BigFix Lifecycle
Power Management Setup Guide

Special notice

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

Edition notice

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

Contents

Chapter 1. Overview

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 various versions of Windows and Mac operating systems, including Windows 7, Windows 10, Windows 11, and macOS 10.15. Users are advised that Microsoft XP, Windows Vista, and Windows 2003 have reached end of life, and BigFix no longer provides support for products that have reached their end of support date.

BigFix Power Management supports the following Windows and Mac versions.

Windows

- Windows 2008
- Windows 2008 R2
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows 11

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

Learn about the initial setup and configuration process for BigFix Power Management.

Quick Start

Enable and configure Power Management by subscribing to the Power Management Fixlet site and following basic configuration steps in the BigFix console. The Quick Start subnode under Setup and Configuration offers analyses and Fixlets for adjusting Wake-on-LAN, Power Consumption, Standby, and Power Tracking settings, which can be accessed through the List Panel for deployment.

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.
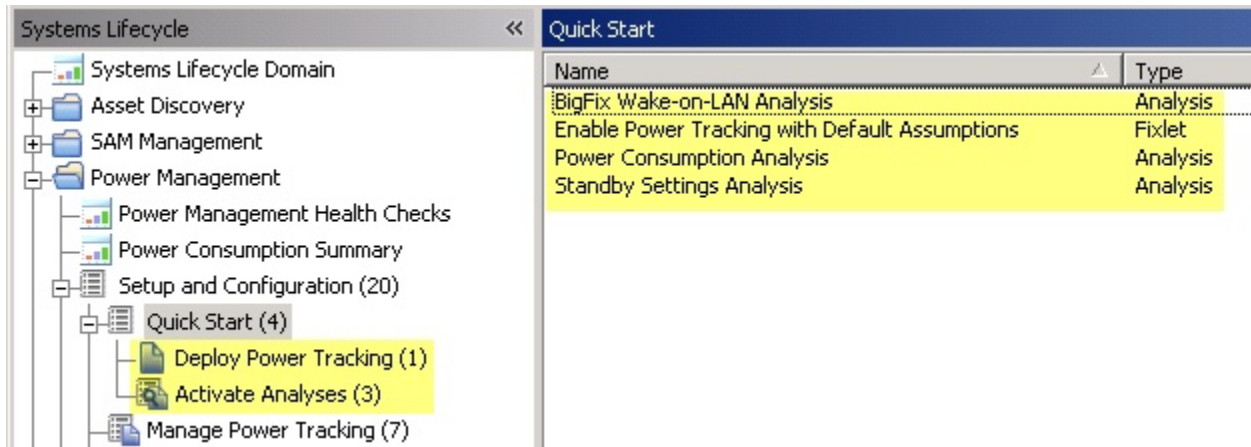

Use the List Panel on the top right of your console to access each analysis and Fixlet. Click the applicable item, and click the link at the bottom of the work panel to deploy the action.
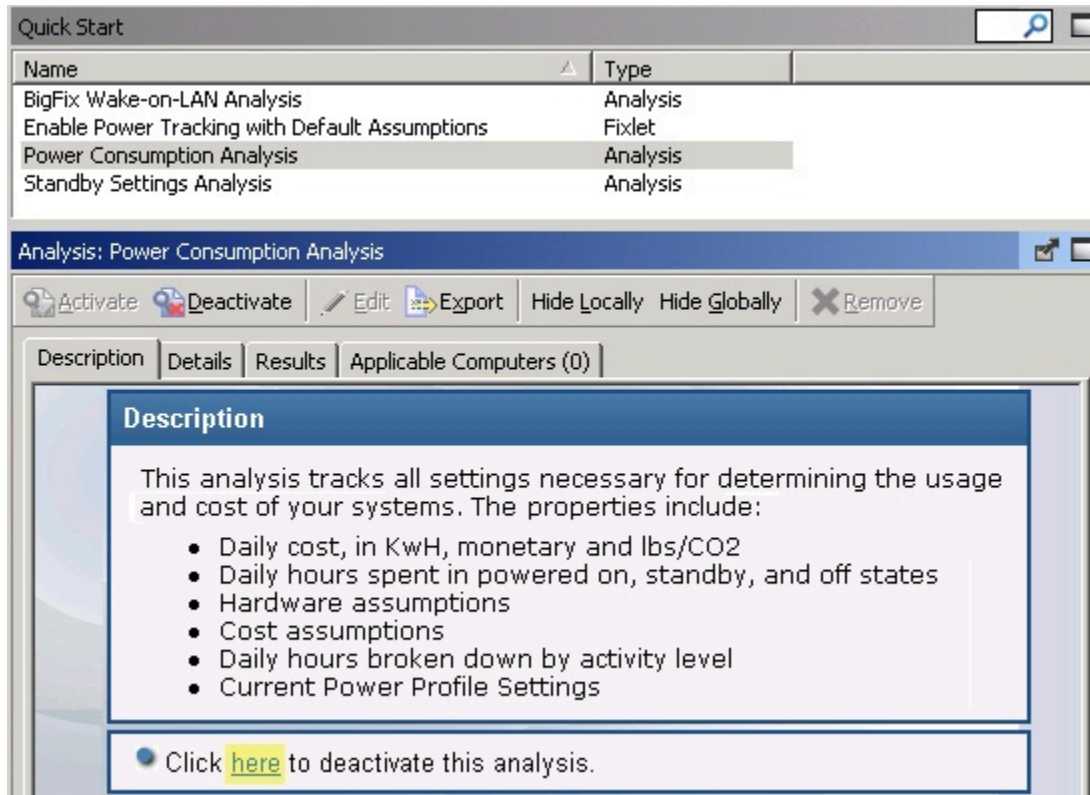
Manage Power Tracking

