **Description:** Create a user-readable title and message to accompany the Analysis you wish to run. This is an HTML page, and you can use the text editing tools at the top to adjust the look of your Analysis.
- **Properties:** Specify retrieved client properties for your Analysis. Click the **Add Property** button, enter a name and a relevance clause. You can also specify an evaluation period for this property.
- **Relevance:** Specify the target client computers for your custom Analysis via a Relevance clause. The Analysis will be applied to all computers where the Relevance clause evaluates to TRUE.

At the bottom of this dialog is a check box:

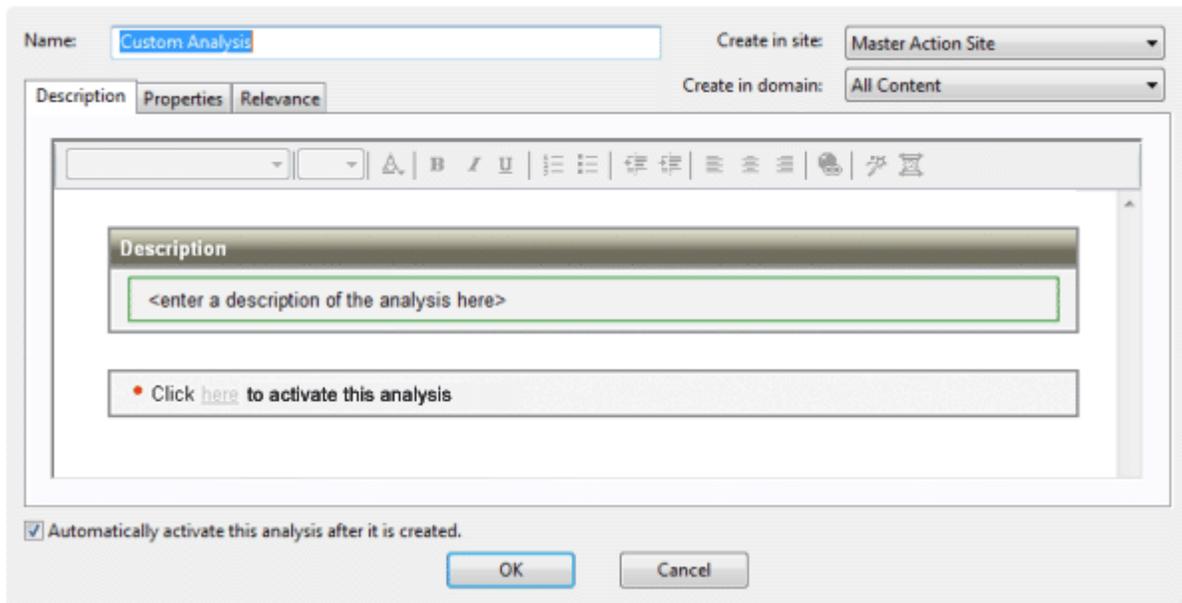
- **Automatically activate this analysis after it is created:** Check this box if you want to immediately propagate this Analysis upon clicking the **OK** button. Leaving this blank will let you describe your Analysis without actually activating it.

You can create a new Analysis by selecting **Tools > Create New Analysis**, or by right-clicking in the Analysis window and selecting **Create New Analysis** from the context menu.

You can edit your existing custom Analyses by right-clicking on them and selecting **Edit** from the pop-up menu.

## Create Analysis Description Tab

The **Description** tab of the **Create Analysis** dialog lets you define the html page for your custom Analysis.

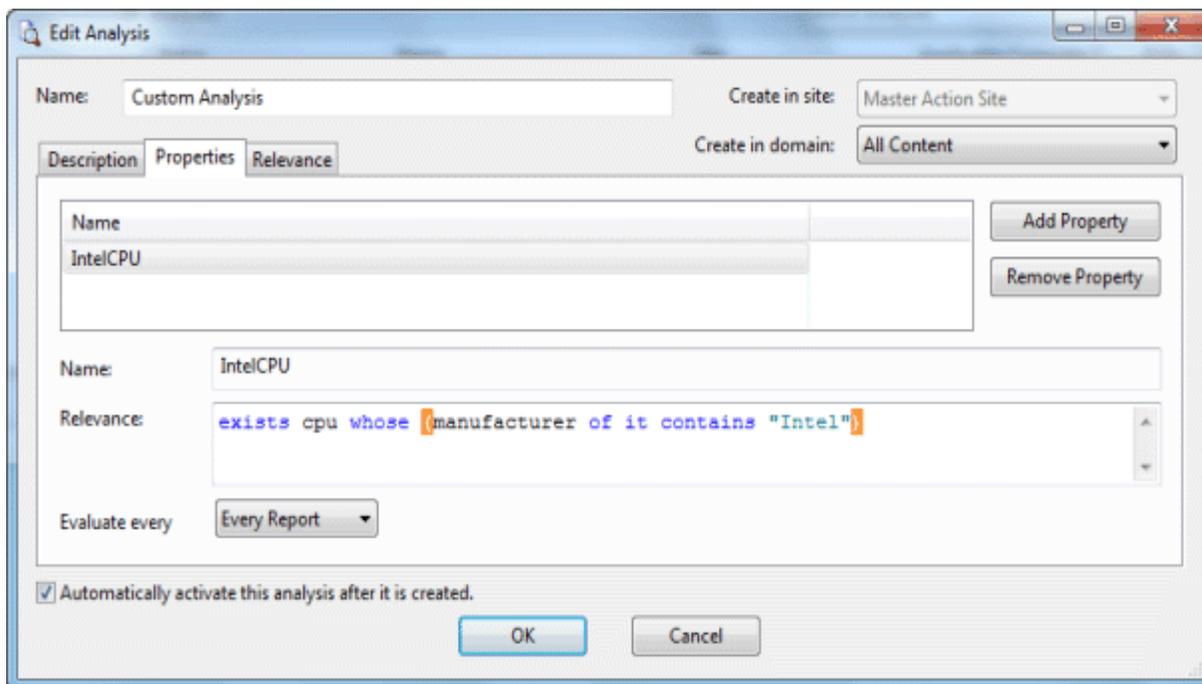


Enter the description of your custom Analysis in the first box. You can customize the second box as well, but the existing text is pretty standard.

You can create a new Analysis by selecting **Tools > Create New Analysis**, or you can edit a *custom* Analysis by right-clicking it and selecting **Edit Custom Analysis** from the context menu. To clone and edit an existing Analysis, first right-click it, select **Export** from the context menu to save it, then select **File > Import** to bring it back in for editing.

## Create Analysis Properties Tab

The **Properties** tab of the **Create Analysis** dialog lets you define the properties you wish to analyze.



This is the customized heart of the Analysis, and is not the same as the Properties tab of the Fixlet, Task or Baseline dialogs.

There are two buttons in the Property tab:

- **Add Property.** Click this button to bring add a new property to the Analysis. When you do, the text areas below will become editable and you can define the property.
- **Remove Property.** Highlight a retrieved property from this list to the left and click Remove Property to delete this item from the Analysis.

After clicking the Add Property button, you must enter a **Name** for the property and a **Relevance** statement that will retrieve the information. For instance you might want to retrieve the names of the administrators for each client. You might name the property "Client Admins" and use a Relevance expression like "names of administrators of client".

You can also set the schedule for the analysis from the **Evaluate every** pull-down menu. The default is to update the property value whenever a report is requested. But you can also set it to any regular period between 5 minutes and 30 days.

You can create a new Analysis by selecting **Tools > Create New Analysis**, or you can edit a custom Analysis by right-clicking it and selecting **Edit Custom Analysis** from the pop up or from the **Edit** menu.

## Create Analysis Relevance Tab

The **Relevance** tab of the **Create Analysis** dialog lets you define a relevance clause to determine the applicability of your custom Analysis to specific computers.

You can choose from three relevance options:

- **All computers:** This is the default choice and will analyze the properties you specify on all of the BigFix Clients in your network.
- **Computers which match the condition below:** When you select this choice, you can select from several pre-defined properties to identify a subset of the BigFix Clients for analysis.
- **Computers with match all of the relevance clauses below:** This choice lets you specify a computer with a custom relevance statement. This is the most powerful of the available choices, and lets you easily narrow down the computers to analyze.

You can create a new Analysis by selecting **Tools > Create New Analysis**, or you can edit a *custom* Analysis by right-clicking it and selecting **Edit Custom Analysis** from the context menu. To clone and edit an existing Analysis, first right-click it, select **Export** from the context menu to save it, then select **File > Import** to bring it back in for editing.

## Create Automatic Computer Group

This dialog allows you to create rules that will automatically enlist specific computers in a group. It has the following parts:

- **Computer Group Name:** This is a text box to enter the name of your group. This will be listed in the name column of any computer group listing.
- **Create in site:** This is a pull-down menu listing the site you wish to host the computer group.
- **Create in domain:** This is a pull-down menu listing the domain you wish to host the computer group.
- **Include computers with [any/all of] the following property:** This option lets you specify a condition that must evaluate to true before the computer will become a member of the group. If there is more than one condition, this option will include a pull-down menu allowing you to use **any** or **all** of the conditions listed. Three fields are used to define a condition:
  - **The retrieved property:** select a property from the pull-down list containing dozens of pre-defined retrieved properties. Note that there are two other options at the top of this list.
    - Select **Relevance Expression** from the top of the list, select **is true** or **is false** from the relationship pulldown and then click the **Edit Relevance** button to define a custom relevance expression to base your group on.

- Select **Group Membership** from the property list, select the desired membership option and then select a manual group from the pull down list to the right.
- **The relationship:** select from the four available comparison operators: contains, equals, does not contain and does not equal. Depending on the particular retrieved property, there may be other relationships available.
- **The value:** Enter a value that will be compared to the value of the retrieved property. If the comparison is true, the Baseline will become relevant on the specified computer. For instance, to create a group that will automatically enlist Windows computers, enter **OS contains Win**.

There are two buttons used to edit the list of conditions:

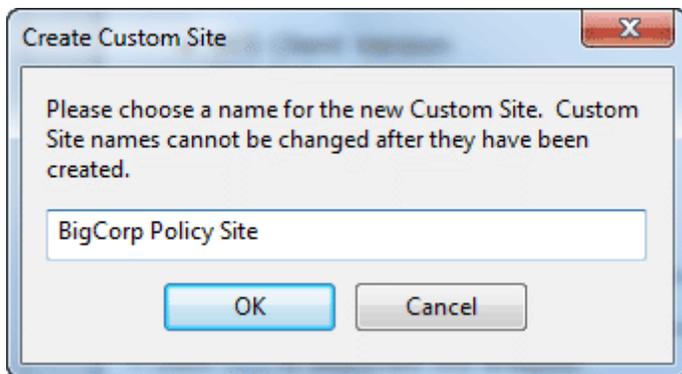
- **Plus (+):** Click this button to add a new condition to the list. When there are two or more conditions, notice that the radio button above will include a pull-down menu allowing you to trigger on any or all of the conditions in the list.
- **Minus (-):** Click this button to delete the condition associated with it.

Click **OK** and enter your password to propagate the new Automatic Computer Group that will be listed in the Computer Groups tab.

This dialog is available by clicking **Create New Automatic Group** from right-click context menu in the Computer Groups tab or select **Tools > Create New Automatic Group**.

## Create Custom Site

This dialog lets you name your own **Custom Site**.



Enter the name of your site and click **OK**. This will bring up the **Custom Site** dialog, where you can finish defining your site.

To create a custom site, select **Tools > Create Custom Site**.

## Custom Site Document

This dialog lets you create or Edit a **Custom Site**.



At the top is a toolbar with four buttons:

- **Save Changes:** After making edits, click this button to record your changes.
- **Discard Changes:** This button will clear all the changes you have made.
- **Gather:** This button will gather the contents of the site. Because the contents of a custom site are typically stored locally, this tool may be grayed-out.
- **Remove:** This button allows you to entirely remove the site from the Console.

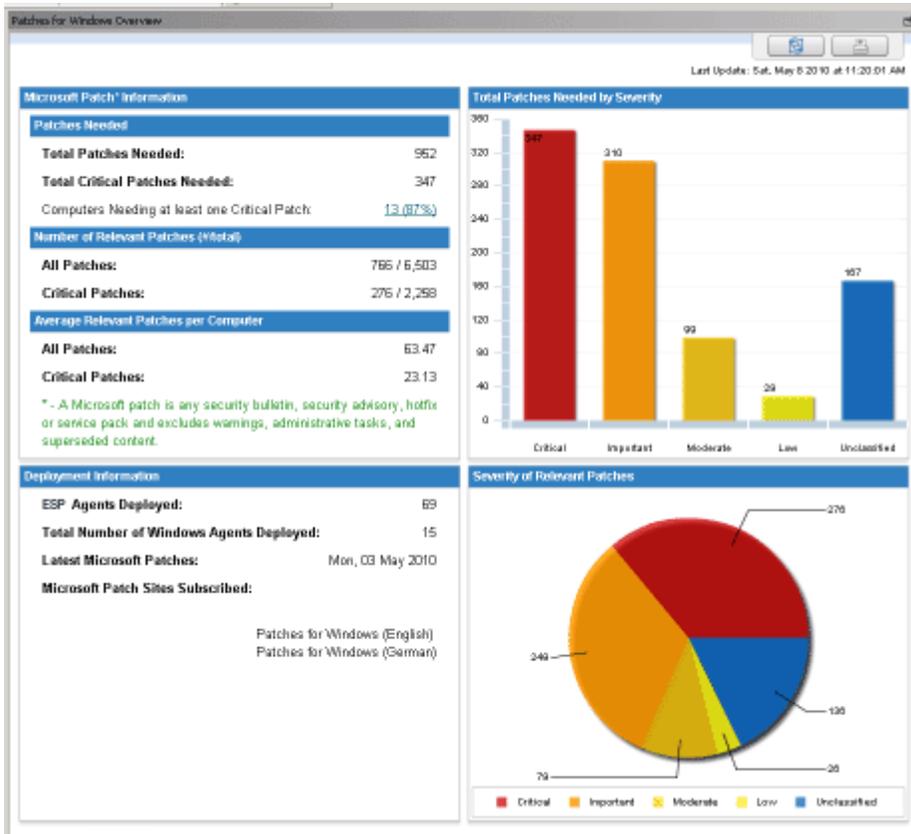
Beneath the toolbar are three tabs:

- **Details:** This tab allows you to add or edit the description of your custom site and to select the Domain you want to host the site.
- **Computer Subscriptions:** This tab lets you specify which BigFix Clients will be subscribed to this site.
- **Operator Permissions:** This tab lets you attach Operators to the site as owners, writers or readers.

To create a custom site, select **Tools > Create Custom Site**.

## Dashboard Document

**Dashboard** documents pop up in the main window of the BES Console when you select them from the Dashboards icon in the Domain Panel navigation tree. Dashboards tap into the BES Database to provide you with timely and compact high-level views of your network.



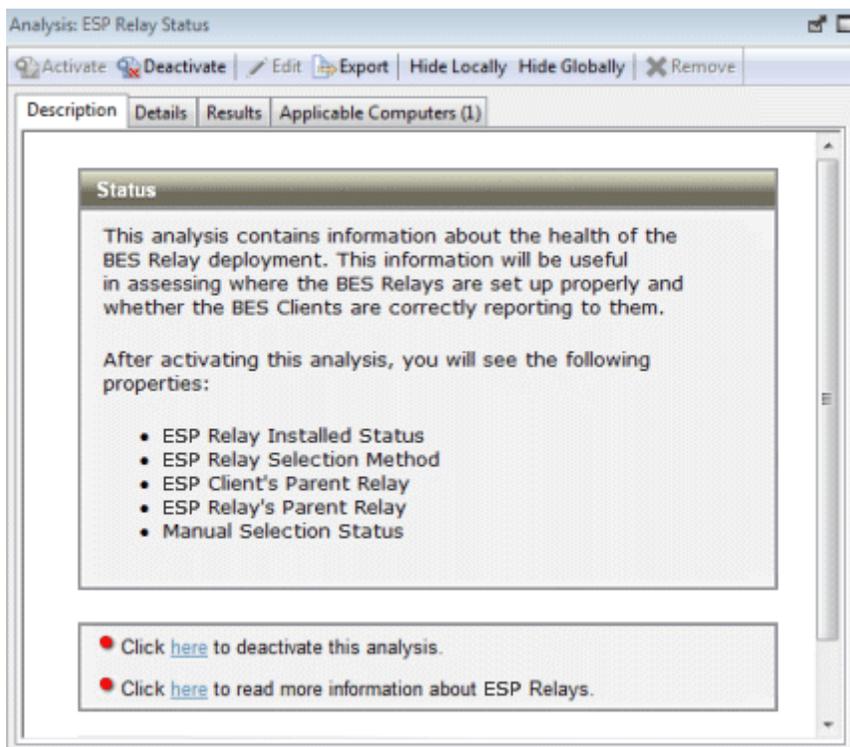
This is a dashboard displaying the latest information on network-wide deployment of Microsoft patches. Dashboards can provide simple textual information, but often provide a visual overview as well to give you aggregated information at a glance.

Different sites make these Dashboards available. For the best coverage, select the All Content Domain, which will list all available Dashboards in the navigation tree.

A **Dashboard** appears whenever you open an item from the **Dashboards** icon in the Domain Panel navigation tree.

## Description Tab

The **Description** tab provides an English-language description of the selected **Fixlet**, **Task**, **Analysis** or **Baseline**.



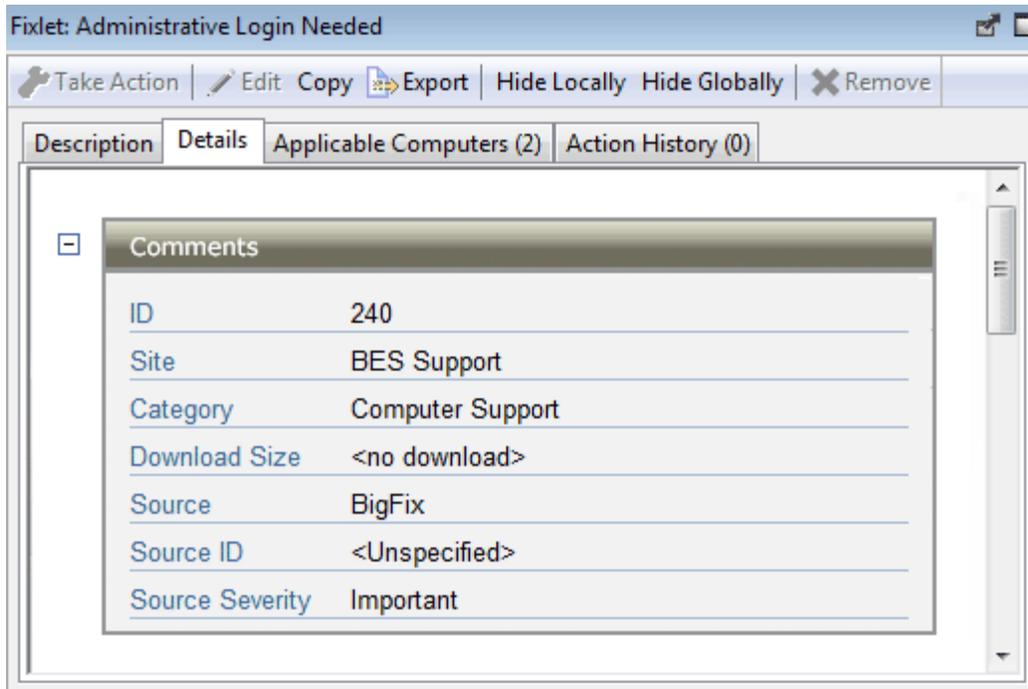
It typically provides one or more actions (in the form of links) that can be executed to install a patch, change a registry, update an application, run an analysis, etc.

Click the link to deploy the action or analysis across your network. For Fixlet messages, when an Action completes the initiating Fixlet will usually disappear since the problem no longer pertains. Tasks, Baselines and Analyses, on the other hand, will continue to stay activated until you terminate them.

This dialog is available by clicking a Fixlet, Task, Analysis or Baseline icon in the Domain Panel navigation tree, selecting an item from the List Panel and clicking the **Description** tab.

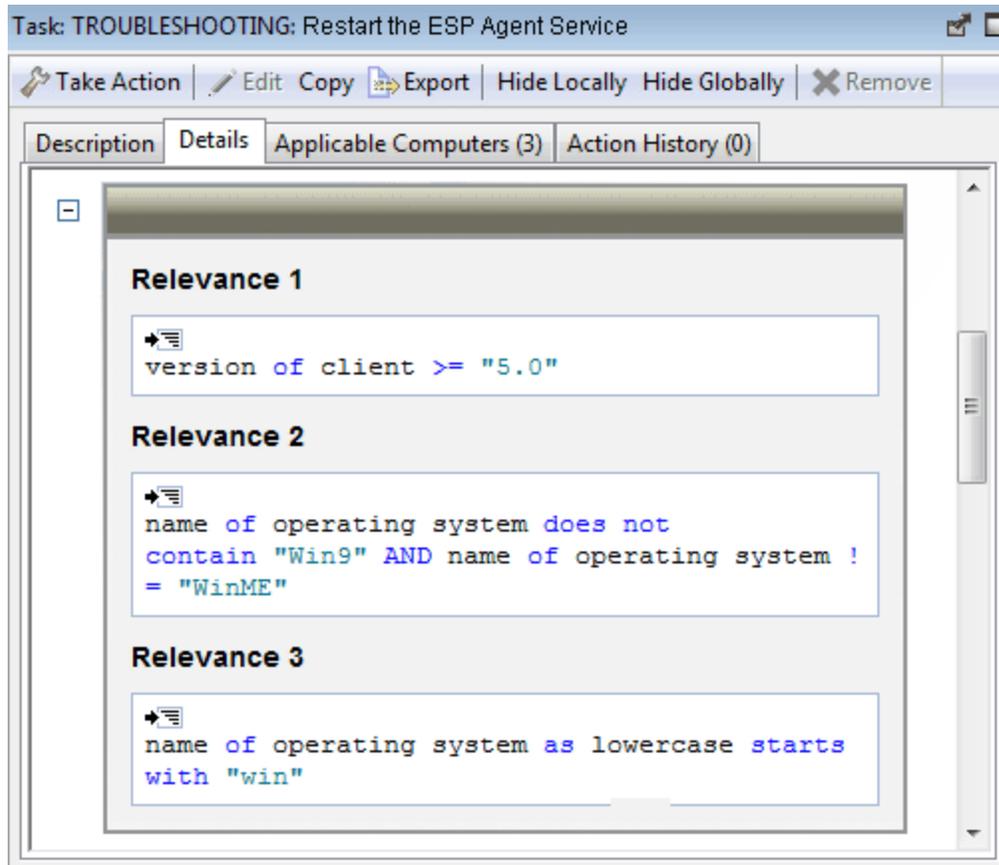
## Details Tab

The **Details** tab provides a look at the mechanics behind the selected **Fixlet**, **Task**, **Analysis** or **Baseline** object.



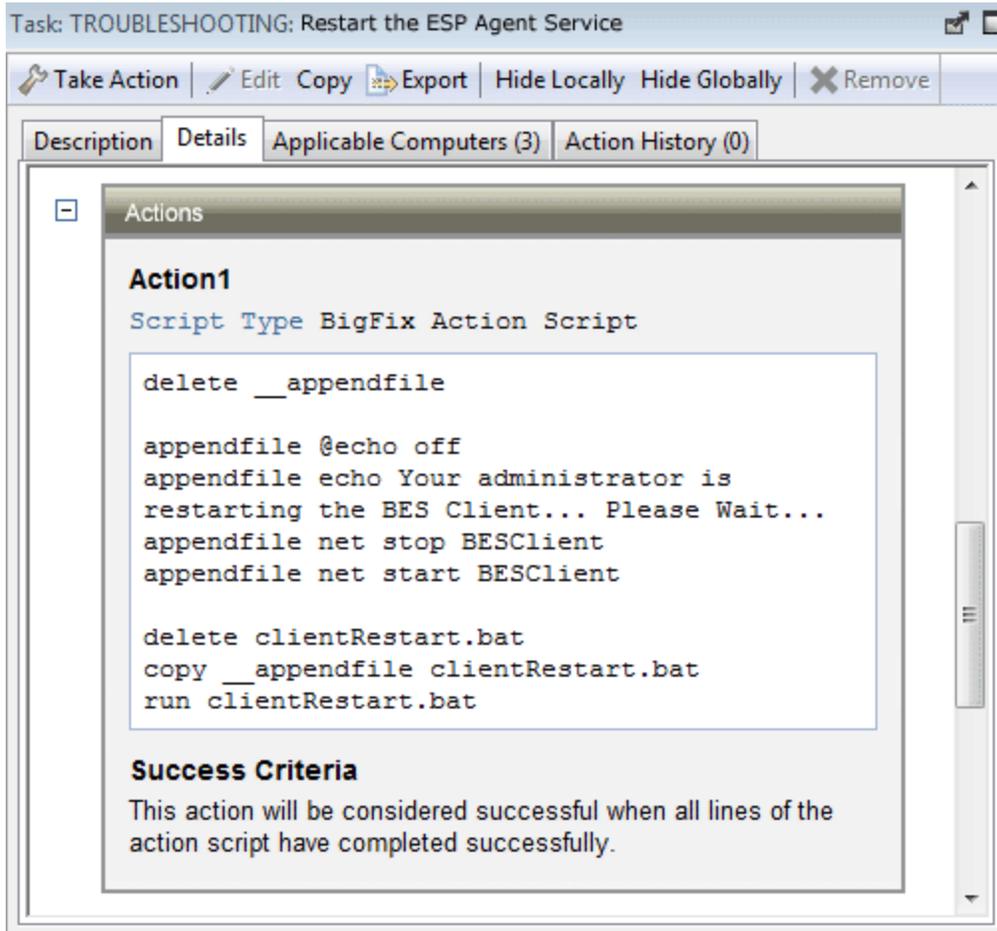
It includes several sections describing various aspects of the Fixlet message:

- **Properties:** As seen above, this section lists various properties of the Fixlet, Task or Baseline, including Category, Download Size, Severity and more. These properties are defined manually when the object is created.
- **Relevance:** This section displays the Relevance expressions that are used to determine the relevance of an individual Fixlet message or Task.

