BigFix Lifecycle
Power ManagementSetup Guide

Special notice

Before using this information and the product it supports, read the information in Notices *(on page 27)*.

Edition notice

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

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Chapter 1. Overview

The Power Management Setup Guide describes the initial setup, configuration, installation, and activation of the BigFix Power Management components. It is intended for BigFix administrators and operators, and evaluators of the product.

To learn about how to use and optimize the Power Management product in your environment, see the Power Management *User's Guide.*

Power Management supports many features, including:

- Managing computer power settings and policies
- Tracking and reporting computer power usage, including measuring power usage, potential power savings, and more
- Tracking of computer states to create power policies that maximize power savings
- Advanced Wake-on-LAN capabilities, including Last Man Standing, Wake-on-LAN 'Medic', scheduled wake-up times, and more
- Support for PC Insomnia detection and prevention
- A client-side dashboard where you can view power usage

New Features

BigFix Power Management has extended support to include the following Microsoft Windows and Mac OS X versions.

- Windows 8.1
- Windows 10
- Windows Server 2016
- OS X 10.9
- OS X 10.10
- OS X 10.11
- macOS 10.12
- macOS 10.13
- macOS 10.14
- macOS 10.15

System requirements

BigFix Power Management supports the following Windows and Mac versions.

Windows

- Windows 2008
- Windows 2008 R2
- Windows Server 2012 R2
- Windows Server 2016
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10

Mac OS

- Mac OS 10.4
- Mac OS 10.5
- Mac OS 10.6
- Mac OS 10.7
- Mac OS 10.8
- OS X 10.9
- OS X 10.10
- OS X 10.11
- macOS 10.12
- macOS 10.13
- macOS 10.14
- macOS 10.15

*Microsoft XP, Windows Vista, and Windows 2003 have reached end of life (EOL). Microsoft products have a lifecycle that ends when the product is no longer supported. When a product reaches EOL or its end of support date, Microsoft no longer supports and releases updates for the product, including automatic fixes, updates, and online technical assistance.

BigFix, in turn, no longer provides security and non-security content and support for products that reached its end of support date. However, users of existing Windows content can use the standard HCL support channels to raise concerns and for troubleshooting support.

Microsoft provides extended support for some products that have reached their end of life. If you signed for extended support with Microsoft, it is suggested that you contact your HCL account representative. To see information about product offerings, see https://www.hcltech.com/software#products.

Subscribe to the site

You can subscribe and gather the Power Management site from the **License Overview** dashboard in the **BigFix Management** domain.

Sites are collections of Fixlet messages that are created internally by you, by HCL, or by other vendors. You can add a new site subscription by acquiring a Masthead file from a vendor or from HCL or by using the Licensing Dashboard. For more information about subscribing to Fixlet sites, see the BigFix Installation Guide.

Sites that you license from BigFix appear automatically in the **License Overview** dashboard. Search for the BES Power Management site and click **Enable**. If you do not see the site, click the **Check for license update** button.

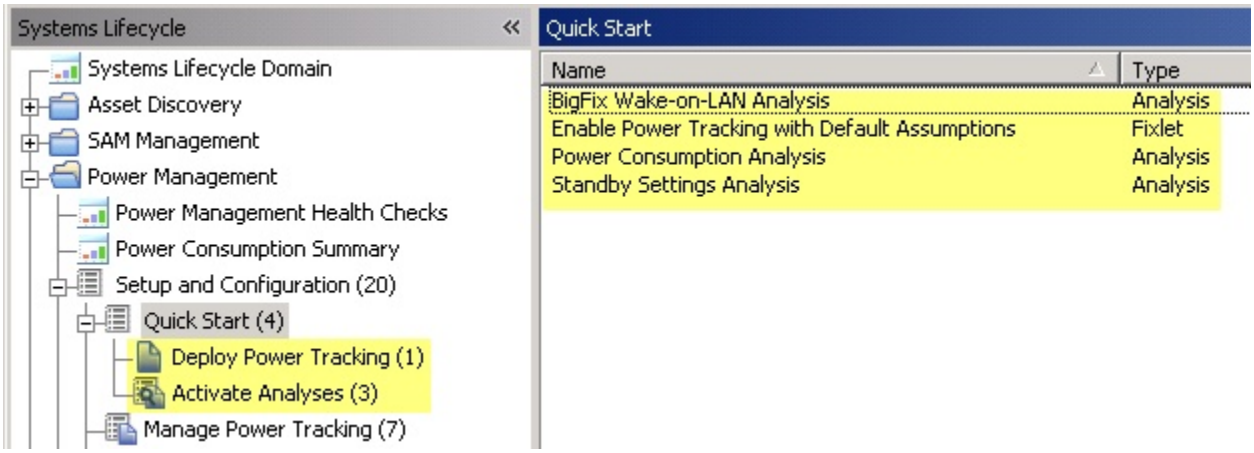
By default, no clients are subscribed to the content of a newly enabled site. To subscribe clients to the site, follow the linked site name, which is BES Power Management in this case. You can define your computer subscription rules in the **Computer Subscriptions** tab of the site document. Save any changes that you make.

Chapter 2. Setup and configuration

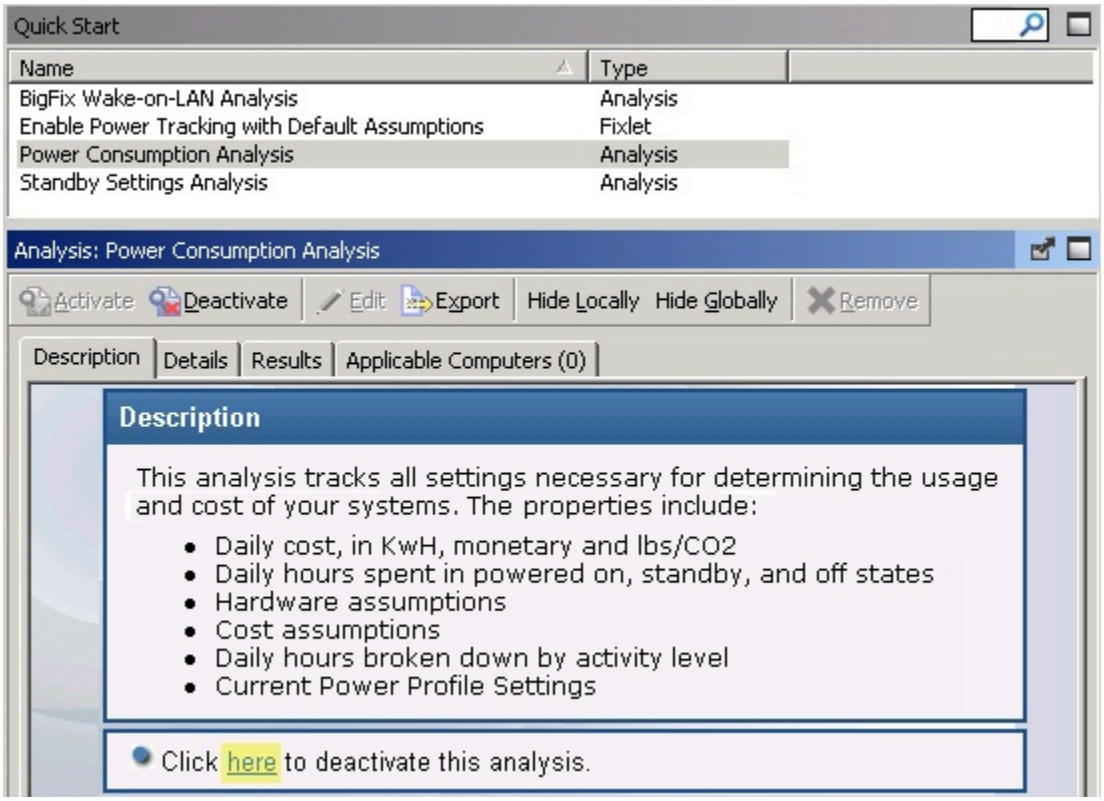
Quick Start

After you subscribe to the new Power Management Fixlet site, you must enable and configure Power Management with some basic configuration steps in the BigFix console.

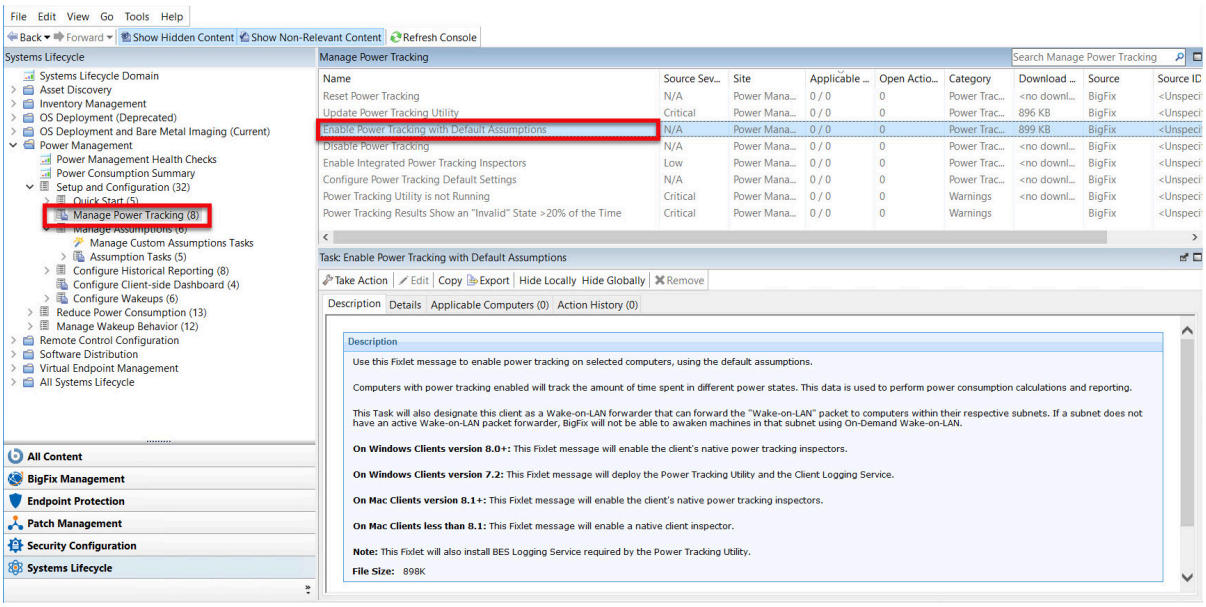
The *Quick Start* subnode under *Setup and Configuration* includes several analyses and Fixlets for setting Wake-on-LAN, Power Consumption, Standby, and Power Tracking parameters in your deployment.