Manage Power Tracking in the Setup and Configuration node involves configuring, setting, enabling, and updating Power Tracking capabilities, which are optional tasks that can be utilized during the configuration process.
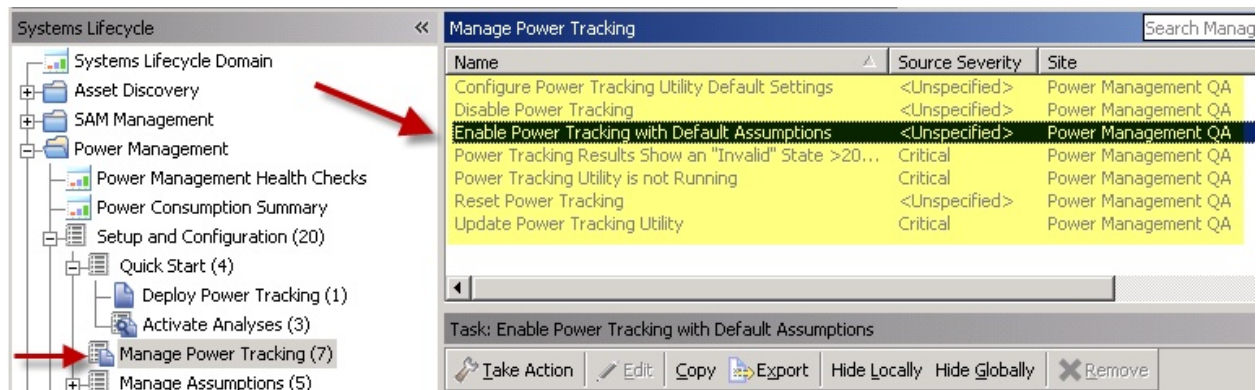

Manage Power Tracking , which is located in the *Setup and Configuration* node includes tasks for configuring, setting, enabling, and updating your Power Tracking capabilities. These optional tasks are not required for initial setup and can be used during the configuration process.

Manage Assumptions

BigFix calculates power consumption based on Active, Idle, Standby, and Off power states, using default assumptions for hardware power draw and cost per kWh. Users can customize these assumptions through the Manage Assumptions dashboard found in the Setup and Configuration section of BigFix Power Management.

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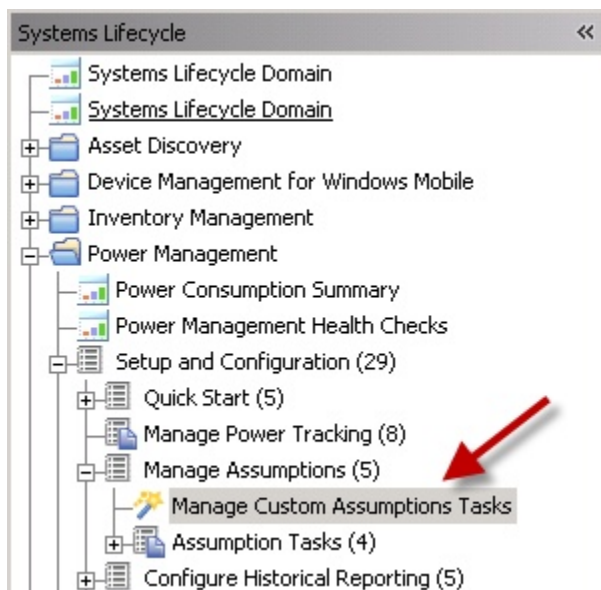
> ✏ **Note:** Managing Assumptions is an optional feature in BigFix Power Management. If you do not set custom assumptions, default assumptions are used.

Global Settings

Access the Global Settings dialog in the Manage Custom Assumptions Tasks Wizard to set international currency and weight units for your deployment, then click Update Settings to confirm your selections.

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

Manage Custom Assumptions Tasks

Global Settings

BigFix determines power consumption and cost by measuring the amount of time a computer spends in Active, Standby, and Off power states and factoring in assumptions for hardware power draw and costs per kWh for the endpoint. This wizard creates and manages fixlets which can be used to set these assumptions on endpoints.

| General Assumptions | Hardware Assumptions | Office Hours Assumptions |

Define the Cost and Carbon emission per kWh consumed by the endpoint.

General Assumption Tasks

+ New Assumption   Search

Name	Cost per kWh	Carbon Emissio	Computers		
Default	$0.08	1.4 lb	2		

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

Global Settings

Define the units in which all cost and carbon data is displayed for all Power Management reports across all users. This will also generate a Fixlet to update the Client Dashboard with selected units.

Currency Unit: $

Weight Unit: lb

Update Settings   **Cancel**

Currency Unit: $

Weight Unit: $
    €
    £
    ¥
    □
    Custom

Update S

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

General Assumptions

Manage Custom Assumptions Tasks allow users to define the cost and carbon emissions per kWh for their endpoints. Users can set specific values or use default ones, with the option to create multiple assumptions for more accurate deployment based on location.