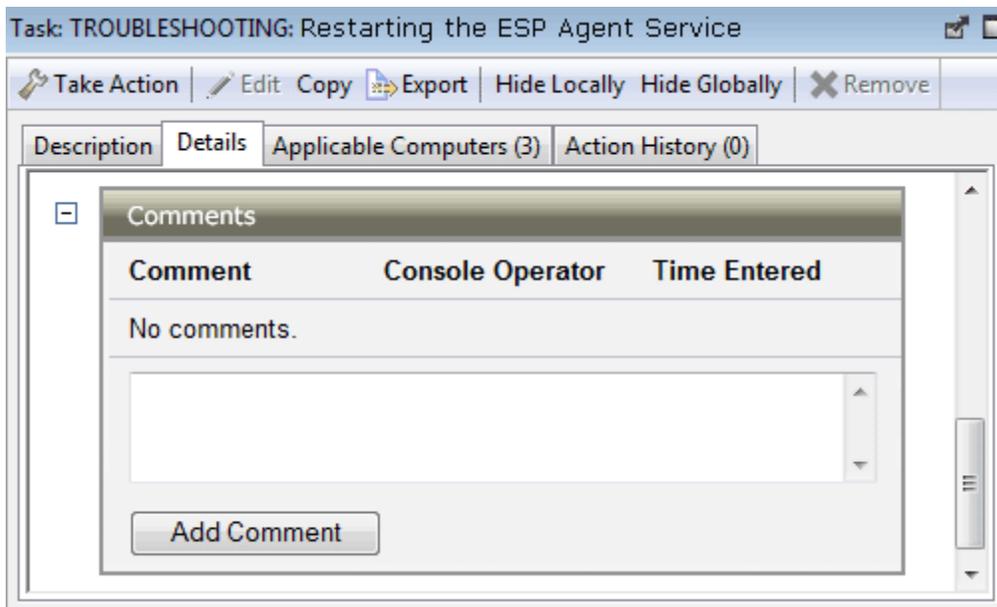


This example has multiple statements that must all be true for the item to be considered Relevant to any particular BigFix Client. For a Baseline, this is an 'envelope' expression that determines the overall relevance of the group. Only if the group is applicable will the relevance of the constituent Tasks and Fixlets be analyzed. This is the core information for an Analysis, which evaluates the Relevance expression and retrieves that value.

- **Actions:** This section displays the code that will be executed if an action is deployed from either a Fixlet or a Task.



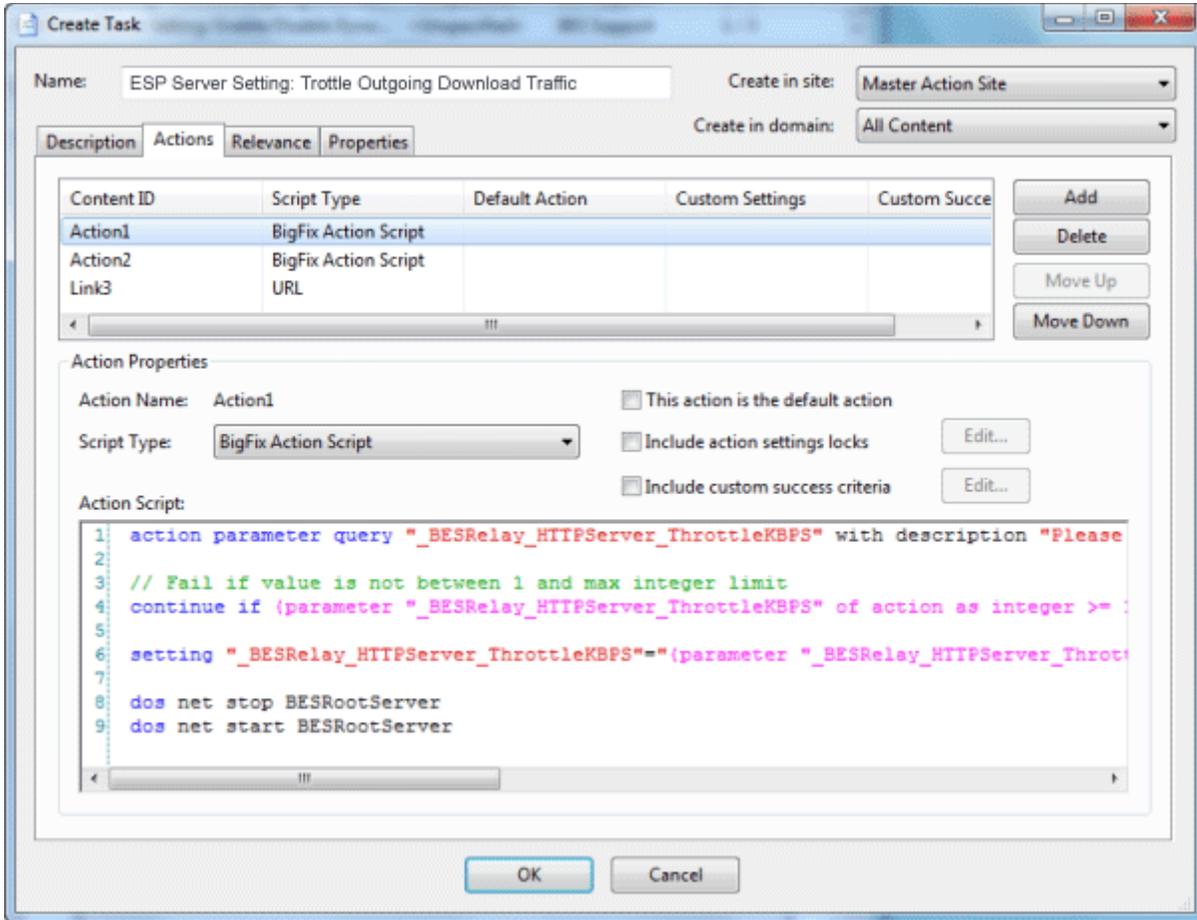
- **Comment:** This section lets you attach comments to the Fixlet, Task or Baseline.



This dialog is available by clicking a Fixlet, Task, Analysis or Baseline icon in the Domain Panel navigation tree, selecting an item from the resulting List Panel and clicking the **Details** tab.

## Edit Actions Tab

The **Actions** tab of the **Creation/Edit** dialogs lets you craft Actions for your new or customized **Fixlet** or **Task** object.



The Actions you create here will become the clickable links in the finished Task or Fixlet, and they will be deployed on the appropriate computers of your BigFix network. The Actions are listed in their display order at the top of the dialog. To the right of the list is a set of buttons:

- **Add:** Click this button to create a new Action. It creates a new numbered entry in the top list and opens a blank text box for you to write your Action script.
- **Delete:** Select an item from the list and click this button to Delete it.
- **Move Up:** Moves the selected Action up in the list, meaning that it will be displayed earlier.
- **Move Down:** Moves the selected Action down in the list, meaning that it will be displayed later.

For each Action, you can edit the type, certain settings and the script itself.

**Action Properties**

Action Name: Action3

Script Type: **BigFix Action Script**

Action Script:

```
1 // ente
URL
```

This action is the default action

Include action settings locks Edit...

Include custom success criteria Edit...

Select an **Action Script Type** from the pull down menu. Among the choices are:

- **BigFix Action Script:** This is a cross-platform scripting language, and is the default scripting type.
- **AppleScript:** This is the scripting language of choice for managing Macintosh computers.
- **sh:** This is shell script as used by a Unix system.
- **URL:** This is a URL pointing to an appropriate script or informational web page. When an Action is created as a URL, it is listed as a numbered Link.

There are some more properties you can use to modify any Action.

**Action Properties**

Action Name: Action3

Script Type: **BigFix Action Script**

Action Script:

```
1 // ente
URL
```

This action is the default action

Include action settings locks Edit...

Include custom success criteria Edit...

Check one or more of the following boxes to customize each action:

- **This Action is the default Action:** Check this box to make the selected Action the default for this group of Actions. Default Actions should be designed to be failsafe and simple, making it reasonable to launch them unattended or to group them for simultaneous deployment.
- **Include Action Settings Locks:** Check this box to use custom settings and locks, including display messages, users, execution behavior and post-actions. Click on the **Edit** button to bring up the **Action Settings** dialog with a lock next to each item. Click on the locks to keep these values from being changed.
- **Include Custom Success Criteria:** Typically a Fixlet is designed so that completing an Action will make it fail the initial Relevance test. Since that test is typically triggered by a vulnerability, its failure indicates successful remediation, therefore causing the Fixlet to disappear from the Console. However, you can select other criteria to establish success by checking this box. Click on the **Edit** button to bring up the **Action Success Criteria** dialog and key in your alternative criteria.

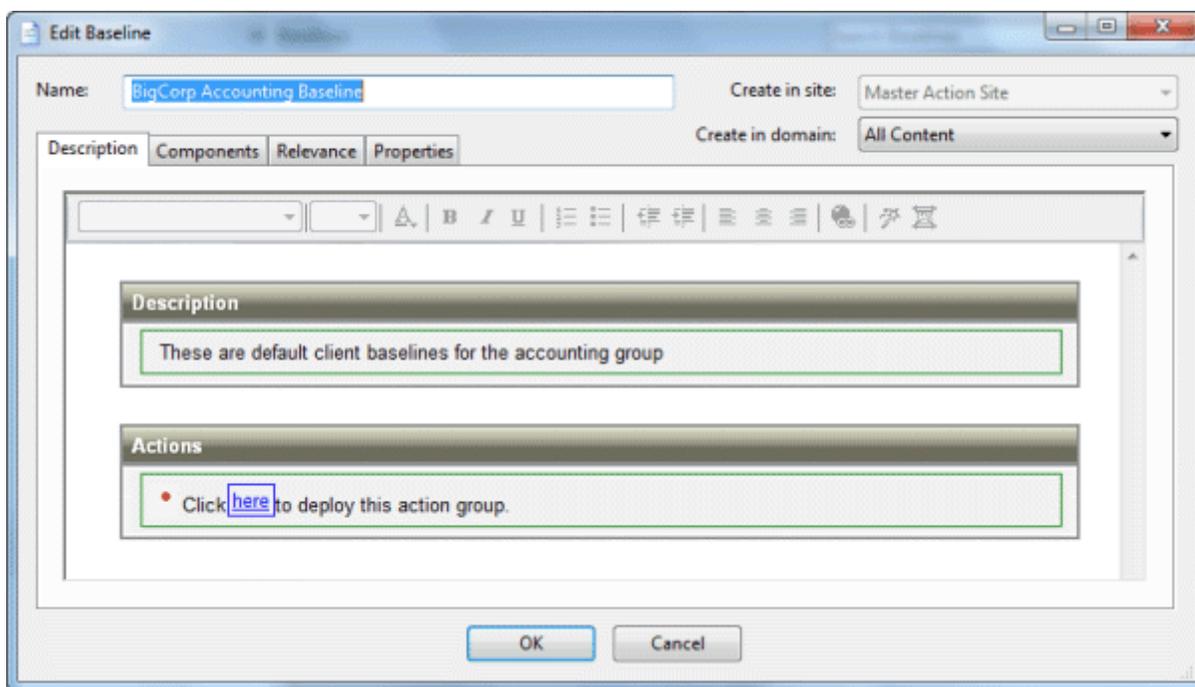
In the bottom text box, enter the actual text of the **Action Script**. The style will vary depending on the script type you chose in the previous section. Because they can be potentially distributed to hundreds of thousands of computers, it is always wise to test and test again.

This dialog is available by clicking the Fixlet, Task or Baseline icon in the Domain Panel navigation tree. Right-click an item in the resulting List Panel and select **Create Custom Copy** from the context menu.

Or select the desired **Create** item from the **Tools** menu.

## Edit Baseline

The **Edit Baseline** dialog. Baselines are groups of Fixlet messages, Tasks and other Baselines that you wish to execute with a single mouse-click.



For instance, a Baseline might be created to group all your application patches or security issues so that you can ensure a common operating environment. You can create a Baseline from scratch, or clone or edit an existing Baseline.

When you select this interface, you are presented with a dialog with three input items at the top:

- **Name:** Enter the name of your Baseline.
- **Create in site:** From the pull-down menu, select the desired host site.
- **Create in domain:** From the pull-down menu, select the desired host domain.

Beneath these data fields, there are four tabs:

- **Description:** Create a user-readable title and description for the Baseline you wish to deploy.

- **Components:** Specify the components, namely the Fixlet messages, Tasks and other Baselines, that you want to group into this Baseline.
- **Relevance:** Create a relevance clause to target this Baseline to just the subset of computers you desire. Since each component of your Baseline will have its own Relevance clause, the default Relevance is set to TRUE.
- **Properties:** Specify certain properties for your Baseline, including category, source, severity and date.

To create a new Baseline from scratch, select the following:

- **Tools > Create New Baseline**

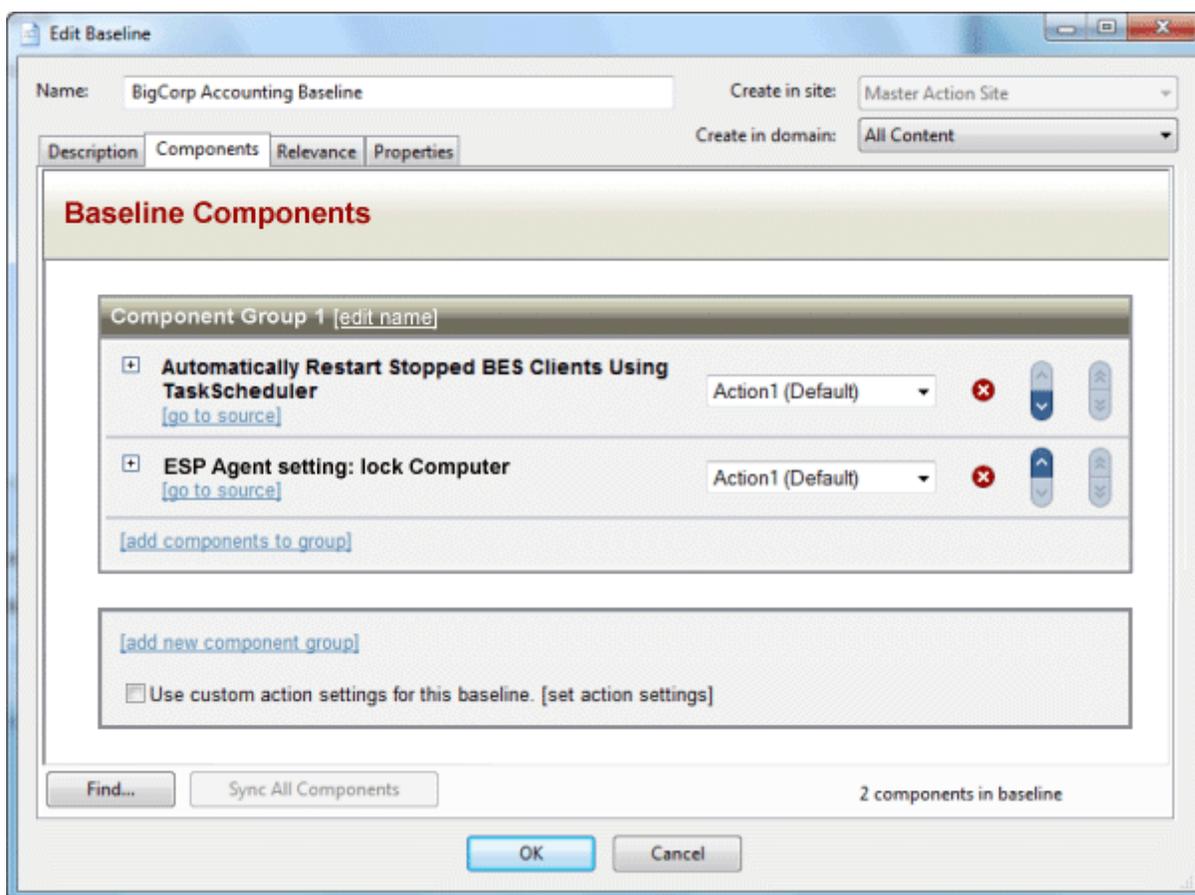
You can also customize an existing Baseline by selecting it from any Baseline list and then choosing:

- **Edit > Create Custom Copy**

Or right-click in a Baseline list and select **Create Custom Copy** or **Create New Baseline** from the context menu. Similarly, you can edit an existing custom Baseline by selecting **Edit Custom Baseline** from the right-click context menu.

## Edit Components Tab

The **Components** tab of the **Edit Baseline** dialog lets you specify a group of Fixlet messages and Tasks that you wish to add to your Baseline.



Click on the link to **add components to group** and then select Fixlets, Tasks and other Baselines to place into your group. Use the **edit name** link to name the group. You can place all your components into a single group or click the **add new component group** link to add structure to your Baseline. Click the red X to delete the associated component, and use the up (^) and down (v) arrows to change the order of the components in the list.

Check the box next to **Use custom action settings** if you want to modify the Baseline Action settings. Click on the **set action settings** link to bring up the **Action Settings** dialog.

The components of a Baseline are copies of the original Fixlet or Task, not pointers. As such, if the underlying Fixlet or Task should change, the Baseline may become out of sync with the original. If this happens, the message **Source Fixlet differs** will show up in the component listing.

At the bottom of this dialog, there is a **Find** command that brings up a dialog for you to enter a search string and options such as match whole word, match case and search direction. It will allow you to easily search through the components of your Baseline.

There is also a **Sync All Components** button. This will force all of your Baseline components to sync up with the latest versions of their sources, in case they have changed.

To create a new Baseline from scratch, select the following:

- **Tools > Create New Baseline**

You can also customize an existing Baseline by selecting it from any Baseline list and then selecting:

- **Edit > Create Custom Copy**

Or right-click in a Baseline list and select **Edit**, **Create Custom Copy** or **Create New Baseline** from the context menu.

## Edit Description Tab

The **Description** tab of the **Creation/Edit** dialogs lets you describe your new or customized **Fixlet**, **Task**, **Analysis** or **Baseline** object.

- Enter a custom **Description** that will constitute the body of your descriptive message. Simply click the description in the HTML page to modify it.
- Below the Description box is the text describing the **Action(s)** you can attach to this Fixlet, Task or Baseline. The Action will appear as a clickable link in the Description page. Simply click the text to modify it, although the default phrase is familiar and usually sufficient.

**Note:** For an Analysis, this link will activate the retrieval of the specified Properties. Technically, activation involves the execution of an Action, but in the case of an Analysis, it's a benign Action that merely establishes a property that can be read by the Console.

This dialog is available by clicking the Fixlet, Task or Baseline icon in the Domain Panel navigation tree. Right-click an item in the resulting List Panel and select the appropriate **Create** option from the context menu.

Or select the desired **Create** item from the **Tools** menu.

## Edit Fixlet Message

The **Edit Fixlet Message** dialog allows you to create your own custom Fixlet messages. You can create a Fixlet message from scratch or clone an existing one and customize it. To create an original Fixlet, choose **Tools > Create New Fixlet**. You will be presented with a dialog with two text boxes at the top:

- **Name:** Enter the name of your custom Fixlet message.
- **Create in site:** From the pull-down menu, select the BES site you want to host it.
- **Create in domain:** From the pull-down menu, select the BigFix Domain you would like to host this Task.

Beneath these data fields, there are four tabs:

- **Description:** Create a user-readable title and description for the Fixlet you wish to deploy. If you are cloning an existing Fixlet, the original title and description will be the default. This is an HTML page, and you can use the toolbar at the top to alter fonts and formatting.
- **Actions:** Specify the action(s) for your custom Fixlet to execute.
- **Relevance:** Create a relevance clause to target this Fixlet to just the subset of computers you desire. For a cloned Fixlet, the original relevance clause will be the default. You can replace or modify the relevance clause to suit your network needs.

- **Properties:** Specify certain properties for your Fixlet, including Category, Download Size, Source, Severity and Date.

To create a new Fixlet message from scratch, select the following:

- **Tools > Create New Fixlet**

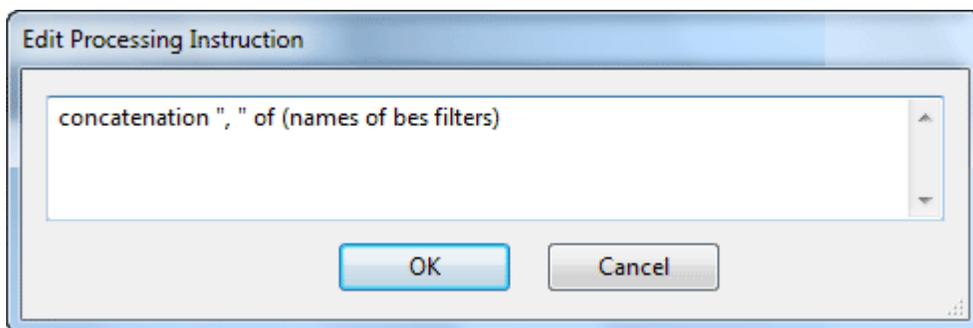
You can also customize an existing Fixlet message by selecting one from any Fixlet list and then selecting:

- **Edit > Create Custom Copy**

Or right-click in a Fixlet list and select **Create Custom Copy** or **Create New Fixlet Message** from the pop-up menu.

## Edit Processing Instruction

The **Edit Processing Instruction** dialog lets you write a Relevance Expression that can be embedded into the text portion of a Fixlet, Task, Analysis or Baseline.



You can enter the expression as straight text, HTML or Presentation (XML) style.

This dialog is available whenever you create a new or custom Fixlet, Task, Baseline or Analysis. In the description tag, enter the text you desire, and then from the toolbar at the top, click the magic wand . This will bring up the **Edit Processing Instruction** dialog.

## Edit Properties Tab

The **Properties** tab of the **Creation/Edit** dialogs lets you assign certain important properties to your new or customized **Fixlet**, **Task** or **Baseline** object.

There are a series of text fields that you can use to describe the various possible properties:

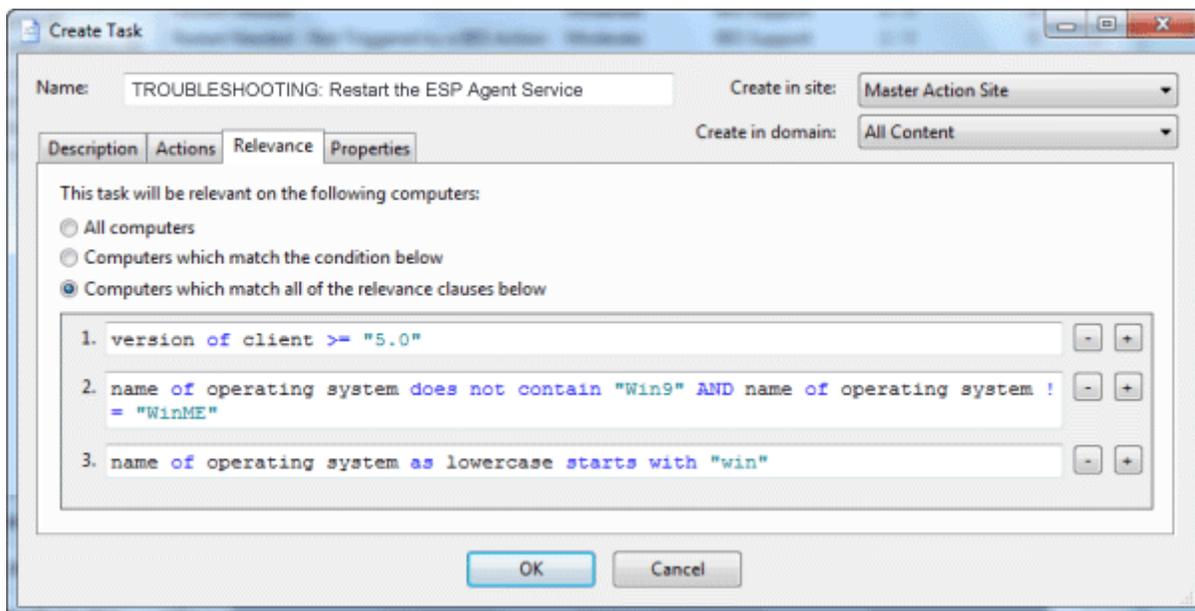
- **Category:** There are many categories you can file your Fixlet, Task or Baseline objects under, including the standard ones such as Setting, Update, Support and more. If you wish, you can create new settings for your particular installation as well.
- **Download Size:** If a download is associated with your Fixlet, Task or Baseline, you can enter the size here. This will allow you to sort, filter and keep track of the bandwidth requirements of your various custom-designed objects.
- **Source:** This is the source of the Fixlet, Task or Baseline. For a custom object, this is typically a name chosen by the BES Administrator, usually **Internal**.
- **Source ID:** This is an ID associated with the source described above. For an Internal source, the ID is typically blank.
- **Source Release Date:** Enter the release date of this Fixlet, Task or Baseline so you can manage these objects by age.
- **Source Severity:** Enter the severity of the Fixlet, Task or Baseline, typically from a list including Low, Moderate, Important and Critical.
- **CVE ID:** Enter the ID for the **Common Vulnerabilities and Exposures** standard, if any.
- **SANS ID:** Enter the ID for the **System Administration, Networking, and Security** standard, if any.

This dialog is available by clicking the Fixlet, Task or Baseline icon in the Domain Panel navigation tree. Right-click an item in the resulting List Panel and select **Create Custom Copy** from the context menu.

Or select the desired **Create** item from the **Tools** menu.

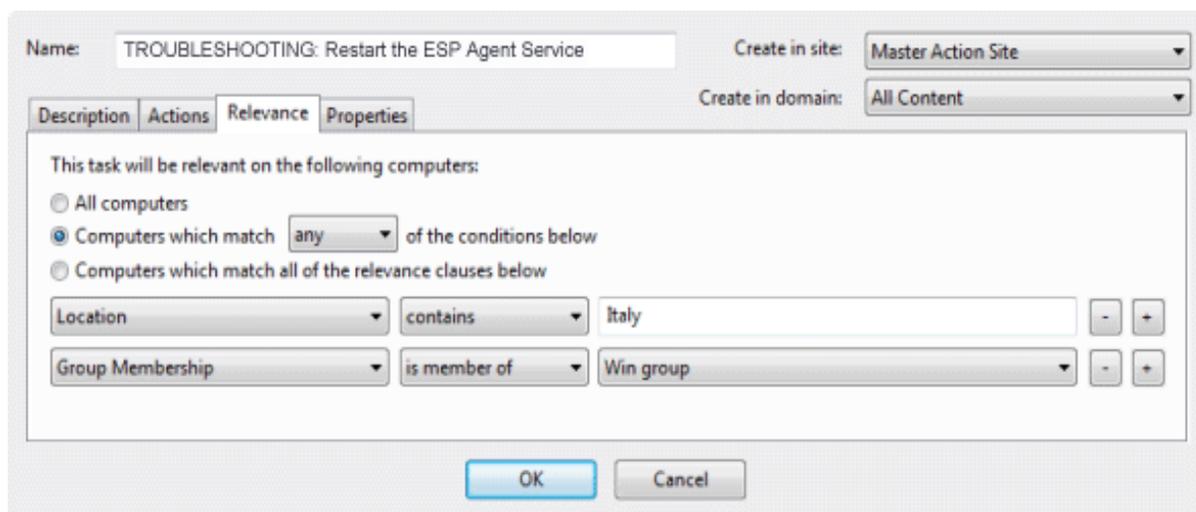
## Edit Relevance Tab

The **Relevance** tab of the **Creation/Edit** dialogs lets you create a relevance expression that will fine-tune the deployment of your custom **Fixlet**, **Task**, **Analysis** or **Baseline** object.



There are several ways to specify the desired set of computers:

- **All computers:** The default is simply to include all the networked BigFix Clients for this particular Fixlet, Task, Analysis or Baseline -- regardless of relevance.
- **Computers which match [any/all of] the condition[s] below:** This option lets you specify a condition that must evaluate to true before the computer will trigger the Fixlet, Task, Analysis or Baseline.