Use the List Panel on the top right of your console to access each analysis and Fixlet. Click the applicable item, and click the link at the bottom of the work panel to deploy the action.



Manage Power Tracking

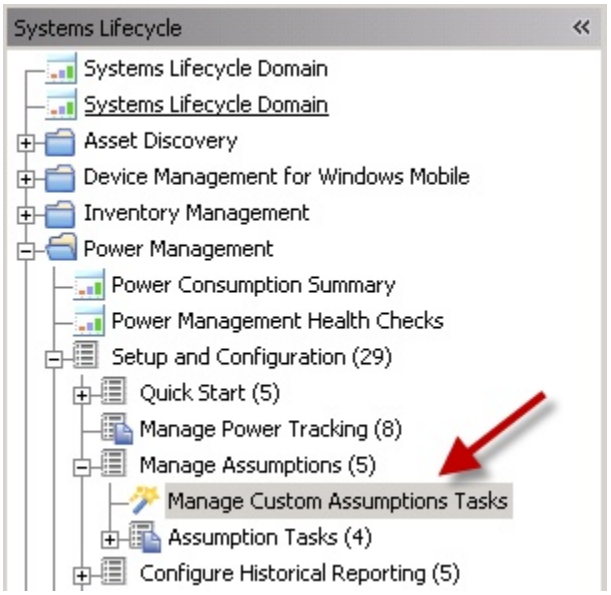


Manage Power Tracking , which is located in the *Setup and Configuration* node includes tasks for configuring, setting, enabling, and updating your Power Tracking capabilities. These optional tasks are not required for initial setup and can be used during the configuration process.

Manage Assumptions

BigFix calculates power consumption by measuring the amount of time a computer spends in Active, Idle, Standby, and Off power states, and factoring in 'assumptions' for hardware power draw and endpoint cost per kWh. Power Management uses default values based on experience and research with typical computers manufactured in the last few years and average CO2 and electricity costs. You can choose the default values or you can override them with known values specific to your computers and costs.

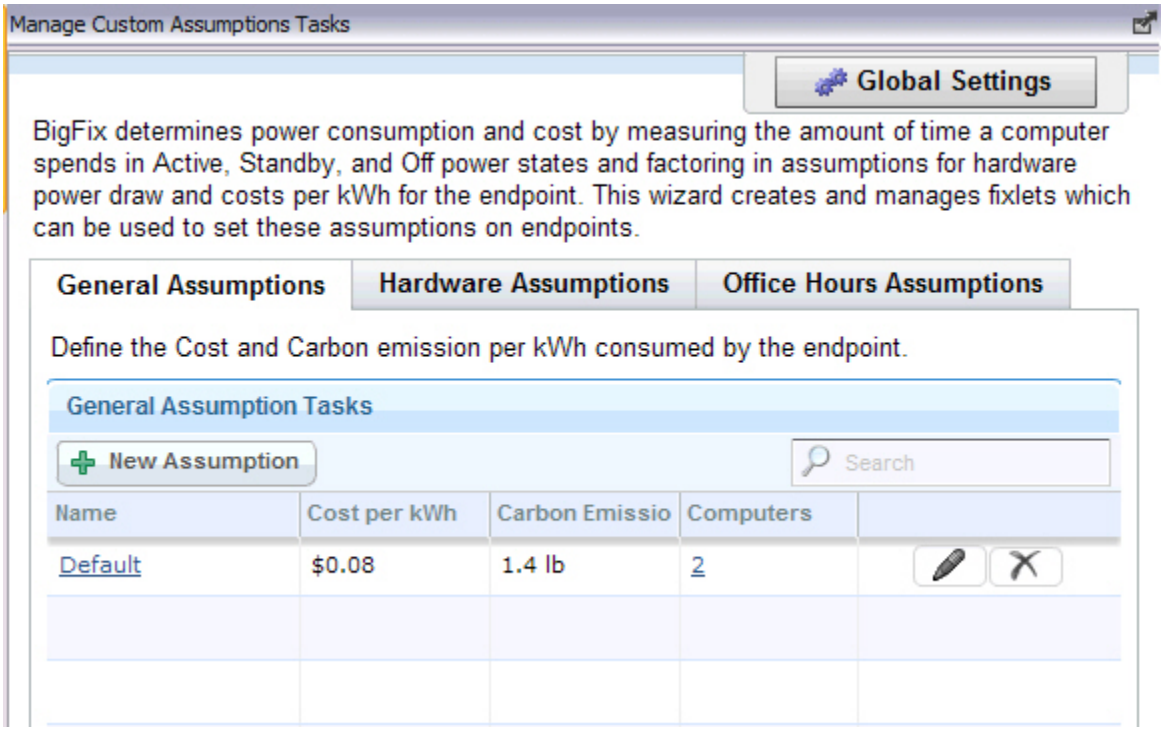
You use the Manage Assumptions dashboard for customizing your deployment through assumptions. The Manage Assumptions dashboard can be found in the navigation tree under Setup and Configuration/ Manage Assumptions/Manage Custom Assumptions Tasks.



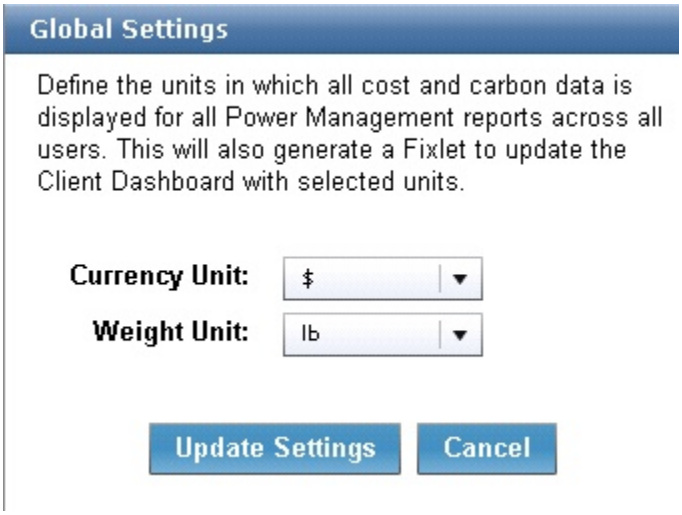
Note: Managing Assumptions is an optional feature in BigFix Power Management. If you do not set custom assumptions, default assumptions are used.

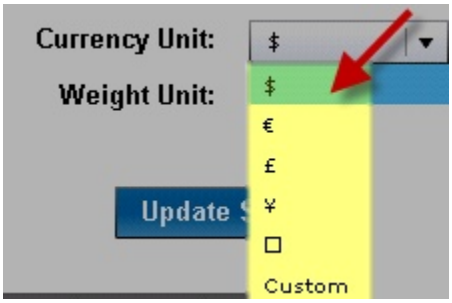
Global Settings

To access the Global Settings dialog, click the icon located in the top right corner of the Manage Custom Assumptions Tasks Wizard.



In this dialog, you can set international currency and weight units in your deployment.