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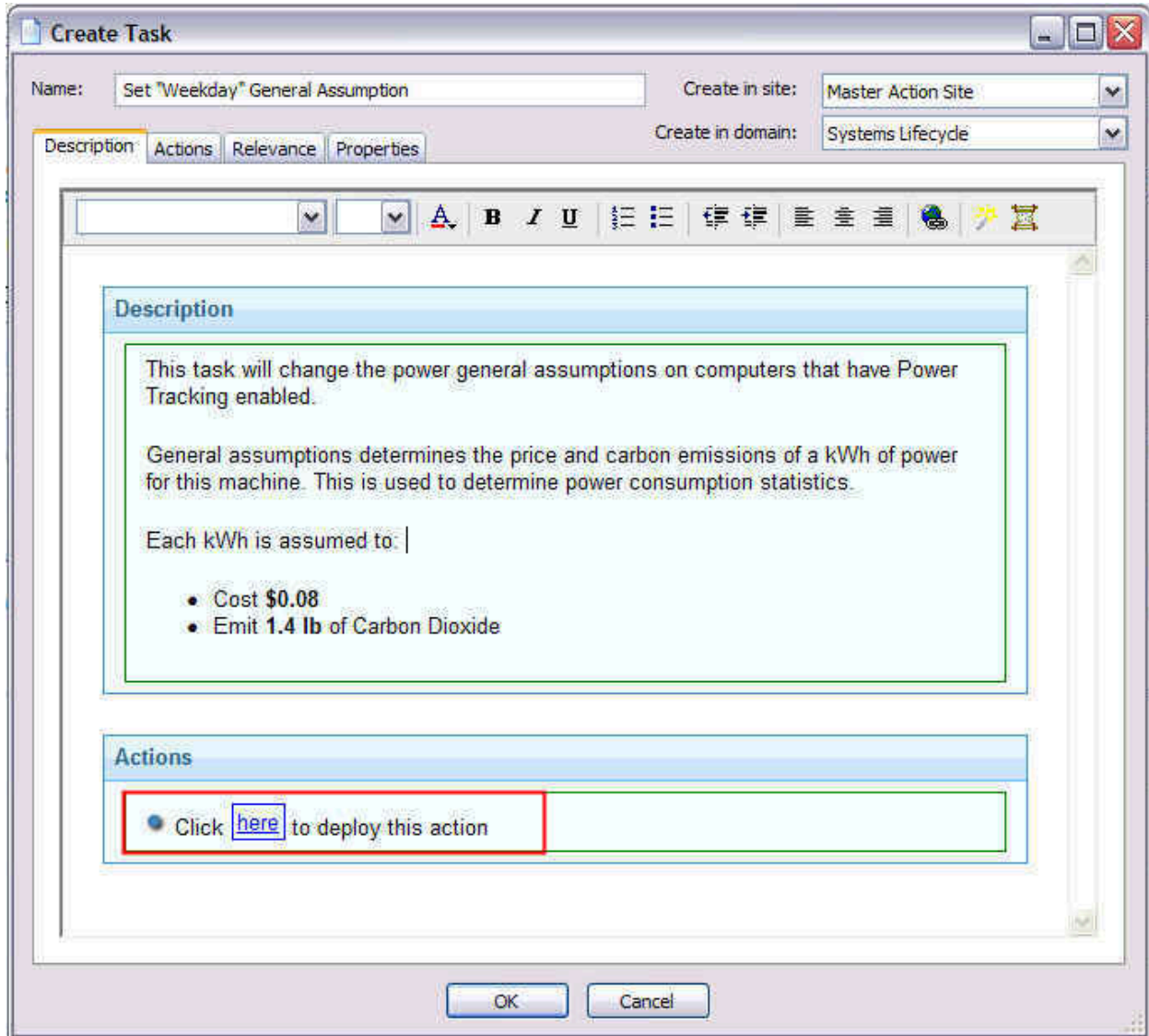
On the work panel, click *OK* and enter your Private Key Password. When the task has gathered the required information, the task window opens as shown in the following image. Click in the Actions box to deploy the action.

Office Hours Assumptions

The Office Hours Assumptions tab allows users to define work hours and workdays settings, including start time, end time, and applicable days. Users can create, edit, and delete assumptions within this tab, with default settings from Monday to Friday. To create a new assumption, users can enter a name, define office hours, select workdays, and deploy the task. To delete an existing assumption, users can select and confirm deletion within the tab.

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.
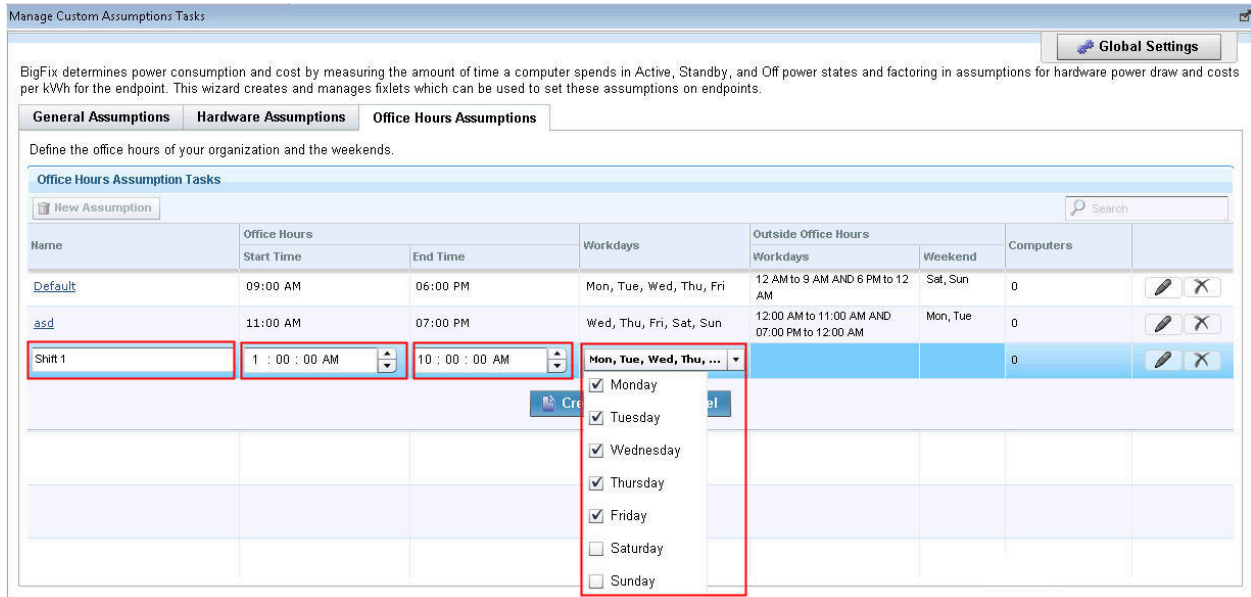
Creating Office Hours Assumptions