If there is more than one condition, this option will include a pull-down menu allowing you to select **any** (ORing the conditions) or **all** (ANDing the conditions). Three fields are used to define each condition:

- **The retrieved property:** select a property from the pull-down list containing dozens of pre-defined retrieved properties. Note that there are two other options at the top of this list.
  - Select **Relevance Expression** from the top of the list, select **is true** or **is false** from the relationship pulldown and then click the **Edit Relevance** button to define a custom relevance expression to base your group on.

- Select **Group Membership** from the property list, select the desired membership option and then select a manual group from the pull down list to the right.
- **The relationship:** select from the four available comparison operators: contains, equals, does not contain and does not equal. Depending on the particular retrieved property, there may be other relationships available.
- **The value:** Enter a value that will be compared to the value of the retrieved property. If the comparison is true, the Baseline will become relevant on the specified computer. For instance, to create a group that will automatically enlist Windows computers, enter **OS contains Win**.

There are two buttons used to edit the list of conditions:

- **Plus (+):** Click this button to add a new condition to the list. When there are two or more conditions, notice that the radio button above will include a pull-down menu allowing you to trigger on any or all of the conditions in the list.
  - **Minus (-):** Click this button to delete the condition associated with it.
- **Computers on which the relevance clause below is true:** Click this button to enter a custom Relevance expression that will be evaluated on each BES Client.

The screenshot shows a dialog box for configuring a task's relevance. At the top, the 'Name' field contains 'TROUBLESHOOTING: Restart the ESP Agent Service' and 'Create in site' is set to 'Master Action Site'. Below this, the 'Create in domain' is set to 'All Content'. The 'Relevance' tab is active, showing a list of conditions. The first condition is '1. version of client >= "5.0"'. The second is '2. name of operating system does not contain "Win9" AND name of operating system != "WinME"'. The third is '3. name of operating system as lowercase starts with "win"'. The radio button for 'Computers which match all of the relevance clauses below' is selected. At the bottom, there are 'OK' and 'Cancel' buttons.

If the relevance expression evaluates to true, the Fixlet, Task or Baseline becomes relevant to that particular client and the BES Console will reflect that status. In the case of multiple relevance statements, they must all be TRUE (they are ANDed together) in order for the Task or Fixlet to become relevant.

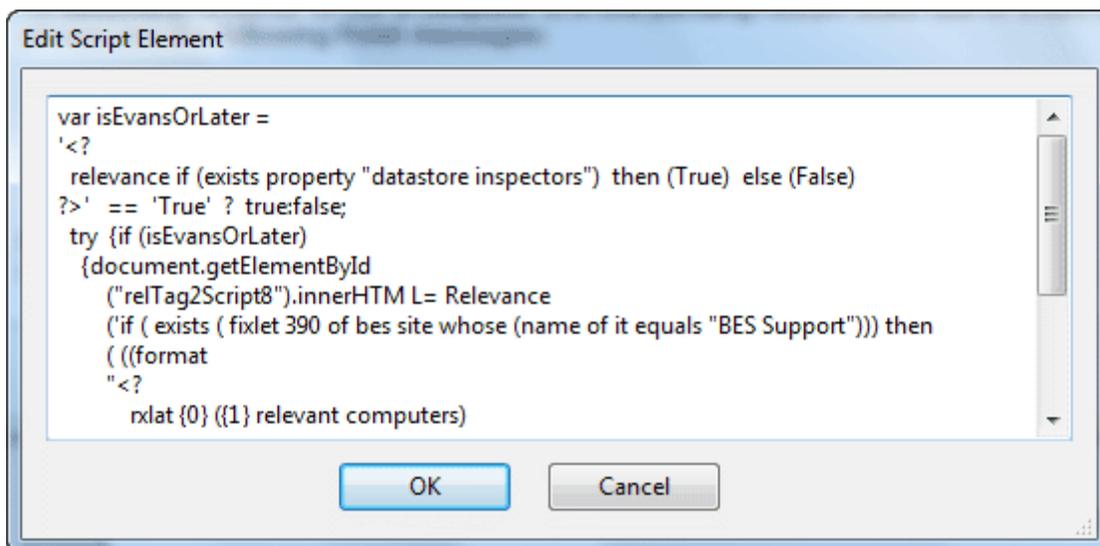
A complete discussion of relevance expressions is beyond the scope of this documentation. For more information, refer to the **BigFix Relevance Language Reference** and the various **BigFix Inspector Guides**. For some instructive examples, make custom copies of BES Support Fixlets and examine their relevance statements.

This dialog is available by clicking the Fixlet, Task, Analysis or Baseline icon in the Domain Panel navigation tree. Right-click the item in the resulting List Panel and select **Create Custom Copy** from the context menu.

Or select the desired **Create** item from the **Tools** menu.

## Edit Script Element

The Edit Script Element dialog lets you create a small script to accompany a new or custom Fixlet, Task, Baseline or Analysis.

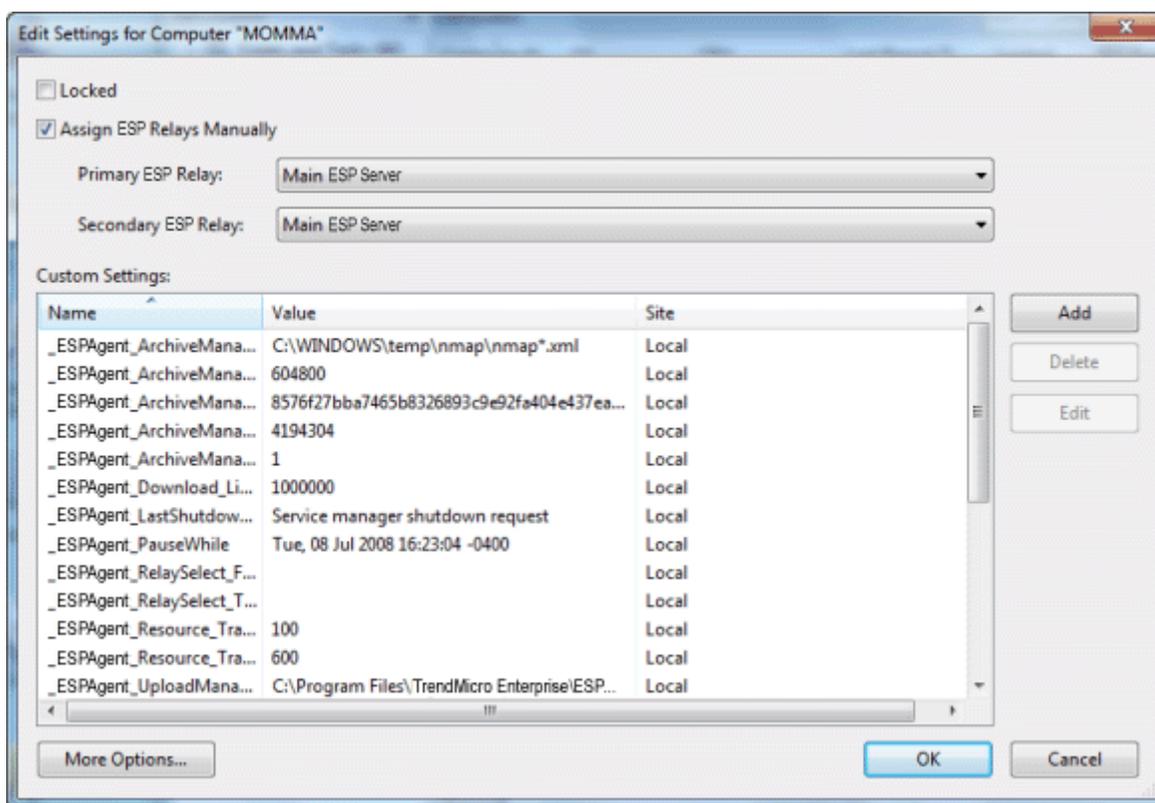


Enter the text of your action, and click **OK**. For more information on Action scripts see the **BigFix Action Language Reference**.

This dialog is available whenever you create a new or custom Fixlet, Task, Baseline or Analysis. In the description tag, enter the text you desire, and then from the toolbar at the top, insert the **Script** icon . This will bring up the **Edit Script Element** dialog.

## Edit Settings for Computer

The **Edit Settings for Computer** dialog allows the BES Console operator to alter the **settings** for a selected computer. (For more settings, or to apply settings to multiple computers, see **Edit Computer Settings**).



There are several way you can customize the settings of a computer:

- **Locked.** Check this box to lock the computer.
- **Assign BES Relays Manually.** Relays can be automatically assigned. Uncheck this box to select automatic discovery (the recommended setting). If you want to manually specify a particular relay for this BES Client, check this box and select the desired relays from the pull-down menus below.
  - **Primary Relay Server:** Select the name of the primary BES Relay from the pull-down menu. The selected computer will now point to this relay for Fixlet downloads instead of connecting directly to the BES Server.
  - **Secondary Relay Server:** Select the name of the secondary BES Relay from the pull-down menu. If the primary relay is unavailable, then this secondary relay will take over the job of providing Fixlet downloads.

**Custom Settings:** This list box contains custom named variables that can be assigned to each computer. This is a valuable technique for organizing a network of computers, and can help to identify individual computers as well as groups. The list of settings in this box can be sorted by clicking the appropriate header:

- **Name:** This column contains the assigned custom variable names, e.g., "depts."
- **Value:** This column lists the values of the named variables, e.g., "human resources."
- **Site:** As applied by the BES Console Operator, these named variables are a part of the "local" site. These variables may also be set by other Fixlet sites, in which case their site name will show up here.

There are three buttons to the right of the list:

- **Add:** Click this button to add a new custom variable to the list.

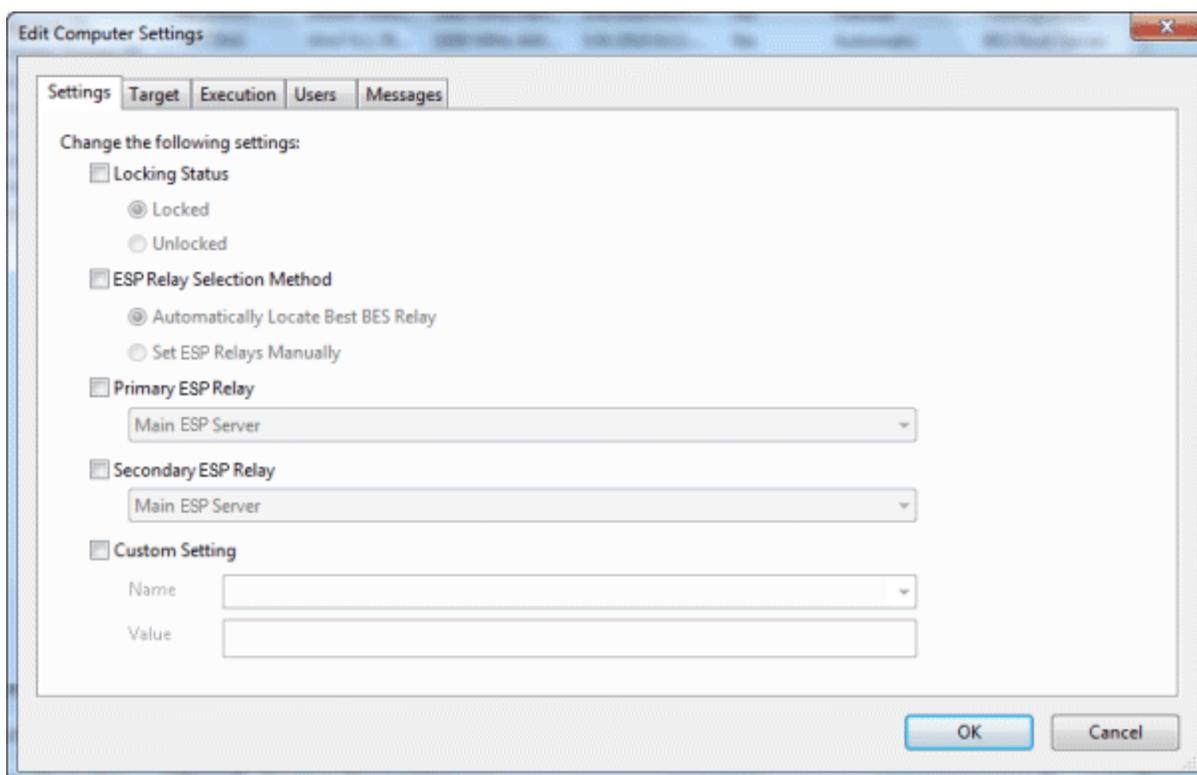
- **Delete:** Click this button to delete the selected variable from the list.
- **Edit:** Click this button to edit the selected named variable. This places the cursor in the value field of the chosen setting for editing.

Finally, there is a **More Options** button at the bottom of the dialog, that expands on these functions and opens up the **Edit Computer Settings** dialog.

This dialog is available by selecting the **Computers** icon in the Domain Panel navigation tree, right-clicking a single computer from the resulting List Panel and selecting **Edit Computer Settings** from the pop-up menu.

## Edit Computer Settings

The **Edit Computer Settings** dialog allows BES Console operators to change certain computer attributes on a single or specified set of computers, including locking, making the client a BES Relay, pointing to BES Relays and creating custom settings.



There are five tabbed dialogs on this screen to target and customize the settings for a selected group of BES Clients:

- **Settings:** Displays a group of controls to edit computer settings, such as the locked status, relays, and custom variables.
- **Target:** Displays a filter/list of computers that can be edited, filtered, sorted and grouped for specifically targeted settings.
- **Execution:** As with other Actions, you can limit the activation of the settings to any desired schedule, keeping in mind that the Action may take some time to deploy. Once applied, the settings will remain

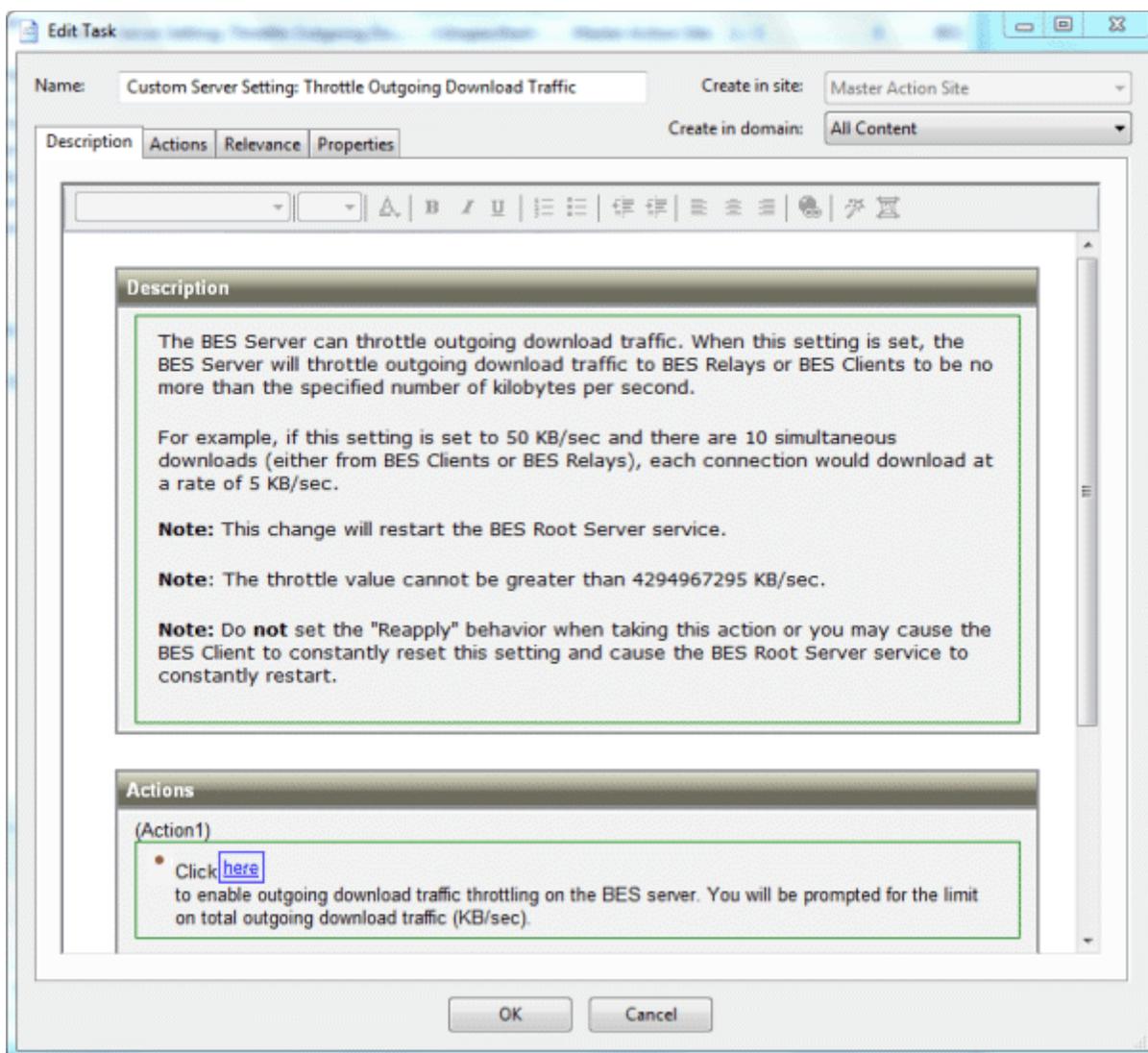
until removed. You can also specify certain user interactions and add extra targeting based on the contents of retrieved properties.

- **Users:** Allows you specify whether or not you want a user to be logged on before activating the settings.
- **Messages:** Allows you to issue a message to the BES Client before activating the settings.

When multiple computers are selected, this dialog is available by right-clicking and selecting **Edit Computer Settings** from the context menu (or select **Edit Computer Settings** from the **Edit** menu).

## Edit Task Message

The **Edit Task Message** dialog allows you to create a Task from scratch or clone an existing Task and customize it.



To create an original Task, choose **Tools > Create New Task Message**. You will be presented with a dialog with two text boxes at the top:

- **Name:** Enter the name of your custom Task.
- **Create in site:** From the pull-down menu, select the BigFix site you would like to host this Task.
- **Create in domain:** From the pull-down menu, select the BigFix Domain you would like to host this Task.

Beneath these data fields, there are four tabs:

- **Description:** Create a user-readable title and description for the Task you wish to deploy. If you are cloning an existing Task, the original title and description will be the default. This is an HTML page, and you can use the toolbar at the top to alter fonts and formatting.
- **Actions:** Specify the action(s) for your custom Task to execute.
- **Relevance:** Create a relevance clause to target this Task to just the subset of computers you desire. For a cloned Task, the original relevance clause will be the default. You can replace or modify the relevance clause to suit your network needs.
- **Properties:** Specify certain properties for your Task, including Category, Download Size, Source, Severity and Date.

To create a new Task from scratch, select the following:

- **Tools > Create New Task**

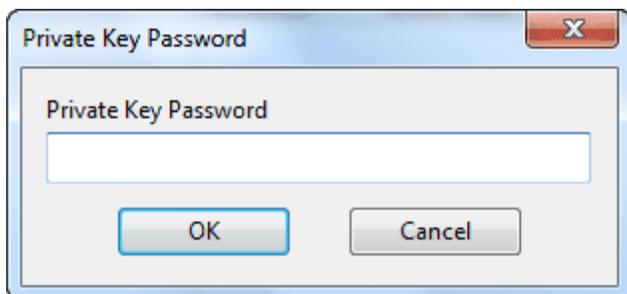
You can also customize an existing Task by selecting it from any Task list and then choosing:

- **Edit > Create Custom Copy**

Or right-click in a Task list and select **Create Custom Copy** or **Create New Task** from the pop-up menu.

## Enter Private Key

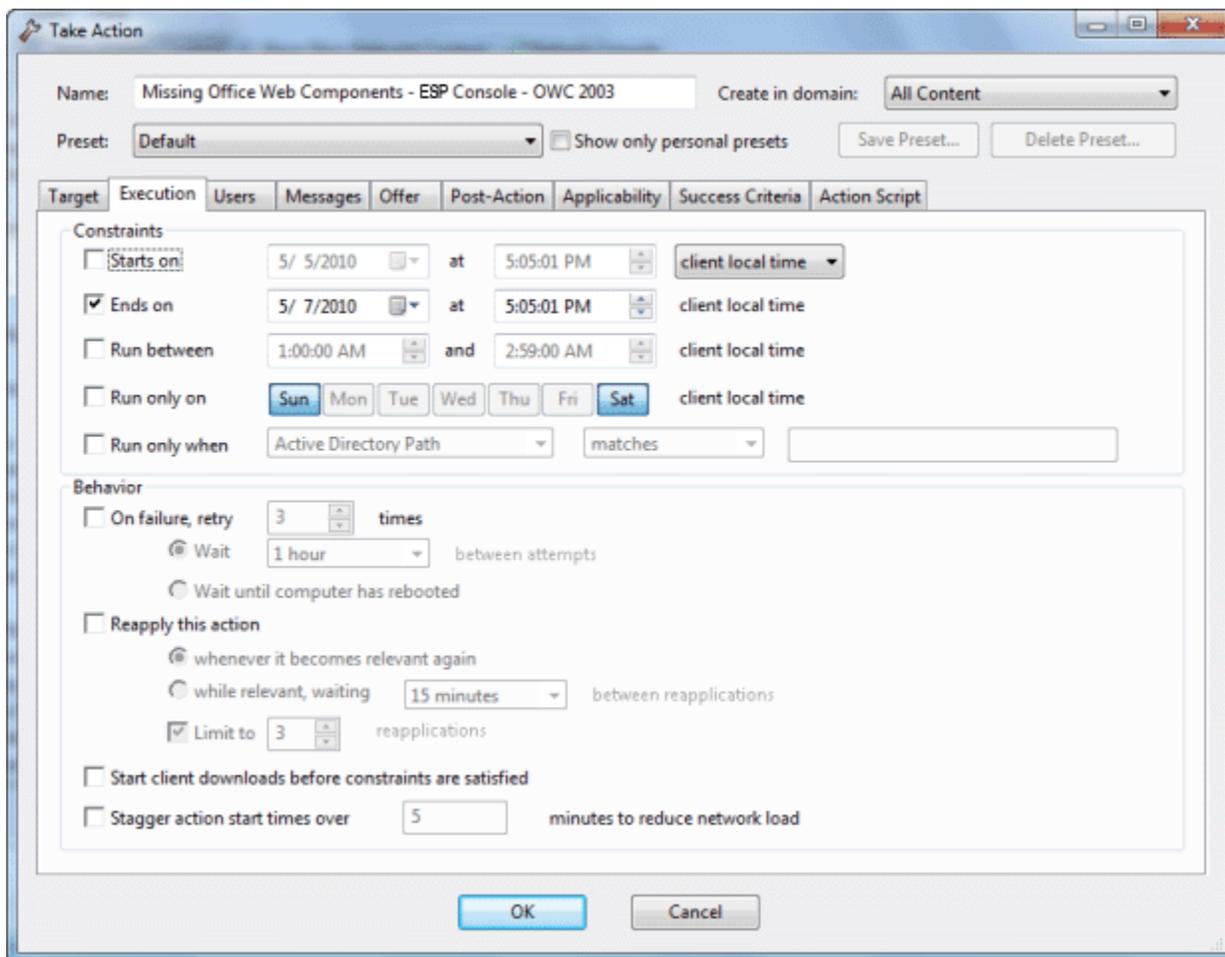
The **Enter Private Key** dialog requests a password.



Type in the publisher password that you were given by your BES Site Administrator. This dialog is displayed whenever an action is deployed, in order to assure that only authorized personnel are allowed to update computers on the network.

## Execution Tab

The **Execution tab** can be found in various Action dialogs. It lets you constrain the schedule and deal effectively with failed or reverted Actions. This dialog also allows you to distribute the Action over a period of time, helping you to balance your network load.



The **Constraints** section of this dialog lets you schedule actions and restrict the target computers:

- **Starts on [date] [time]:** Check this box to define a date and time when the Action can first be executed. You can choose from Local Client time or Universal time from the pull-down menu. The choice you make here affects all of the scheduling constraints. Note that UTC is only available for BigFix Clients version 8.0 or better.
- **Ends on [date] [time]:** Check this box to define a date and time when the Action should expire.
- **Run between [time] [time]:** Check this box to define a block of time when the Action can be run.
- **Run only on [Sun,Mon,Tue,Wed,Thu,Fri,Sat]:** Select specific days of the week to run the Action.
- **Run only when [Property] [Operator] [Value]:** Check this box when you want to filter the BigFix Clients by their retrieved properties. Select a Property and an Operator from the pull-down menus, then select a value for comparison. The value entered must form a valid relevance expression.

The **Behavior** section of this dialog lets you deal with failed Actions and recurrent relevance. The BigFix Client can **retry** any Action that is unsuccessful. It can also **reapply** any Action that succeeds and then subsequently fails. Among other things, this allows you to implement continuing policies while distributing the execution of the Actions over time to minimize the network load:

- **On failure, retry XX times:** Check this box to retry the action in case of a failure. If an action fails, it may be that the user dismissed it or that the computer crashed or was otherwise unable to execute the

action. Select a number of retry attempts (the default is 3). and then select a condition for trying again from the choices below:

- **Wait XX between attempts:** This button lets you select a period of time to wait before retrying the action (the default is one hour).
  - **Wait until computer has rebooted:** Select this button to wait until the BigFix Client reboots before trying to execute the action again.
- **Reapply this action.** Check this box to keep reapplying this action as a policy.
- **Whenever it becomes relevant again:** Reapply the action whenever the relevance expression evaluates to true.
  - **While relevant, waiting XX between reapplications:** Instead of immediately reapplying the action upon relevance, specify a period to wait between attempted reapplications.
  - **Limit to XX reapplications:** Continue to apply the action the given number of times, as long as it is still relevant. This limits a BigFix Client to a certain number of attempts (the default is 3) before quitting. Note that this counts as the number of attempts *after* the original, so a limit of 3 will actually involve 4 attempts. Note: If an action becomes repeatedly relevant, it might be a sign that a client computer needs special handling.
- **Start client downloads before constraints are satisfied:** If this box is checked, software downloads will be started before the Client has satisfied the execution constraints. This allows you to ensure that the download is available for execution as soon as the desired time frame begins.
- **Stagger action start times over MM minutes to reduce network load:** By checking this box, you can force the BigFix program to space out the execution of actions. This can be useful to reduce the load on the network in the case of bandwidth-intensive actions (such as large downloads). It is especially useful for allowing BigFix Relays to effectively service hundreds of attached BigFix Clients.

This tab is available from several different dialogs:

**Take Action, Take Multiple Actions, Action Settings and Edit Computer Settings.**

## Find

You can find information in any of the lists (Fixlets, Tasks, Actions, etc.) whenever the focus is on that list. To do so, you create a Find Filter. For instance, to find a particular word in the Fixlet list, click anywhere in the Fixlet List Panel and press **Ctrl-F** (or select **Find** from the **Edit** menu).