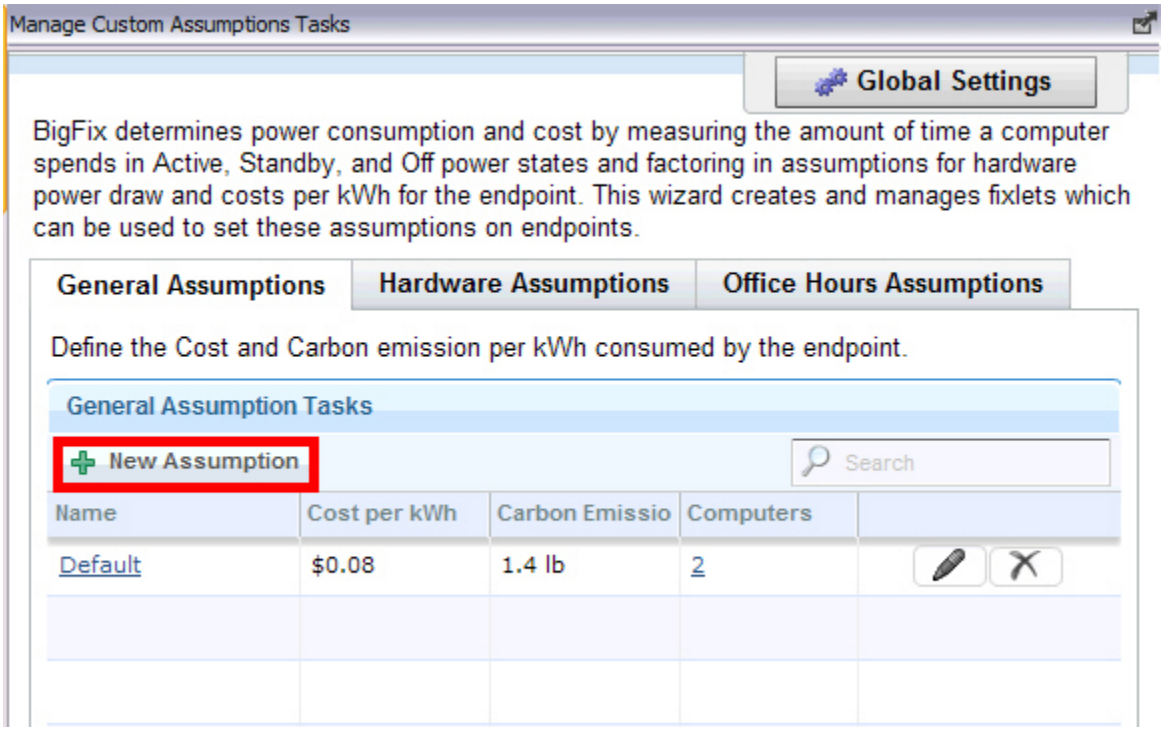
After making a selection from the drop-down lists, click **Update Settings**.

General Assumptions

You define the cost and carbon emissions per kWh that are consumed by your endpoints on the *General Assumptions* tab in *Manage Custom Assumptions Tasks*. Click the tab in the wizard to display the following information:

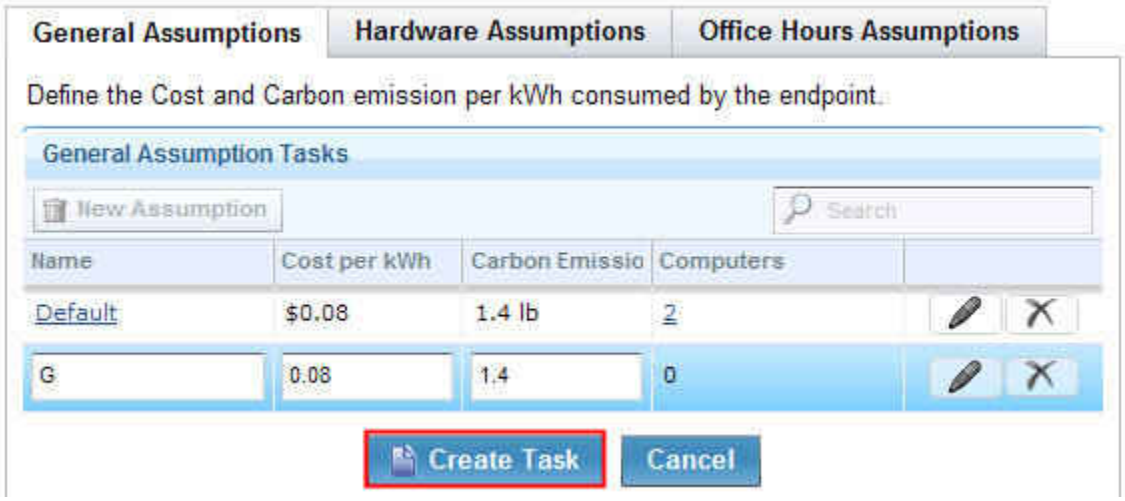
- Name
- Cost per kWh
- Carbon Emissions per kWh
- Computers

If you do not have General Assumptions set, then you are using default values. To override the default values and use values specific to your deployment, click *New Assumption*.

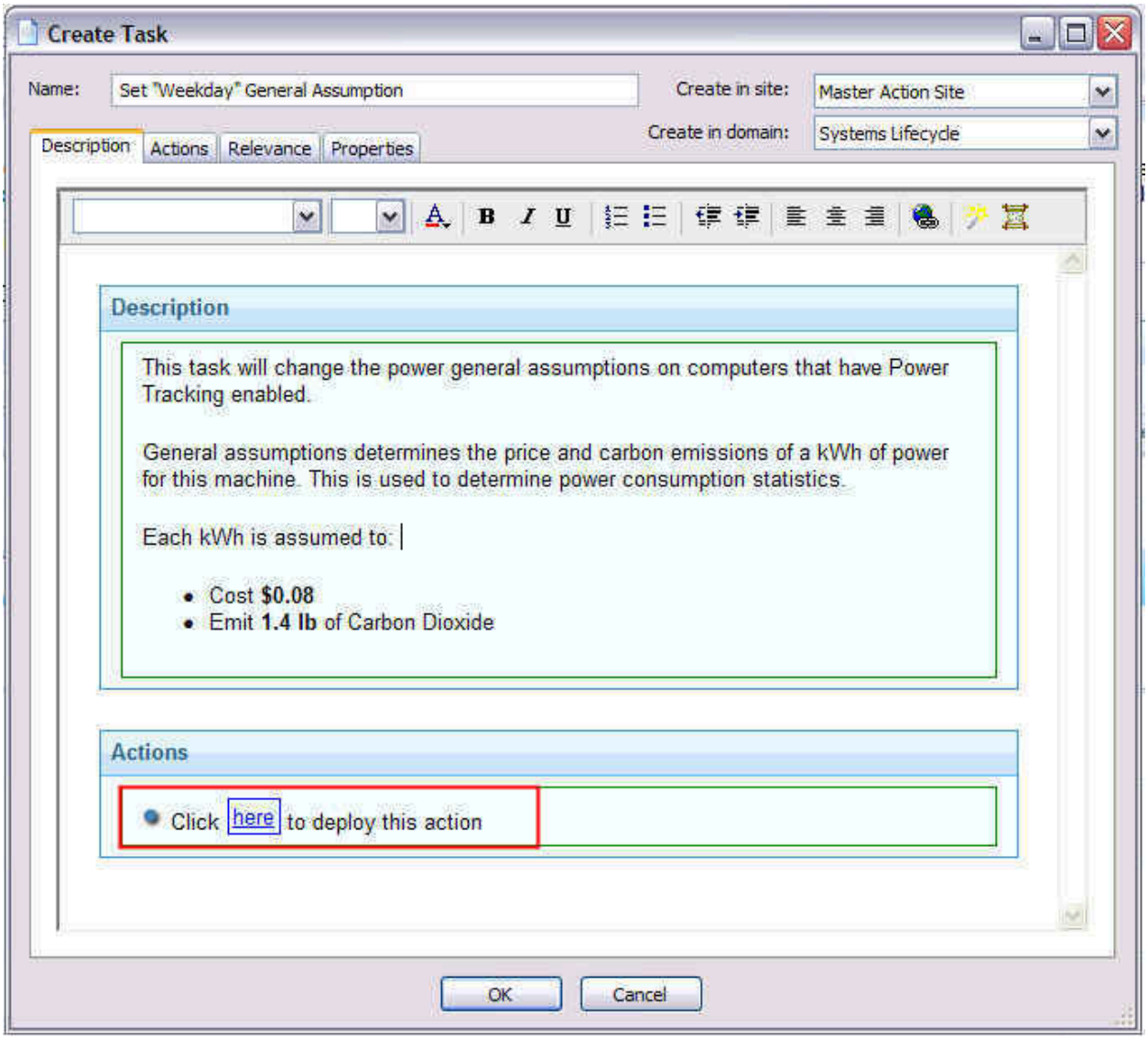


Your electricity provider can provide your cost per kWh of electricity and the amount of carbon released to create each kWh. If you have multiple providers, you can choose to average the values and assign them to all computers. Alternatively, you can create multiple assumptions and assign each assumption to the appropriate computers based on location. The latter approach is more accurate, but it is more time consuming and difficult to maintain over time.

Enter a name for the assumption, cost per kWh, and carbon emissions per kWh. Click **Create Task**.



On the work panel, click *OK* and enter your Private Key Password. When the task has gathered the required information, the task window opens as shown in the following image. Click in the Actions box to deploy the action.

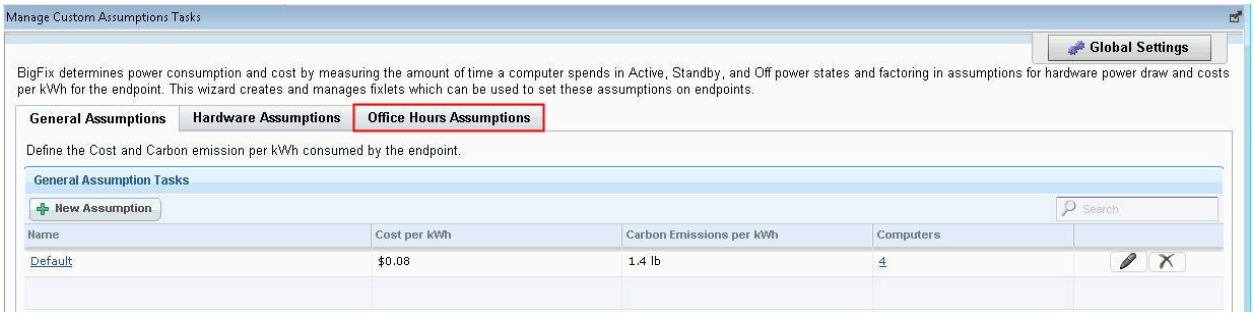


Office Hours Assumptions

You can set how your organization defines work hours and workdays in the *Office Hours Assumptions* tab.