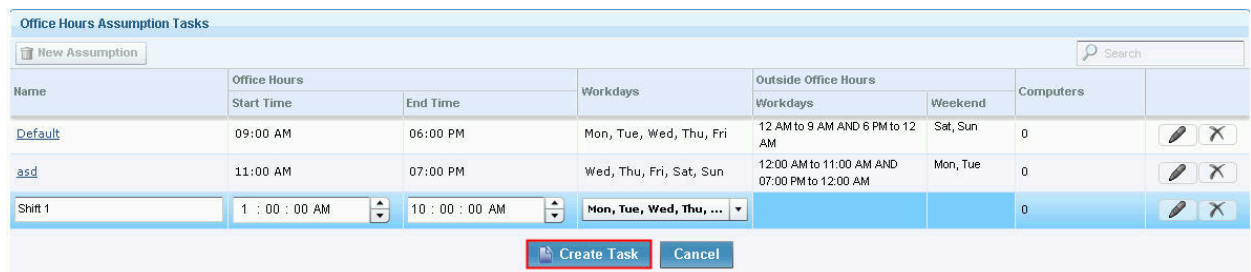To create an office hour assumption, click **New Assumption**.
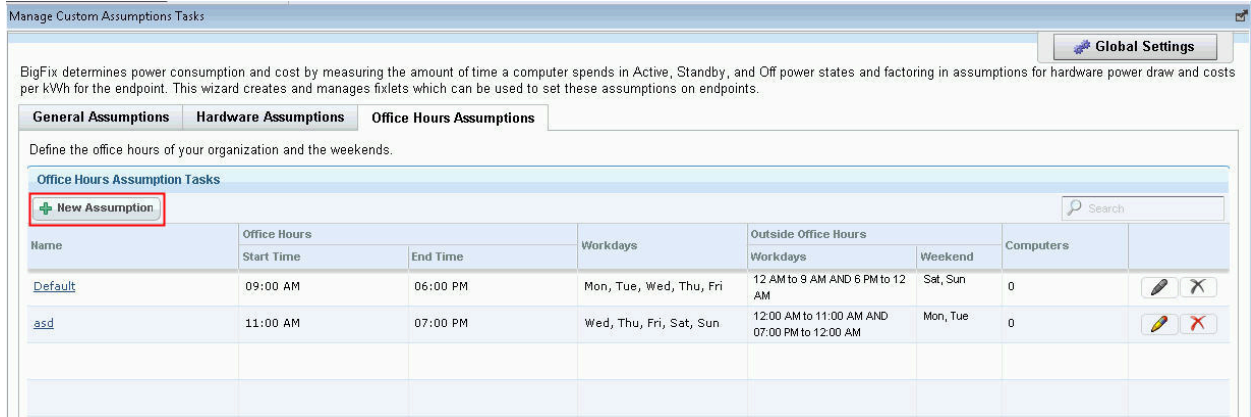
A row is added. Enter the name of the new assumption in the **Name** field. Define the office hours by selecting the **Start Time** and **End Time**.

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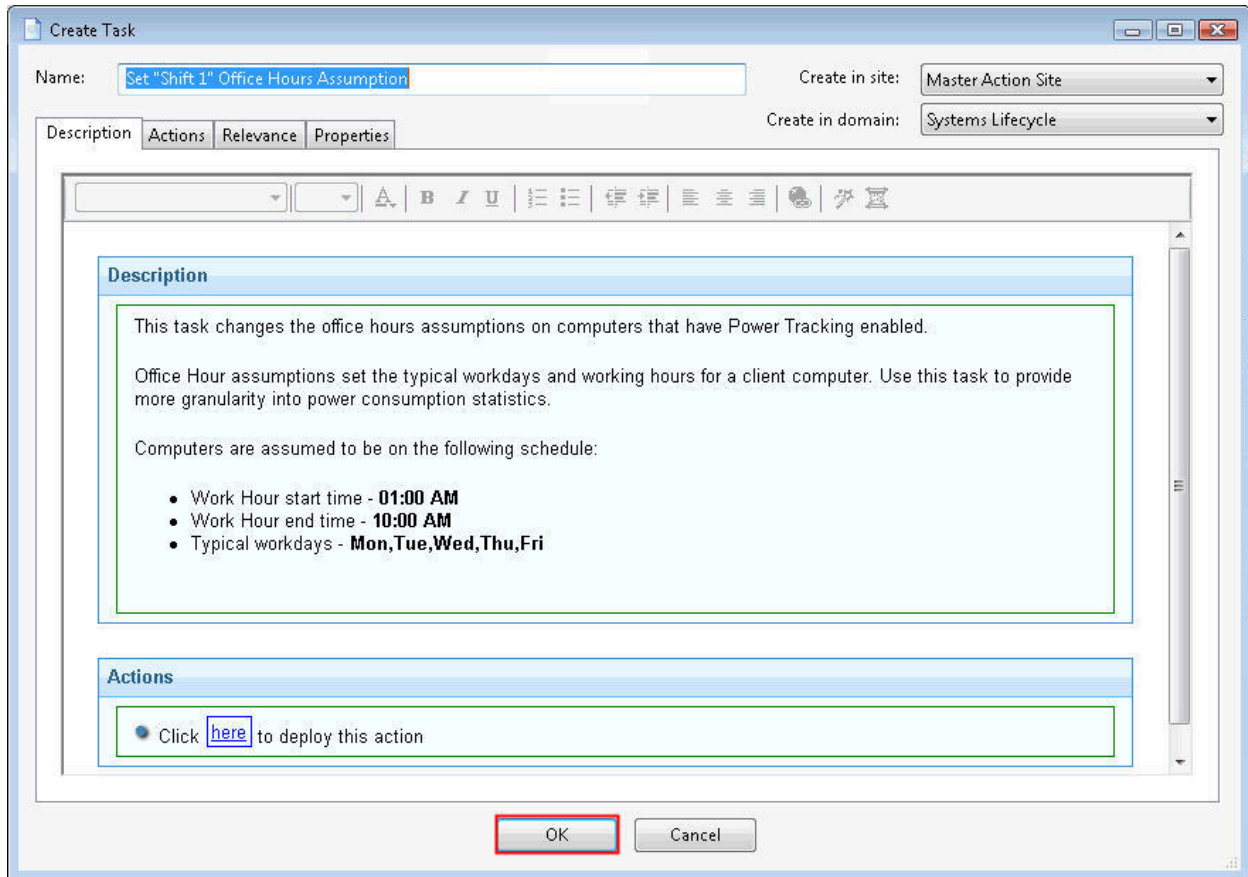