There are several section in the Filter dialog:

**Name:** First, provide a name for your Find Filter in the Name box.

**Visibility:** This box lets you keep the Filter to yourself or share it with other users.

**Include:** This section lets you define the scope of the Find. Choose from Fixlets, Actions, Tasks or any of the other main categories of BigFix content. You can choose to include **all** (AND the properties) or **any** (OR the properties) of the following items.

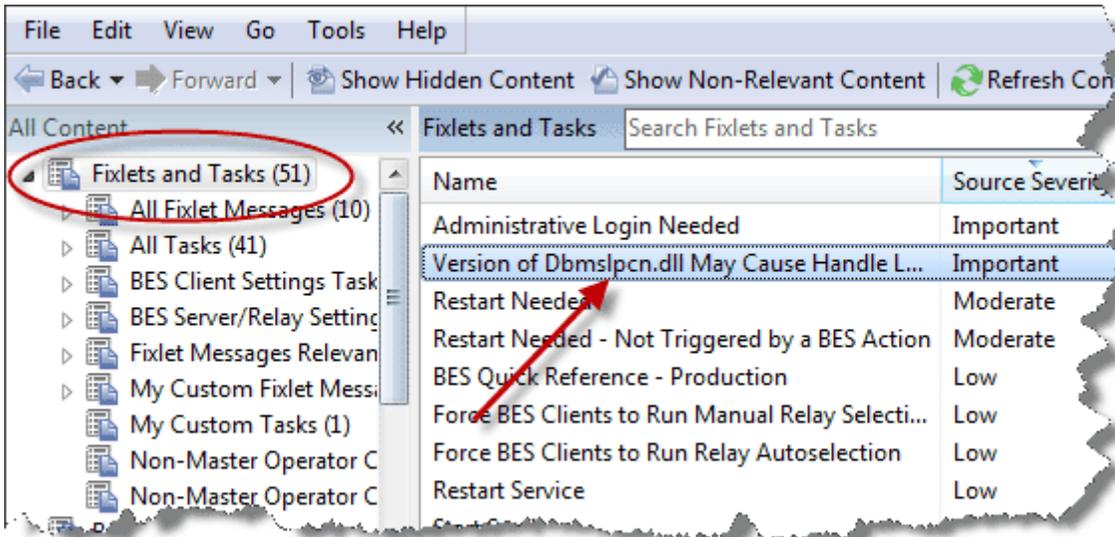
Two properties have been pre-arranged for you, but you can add or delete from these default choices. As with other property choices in the BigFix environment, there is a **{field} {operator} {search string}** triad to define. Here the defaults allow you to select a **Name** containing a value and a **Visibility**. Because Fixlets, Tasks and Analyses can be hidden, the visibility field allows you to search through these items depending whether they are **Visible**, **Locally Hidden** or **Globally Hidden**.

When you have finished defining your Find Filter, click the **Create** button. Your custom filter will be placed in the All Content Domain, under the **Custom Filters** folder. To make changes, right-click it and select **Edit** from the context menu.

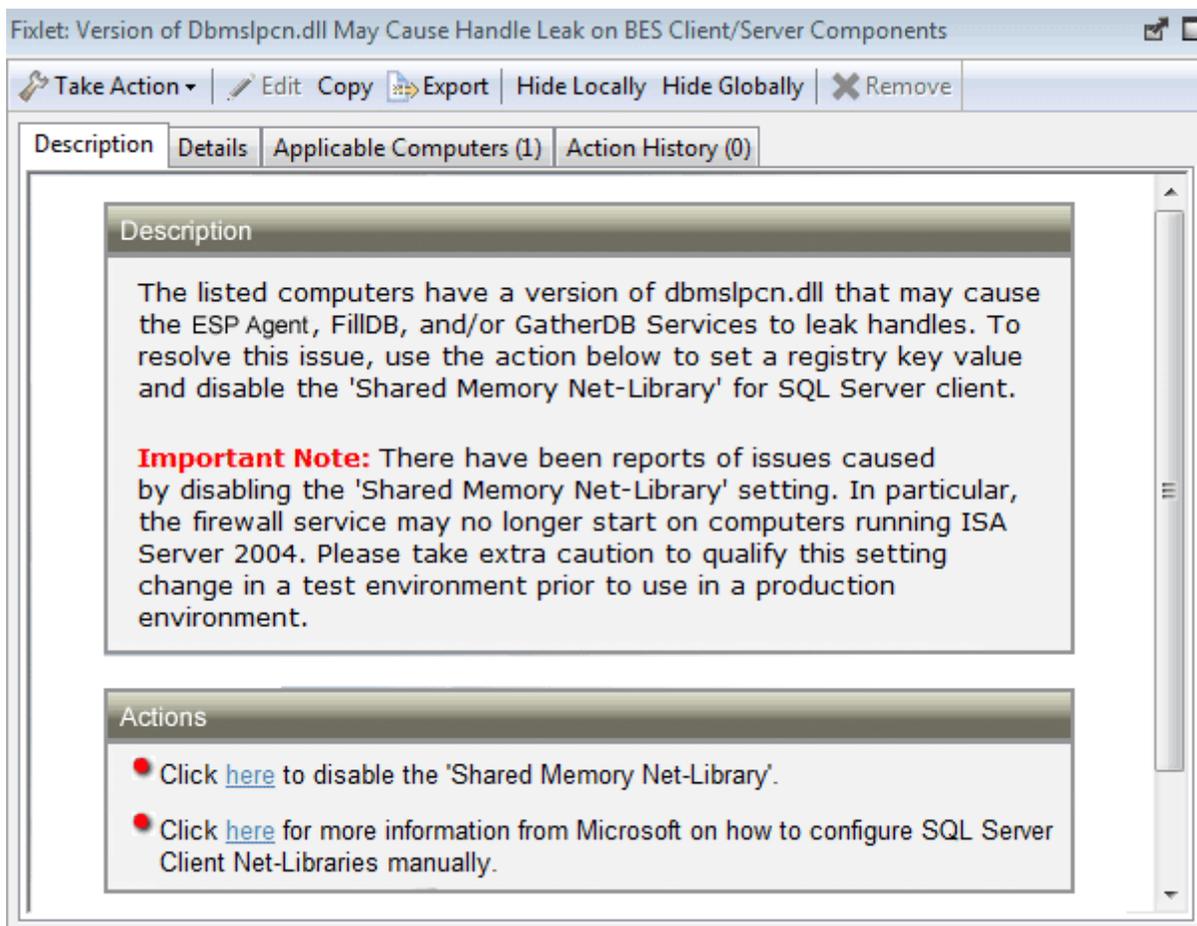
This dialog is available by selecting one of the main BigFix content categories (Fixlet Messages, Tasks, Actions, etc.) the icon in the Domain Panel navigation tree to establish the focus, then pressing **Ctrl-F** or selecting **Find** from the **Edit** menu..

## Fixlet and Task: List and Document

A list is created whenever you click **Fixlets and Tasks** from the Domain Panel navigation tree.



This list incorporates both Fixlets and Tasks, which you can filter by opening the icon and clicking any of the child nodes beneath it. The List Panel on the right now contains all the currently relevant Fixlets and Tasks, winnowed down by the filters. A Fixlet or Task **document** is displayed in the Work Area of the BES Console when you click any item in the list.



Fixlet and Tasks have the same basic tools and tabs available because they are similar objects. The main difference between the two is that a Fixlet is triggered by a vulnerability, whereas a Task is designed for ongoing maintenance. Both of them use Relevance clauses to target client computers and both use Action scripts to accomplish their goals. You can get a separate listing of each by clicking the **All Tasks** or **All Fixlets** node in the navigation tree.

At the top of each document you'll find the name of the Fixlet or Task. Beneath that is a toolbar containing the following tools:

- **Take Action:** This tool provides a pull-down menu of Actions. Select one from the menu to deploy it to your BigFix network.
- **Edit:** Lets you edit the Fixlet or Task. This tool is only available for custom Fixlets or Tasks.
- **Copy:** Lets you copy or clone the Fixlet or Task to customize its functionality.
- **Export:** Allows you to export the Fixlet or Task for editing in an external editor, or for copying to another Console or deployment.
- **Hide Locally:** Hides the Fixlet or Task on this version of the Console.
- **Hide Globally:** Hides the Fixlet or Task on all networked BigFix Consoles.
- **Remove:** Deletes this Fixlet or Task (only available for Custom Fixlets or Tasks).

There are several tabs for this document. They include:

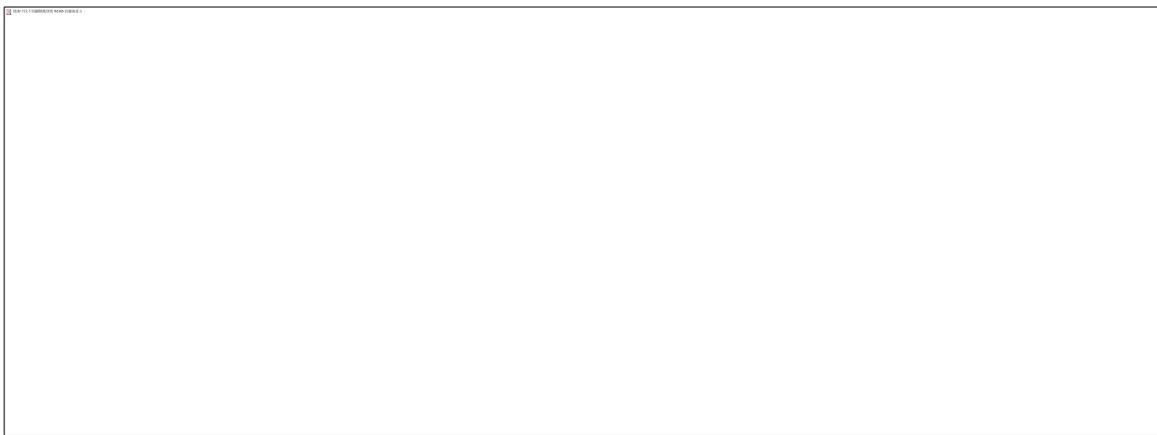
- **Description:** An HTML page describing the Fixlet or Task and a set of Actions (implemented as links) that are designed to address the problem described. You can search any of the HTML interfaces in BES by pressing Ctrl-F and then entering your search string.
- **Details:** An HTML page describing the Properties, Relevance clauses and Action scripts behind the Fixlet or Task. At the bottom of the page is a text box to enter a comment that will be attached to the message.
- **Applicable Computers:** Shows what subset of computers is targeted by the Action.
- **Action History:** Shows the history of any Actions that have been invoked by this Fixlet or Task.

To display a Fixlet or Task list, click the **Fixlets and Tasks** icon in the Domain Panel navigation tree.

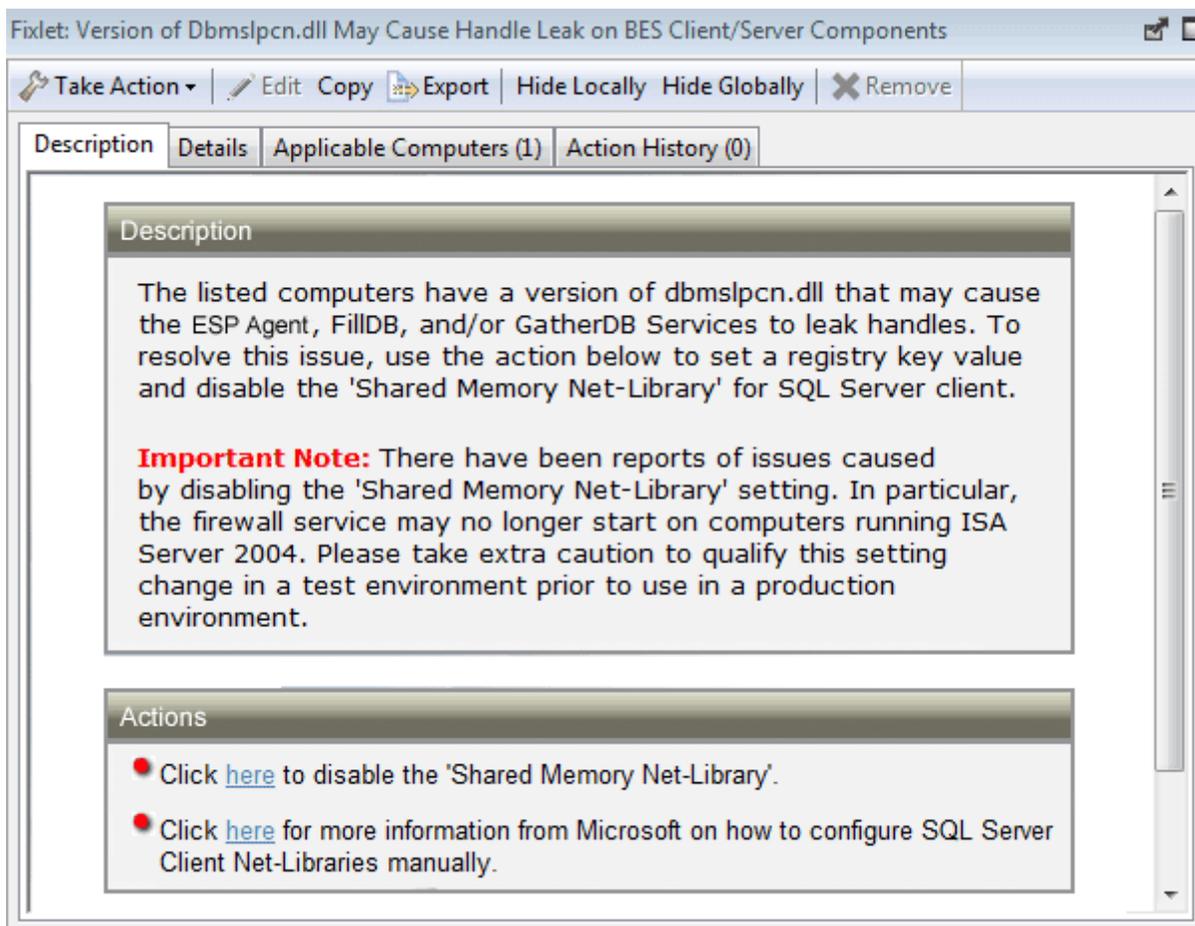
A **Fixlet or Task document** is opened whenever you open an item in the resulting list.

## Fixlet List and Document

A list is created whenever you click **Fixlets and Tasks** from the Domain Panel navigation tree. This list incorporates both Fixlets and Tasks, which you can filter by opening the Fixlet and Tasks icon and clicking **All Fixlet Messages** beneath it.



The List Panel on the right now contains all the currently relevant Fixlets. A **Fixlet document** is displayed in the Work Area of the BES Console when you click any message in the list.



At the top of the Fixlet document you'll find the Fixlet name. Beneath that is a toolbar containing the following tools:

- **Take Action:** This tool executes the default action of Fixlet.
- **Edit:** This option lets you edit the Fixlet. This tool is only available for custom Fixlets that you have created yourself.
- **Copy:** This option lets you copy or clone the Fixlet to customize its functionality.
- **Export:** This tool allows you to export the Fixlet for editing in an external editor.
- **Hide Locally:** Hides the Fixlet on this version of the Console.
- **Hide Globally:** Hides the Fixlet on all Consoles.
- **Remove:** Deletes this Fixlet (only available for Custom Fixlets).

There are several tabs in a Fixlet document. They include:

- **Description:** An HTML page describing the Fixlet and a set of Actions (implemented as links) that are designed to address the problem described. You can search any of the HTML interfaces in BES by pressing Ctrl-F and then entering your search string.
- **Details:** An HTML page describing the Properties, Relevance clauses and Action scripts behind the Fixlet. At the bottom of the page is a text box to enter a comment that will be attached to the Fixlet message.
- **Applicable Computers:** Shows what subset of computers is targeted by the action.

- **Action History:** Shows the history of any actions that have been invoked by this Fixlet message.

To display a Fixlet list, click the **Fixlets** icon under the **Fixlets and Tasks** icon in the Domain Panel navigation tree.

A **Fixlet document** is opened whenever you open an item in a Fixlet list.

## Help for the BES Console

Show the help files for the BES Console. These online files provide a tutorial, a description of the program and a full-text search capacity. To get started, click [here](#).

This dialog is available by selecting:

- **Help > Contents**

## Import Content

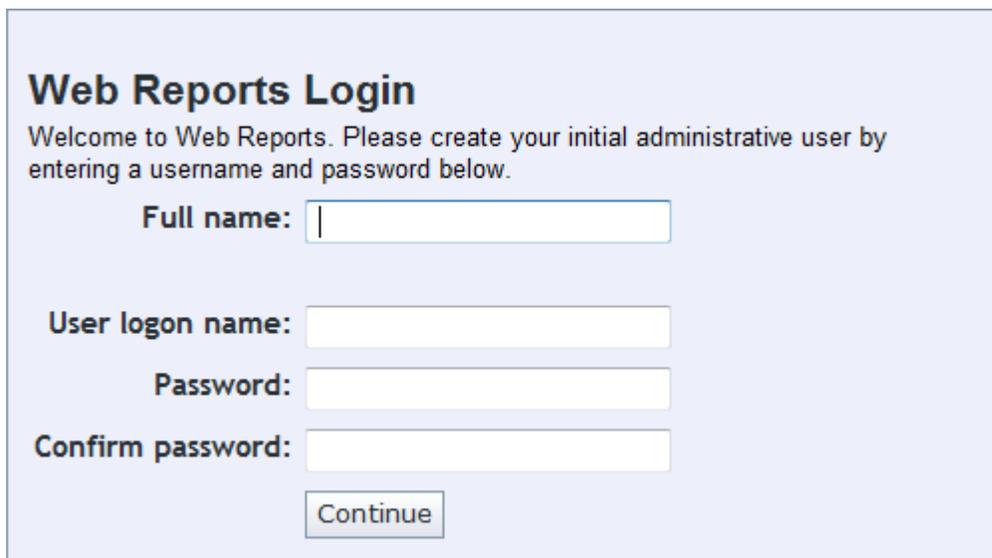
The **Import** dialog allows you to import .bes files that you have exported or that have been sent to you by another operator.

BigFix files may contain groups of Fixlet messages, Tasks, Actions or Baselines. When you open them, a Create dialog is displayed, along with the expected features for each content type. For more information, see the associated creation dialogs for the selected content.

This dialog is available by selecting **Import** from the **File** menu.

## Launch Web Reports

The **Web Reports** dialog provides access to network information which is collected from various BES Servers and aggregated into a set of HTML reports. These include summaries of the history and status of Fixlet messages and Actions across extended networks of computers. These reports can be used to track software deployments and compliance across a global network of independent LANs. To start, select **Tools > Launch Web Reports**. The following dialog will appear in your browser.



**Web Reports Login**

Welcome to Web Reports. Please create your initial administrative user by entering a username and password below.

**Full name:**

**User logon name:**

**Password:**

**Confirm password:**

Web Reports is a stand-alone program that is not covered in this documentation. For more information, see the **Web Reports Guide**.

This dialog is available by selecting:

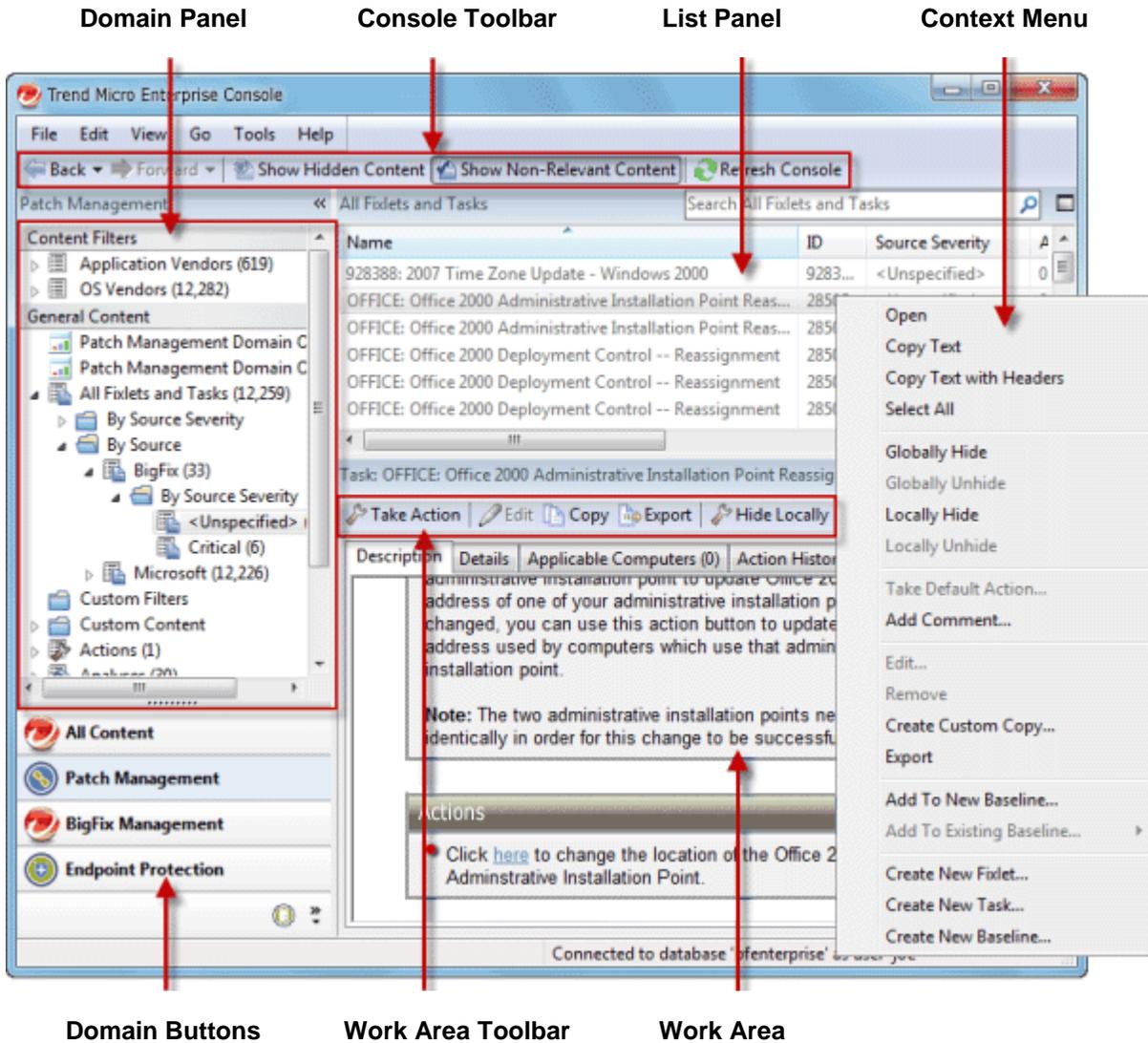
- **Tools > Launch Web Reports.**

## Main Console Window

The **Main Console Window** has a panel on the left containing buttons and navigation trees called the **Domain Panel**. Choose an item from the Domain Panel open up the related List Panel on the right. From this list, specific items can be opened in the Work Area below. Here are the main parts:

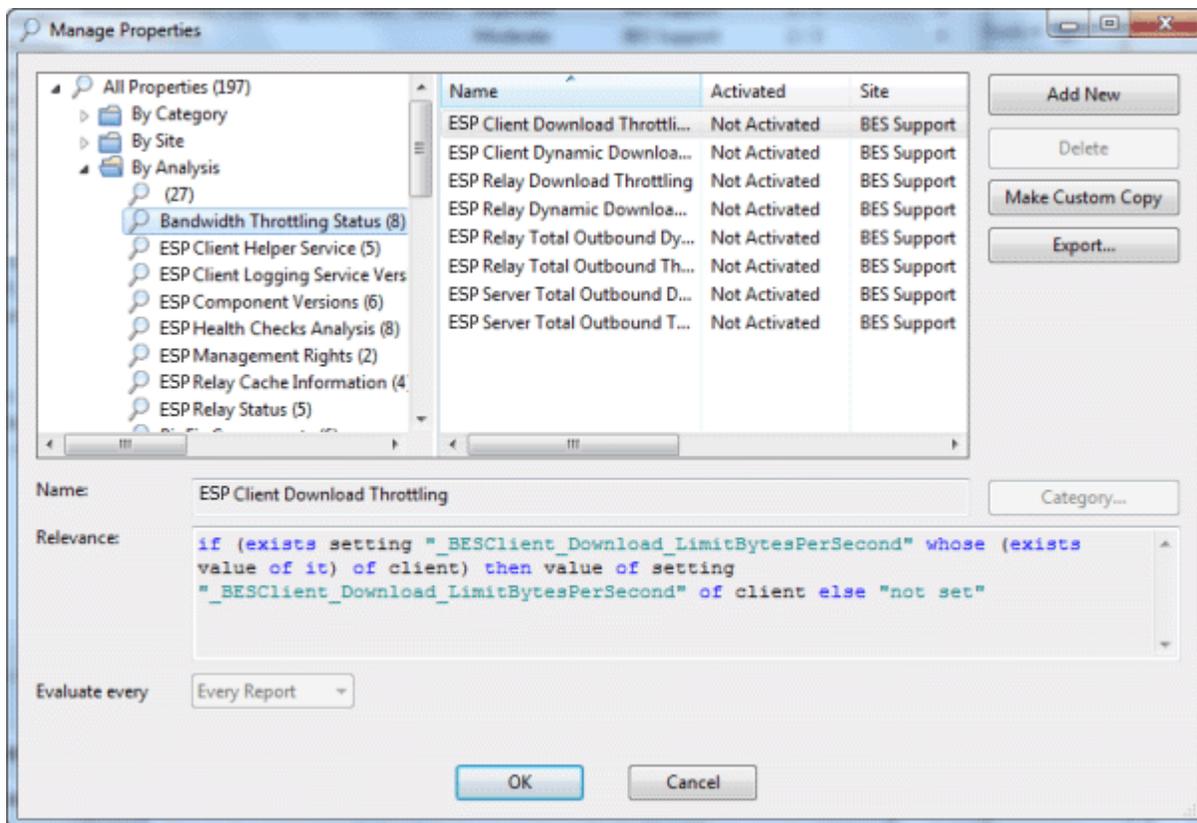
- **Domain Panel:** This panel provides a high-level view of the extensive BigFix content, allowing you to quickly subdivide the information by major IT functions. Within each domain, this panel presents navigation trees that make it easy to zoom in on Fixlet Messages, Reports, Analyses and other content.
- **Domain Buttons:** At the bottom of the Domain Panel, these buttons represent the current set of BigFix Domains that are currently available to you. When you subscribe to a site, it is automatically entered into the proper domain. If a new domain is required, a button for it will be added to this group. At the bottom of the buttons is a control that allows you to adjust the number of buttons to display.
- **Console Toolbar:** This toolbar allows you to navigate back and forth through the items you have selected from the Domain navigation tree. In addition there are buttons that allow you to display items you may have hidden and items that are not currently relevant to any of your BigFix Clients (this enables you to view all the available content for research or cloning purposes). There is also a refresh button that will re-evaluate content for the Console display.
- **List Panel:** This is a listing of the items specified by the content filters and the navigation trees in the Domain Panel. You can sort this list by clicking on the column headers and you can rearrange the headers by dragging them left or right. In addition, you can right-click the headers to see a pop-up menu containing a list of all the possible fields. Check those you wish to use as headers.