To define office hours assumptions settings, go to the **Systems Lifecycle Domain**. From the navigation tree, click **Power Management > Manage Assumptions > Manage Custom Assumptions Tasks.**

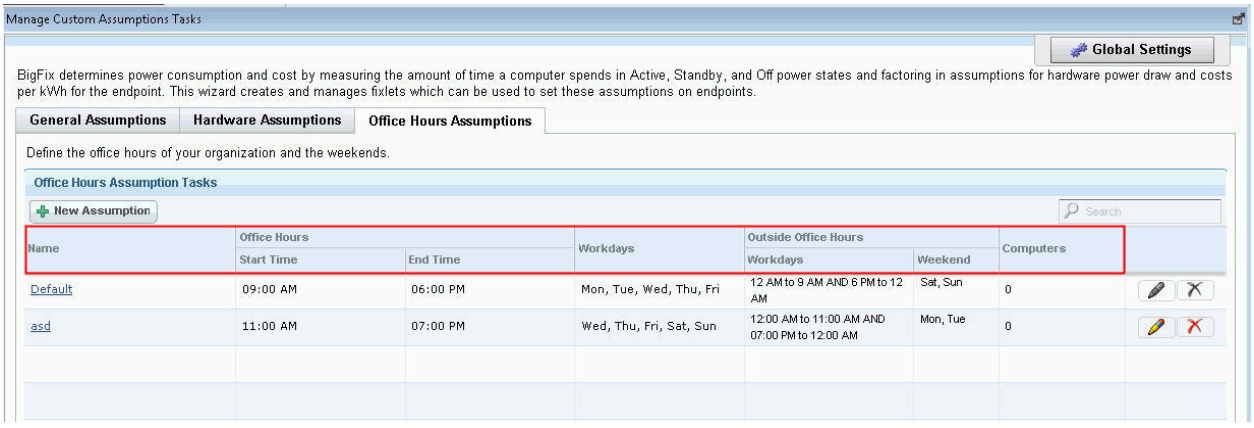
Click the **Office Hours Assumptions** tab. You can create, edit, and delete assumptions from this tab.



The following columns are displayed in the *Office Hours Assumptions* tab:

- Name
- Office Hours
    - Start Time
    - End Time
- Workdays
- Outside Office Hours
    - Workdays
    - Weekends
- Computers

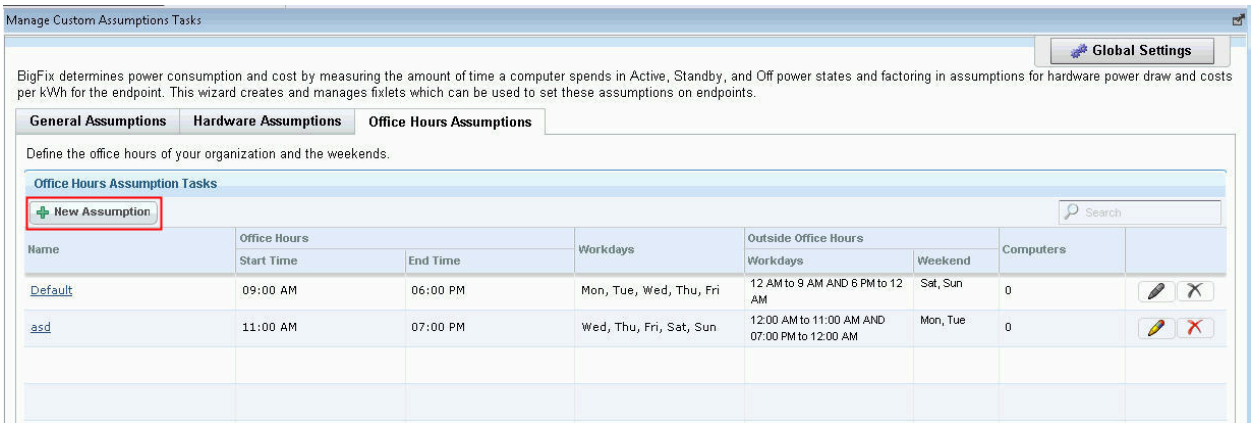
By default, in the **Office Hours** column, the *Start Time* is set to 09:00 AM and the *End Time* is set to 06:00 PM. The workdays are also set, by default, from Monday to Friday.



Note: If power tracking is deployed before setting new office hours assumptions, the default start time, end time, and work days settings are used.

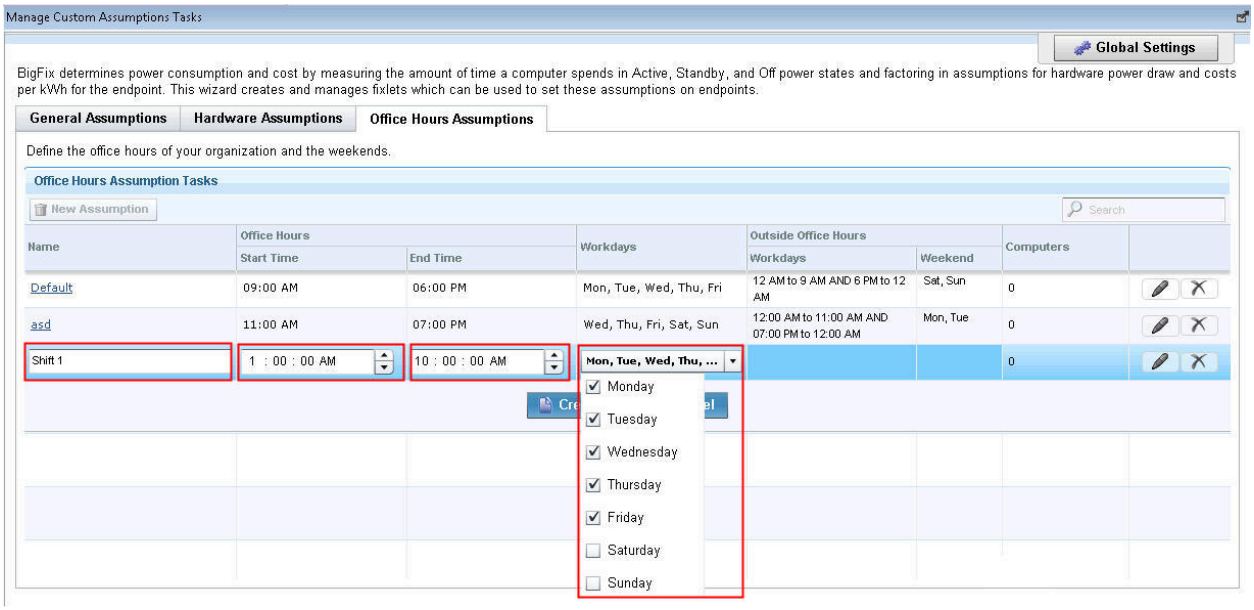
Creating Office Hours Assumptions

To create an office hour assumption, click **New Assumption**.

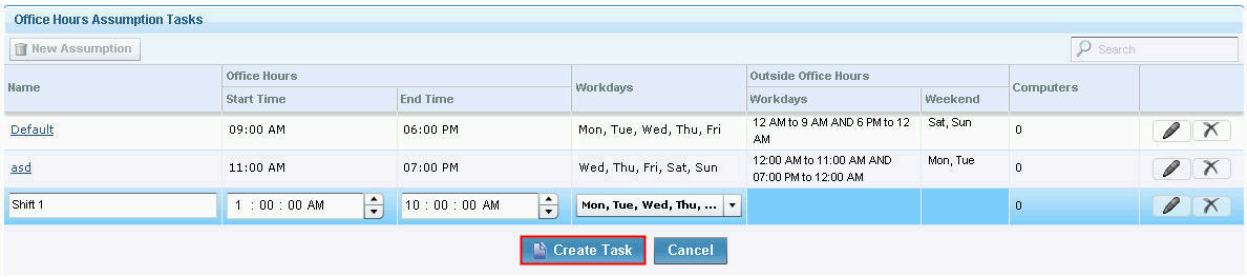


A row is added. Enter the name of the new assumption in the **Name** field. Define the office hours by selecting the **Start Time** and **End Time**.