Click **Create Task**.

The **Create Task** window opens. Click **OK** to create the task.
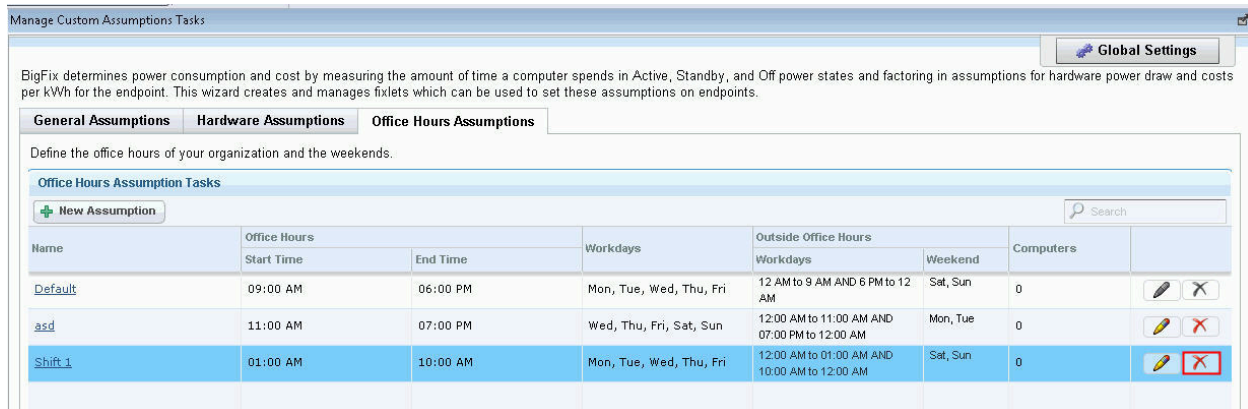
Click in the **Actions** box of the task window to deploy the action.

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 by specifying fields like Name, System Power Draw, and Monitor Power Draw for hardware including servers and desktops. To customize values, create new assumptions and assign them to specific computer models, either averaging values for all or creating multiple assumptions for accuracy. Manually input data for new tasks and deploy actions after entering Private Key Password.

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 allows users to view historical power usage trends and capture data for reporting purposes. Tasks under Configure Historical Reporting include installing the BES Server Plugin, configuring historical reporting groups, and enabling history tracking on a server for efficient power data management.

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.
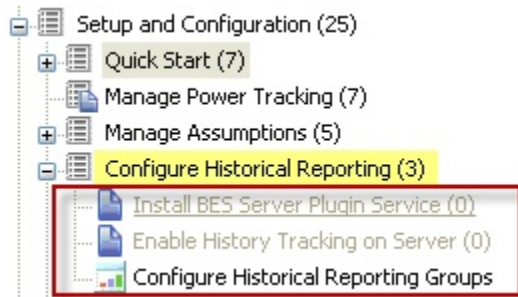
Install BES Plugin Service

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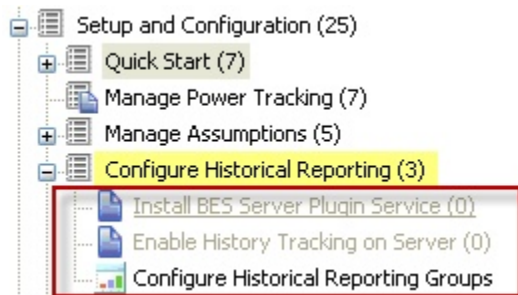
You must install the BES Server Plugin service before you use the historical reporting feature.