- **Context Menu:** This is the menu that pops up when you right-click any item in a list. Different lists have different context menus.
- **Work Area Toolbar:** This bar contains context-sensitive buttons that can execute various actions based on the content of the current work area.
- **Work Area:** Below the List Panel and the Work Area Toolbar is the Work Area. When you double-click an item from the List Panel, the Console opens a detailed document in this window.



## Manage Properties

The **Manage Properties** dialog contains a list of computer properties that are retrieved on a regular schedule from each BES Client.



This allows the Console operator to monitor specific aspects of all managed clients. These properties can also form the basis of the client filters (and column headers) in the BES Console whenever client computers are listed. In addition, these properties can be used to target computers for Fixlet messages or actions.

There are several properties listed as defaults in the top panel, but if you are a Master Operator, you can add to these (and delete others) by using the buttons on the right:

- **Add New:** To add a property, click this button, and the bottom part of the dialog becomes editable. Supply a name (that will be used for filtering and sorting) and then fill in a Relevance Expression in the text box below.
- **Delete:** To delete a property, highlight it in the list and then click this button.
- **Make Custom Copy:** You can clone and customize any property by selecting it in the list and then clicking this button.
- **Export:** To export a property as an XML (.bes) file for sharing with other users, click the button and then specify a filename for export.

Below this panel are two text fields. They display the existing property name and relevance expression. For reserved properties, these fields are display-only. Many of the properties, however, are available for editing.

- **Name:** Displays the existing name of a property, or allows you to enter a name for a new Property. If you make this name available, it will be integrated into the interface for filtering, sorting and targeting. This field also allows you to rename a property.
- **Relevance:** This text box displays the relevance expression that is evaluated to produce the retrieved property.

For each of these properties, there is an optional evaluation period:

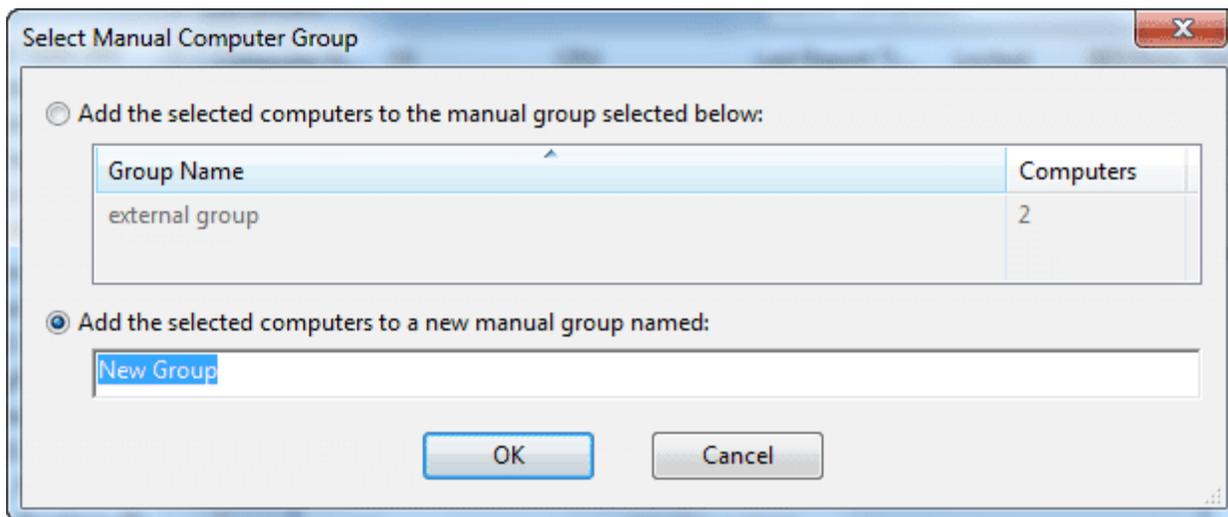
- **Evaluate Every:** Choose a time period, from 5 minutes to a month, which controls how often the Property is evaluated. You may wish to set a long period for time-consuming property evaluations or a short period for more urgent properties. The default is **Every Report**, which reevaluates the properties with each report.

**NOTE:** Some of the properties (such as the IP Address and the relay status) are essential to the proper functioning of the BES Console. They are marked as **Reserved**, and may not be renamed or deleted.

This dialog is available by selecting **Tools > Manage Properties...**

## Manual Computer Groups

This dialog allows you to manually group your computers so that you can target them simultaneously.



To choose the computers you wish to group, select them from the **Computers** List Panel. Right click and select **Add to Manual Group** from the context menu. In the dialog that pops up, you can add these computers to a pre-existing group, or define a new one. There are two buttons for these choices:

- **Add the selected computers to the manual group selected below:** Click on the desired group and click OK.
- **Add the selected computers to a new manual group named:** Type in a new group name and click OK.

**NOTE:** A computer can belong to more than one group. You may also define groups automatically, by using properties or Relevance statements to indicate their group status.

This dialog is available by clicking the **Computers** icon in the Domain Panel navigation tree, selecting computers from the Computer List Panel, and then right-clicking and selecting **Add to Manual Group** from the context menu.

## Messages Tab

The **Messages** tab can be found in various Action dialogs. Ordinarily, the BigFix system applies actions in the background, without bothering any end user who may be present. There are, however, occasions in which the BigFix Console operator might prefer that the action be taken only with end-user involvement. The Message tab in the Take Action dialog box allows the operator to alert the user with a specific message, and to offer certain interactive features on the message display, including the ability to see more information about the proposed action and to cancel the proposed action.

- **Display message before running action:** Check this box if you want to deliver a message to the BigFix Clients *before* running an action. When this box is checked, other boxes are opened for modification:
  - **Title:** Type a title line for your message.
  - **Description:** To prepare the user, enter a description of the forthcoming Action in this text box.
  - **Ask user to save work:** Check this box to include a prompt asking users to save their work before the Action is invoked.
  - **Allow user to view action script:** Check this box to allow the user to look over the script before accepting the Action. **Note:** This option is disabled in the Take Multiple Action dialog.
  - **Allow user to cancel action:** Check this box if you want to grant the user the right to cancel the action.

**Set Deadline:** The following two radio buttons allow you to extend the user a grace period after the Action becomes relevant. This can give them time to prepare for an upgrade. The deadline can be relative or absolute:

- **[time period] from time action is relevant:** Click this button to grant the user a specified grace period starting at the moment the Action becomes relevant.
- **[date] at [time] client local time:** Click this button to specify a specific date and time to serve as the Action deadline. The choice of local client time or universal time is set by the Execution tab.

**At deadline:** When the deadline arrives, these options are available:

- **Run action automatically:** Click the button to cause the Action to run automatically when the deadline arrives.
- **Keep message topmost until user accepts action:** Click this button to keep the message on top until the user clicks to accept the Action.

**Confirmation message:** When the user accepts an action, you can issue a message:

- **Show confirmation message before running action:** Check this box if you want to display a final confirmation message to the user before executing the Action.

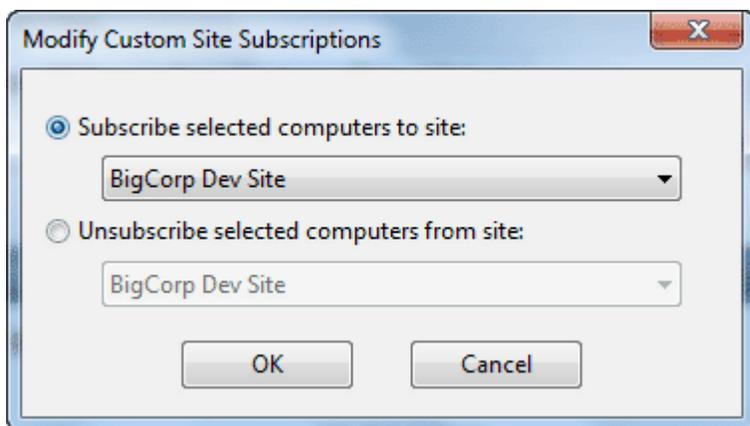
**Display message while running action:** You can add a separate message to be displayed *while* the action is running. Check this box and then enter the title and your message in the text box below.

This tab is available from several different dialogs:

**Take Action, Take Multiple Actions, Action Settings** and **Edit Computer Settings**.

## Modify Custom Site Subscriptions

The **Modify Custom Site Subscriptions** dialog lets you subscribe or unsubscribe any specified group of computers to any of your ad-hoc enabled custom sites.



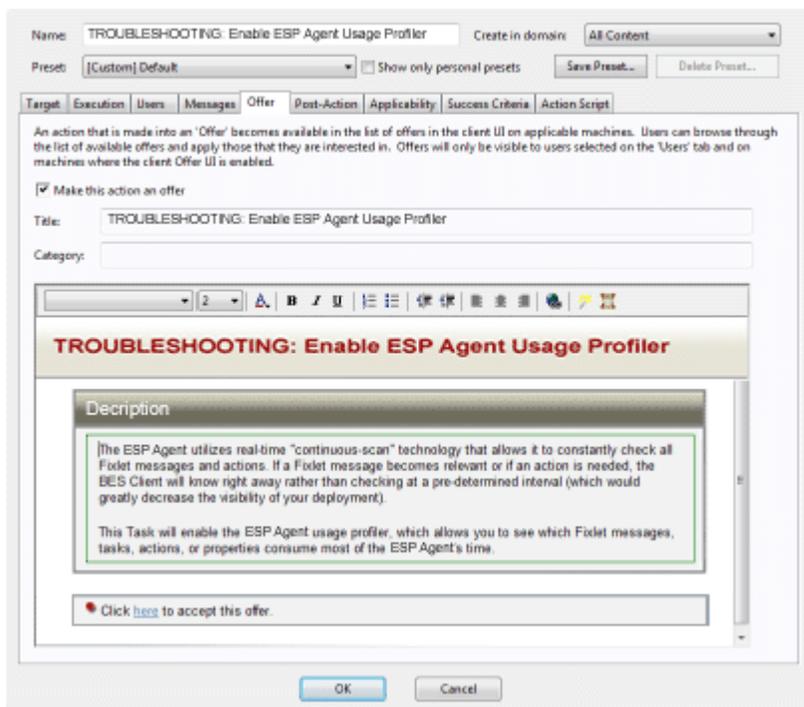
To ready a custom site for this type of ad-hoc subscription, you must first open the desired custom site, select the **Computer Subscriptions** tab and click the button labeled **Computers subscribed via ad-hoc custom site subscription actions**. Don't forget to **Save Changes** using the toolbar.

Now, when you open Computers in the List Panel, right-click to bring up the context menu and choose **Modify Custom Site Subscriptions**. This dialog will pop up and those custom sites that have been enabled for ad-hoc subscriptions will be available for subscription from the pull-down menu. If the site is already subscribed to a custom site, this dialog also lets you unsubscribe it.

This dialog is available by right-clicking on an item from any Computer list and selecting **Modify Custom Site Subscriptions** from the context menu.

## Offer Tab

The **Offer** tab can be found in various Action dialogs. It lets you advertise a list of Actions (typically optional patches or updates) to the BES Client user.



The operator of the targeted BigFix Clients can then choose the Actions they desire from the offering list. Offers are limited to BigFix version 7.0 Clients or better.

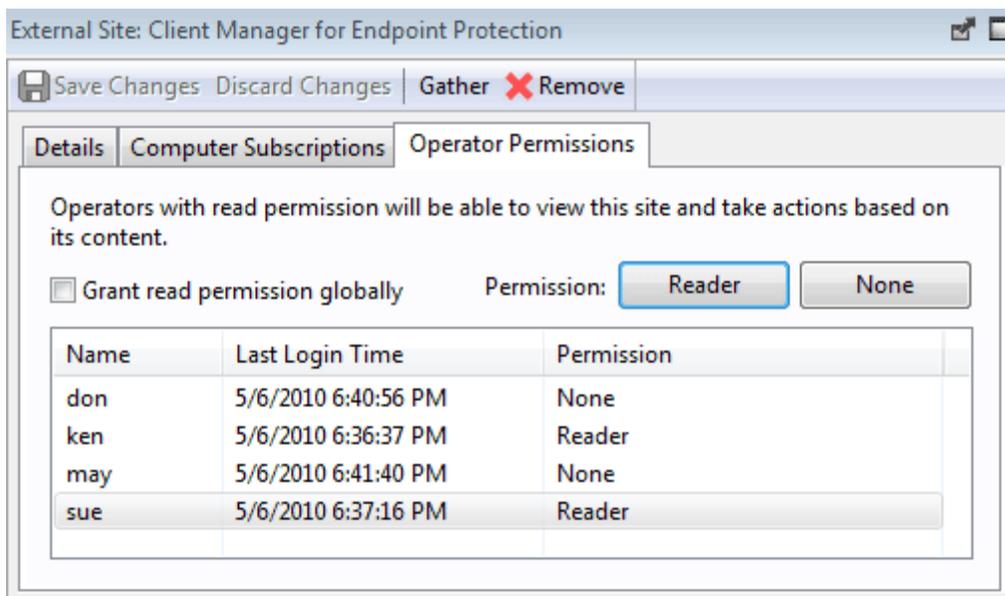
- **Make this action an offer:** Check this box to advertise the given Action to users. When you check the box, the interface opens up to enter more details about the offer:
- **Title:** Enter a descriptive title for your Action here. Remember that this advertisement is being presented to end-users who will need a clear and simple description in order to take advantage of the offer.
- **Category:** Enter a category for this offering. This is a user-defined field, and you can use any scheme that makes sense to your particular BES deployment.
- **HTML box:** Use this box to customize the HTML that will be presented to the end user. Enter a description of the action in the box provided. You can customize this HTML with fonts and styles.

This tab is available from several different dialogs:

**Take Action, Take Multiple Actions** and **Action Settings.**

## Operator Permissions Tab

The **Operator Permissions** tab of the Site document lets BES Master Operators specify site permissions for other operators.



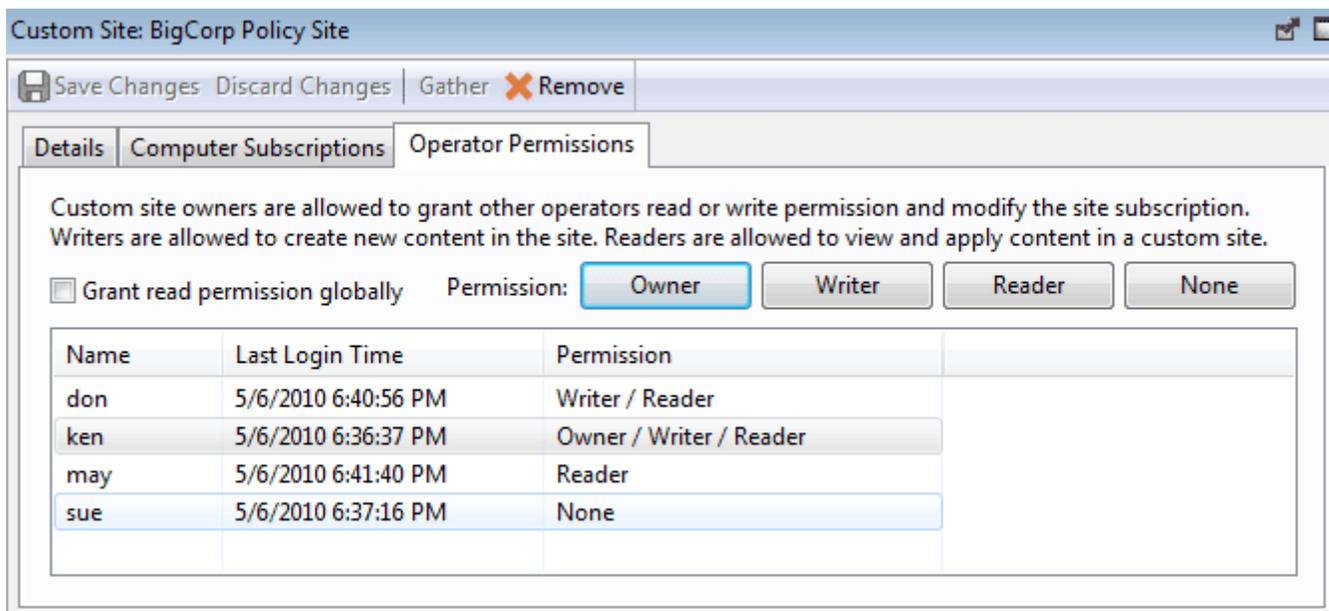
This dialog is available to BES Master Operators and Non-Master Operators who have Site Ownership permissions.

Not all operators need to know about all sites, and some sites may be most easily managed by a single operator, such as the Anti-Spyware Czar. This interface lets you attach a Fixlet site to a single operator or group of operators. You can also remove operators from this list at any time.

This interface only affects the reader status of Non-Master Operators. For an external site, there is a check box and two buttons:

- **Grant read permission globally:** Check this box to allow read access to all operators.
- **Reader:** Select an operator from the list and then click this button to grant read permission to that operator.
- **None:** Select an operator from the list and click this button to deny read permission to the specified operator.

For a custom site, which can be owned and edited, there are two extra permission buttons.



As before, you select an operator from the list and then click buttons to grant permissions. The two extra buttons are:

- **Owner:** This grants the greatest permission to the operator who can then assign reader and writer permissions.
- **Writer:** This button allows an operator to edit the site.

This dialog is available by clicking the **Sites** icon in the Domain Panel navigation tree, selecting a Site from the resulting List Panel and then clicking the **Operator Permissions** tab.

## Post-Action Tab

The **Post-Action** tab can be found in various Action dialogs.

Name: TROUBLESHOOTING: Enable ESP Agent Usage Profiler    Create in domain: All Content

Preset: [Custom] Default     Show only personal presets    Save Preset...    Delete Preset...

Target   Execution   Users   Messages   Offer   **Post-Action**   Applicability   Success Criteria   Action Script

Do nothing after action completes  
 Restart computer after action completes  
 Shutdown computer after action completes

Message

Before restarting, show the following message to active users:

Message Title: TROUBLESHOOTING: Enable ESP Agent Usage Profiler

Message Text: Your system administrator is requesting that you restart your computer. Please save any unsaved work and then take this action to restart your computer.

Allow user to cancel restart

Set deadline: 1 day    from time action completes

At deadline:  Restart automatically  
 Keep user interface topmost until user accepts restart

OK    Cancel

It gives the BES Console operator the choice of restarting or shutting down the client computer after the Action has completed.

There are three radio buttons at the top of this dialog:

- **Do Nothing after action completes:** This is the default -- after execution, simply resume normal operation.
- **Restart computer after action completes:** Many actions require a restart to complete the remediation. The Options here include user cancellation and postponement. You can also specify a title and a message to be displayed to the user.
- **Shutdown computer after action completes:** You may need to shut down the computer after the application of the action. As above, you can also specify a title and a message to be displayed to the user.

If you select either of the last two options above, the bottom panel becomes available for editing:

#### Message:

- **Message Title and Text:** Use these text boxes to create a message that will be delivered to the end user, explaining what's about to happen (restart or shutdown) and what their options are.
- **Allow user to cancel restart/shutdown:** This gives the user a dialog box so that they can cancel out of the proposed restart or shutdown.

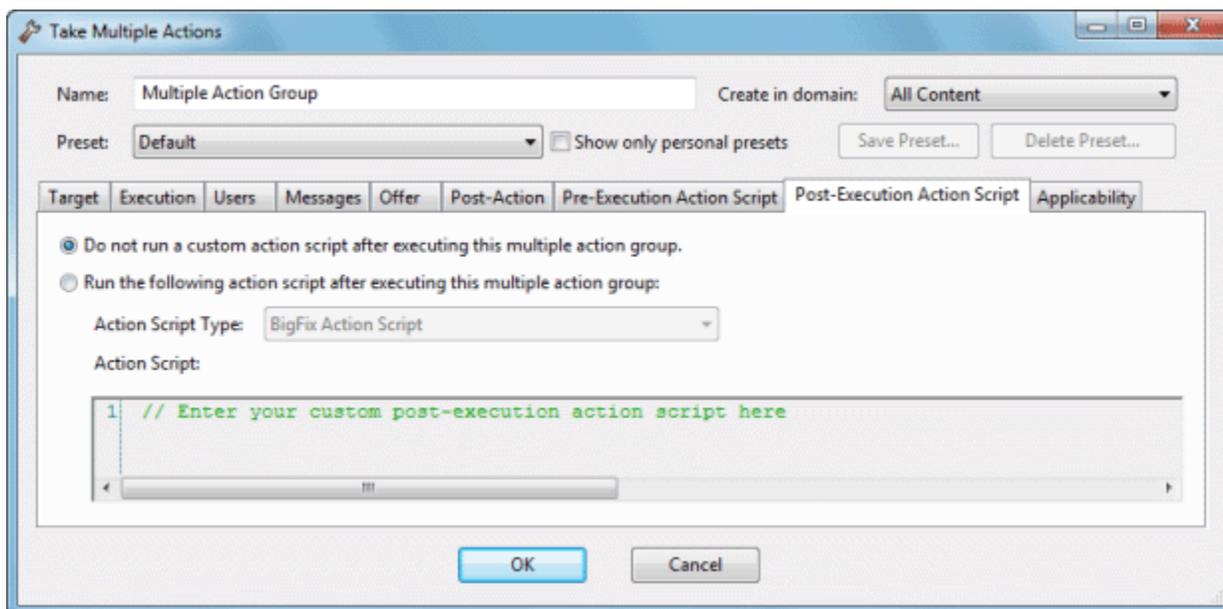
- **Set deadline:** This gives the user the option to delay the restart/shutdown for the specified period of time (from fifteen minutes to thirty days) after the completion of the Action. Typically, restarts are needed to complete an installation, so they should not be put off for long.
- **At deadline:** Click one of these buttons to specify what the deadline action will be. You can choose to automatically restart (or shutdown), or to keep a dialog box on the screen until the user is ready (presumably after saving their work).

This tab is available from several different dialogs:

**Take Action, Take Multiple Actions** and **Action Settings**.

## Post-Execution Action Script Tab

The **Post-Execution Action Script** tab of the **Take Multiple Actions** dialog lets you create an action script that will execute after the chosen set of Actions is run.



Among other possibilities, this allows you to track the Action deployments using your existing control systems. There are two buttons in this dialog:

- **Do not run a custom action script after executing this multiple action group :** This is the default for most multiple Fixlet actions.
- **Run the following action script after executing this multiple action group:** If you want to create a custom action script when you deploy this action, select this button, and the following two items will determine the course of the action.
  - **Action Script Type:** The type of action script you want to use for this script. Some of the options include:
    - **BigFix Action Script:** This is the standard scripting language for BigFix actions.
    - **AppleScript:** This is Apple's scripting language for controlling computer resources.
    - **sh:** indicates that the action is a shell script, intended to be run by a linux / unix / bsd shell.
    - **URL:** specify a URL pointing to a post-execution script.

- **Action Script:** Type your post-action script into this text box. Scripting is powerful and can have huge ramifications. Make sure to test your action on a small scale before you deploy it on your entire network!

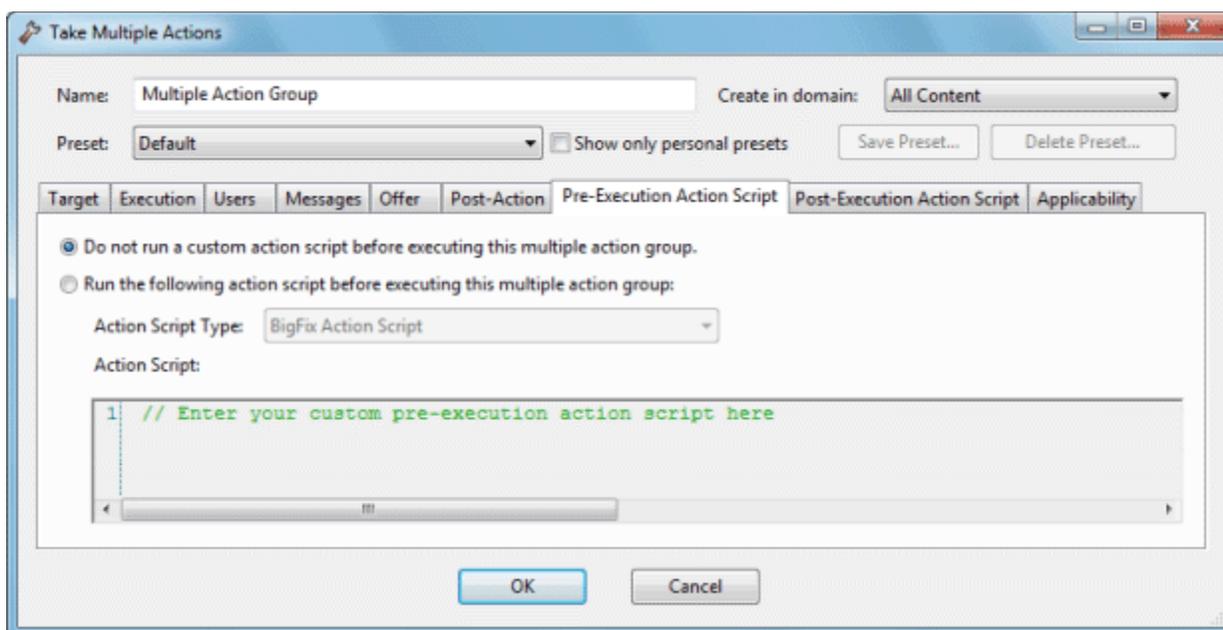
This dialog is available by selecting multiple Fixlet messages (as long as they have default actions) from any Fixlet list, then selecting **Take Default Action** from the right-click menu.

You can also arrive at this dialog by selecting Baseline Actions.

From the **Take Multiple Actions** dialog, select the **post-Execution Action Script** tab.

## Pre-Execution Action Script Tab

The **Pre-Execution Action Script** tab of the **Take Multiple Actions** dialog lets you create an action script that will execute before the chosen set of Actions is run.



Among other possibilities, this allows you to track the Action deployments using your existing control systems. There are two buttons in this dialog:

- **Do not run a custom action script before executing this multiple action group** : This is the default for most multiple Fixlet actions.
- **Run the following action script before executing this multiple action group:** If you want to create a custom action script when you deploy this action, select this button, and the following two items will determine the course of the action.
  - **Action Script Type:** The type of action script you want to use for this script. Some of the options include:
    - **BigFix Action Script:** This is the standard scripting language for BigFix actions.
    - **AppleScript:** This is Apple's scripting language for controlling computer resources.