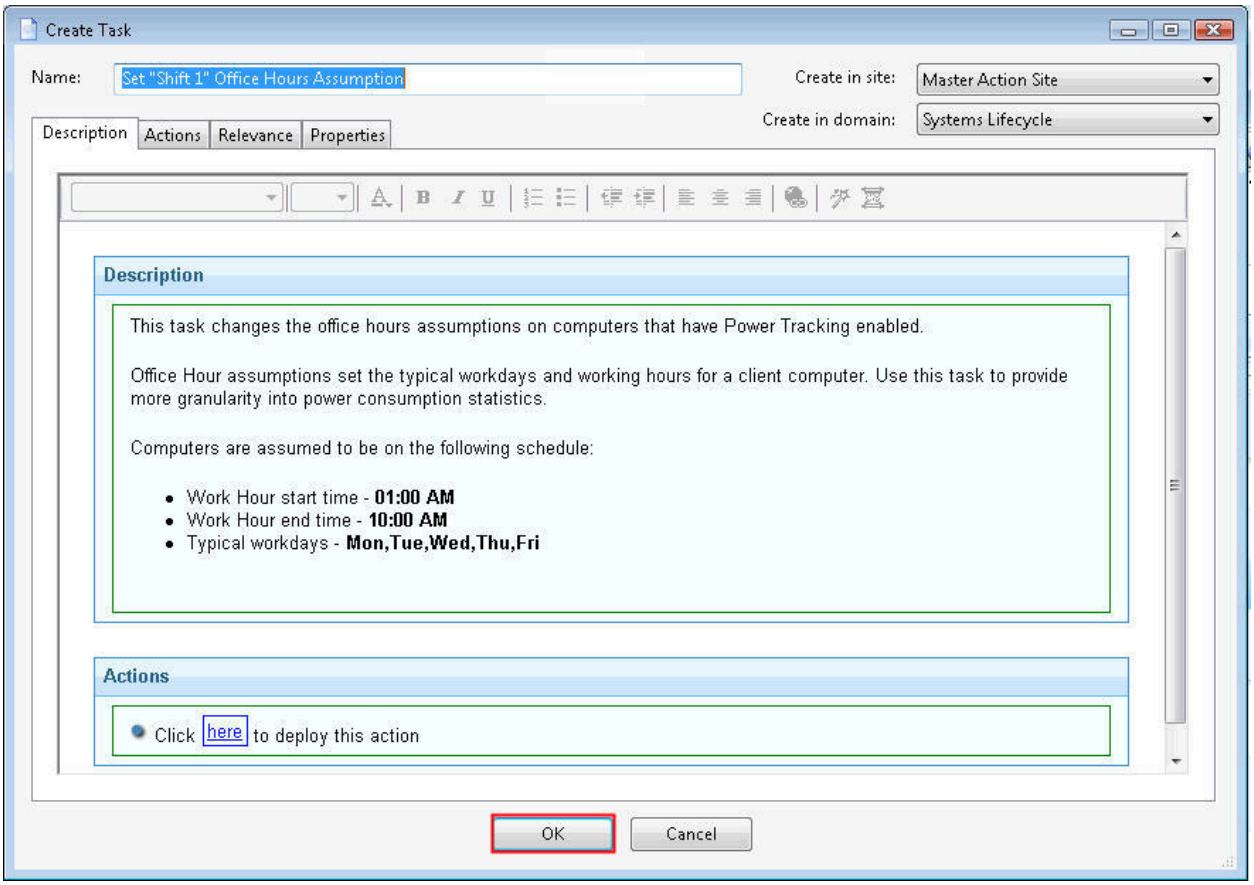
Under the **Workdays** column, click the **All days** drop-down menu and click to select the applicable days.



Click **Create Task**.



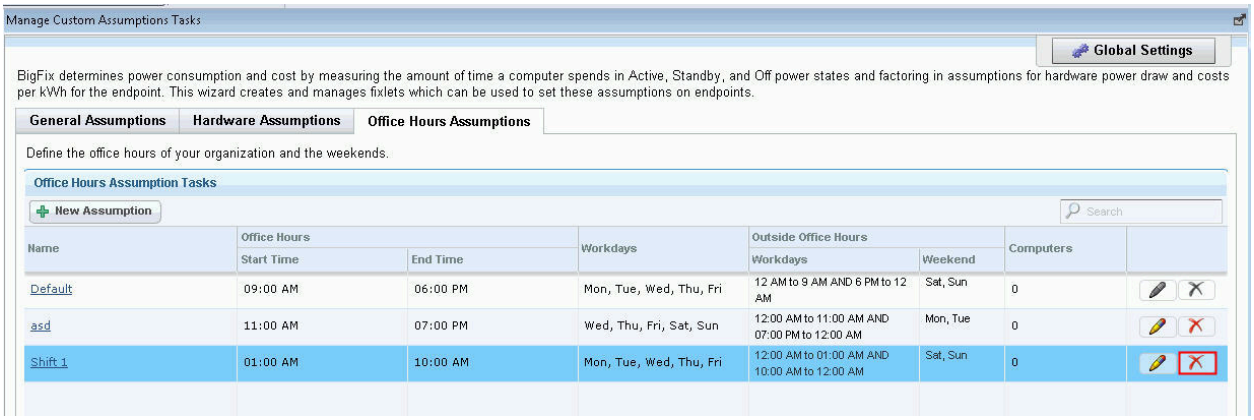
The **Create Task** window opens. Click **OK** to create the task.



Click in the **Actions** box of the task window to deploy the action.

Deleting Office Hours Assumptions

To delete existing office hours assumptions, go to the **Office Hours Assumptions** tab. Select the assumption and click the **Delete.**



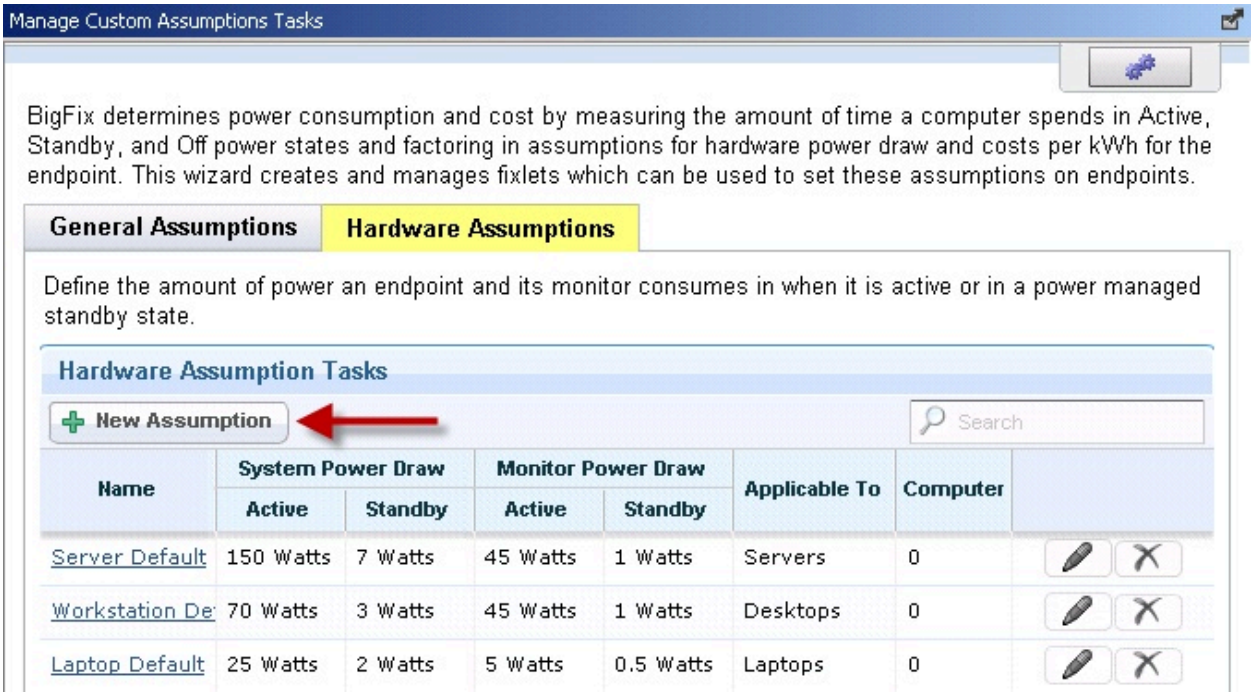
Click **Delete** to confirm deletion of the Assumption Fixlet. The Remove Tasks window opens. Click **Yes**, then **OK** to confirm the removal of the task. The assumption task is now deleted.

Hardware Assumptions

Define endpoint power consumption in Active or Standby mode in the *Hardware Assumptions* tab. The following fields are displayed:

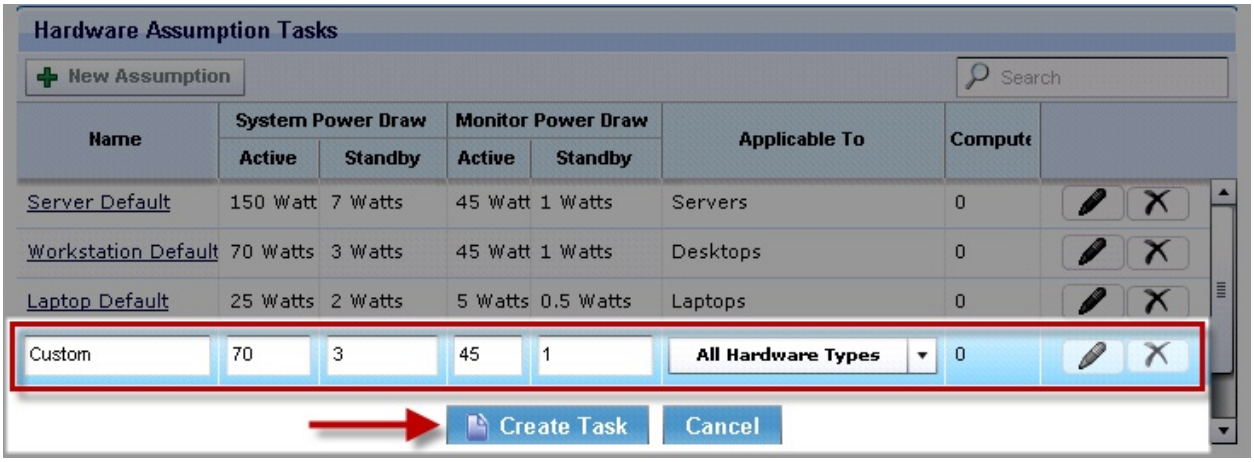
- Name
- System Power Draw - Active or Standby
- Monitor Power Draw - Active or Standby
- Applicability to hardware such as servers or desktops
- Computers

If you do not have Hardware Assumptions set, you are using default values. To override default values with values specific to your deployment, click *New Assumption*.