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 task performs validation on the user name 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 task 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.
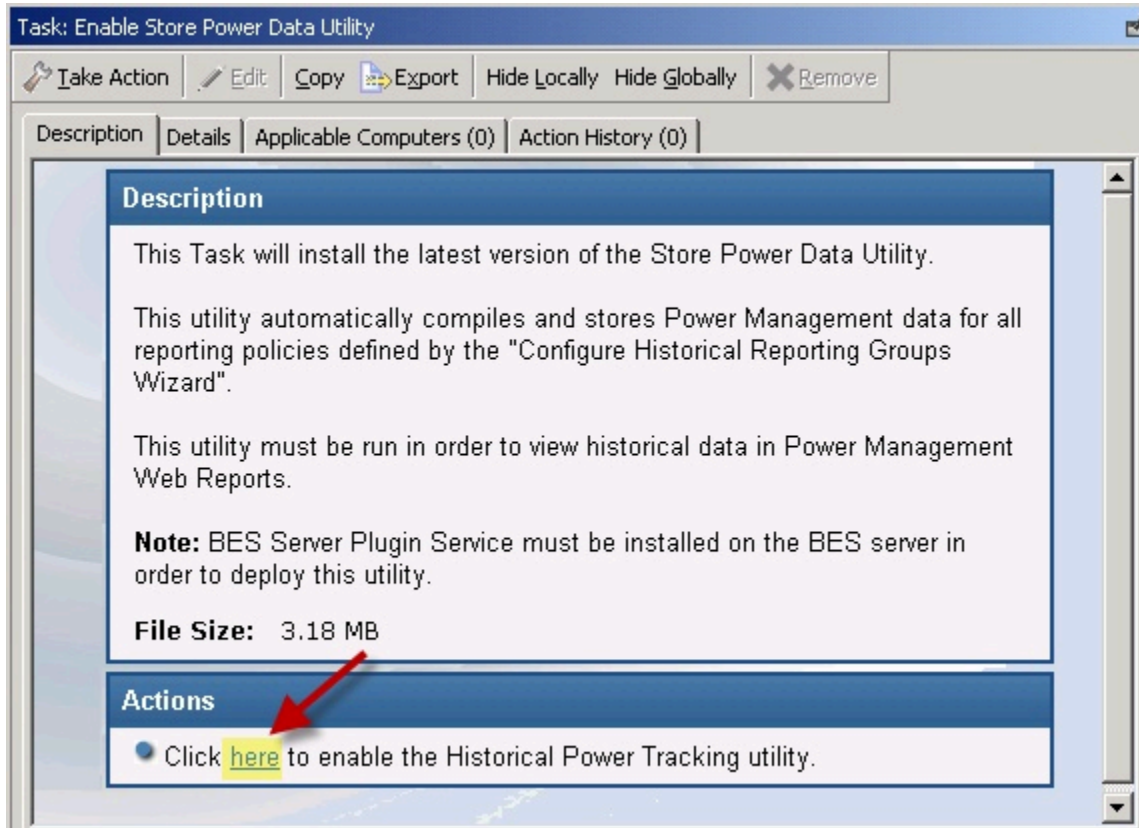
Configure Client-side Dashboard

Configure the Client-side Dashboard by enabling and disabling tasks in the navigation tree, creating offers for target machines and users, and applying power profiles without needing to access the Offers tab. Ensure your BES Client version is 8.2.1170.0 or later for this functionality.

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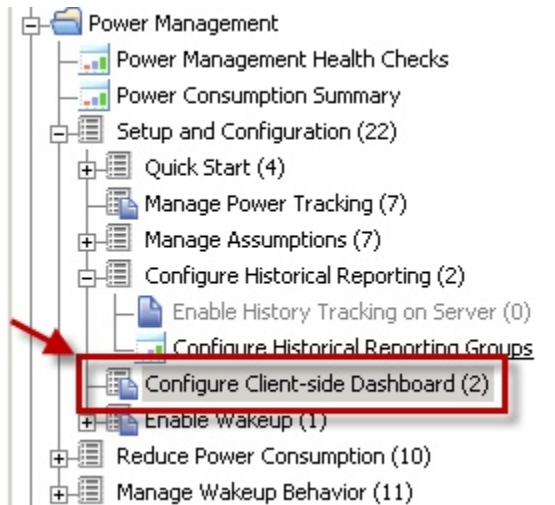
To start deployment, click the appropriate task, and then click the link in the Actions box.