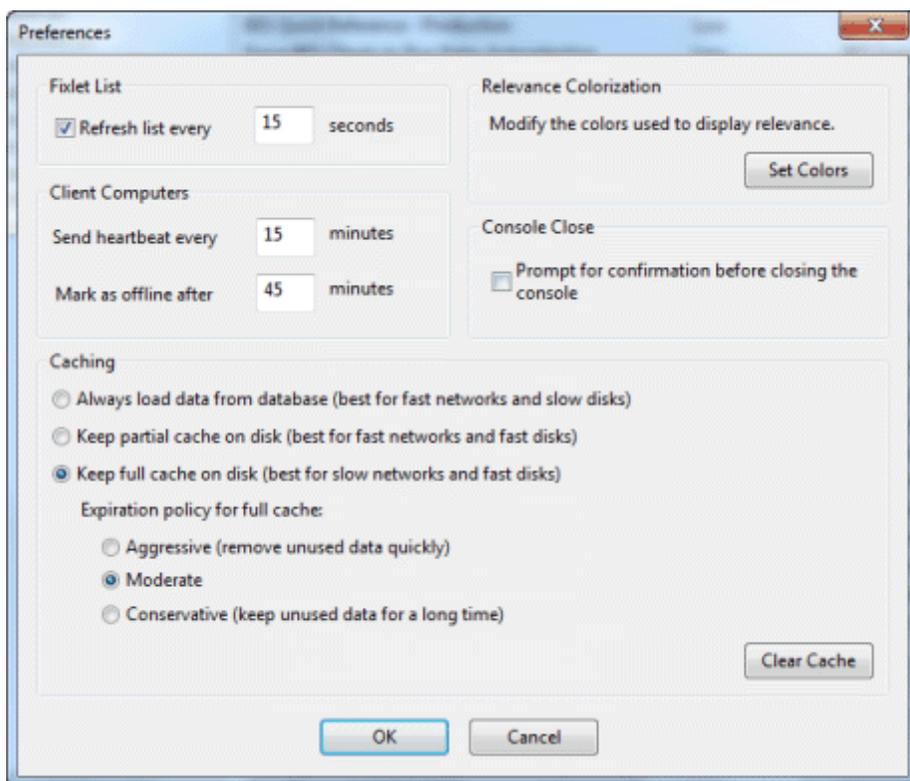
- **sh:** indicates that the action is a shell script, intended to be run by a linux / unix / bsd shell.
- **URL:** specify a URL pointing to a pre-execution script.
- **Action Script:** Type your action script into this text box. Scripting is powerful and can have huge ramifications. Make sure to test your action on a small scale before you deploy it on your entire network!

This dialog is available by selecting multiple Fixlet messages from any Fixlet list (as long as they have default actions), then selecting **Take Default Action** from the right-click menu. You can also arrive at this dialog by selecting Baseline Actions.

From the **Take Multiple Actions** dialog, select the **Pre-Execution Action Script** tab.

## Preferences

The **Preferences** dialog lets you adjust certain system-wide parameters.



There are several sections in the Preferences dialog:

### Fixlet List

- **Refresh list every XX seconds:** Controls how often the Fixlet display is updated. The default setting causes the BES Database to be queried every 15 seconds. More frequent updates cause more network traffic, but less frequent updates increase the response time. As the BES Database increases in size, a

longer refresh rate may be desirable. In practice, 15 seconds provides a good balance between latency and bandwidth concerns.

### Client Computers

- **Send heartbeat every XX minutes:** Controls how often the BES Client computers check in with the BES Server to update their status. Each time a BES Client sends a heartbeat, it includes any retrieved property values which have changed. 15 minutes is the default value.
- **Mark as offline after XX minutes:** Controls how long to wait after the last heartbeat before a computer is declared to be offline. The default is 50 minutes.

### Relevance Colorization

- **Modify the colors used to display relevance:** Whenever Relevance expressions are viewed, the text can be colored for easier reading. Click the **Set Colors** button to open an interface allowing you to customize your personal color scheme.

### Console Close

- **Prompt for confirmation before closing the console:** This preference provides a yes/no prompt every time you exit the BES Console.

### Cache options

- **Always load data from database:** If you do not wish to leave information cached on your BES Console computer, click this option. This will cause all data to be loaded freshly from the database each time you open the Console.
- **Keep partial cache on disk:** This option caches everything but retrieved property results. The Console still caches Fixlet and Action results which are then written out upon exiting.
- **Keep full cache on disk:** With this option, retrieved properties can be stored locally along with Fixlet and Action results. The more properties you keep in the cache, the more expensive it is to maintain, so the caching policy determines how long the Console runs before it clears items out of its cache.

**Expiration policy.** If you have selected the full caching option above, you must also set an expiration policy to periodically purge the cache:

- **Aggressive:** This policy purges unused data rapidly, purging any items that were not accessed in the previous Console session.
  - **Moderate:** This policy is intermediate between aggressive and conservative.
  - **Conservative:** This policy allows data to remain for a long time between purges, whether or not it has been recently accessed.
- **Clear Cache:** Click this button to clear the current cache when the BES Console is next run.

This dialog is available by selecting:

- **File > Preferences**

### Recent Comments

This dialog presents a list of comments that have been attached to Fixlet messages, Tasks, Baselines, Actions and Computers.

Object	Comment	Console Operator	Time Entered
<a href="#">Start Service</a>	Only used for Development clients	joe	5/6/2010 4:37:45 PM
<a href="#">Missing Office...</a>	Executed per Policy #25	joe	5/6/2010 4:37:10 PM
<a href="#">Stop Service</a>	'joe' has marked this object as hidden.	System	5/5/2010 1:33:54 PM
<a href="#">Restart Service</a>	'joe' has marked this object as visible.	System	5/5/2010 1:26:01 PM

It compiles all the Comments from each of these interfaces for viewing in one spot.

You can view the current comments by selecting **Tools > View Recent Comments**.

## Results Tab

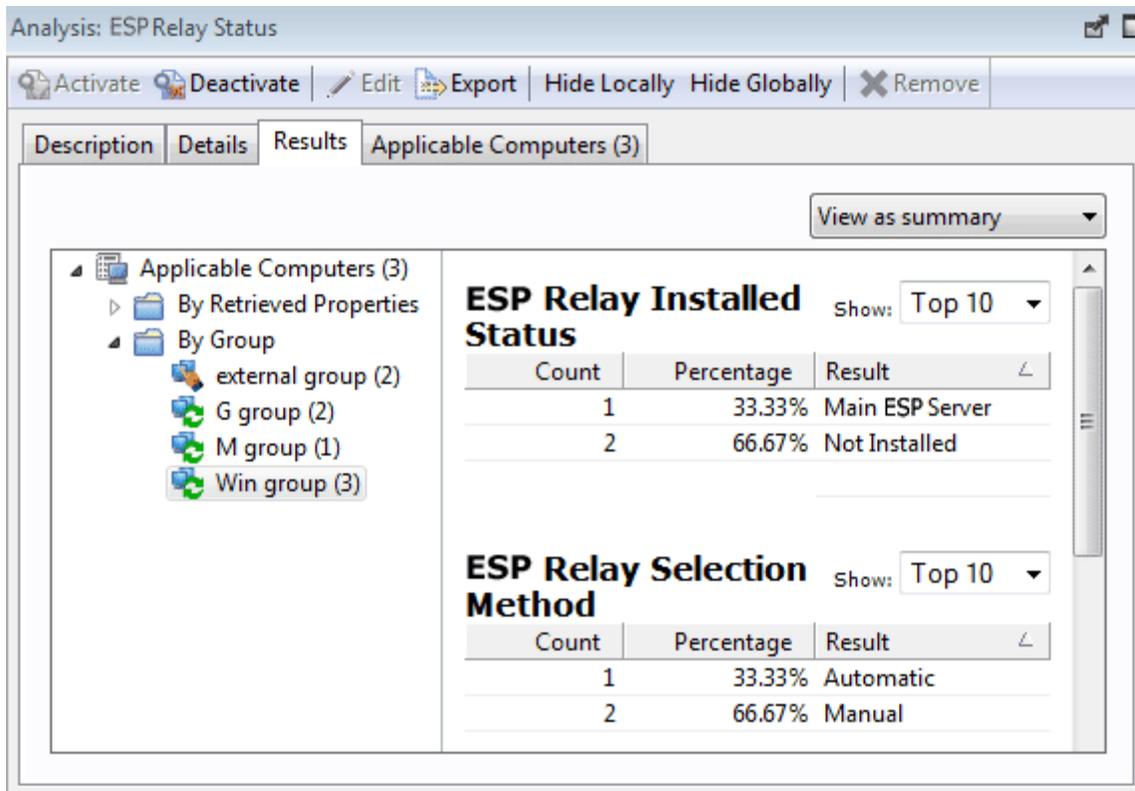
The **Results** tab of the **Analysis** document displays a list of targeted computers and the results of the analysis for each one.

Computer Na...	ESP Relay Installed Status	ESP Relay S...
BIGDOG	Not Installed	Manual
MOMMA	Not Installed	Manual
TESTING	Main ESP Server	Automatic

The format of this display depends on the selected View, either **list** or **summary**. The list view is shown above.

When viewed as a list, each specified retrieved property has a corresponding header and the value of each property is displayed beneath it. If there is more than one value for a property, then <multiple results> is displayed. You can sort this list by the headers or use the folders in the left-hand panel to filter the results. This allows you to manage large sets of computers by their retrieved properties.

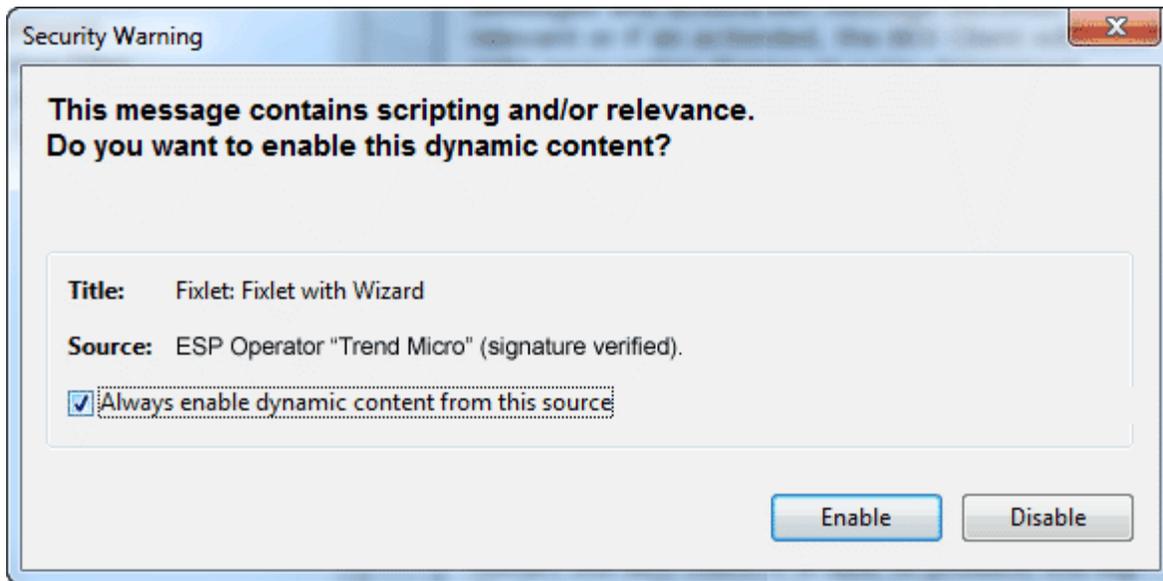
When viewed as a **summary**, each property has its own section, with response counts and percentages for each value of the property.



This dialog is available whenever you select an activated Analysis from an appropriate list.

## Security Warning

The **Security Warning** dialog alerts you about scripting or relevance statements embedded in text.



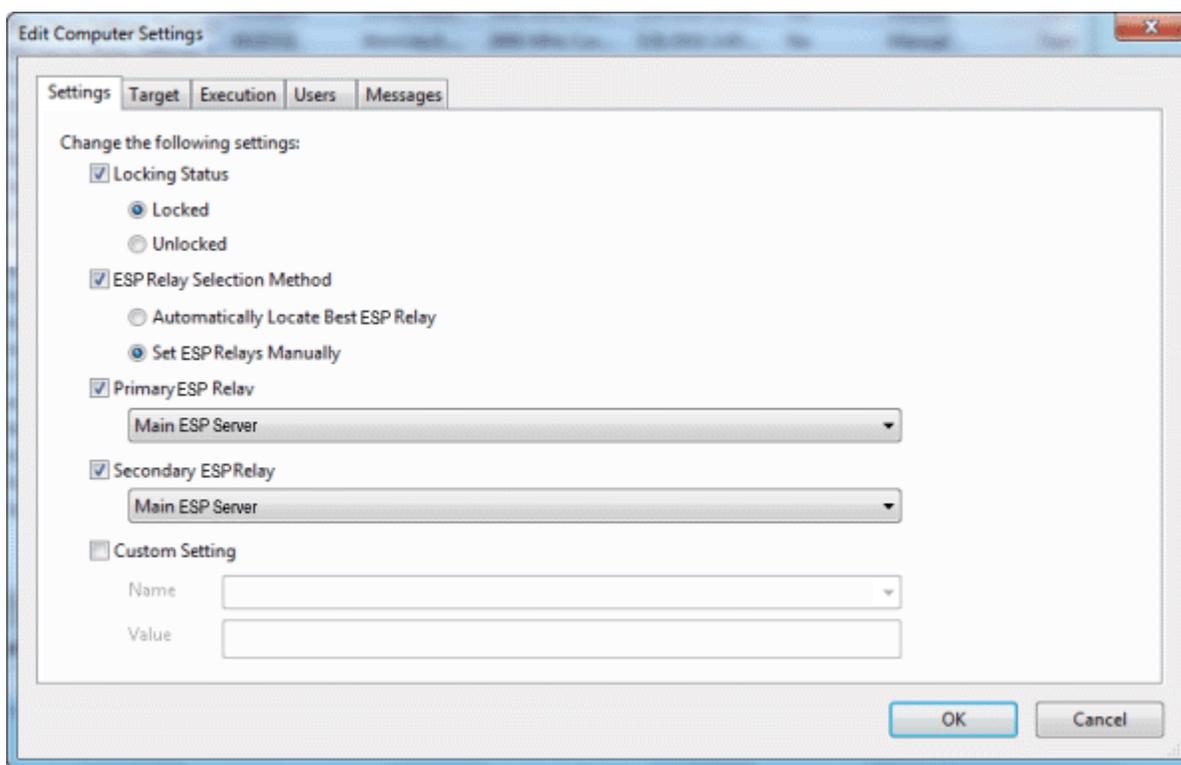
Whenever the Console detects that an embedded Relevance clause or a script is about to be displayed, this warning pops up. Unlike Action scripts which require a password before they can be executed, embedded scripts will be executed automatically and thus require scrutiny. In general, if these scripts are your own creation from a custom site, you can click the checkbox to allow dynamic scripting to always be enabled.

If you are uncertain as to the source of the embedded script, click **Disable**.

This dialog appears whenever content containing a Relevance statement or a script is about to be displayed.

## Settings Tab

The **Settings** tab of the **Edit Computer Settings** dialog allows the administrator to apply certain settings to multiple targeted computers, including locking, relays and custom variables.



It includes the following controls:

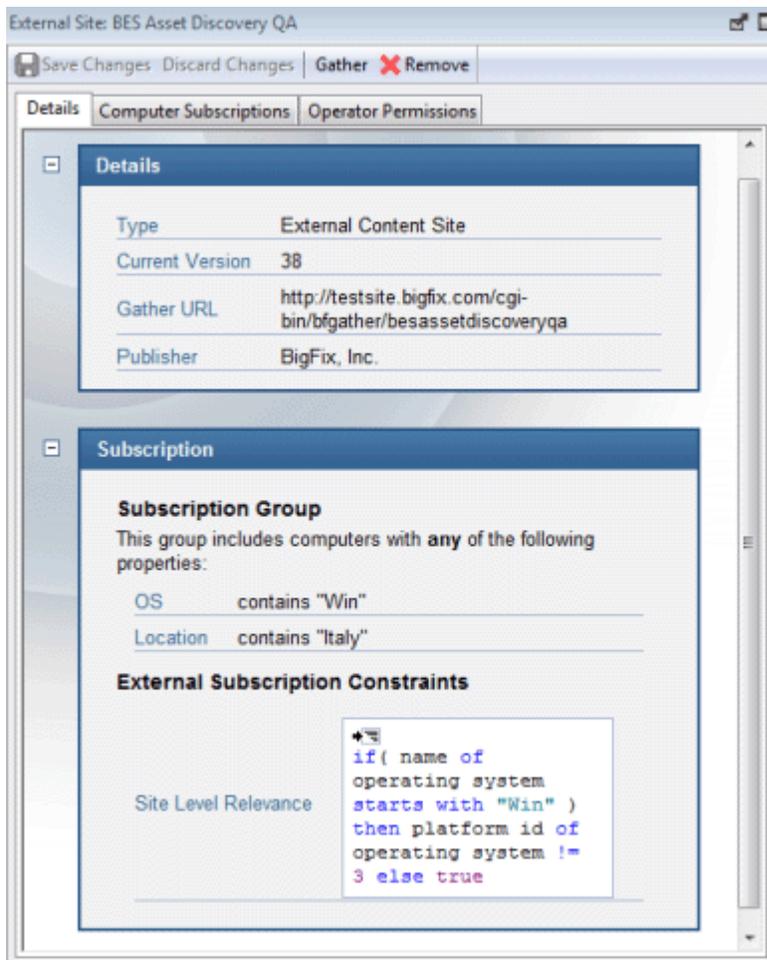
- **Locking Status.** Check this box to either lock or unlock the targeted computers. You might wish to lock a computer because it is currently being used in program development, it is in the middle of a lengthy process or because it is running specialized software. As long as a computer is locked, no actions will be executed on it.
  - **Locked.** Click this button to lock the computer.
  - **Unlocked.** Unlock the targeted computers.
- **BES Relay Selection Method.** Choose an automatic or manual Relay method.
  - **Automatically Locate Best BES Relay.** Select this button to automate the process of selecting a BES Relay. This is the recommended setting.
  - **Set BES Relays Manually.** Force a manual selection of the BES Relays.
- **Primary BES Relay.** Select a primary BES Relay. Check the box and select a computer from the pull-down menu. Any attached BES Clients will then gather Fixlet downloads from this relay rather than directly from the BES Server.
- **Secondary BES Relay.** Select a secondary BES Relay. Check the box and select a computer from the pull-down menu. Any attached BES Clients will then gather Fixlet downloads from this relay if the primary relay is unavailable.
- **Custom Setting.** This feature allows the BES Master Operator to create named variables that can be associated with the targeted computers.
  - **Name.** Type the name of a variable to be associated with all targeted computers, e.g., "department."

- **Value.** Enter the value of the above-named variable, e.g., "payroll."

When multiple computers are selected, this dialog is available by right-clicking and selecting **Edit Computer Settings** from the context menu.

## Site Details Tab

The **Details** tab of the Site document provides you with information about the site and the subscription criteria.



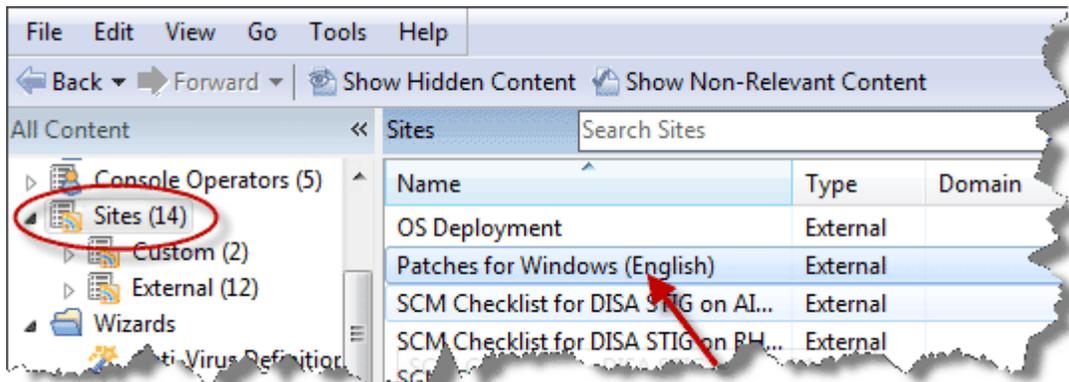
The **Details** group provides information about the version, publisher and URL of the site.

The **Subscription** group provides information about how the criteria used to select clients for subscription to the site.

This dialog is available by clicking the **Site** icon in the Domain Panel navigation tree, selecting a Site from the resulting List Panel and clicking the **Details** tab from the document in the Work Area below.

## Site List and Document

A list of Sites is displayed when you click **Sites**, or any of its child nodes, from the Domain Panel navigation tree.



A **Site document** is displayed in the Work Area of the BigFix Console when you click any item from this list. If you open the Sites icon, you can filter the sites to either Custom or External types. Click an external site from the list to open it in the Work Area below.



At the top is a toolbar with four buttons:

- **Save Changes:** This button is grayed out for an external site.
- **Discard Changes:** This button is grayed out for an external site.
- **Gather:** This button with gather the contents of the site.
- **Remove:** This button allows you to remove the site from the Console.

Beneath the toolbar are three tabs:

- **Details:** This read-only tab displays the version, URL and publisher of the site.
- **Computer Subscriptions:** This tab lets you specify which BigFix Clients will be subscribed to this site.
- **Operator Permissions:** This tab lets you attach Operators to the site as owners, writers or readers.

You can also create and edit your own Custom sites as well. If you have any custom sites, click one from the list to view or edit it.



The document for a Custom Site is similar to that for an External site, with added abilities to edit the site. The toolbar has the same four buttons:

- **Save Changes:** After making edits to your Custom Site, click this button to record your changes.
- **Discard Changes:** This button will clear all the changes you have made.
- **Gather:** Because the contents of a custom site are typically stored locally, this tool may be grayed-out.
- **Remove:** This button allows you to entirely remove the site from the Console.

Beneath the toolbar are the same three tabs:

- **Details:** This tab allows you to view or edit the description of your custom site and to select the Domain you want to host the site.
- **Computer Subscriptions:** This tab lets you specify which BigFix Clients will be subscribed to this site.
- **Operator Permissions:** This tab lets you attach Operators to the site as owners, writers or readers.

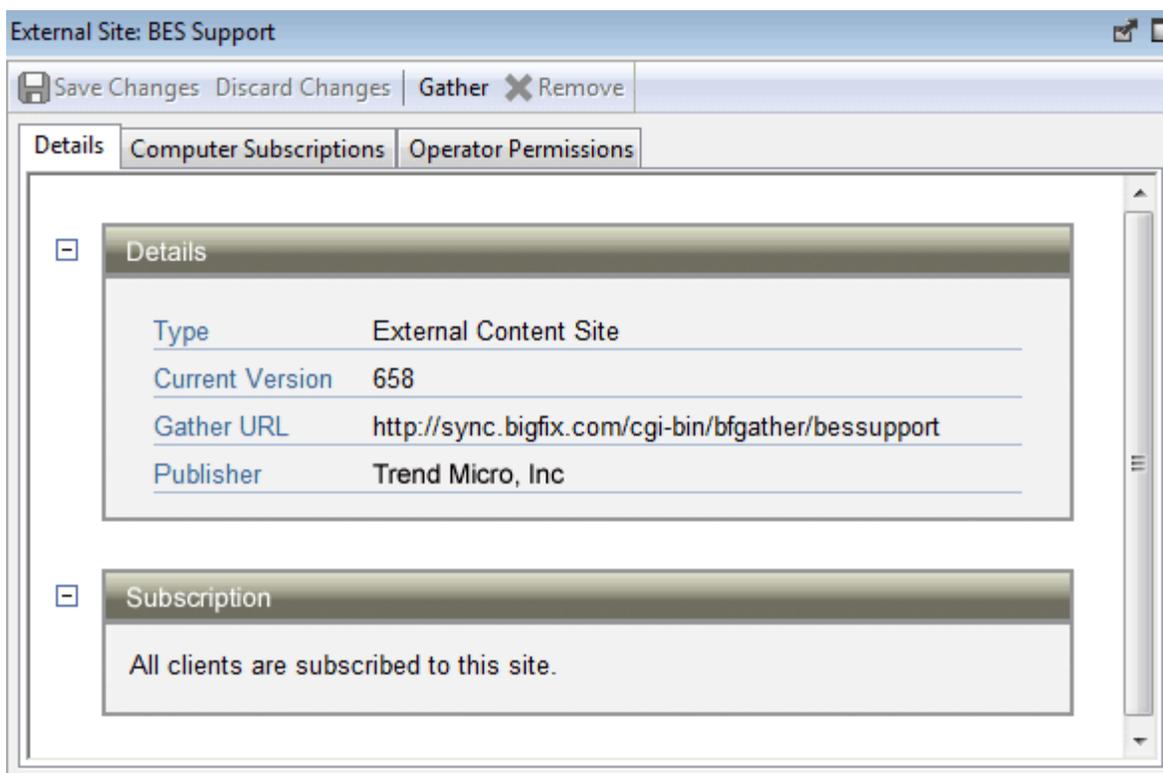
To view the Site list, click the **Sites** icon (or any of its child nodes) in the Domain Panel navigation tree. Open the icon to narrow the list down to either **Custom** or **External** sites.

To view a **Site Document**, click any item in a site list.

To create a custom site, select **Tools > Create Custom Site**.

## Site Properties

The **Site Properties** dialog displays information about the selected Fixlet site, including the name of the Site publisher and the URL from which the content is gathered.



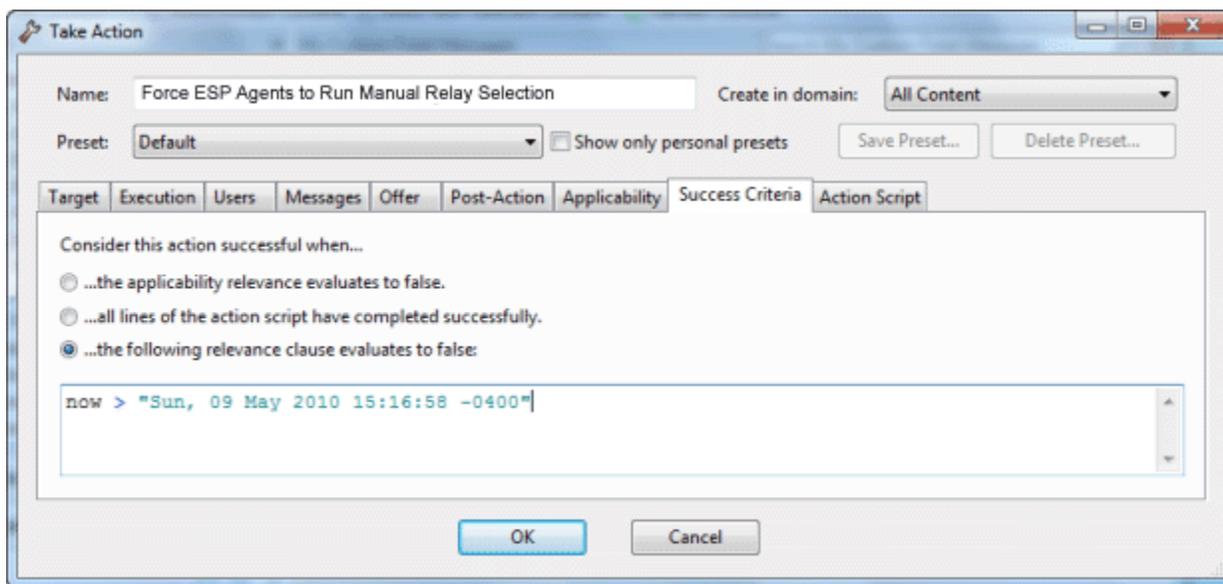
The tabs in this dialog include:

- **Details:** This tab displays the Site type (internal, external), the version and information about the publisher and subscriptions.
- **Computer Subscriptions:** This dialog allows you to winnow the list of computers that subscribe to the chosen site. By eliminating superfluous or irrelevant Fixlet subscriptions, you can reduce the disk-storage requirements of your client computers.
- **Operator Permissions:** This is a list of the operators and their permission levels. For an external site, you can typically only grant read access, but for a custom site you can grant ownership, write or read permission.