To effectively set assumptions, you must discover the amount of electricity used by your computers. You can determine this amount by plugging systems into an electricity usage device, such as a *Kill a Watt* electricity usage monitor. Because power usage varies only minimally per computer model, you might want to check power values for representative models. If you have many computer models, you can choose to average the values and assign them to all computers or create multiple assumptions and assign each assumption to the appropriate computers based on their models. The latter approach is more accurate, but it is more time consuming and difficult to maintain over time.

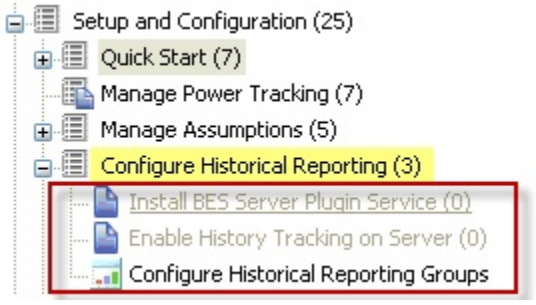
After clicking *New Assumption*, an additional row displays at the bottom of the window, where you can manually populate fields corresponding to the new task Name, System Power Draw, Monitor Power Draw, and the applicability to different hardware types. When complete, click *Create Task,* click *OK,* and enter your Private Key Password. Click in the Actions box of the task window to deploy the action.



Configure Historical Reporting

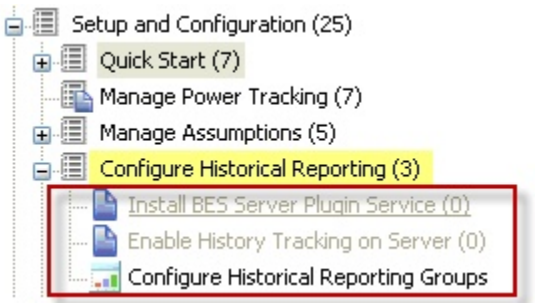
Power Management provides power information based on the current state of computers in your deployment. You can see historical data trends for power usage and capture historical data to address reporting needs.

The *Configure Historical Reporting* subnode under *Setup and Configuration* includes tasks for installing the BES Server Plugin and enabling historical tracking on a server, and a task for configuring historical reporting groups.



Install BES Plugin Service

The BES Server Plugin Service facilitates communication and automation of the BigFix server and Web Reports components with server-side utilities. Several BigFix applications, such as Power Management, require this plug-in service to fully use the available functions.



You must install the BES Server Plugin service before you use the historical reporting feature.

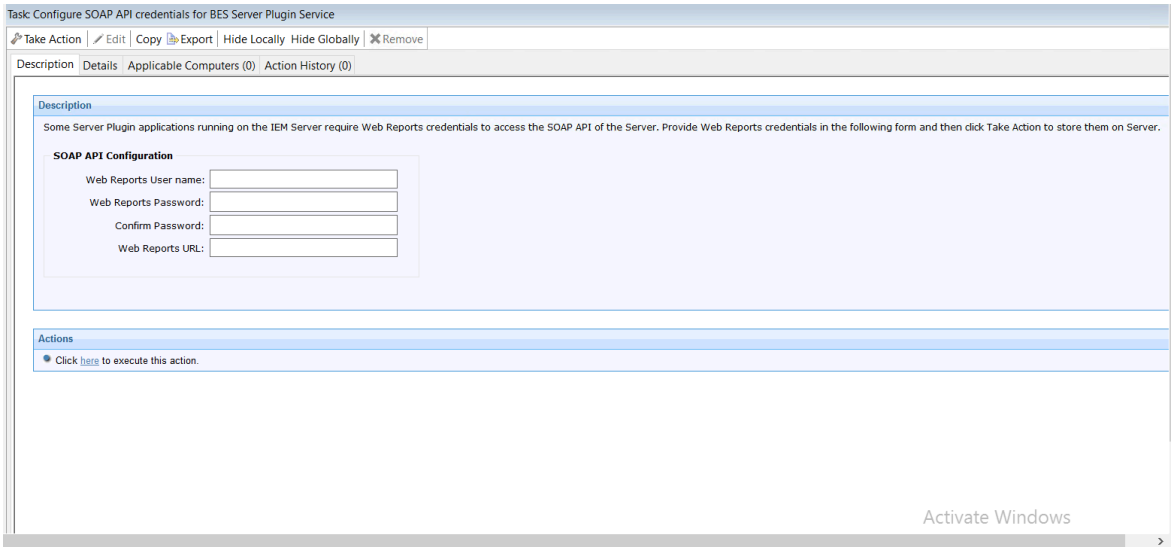
Configure BES Plugin

Before configuring, ensure the BES Server Plugin is installed or updated as applicable.

- If the BES Plugin Service has not yet been installed, use the `Install BES Server Plugin Service` task to install BES Plugin. or
- If the BES Plugin Service has already been installed, use the `Update BES Server Plugin Service` task to update.

To configure BES Plugin, use the `Configure SOAP API credentials for BES Server Plugin Service` task. To do this:

1. Go to **Setup and Configuration** > **Configure Historical Reporting** > **Install BES Server Plugin Service**.
2. In the description section, click the link **Configure SOAP API credentials for BES Server Plugin Service**. The following screen appears.

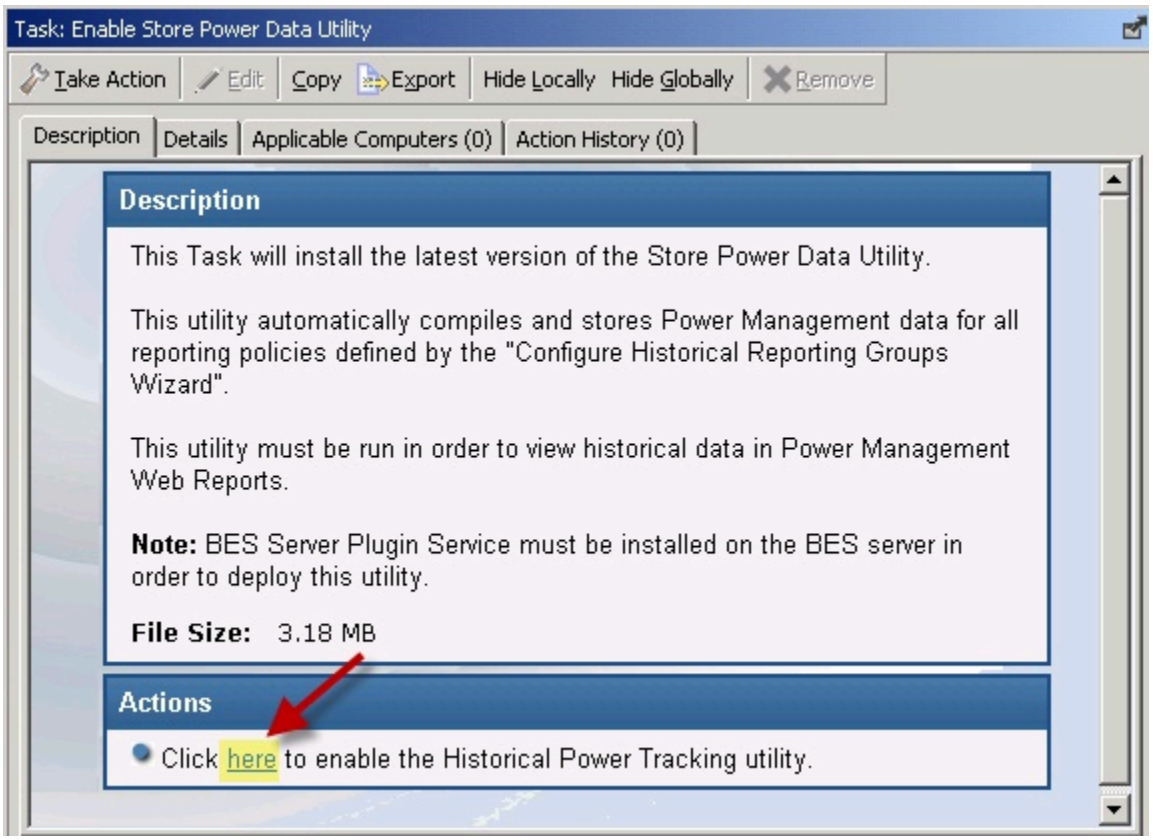


3. Under **SOAP API Configuration**, fill in the following fields:
    - Web Reports User name
    - Web Reports Password
    - Confirm Password
    - Web Reports URL
4. Click “here” to execute action.

This fixlet performs validation on the username and password using the web report URL before executing the action. If the web report URL is not accessible from the console machine, the validation fails; however, the fixlet still gives the option to proceed.

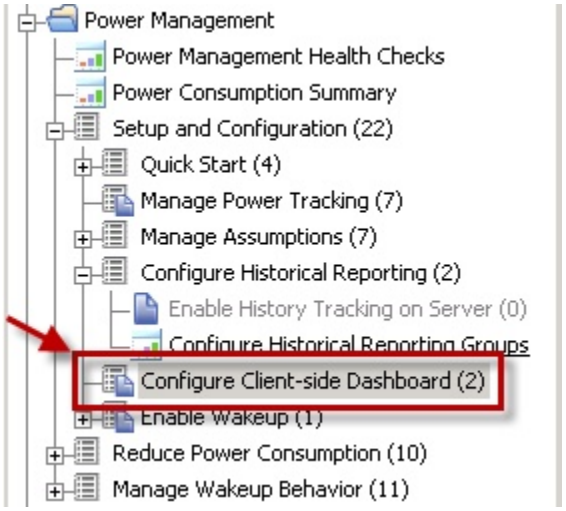
Enable History Tracking

To enable History Tracking on a server, click the appropriate task from the navigation tree. Click in the Actions box of the task window to enable the Store Power Data Utility.