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.
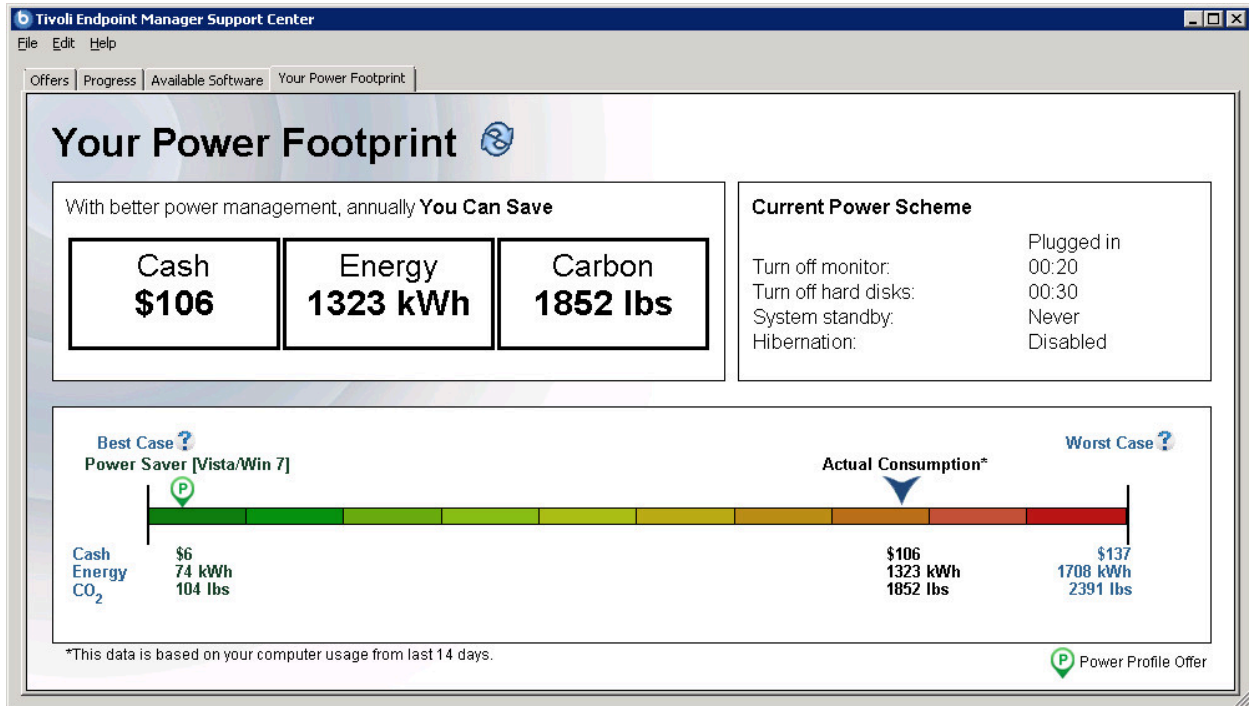
This example shows an offer for a single power profile from the **Your Power Footprint** tab. Click **Apply This Profile** to apply the offer without having to go to the **Offers** tab.
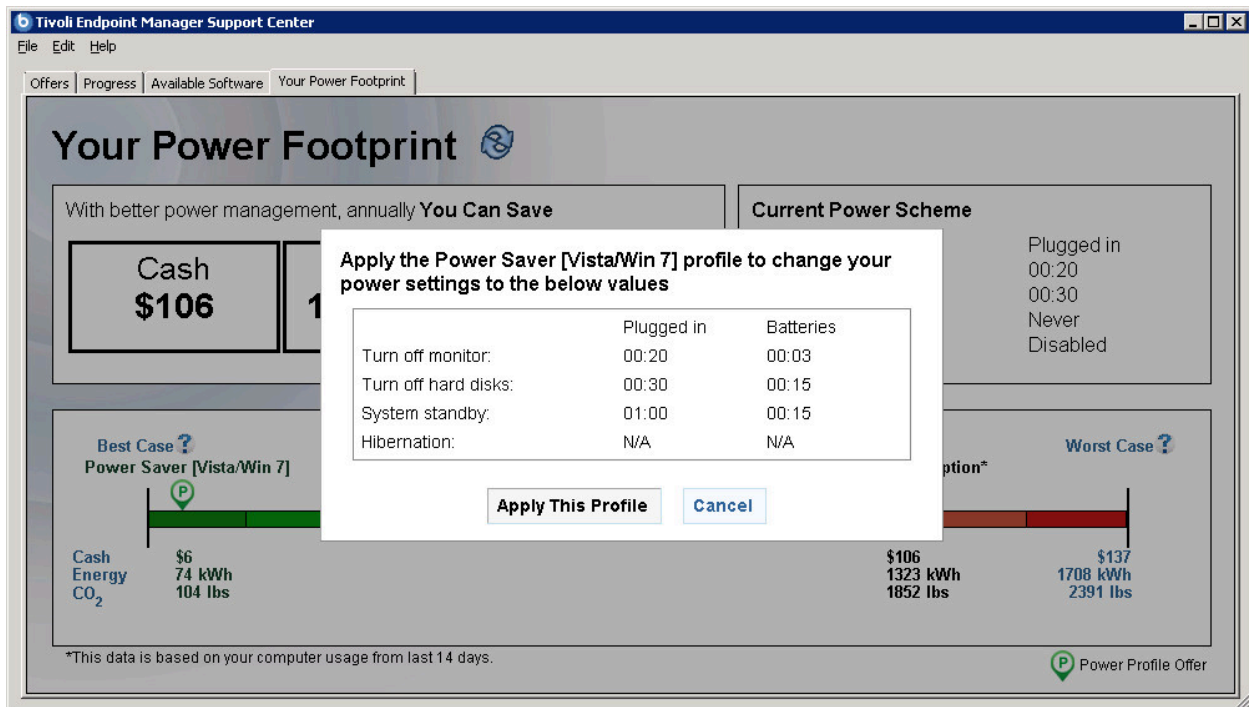
Note: Your BES Client version must be 8.2.1170.0 or later to view and apply the single power profile from the **Your Power Footprint** tab.

Enable Wakeup

Enable Wakeup involves enabling the Wake-on-LAN Medic Utility to wake computers according to a defined schedule and send wake-up requests to Last Man Standing computers. It utilizes directed broadcasts without the need for Wake-on-LAN forwarders and supports versions 1.5.30 or later of BESWolMedic.exe. Ensure correct setup of RESTAPI for proper functionality, supported by BigFix server version 9.0 and above, and be aware of possible network security warnings from the BigFix Server firewall when running the utility.

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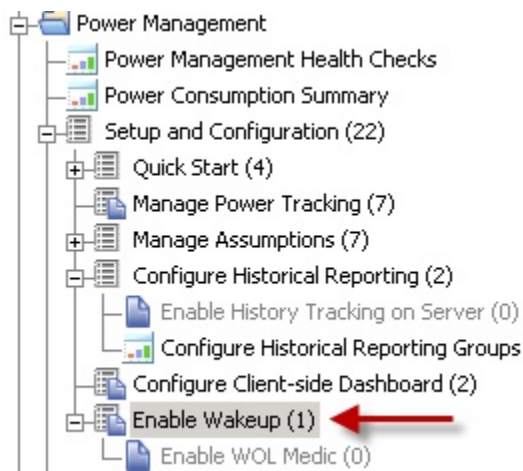
As well as the BigFix Wake-on-LAN technology, BESWolMedic.exe with versions 1.5.30 or later use a directed broadcast that does not need Wake-on-LAN forwarders and Last Man standing computers.