This dialog is available by clicking the Sites icon in the Domain Panel navigation tree and then clicking an item from the resulting List Panel. The Site information opens in the Work Area below.

## Success Criteria Tab

The **Success Criteria** tab of the **Take Action** dialog lets you define the conditions under which the action will be considered to be successful.



There are three buttons in this dialog:

### Consider this Action successful when:

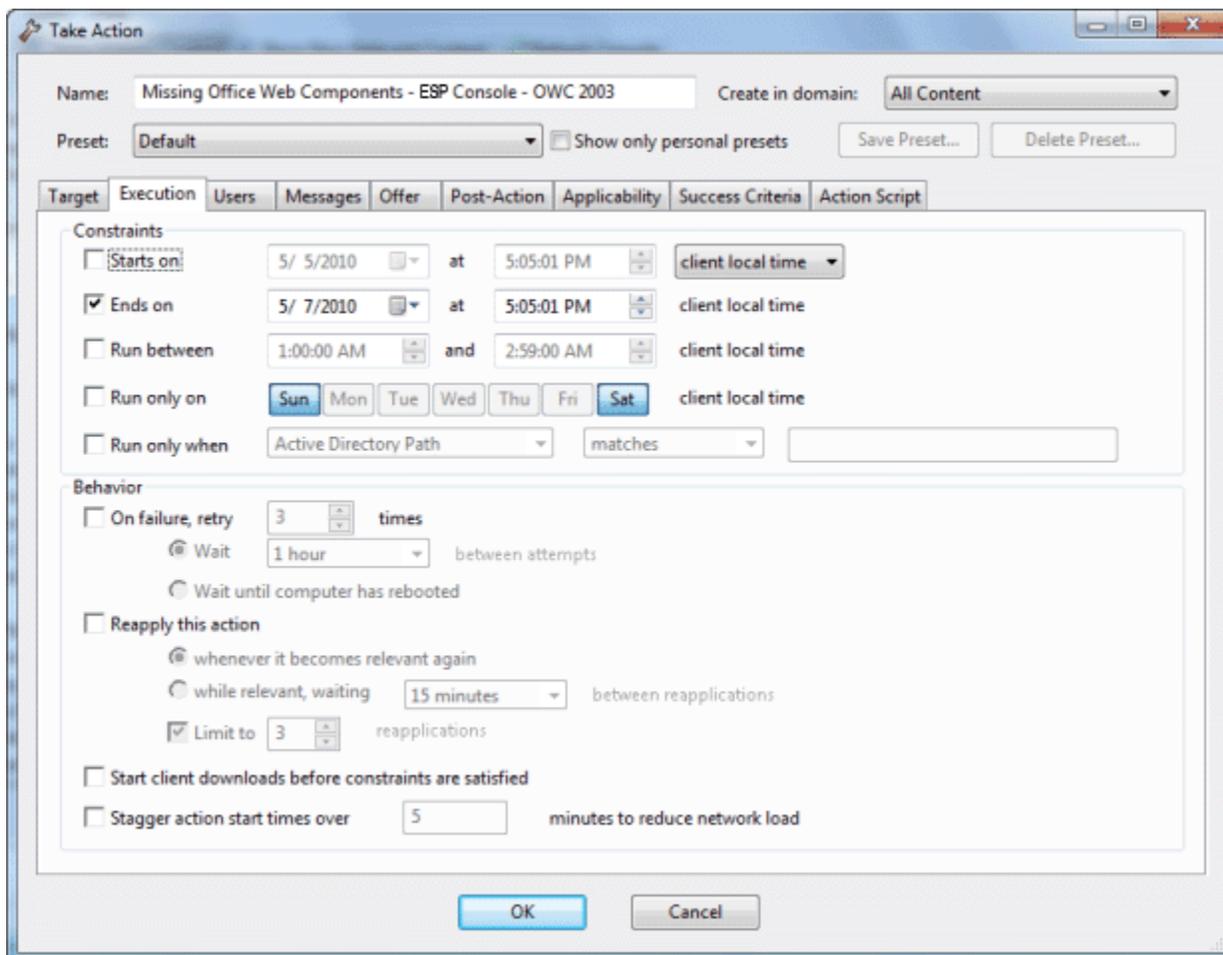
- **The applicability relevance evaluates to false:** This is the default success criteria, requiring that the Relevance statement that made the Action applicable is no longer TRUE. Since the Relevance statement is designed to notice a problem and the Action is designed to fix it, this is generally sufficient to establish success.
- **All lines of the action script have completed successfully:** You can make success dependent on completing the action script.
- **The following relevance clause evaluates to false:** You may use a special Relevance clause to ensure that the desired action has accomplished its goals.

If you choose the third option, the text box below becomes editable and you can create or revise an existing Relevance clause.

This dialog is available by selecting a Fixlet message or Task from any list, then clicking an action button. From the **Take Action** dialog, select the **Success Criteria** tab.

## Take Action

The **Take Action** dialog is similar to the **Take Multiple Actions** dialog, but it is designed to issue a single Action.



When you click an Action button, this dialog pops up, letting you specify exactly how the selected Action is to be deployed to the computers on your network.

- At the top of this dialog is the **Name** of the Action. It is editable, should you wish to rename it or add extra information to it.
- Next to the name is the **domain**. The Action may be created and placed into any domain you choose from the pull-down menu. The default is **All Content**, the top-level domain which includes objects from all domains.

Below the Name box are some buttons that allow you to save or re-use your Action values:

- **Preset:** This is a pull-down menu with the names of your existing presets. One of these presets is **Policy**, which will create an open-ended Action with no expiration date. Click on a named preset to automatically fill out your Action settings.
- **Show only personal presets:** Check this box to limit the presets to your own personal presets.
- **Save Preset:** After creating custom settings for an Action, you can save them for later re-use.
- **Delete Preset:** Select a preset and then click this button to delete it.

The body of the dialog contains several tabs, including:

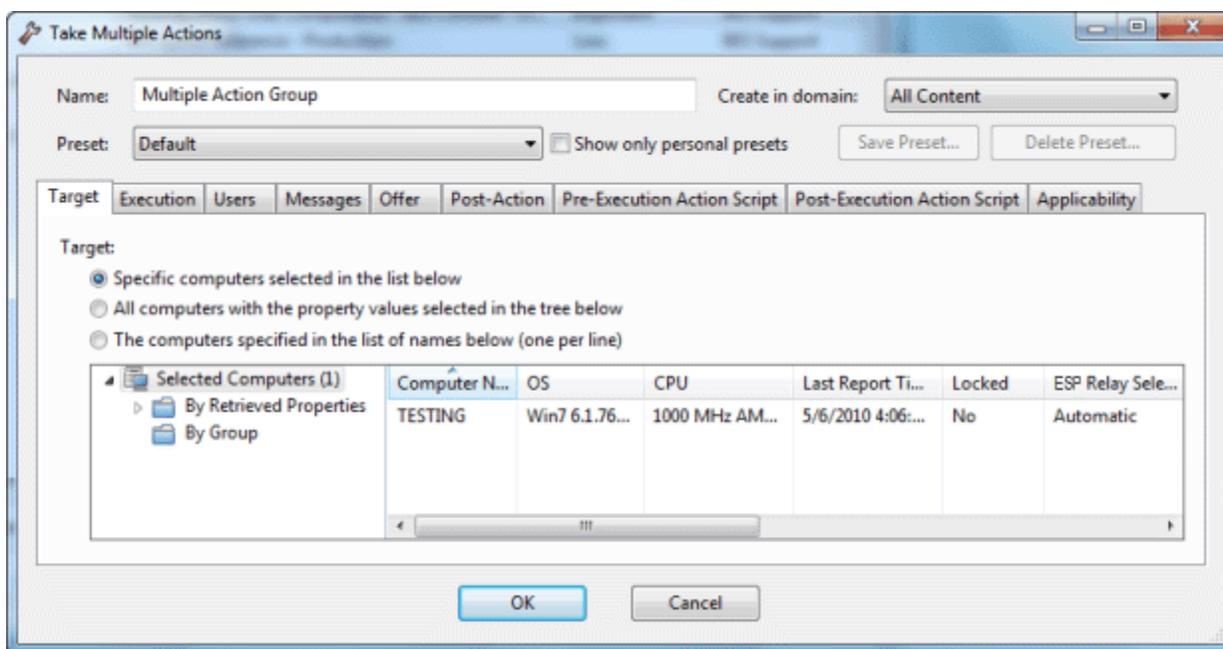
- **Target:** Lets you specify subgroups of BES Clients to target with the selected Action. You can select computers based on retrieved properties -- including your own custom properties -- or you can supply a list of specific computers.
- **Execution:** Lets you constrain the execution schedule and allows you to specify the retry and reapply behavior for execution and failure.
- **Users:** Lets you run an Action based on user presence. You can also expose specific users or groups of users to a Client User Interface.
- **Messages:** Here you can specify some interactions that may take place with the end user before and during the execution of the Action.
- **Offer:** Allows you to advertise the existence of programs or patches that your networked BES Clients can opt into. This grants extra control to your users to customize their setup.
- **Post-Action:** Lets you specify a follow-up behavior for the Action, such as a restart or shutdown.
- **Applicability:** Lets you choose the original Action relevance or substitute your own custom relevance expression.
- **Success Criteria:** Typically, an issue is considered fixed when the Fixlet message is no longer relevant, meaning the problem can no longer be detected. This tab lets you use different criteria to determine when a problem has been fixed.
- **Action Script:** Lets you choose the original Action script or substitute your own custom script.

When you decide to execute the Action, click **OK**. You will need to enter your password before the BES Console will issue the Action. When you do, a progress dialog will pop up to keep you posted on the deployment.

This dialog is available by opening a **Fixlet** message from any list and then clicking on an **Action** button.

## Take Multiple Actions

The **Take Multiple Actions** dialog is similar to the **Take Action** dialog, but is designed to issue multiple default Actions in a single group.



Right-click a selected group of Tasks or Fixlets containing default Actions, and select **Take Default Action**. This dialog pops up, letting you specify exactly how the selected Actions are to be deployed to the computers on your network.

- At the top of this dialog is the **Name** of the Action. It is editable, should you wish to rename it or add extra information to it.
- After the Name field is a pull-down allowing you to specify the **Domain** where you wish to create the Multiple Action. Choose from the set of existing Domains.

Below these fields are buttons that allow you to save or re-use your Action values:

- **Preset:** This is a pull-down menu with the names of your existing presets. One of these presets is **Policy**, which will create an open-ended Action with no expiration date. Click on a named preset to automatically fill out your Action settings.
- **Show only personal presets:** Check this box to limit the presets to your own personal presets.
- **Save Preset:** After creating custom settings for an Action, you can save them for later re-use.
- **Delete Preset:** Select a preset and then click this button to delete it.

The body of the dialog contains several tabs, including:

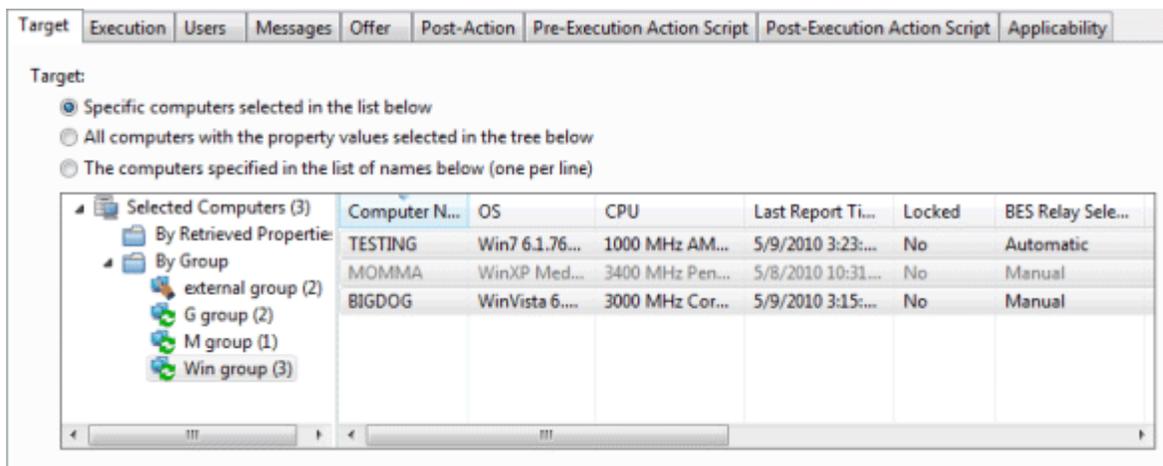
- **Target:** Lets you specify subgroups of BES Clients to target with the selected Actions. You can select computers based on retrieved properties -- including your own custom properties -- or you can supply a list of specific computers.
- **Execution:** Lets you constrain the execution schedule and allows you to specify the retry behavior for execution and failure.
- **Users:** Lets you run Actions based on user presence. You can also expose specific users or groups of users to a Client User Interface.
- **Messages:** Here you can specify some interactions that may take place with the end user before and during the execution of the Actions.
- **Offer:** Allows you to advertise the existence of programs or patches that your networked BES Clients can opt into. This grants extra control to your users to customize their setup.
- **Post-Action:** Lets you specify a follow-up behavior for the Action group, such as a restart or shutdown.
- **Pre-Execution Action Script:** Lets you specify an Action Script to execute before the group of Actions is deployed.
- **Post-Execution Action Script:** Lets you specify an Action Script to execute after the group of Actions is deployed.
- **Applicability:** Lets you choose the relevance provided by the original Actions or substitute your own custom relevance expression.

When you decide to deploy the set of Actions, click **OK**. You will need to enter your password before the BES Console will issue the Actions. When you do, a progress dialog will pop up to keep you posted on the deployment.

Right-click a selected group of Tasks or Fixlets containing default Actions, and select **Take Default Action**.

## Target Tab

The **Target** tab can be found in various Action dialogs.



When an Action becomes relevant, the BES Console operator can target a subset of users to receive the action.

There are three radio buttons at the top of this dialog:

- **Specific Computers selected in the list below.** When you select this button, only those BES Clients highlighted in the computer list will receive the actions. This is the default behavior. Note that you can filter this computer list by selecting items from the tree view in the left panel. Once you click **OK**, the selection of computers in this list will be frozen -- the retrieved values will not be reevaluated before the action is deployed. Thus, if a computer is affected by this problem in the future, it will not be covered by this option. It will trigger the same Fixlet, but will require you to target it again.
- **All Computers with the Retrieved Properties values selected in the tree below.** This button will cause continued evaluation of BES Client computers for relevance if they match the selected properties. Unlike the scenario described above, if a new computer is affected by this problem in the future, it will be automatically updated. You may also filter this set of relevant computers using the retrieved property panel on the left. Because of the open-ended nature of this function, you may want use the Execution tab to define an expiration date.
- **The computers specified in the list of names below.** This button allows you to enter (or paste) a list of specific computers. Format the list with computer names (as displayed in the Console), separated by newlines.

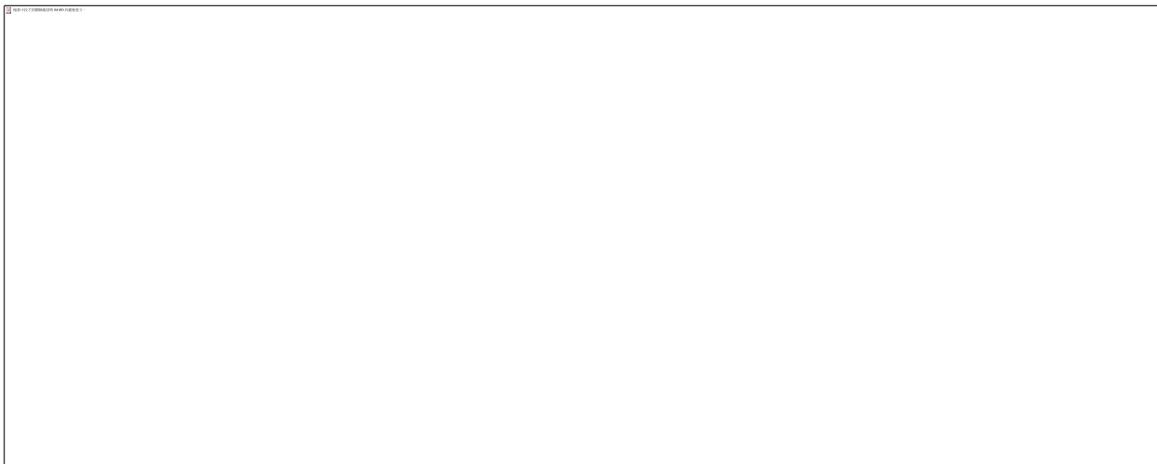
These options grant you great power over the deployment of Fixlet actions. Think carefully about your choices here. The first button is the safest, since it describes a static set of computers that you wish to target. The second choice is more powerful, because it will continue to evaluate and automatically deploy relevant actions, but it could also have long-term consequences that you should consider. The third choice allows you to deploy to a specific list of computers, for fine-grain control over your deployment.

This tab is available from several different dialogs:

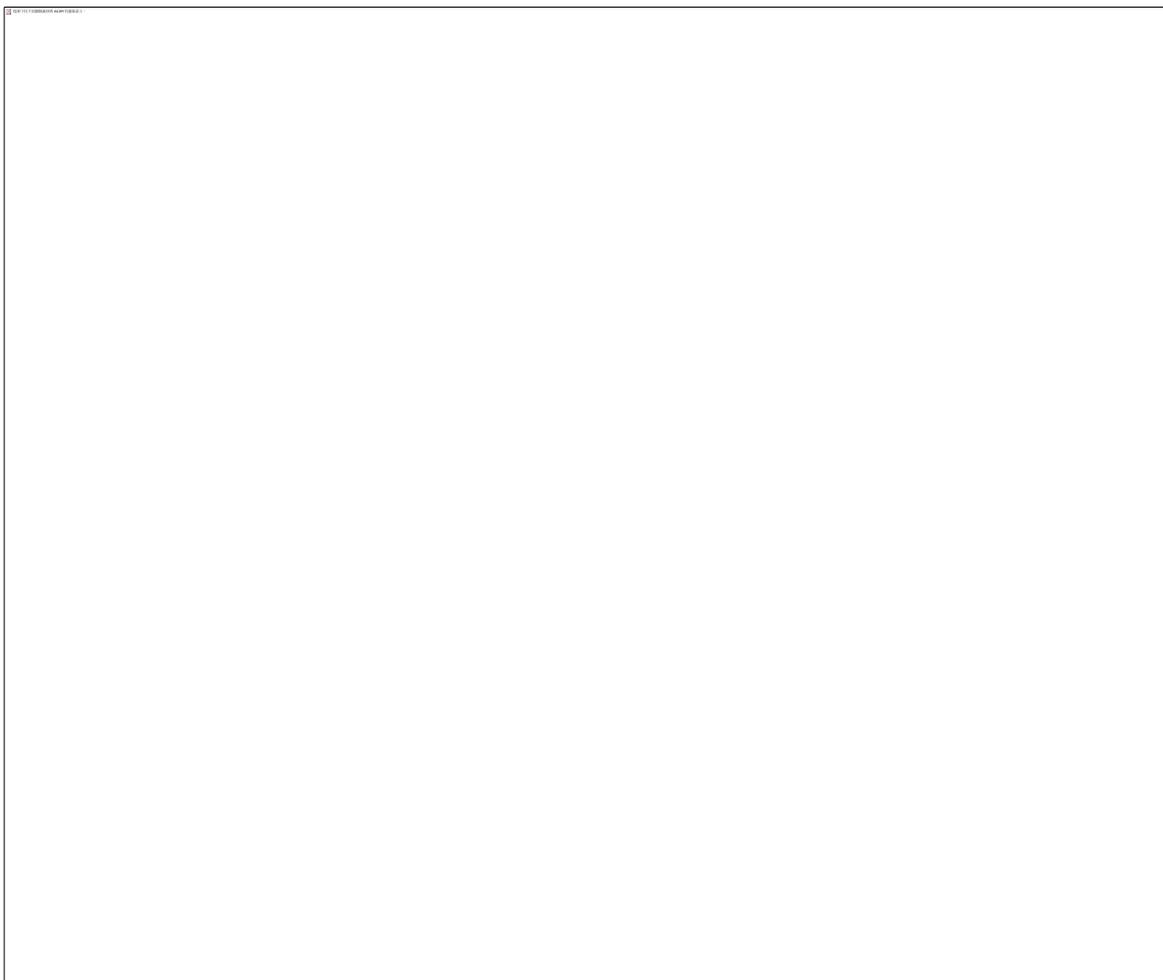
**Take Action, Take Multiple Actions** and **Edit Computer Settings**.

## Task List and Document

A list is created whenever you click **Fixlets and Tasks** from the Domain Panel navigation tree. This list incorporates both Fixlets and Tasks, which you can filter by opening the Fixlet and Tasks icon and clicking **All Tasks** beneath it.



The List Panel on the right now contains all the currently relevant Tasks. The **Task document** is displayed in the Work Area of the BES Console when you click any item in the list.



At the top of the Task document is the name. Beneath that is a toolbar with the following tools:

- **Take Action:** This tool executes the default action of Fixlet.
- **Edit:** This option lets you edit the Fixlet. This tool is only available for custom Fixlets that you have created yourself.
- **Copy:** This option lets you copy or clone the Fixlet to customize its functionality.
- **Export:** This tool allows you to export the Fixlet for editing in an external editor.
- **Hide Locally:** Hides the Fixlet on this version of the Console.
- **Hide Globally:** Hides the Fixlet on all Consoles.
- **Remove:** Deletes this Fixlet (only available for Custom Fixlets).

There are several tabs in a Task document. They include:

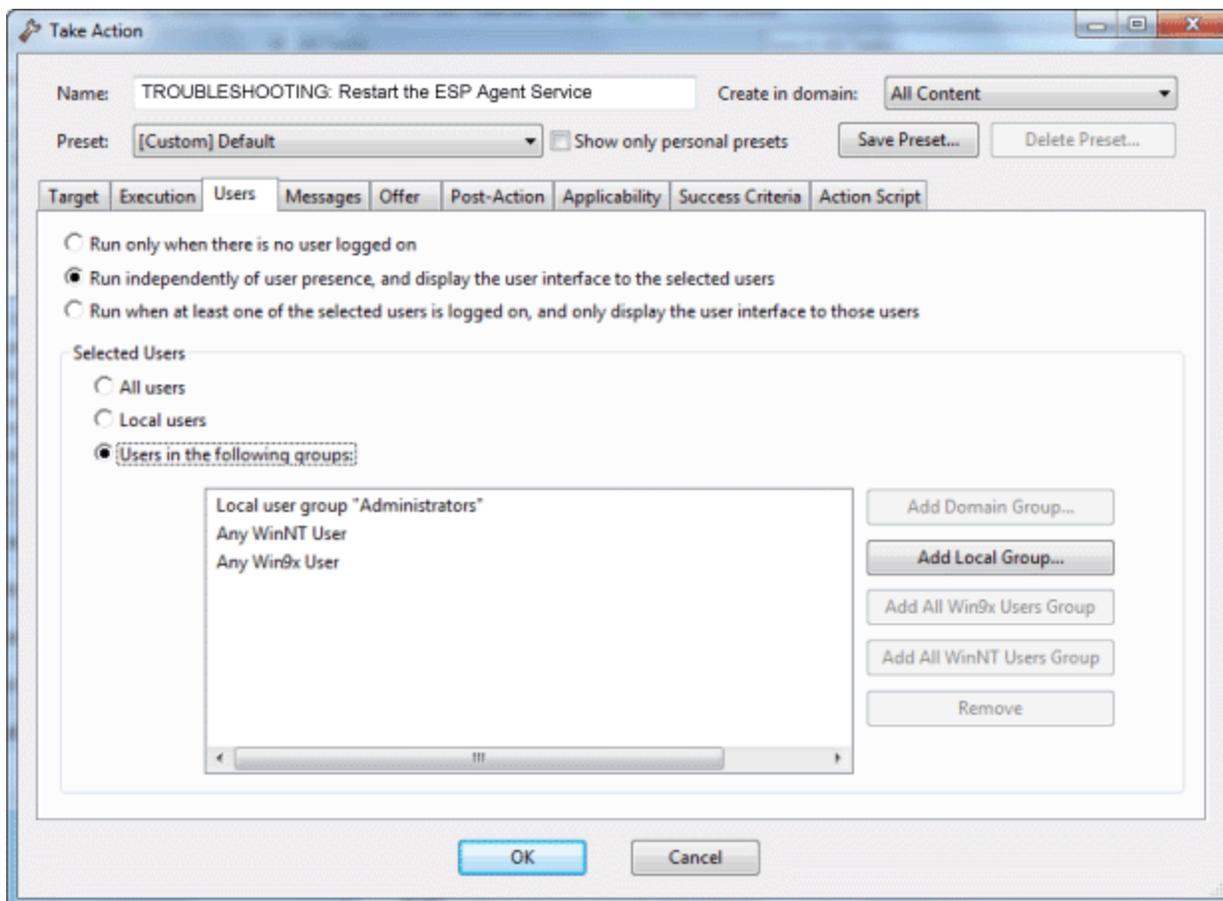
- **Description:** A text version of the Task, describing the problem and offering one or more Action buttons or links to redress the issue. You can search any of the HTML interfaces in BES by pressing Ctrl-F and then entering your search string.
- **Details:** A list of the properties, Relevance statements and Actions that constitute the Task.
- **Applicable Computers:** Lists the subset of computers are targeted by the Task.
- **Action History:** Shows the history of the Action deployment. This list is empty unless the Action associated with the Task has already been triggered.

To display a Task list, click the **Tasks** icon under the **Fixlets and Tasks** icon in the Domain Panel navigation tree.

A **Task document** is opened whenever you open an item in a Task list.

## Users Tab

The **Users** tab can be found in various Action dialogs.