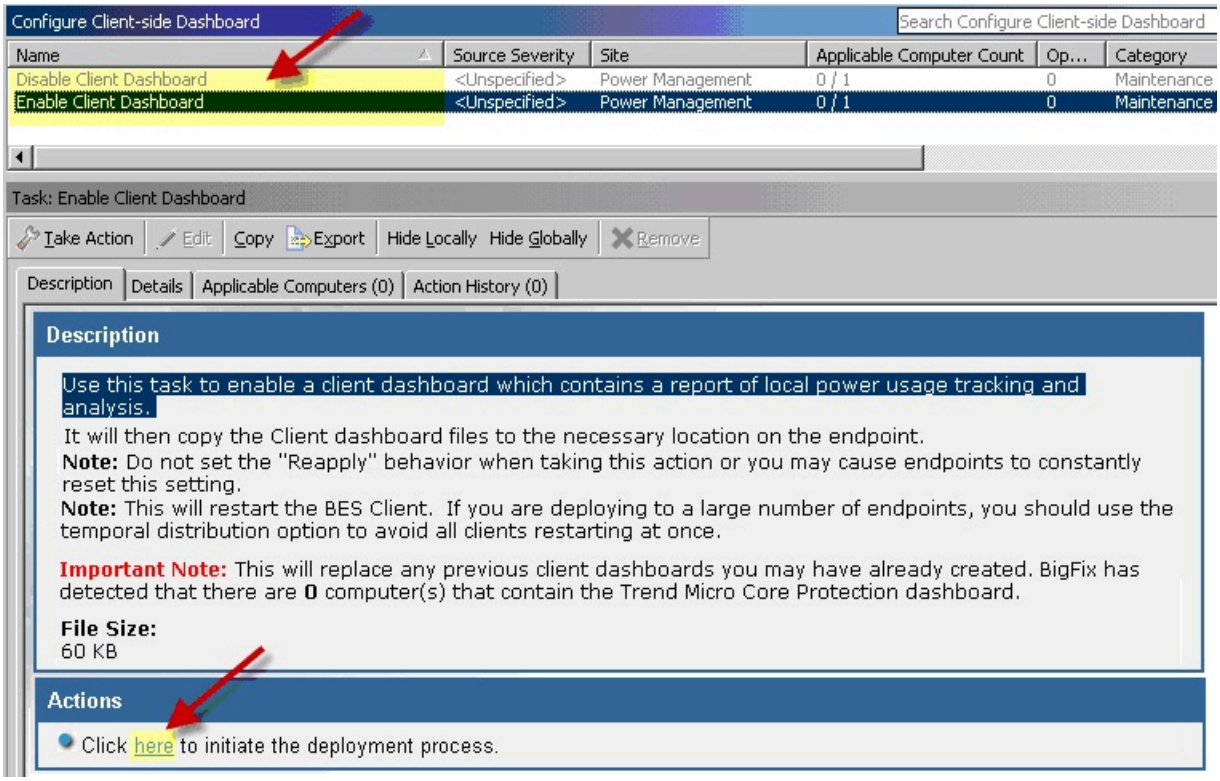


Configure Client-side Dashboard

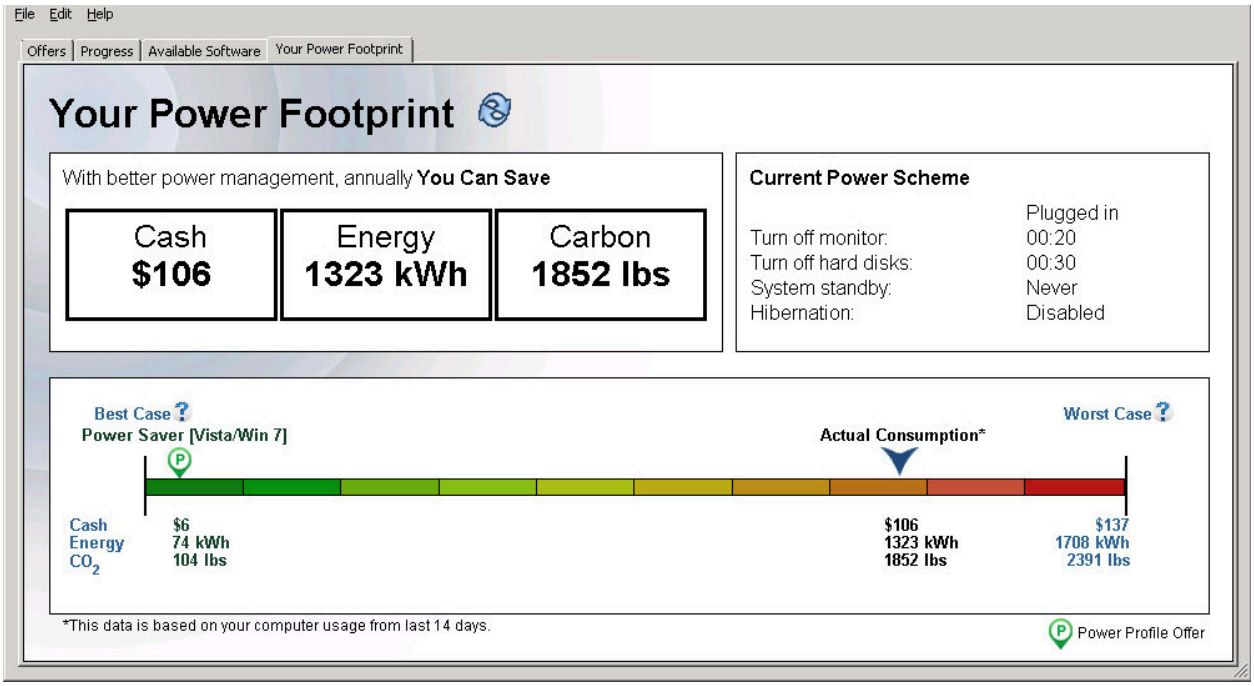
The Client-side Dashboard provides you with individual power footprints. Power Management includes tasks in the navigation tree for enabling and disabling the client-side dashboard.



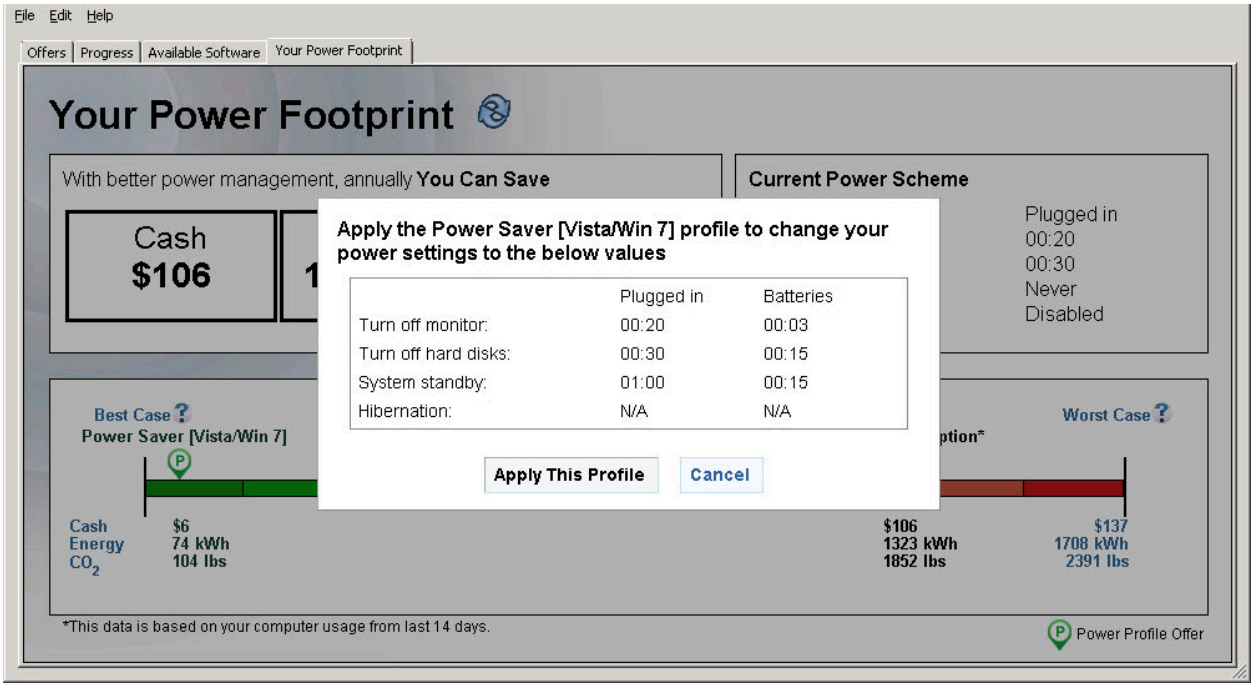
To start deployment, click the appropriate task, and then click the link in the Actions box.



From the **Take Action** window, you can make an action into an offer to have it become part of a list of offers made available in the client UI on applicable machines. This offer applies to the target machines and users that you choose in the **Take Action** window.