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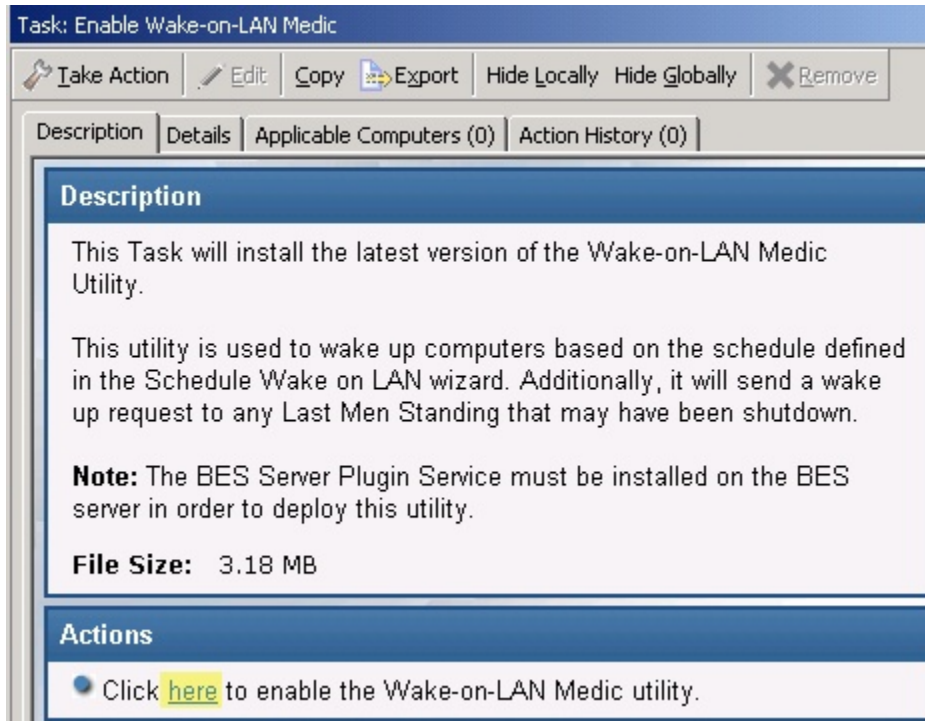
Your BigFix Server firewall might prompt a network security warning when the utility is run for the first time. No directed broadcast is issued if the permission to access the network is not approved at your BigFix server. The existing BigFix Wake-on-LAN technology will continue to work.

Remove previous version

When transitioning to the new version of Power Management, it is important to note that the new version uses different collection techniques from the old version. Historical data is not carried over when the old version is removed after installing the new 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

To disable previous historical tracking in BigFix Power Management, remove the scheduled task for storing power results utility by accessing the Windows Control Panel, selecting Scheduled Tasks, and deleting the Store Historical Power Data task.

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.
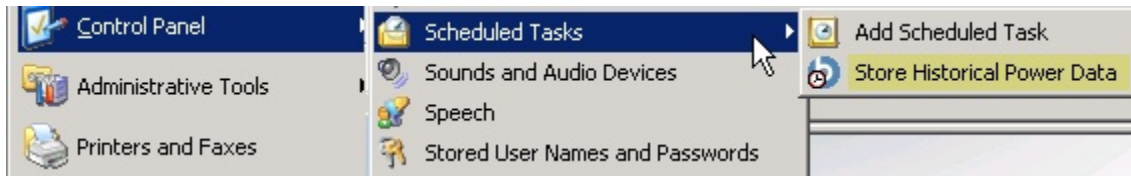
Unsubscribe from sites

Learn how to unsubscribe from a site by accessing the All Content domain icon, navigating to the Sites folder, selecting the desired site, and removing it from the work panel.

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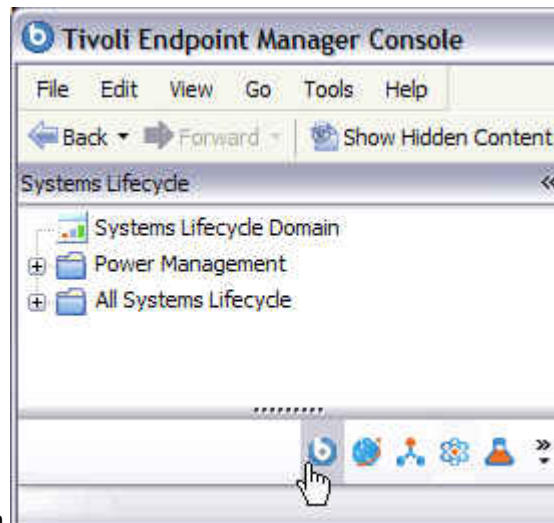
Content domain icon.

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.
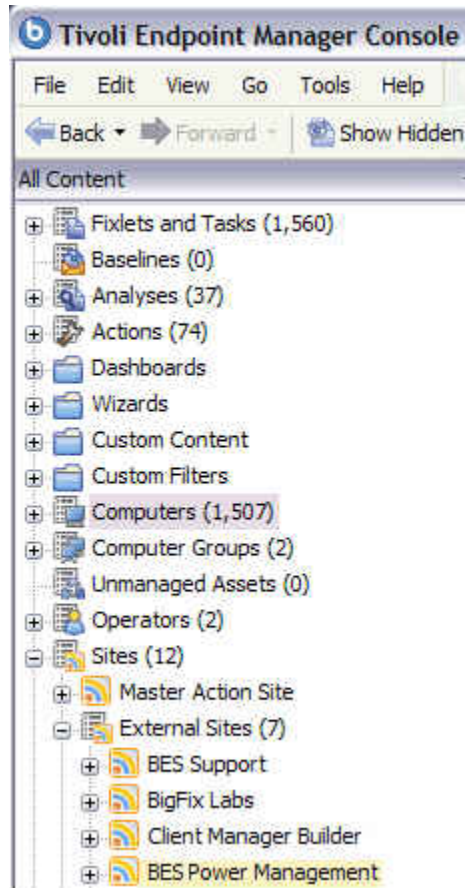
Remove custom analyses

Power Management's previous custom analyses are no longer necessary with the current version, as tracking is now consolidated into a single analysis in the Fixlet site. To remove these custom analyses, unsubscribe from the older Power Management and delete the Power Monitoring Analysis site from the Analyses node in the All Content navigation tree.

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

Various resources are available for support of the product, including the Knowledge Center, BigFix Support Center, BigFix Support Portal, BigFix Developer, BigFix Wiki, and HCL BigFix Forum.

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

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

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