It allows you to fine tune the delivery of Actions based on the presence of users. For instance, you can target long installs to just those computers where the users have logged off, ensuring that no downtime is incurred by the install.

For installations that require user feedback, you can also expose specific sets of users to an interface. There are three main user modes:

- **Run only when there is no user logged on:** Execute the action only in the absence of a user. This might be desired for long installs that might happen overnight, but only on logged-off clients.
- **Run independently of user presence, and display the user interface to the specified users:** Execute the action whether a user is present or not. This can be useful for critical patches or small,

silent updates. You can specify a set of users (below) that will be allowed to view the BES Client interface.

- **Run when at least one of the specified users is logged on, and only display the user interface to those users:** Execute an Action and display a dialog only when one of the users specified below is logged on. This might be desired when the action requires feedback or intervention from specific groups of users.

The lower section of this dialog lets you select user groups for notification and interaction:

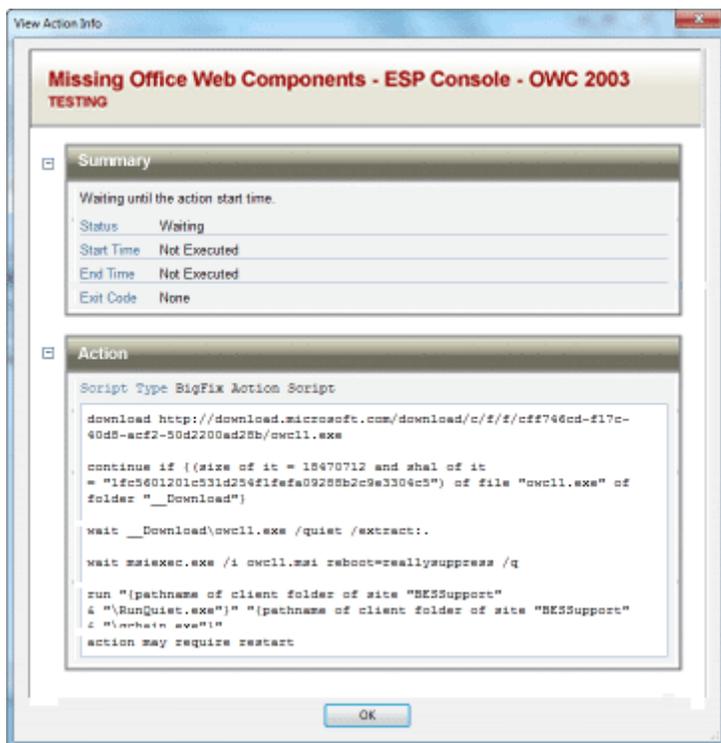
- **All users:** Click this button to select all users for interaction with the user interface.
- **Local users:** Select only local NT-Vista users to interact with the user interface.
- **Users in the following groups:** Select users from the group below to interact with the user interface. Typical groups include the Local user group, WinNT and Win9x users. There are also some buttons to help you select user groups:
  - **Add Domain Group:** Add an NT Domain group of users.
  - **Add Local Group:** Add a local NT-Vista group to the set of users.
  - **Add All Win9x Users Group:** Add users who are logged in to Win 9x Clients.
  - **Add All WinNT Users Group:** Add users who are logged in as WinNT users.
  - **Remove:** Remove the selected user group from the list.

This tab is available from several different dialogs:

**Take Action, Take Multiple Actions, Action Settings and Edit Computer Settings.**

## [View Action Info](#)

The **View Action Info** dialog displays information on a specific action for a given computer.



**Title:** Shows the title of the Fixlet or Task that initiated the Action.

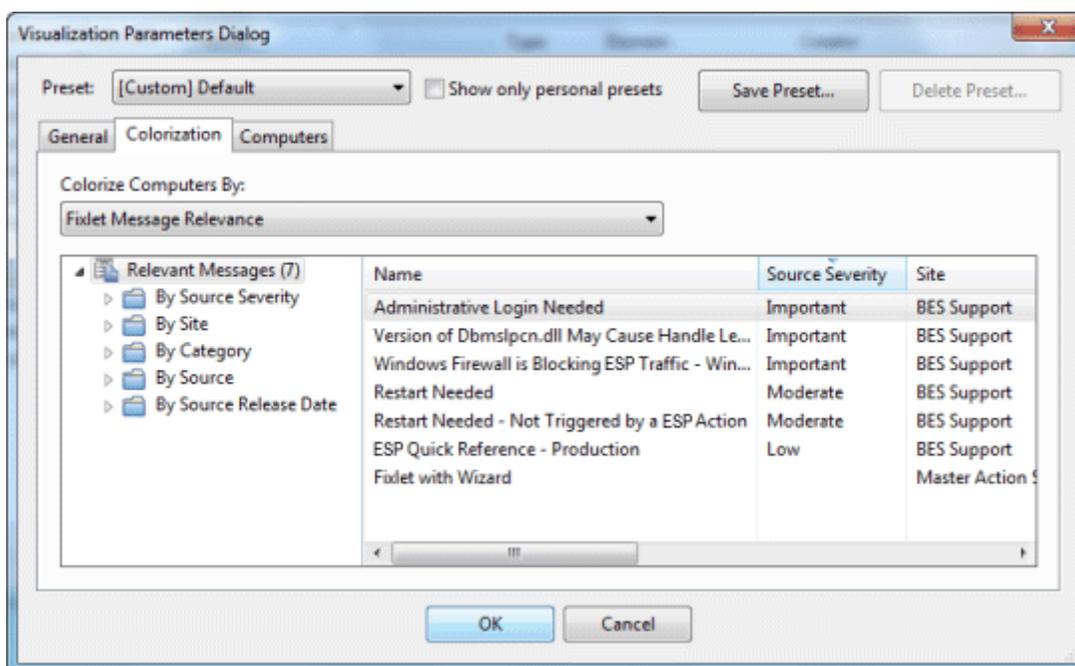
**Summary:** A summation of the Action deployment for this computer. It includes the current **Status**, the **Start** and **End Time** for the Execution of the Action and any **Exit Code** that may be returned by the Action.

**Action:** A listing of the Action script, usually a human-readable BigFix Script.

This dialog is available from any **Action** document in the lower Work Area. Select the **Computers** tab, right-click a computer and select **Show Action Info** from the context menu (or select **Show Action Info** from the **Edit** menu).

## Visualization Parameters: Colorization

The **Colorization** tab of the **Visualization Parameters** dialog lets you customize the colors for a graphical representation of your network.



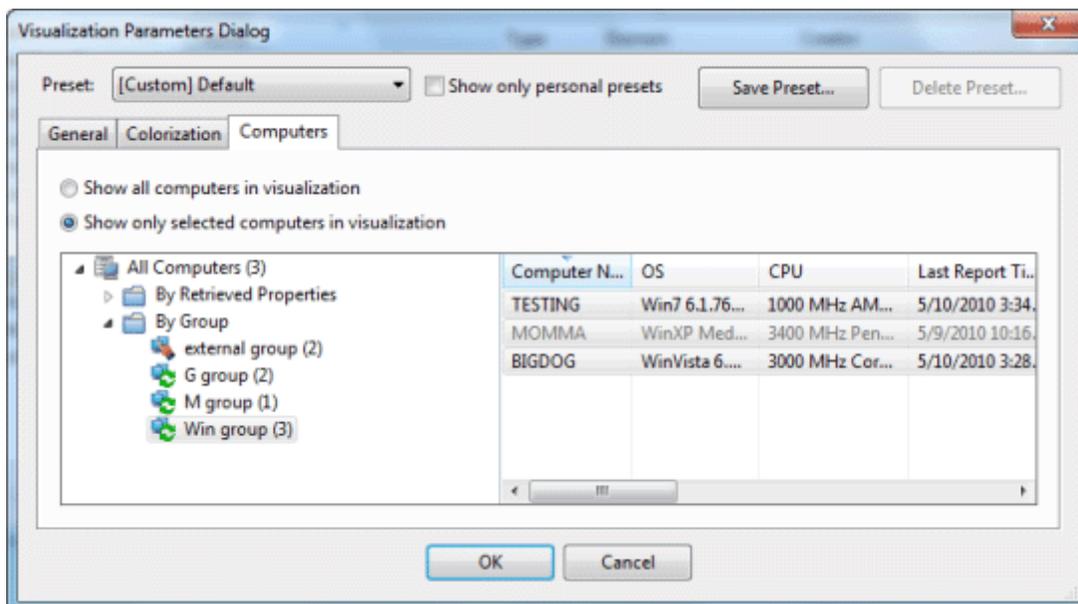
This tab offers four different ways to color the data, available from the main pull-down menu:

- **No colorization:** Select this option to have every computer displayed as white.
- **Fixlet Message Relevance:** Color each computer based on the Relevance (applicable or non-applicable) of specific Fixlet messages. Specify the desired Fixlet message in the filter/list box below.
- **Baseline Relevance:** Color each computer based on the Relevance (applicable or non-applicable) of specific Baseline groups. Specify the desired Baselines in the filter/list box below.
- **Retrieved Property:** Select the colors of the BES Client computers based on the specified retrieved property.
- **Action Status:** Base the colors of the computers on the current status (completed, open, expired) of a specified action. Specify the desired Action in the filter/list box below.
- **Relevance Clause:** Color each computer based on a Relevance Clause, as specified in the text box below.

This dialog is available by selecting **Tools > Launch Visualization Tool > Colorization**.

## Visualization Parameters: Computers

The **Computers** tab of the **Visualization Parameters** dialog lets you limit the number of computers to be graphed.



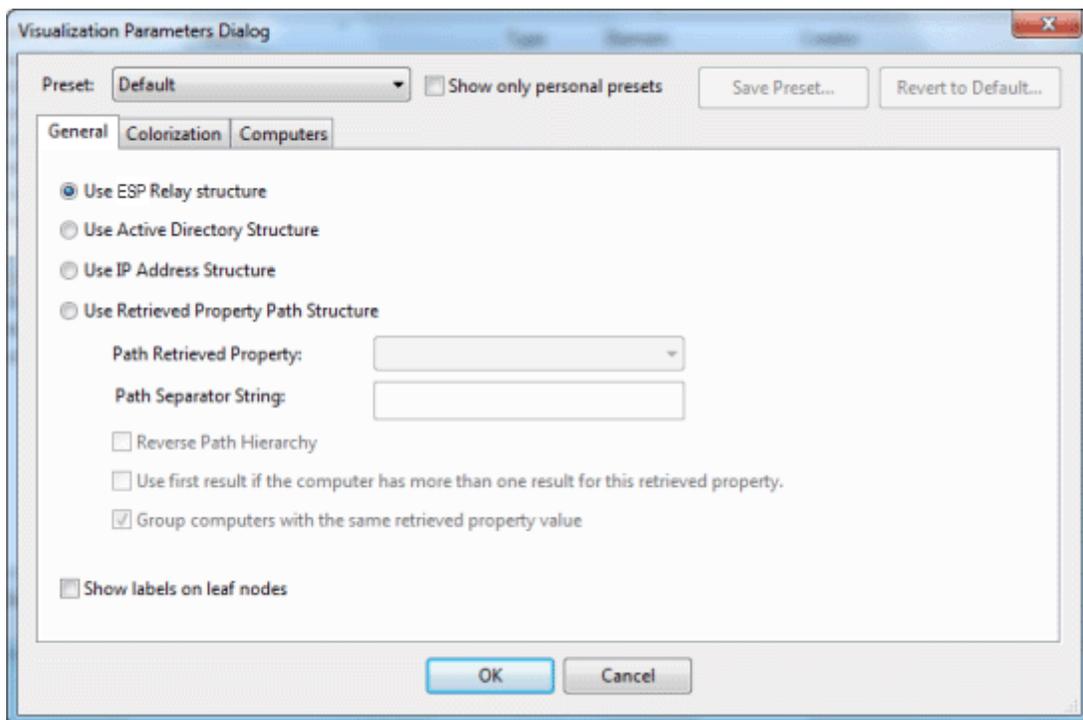
This tab has two buttons to make your selection easy.

- **Show all computers in visualization:** This is the default option, allowing all BES Clients to be displayed
- **Show only selected computers in visualization:** This option brings up a computer filter/list allowing you to specify any subset of computers in your network by retrieved properties or groupings.

This dialog is available by selecting **Tools > Launch Visualization Tool > Computers**.

## Visualization Parameters: General

The **General** tab of the **Visualization Parameters** dialog helps you to customize a graphical representation of your network.



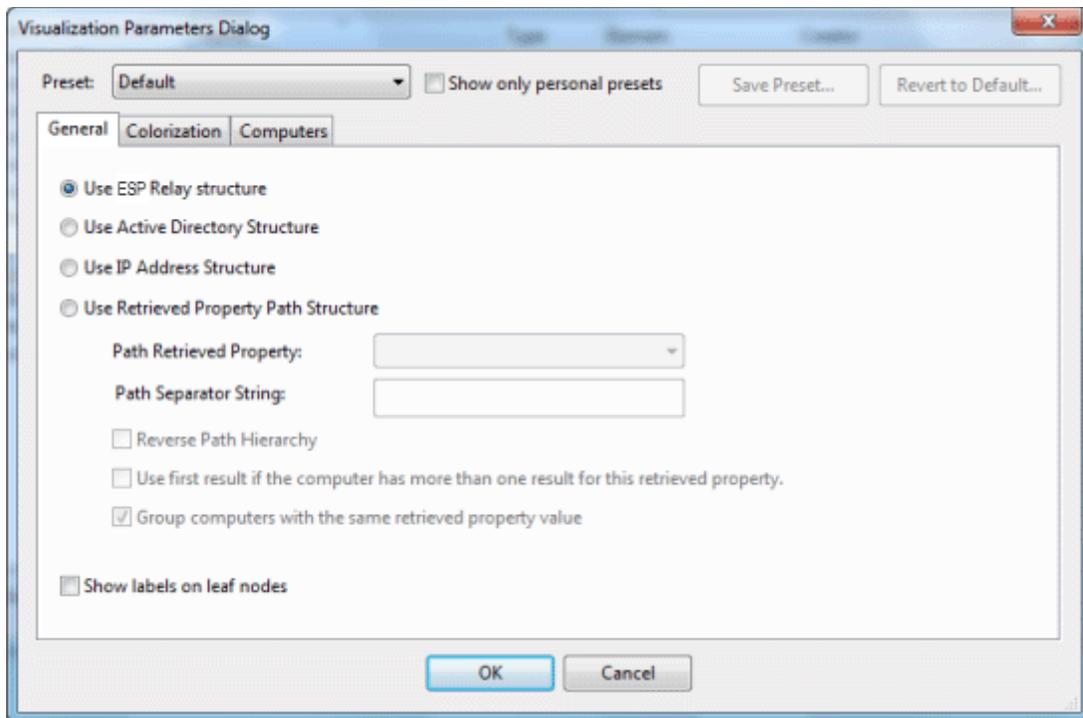
There are several ways to represent the data:

- **Use BES Relay structure:** Display the network tree from the BES Relay point of view. This is the default view.
- **Use Active Directory Structure:** Use the Active Directory to map out the network tree for visualization.
- **Use IP Address Structure:** Use the IP architecture to map out the network tree.
- **Use Retrieved Property Path Structure:** Use standard or custom properties of the client computers to map out a custom network tree. If you select this option, you must specify the desired path-style property from the section below:
  - **Path Retrieved Property:** This pulldown menu lists the available BES Client properties. Select one of these to define the network graph. A path-style property has a separator string to delimit the parts of the path. For instance, if you use an IP address as a path, you would select a period as a separator. Another example is an actual directory path, where the delimiter is a backslash. You can also create your own custom paths by concatenating fields with your own chosen separator.
  - **Path Separator String:** Enter the delimiter you want to use to parse the path specified above. For instance, to create a hierarchy from a directory path, use '\' as a separator string..
  - **Reverse Path Hierarchy:** Check this box if your chosen path-style property has the most significant part on the right instead of the left.
  - **Use first result if the computer has more than one result for this retrieved property:** Many properties return a list, rather than a single item. These values can be ignored, or you can check this box to have the first element in the list used for the network map.
  - **Group computers with the same retrieved property value:** This option will create easy-to-visualize groups from computers sharing the same property.
- **Show labels on leaf nodes:** Check this box if you want to display labels next to the computers at the leaf nodes of the network tree.

This dialog is available by selecting **Tools > Launch Visualization Tool...**

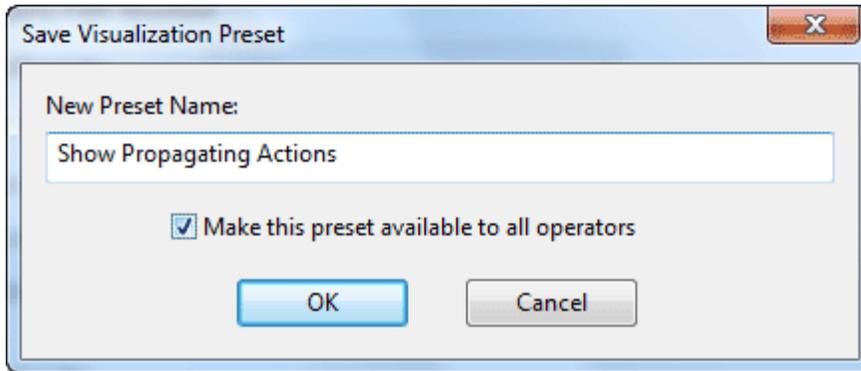
## Visualization Tool

The **BES Visualization tool** allows administrators to view and manipulate data from their network. To start up this tool, Select **Launch Visualization Tool** from the **Tools** menu. A dialog pops up allowing you to set certain parameters:



This dialog allows you to load and save your preset preferences, so you can customize individual views of your network. The presets are managed with a simple interface:

- **Preset:** Select a named set of options from this pull-down menu of previously-defined preferences.
- **Show only personal presets:** Check this box to filter down the list of presets to just those you have personally created.
- **Save Preset:** Click this button to save the current set of preferences as a named preset.



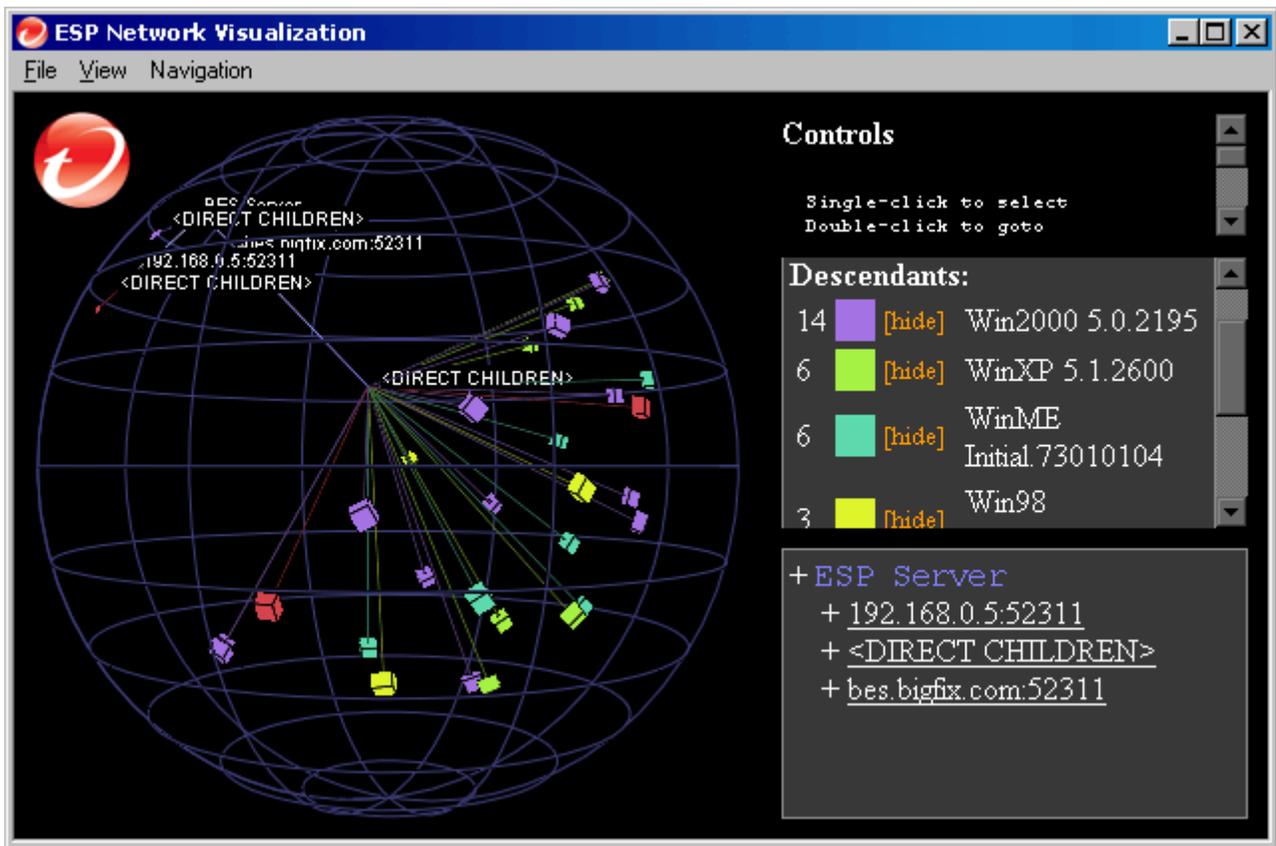
You can choose to make your presets private, or you can share them with other BES Operators. Later, if you wish to change the parameters of this preset, simply open it up, make the changes and save it with the same name. You will be asked to confirm the update.

- **Delete Preset:** Deletes the currently selected preset.

Below the Preset interface, there are three tabbed areas:

- **General:** Describe the network hierarchy according to the specified structure.
- **Colorization:** Set up a coloring scheme for the display.
- **Computers:** Select all computers or a specified subset.

Before running the tool, your options will be checked for completeness. If it passes, the Visualization tool will run with these values.



With this screen, you can display network locations, relay hierarchies, Active Directory domains and other administrator-defined hierarchies. The tool is 3D and you can rotate the graph to better visualize the network.

The tool makes it possible to view a real-time graphical network map showing Fixlet message status, Action status, Retrieved Property information and much more. For instance, you could view all computers that are currently unpatched for a specific Fixlet across your enterprise, and watch the clients change from red to green as the patch is propagated.

This dialog is available by selecting **Tools > Launch Visualization Tool**. You will need to enable hardware acceleration and OWC, if you haven't already.

# Resources

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## Glossary

**action password**—See ESP signing password.

**Analysis**—A set of retrieved properties that can be used to organize and report on your network.

**ESP**—See Trend Micro Endpoint Security Platform

**ESP Agent**—Software installed on each networked computer to be managed under ESP. The Agent accesses a pool of Fixlet messages, checks the computer it's installed on for vulnerabilities, and sends the ESP Server a message when such a condition occurs.

**ESP Console**—A management program that provides an overview of the status of all the computers with the ESP Agent installed in the network, identifying which might be vulnerable and offering corrective actions.

**ESP database**—A component of the ESP system that stores data about individual computers and Fixlet messages. The ESP Server's interactions primarily affect this database, which is a standard Microsoft product (SQL Server 2000 or 2005).

**ESP Generator Install folder**—The directory on the installation computer where the Generator places the installation files for the ESP system.

**ESP Installation Generator**—An application that creates installers for the core ESP system components.

**ESP Relay**—This is a ESP Agent (Win 2k, 2k3 or XP) that is running special server software. Relays spare your server and the network by minimizing direct server-client downloads and by compressing upstream data. Relays are automatically discovered by ESP Agents, which dynamically choose the best Relay to connect to.

**ESP Server**—A collection of interacting applications (web server, database server, etc.) that coordinates the relay of information to and from individual computers in the ESP system. The server processes may be hosted by a single server computer or segmented to run on separate server computers.

**ESP signing password**—The password (specified when the ESP system was installed) used by a ESP Console operator to sign an action for deployment. It is called the *action* password in the Console interface.

**ESP Site Administrator**—The person in charge of installing ESP and authorizing ESP Console operators.

**ESP system install folder**—The directory on the ESP Server where the ESP Server and related files (including Console and Agent installers) will be installed.

**Trend Micro technology**—A process that enables knowledgeable computer technicians to disseminate information about the causes of computer problems to ESP Agents across a network and provide automatic solutions for them.

**BigFix Action Scripting Language**—The language used for crafting action scripts. Action can be crafted in different scripting languages, including AppleScript and Unix shells.

**Trend Micro Endpoint Security Platform (ESP)**—A preventive maintenance tool for enterprises that monitors computers across networks to find and correct vulnerabilities with a few simple mouse-clicks.

**BigFix Relevance Language**—The language in which relevance clauses are written.

**DSA**—Distributed Server Architecture. Multiple ESP Servers are linked to provide full redundancy in case of failure.

**Fixlet message**—A mechanism for targeting and describing a problematic situation on a computer and providing an automatic fix for it.

**Fixlet servers**—Web servers offering Fixlet site subscriptions. They can be either internal to the enterprise network or external to the network (if direct external web access is allowed).

**Fixlet site**—A trusted source from which the ESP Agent obtains Fixlet messages.

**installation computer**—A secure computer (separate from the ESP Server computer) that hosts and runs the ESP Installation Generator.

**Management Rights**—Ordinary ESP Console Operators can be limited to a specified group of computers. These limits represent the management rights for that user. Only an ESP Site Administrator or a Master Operator can assign management rights.

**Master Operator**—An ESP Console Operator with administrative rights. A Master Operator can do almost everything a ESP Site Administrator can do, with the exception of creating new operators.

**masthead**—Files containing the parameters of the ESP process, including URLs that point to where trusted Fixlet content is available. The ESP Agent brings content into the enterprise based on subscribed mastheads.

**Mirror server**—A server required in the ESP system if the enterprise doesn't allow direct web access but instead uses a proxy server that requires password-level authentication.

**Operator**—A person who operates the ESP Console. Ordinary operators can deploy Fixlet actions and edit certain computer settings. Master Operators have extra privileges, among them the ability to assign management rights to other operators.

**signing password**—See ESP signing password.

**SQL server**—A full-scale database engine from Microsoft that can be acquired and installed into the ESP system to satisfy more than the basic reporting and data storage needs. A step up from MSDE.

**standard deployment**—A deployment of ESP that applies to workgroups and to enterprises with a single administrative domain. It's intended for a setting in which all ESP Agent computers have direct access to a single internal server.

**Task**—A special type of Fixlet message that can be used to establish corporate policy or maintain a common operating environment. You can create your own custom Tasks.

**Throttling**—A technique to limit bandwidth to accommodate shared users or thin connections. Throttling can be static or dynamic.

**Unmanaged Assets**—A list of routers, printers and non-client computers that allows the ESP Console to extend coverage to these otherwise unmanaged devices.

**Visualization**—A tool for graphically analyzing your ESP network data.

**VPN**—Virtual Private Network. An encrypted channel (or tunnel) that allows companies to extend their local-area networks across the world by using an inexpensive Internet connection.

**Web Reports**—These reports can be collected from various ESP Servers, providing a way to centrally administer a set of separate networks.

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