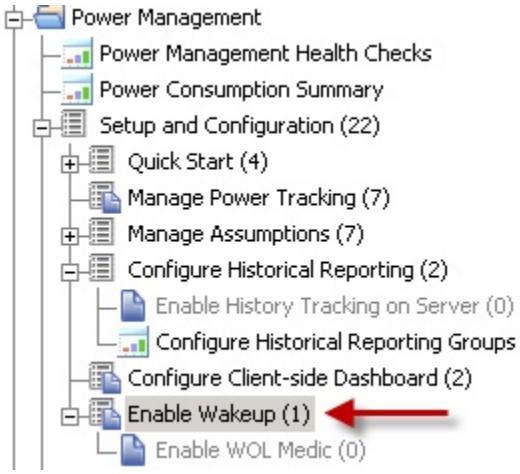
This example shows an offer for a single power profile from the **Your Power Footprint** tab. Click **Apply This Profile** to apply the offer without having to go to the **Offers** tab.



Note: Your BES Client version must be 8.2.1170.0 or later to view and apply the single power profile from the **Your Power Footprint** tab.

Enable Wakeup

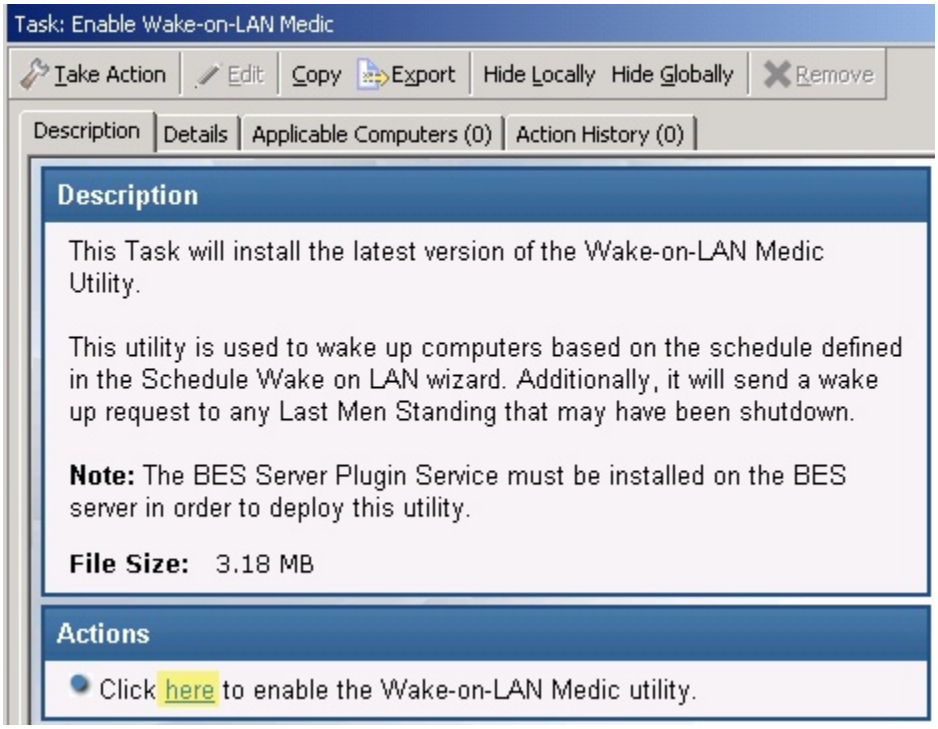
Enable Wakeup includes a task for enabling the Wake-on-LAN Medic Utility. This utility is used to wake computers based on the schedule defined in the *Schedule Wake-on-LAN* wizard. It also sends a wake-up request to any Last Man Standing computers that are shut down.



As well as the BigFix Wake-on-LAN technology, BESWolMedic.exe with versions 1.5.30 or later use a directed broadcast that does not need Wake-on-LAN forwarders and Last Man standing computers.

To enable the *Wake-on-LAN Medic Utility*, click the *Enable* task in the List Panel, and then click in the Actions box of the Task window.

Note: Ensure that RESTAPI is set up correctly to avoid errors and for the Wake-on-Lan Medic Utility to function properly. RESTAPI is supported by BigFix server version 9.0 and later.



Your BigFix Server firewall might prompt a network security warning when the utility is run for the first time. No directed broadcast is issued if the permission to access the network is not approved at your BigFix server. The existing BigFix Wake-on-LAN technology will continue to work.

Remove previous version

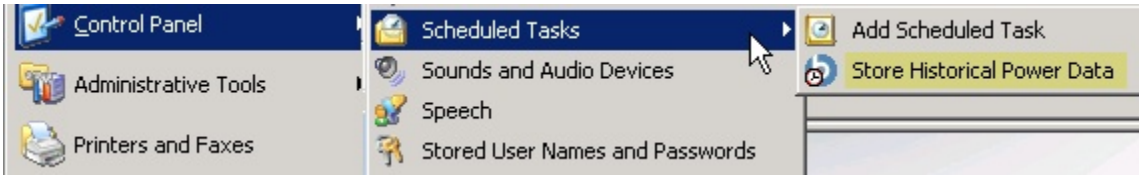
You can run the previous and current versions of both versions of Power Management simultaneously. However, the new version of Power Management uses different collection techniques. When you remove the old version, your historical data is not transferred.

Note: Remove the previous version of BigFix Power Management after the new version is installed.

Disable previous Historical Tracking

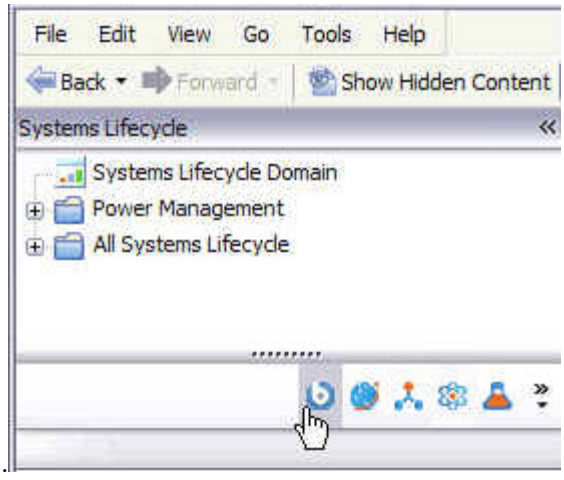
The previous version of BigFix Power Management used a user-defined scheduled task in Windows to run the Store Historical Power Data process. If you previously set up this task, you must disable it after you remove the older Power Management Fixlet site.

To disable previous historical tracking, remove the scheduled task for storing the power results utility. To do this, access the Windows Control Panel and select Scheduled Tasks. Delete the *Store Historical Power Data* task.

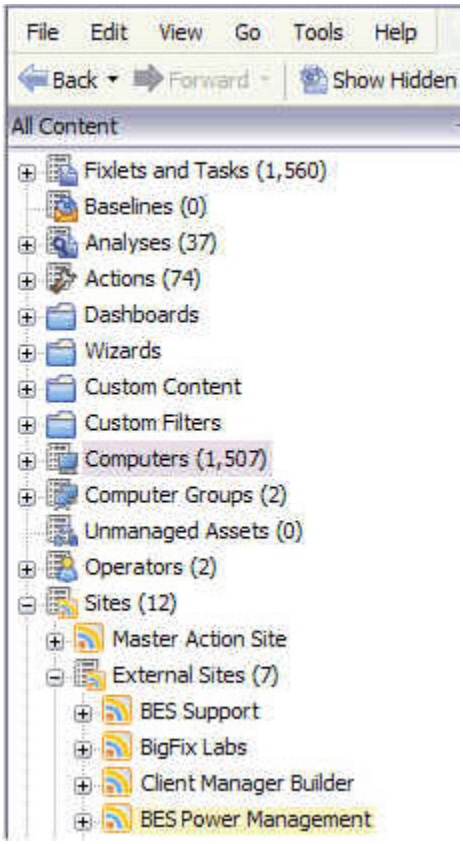


Unsubscribe from sites

To unsubscribe from the previous site, go to the domain icons at the bottom of the domain panel and click the *All Content*domain icon.



The *All Content* navigation tree displays in the domain panel on the left. In the *All Content* navigation tree, expand the *Sites* folder. Highlight the previous Power Management site and click *Remove* from the work panel.



Remove custom analyses

The previous version of Power Management used a custom analysis to track power usage that was different for each console user. In the current version, tracking is done with a single analysis in the Fixlet site.

Remove the previous analysis after you unsubscribe from the older Power Management.

To remove custom analyses created in the previous Power Management site, click the Analyses node in the *All Content* navigation tree. In the List Panel that displays on the right, sort the list *by Name* and locate the previous site. It is called *Power Monitoring Analysis*. If there are several sites within your console, right-click each *Power Monitoring Analysis* site and select *Remove* from the list.

Analyses

Status	Name	Site	Applicable Computer
Activated Globally	BES Client Helper Service	BES Support	0
Activated Globally	BES Client Logging Service Version and Extensions	BES Support	2
Activated Globally	BES Component Versions	BES Support	2
Activated Globally	BES Health Checks Analysis	BES Support	1
Activated Globally	BES Relay Status	BES Support	2
Activated Globally	BigFix Wake-on-LAN Analysis	BES Power Management	2
Activated Globally	Power Monitoring Analysis	Master Action Site	2
Activated Globally	Power Options Information - Windows 2000/XP...	BES Power Management	2

Appendix A. Support

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

- BigFix Support Portal
- BigFix Developer
- BigFix Playlist on YouTube
- BigFix Tech Advisors channel on YouTube
- BigFix Forum

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