



BigFix[®] Power Management



Setup Guide

July, 2010

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Introduction

This document describes the initial setup, installation and activation of BigFix Power Management components. It is intended for BigFix administrators and operators, as well as evaluators of the product.

To learn about how to use and optimize the Power Management product within your environment, refer to the Power Management *User's Guide*, which is also available as part of this release.

Power Management supports many features, including:

- Managing computer power settings and policies
- Tracking and reporting on computer power usage including measuring power usage, potential power savings, and more
- Tracking of computer states (idle, active, standby, powered-off), which allows you to create power policies that maximize power savings
- Advanced Wake-on-LAN capabilities (that require no network modifications) including Last Man Standing, Wake-on-LAN "Medic", scheduled wake-up times, and more
- Support for PC Insomnia detection / prevention
- A client side dashboard that enables end users to view their power usage

System Requirements

The General Hardware and Software Requirements for BigFix Power Management are as follows:

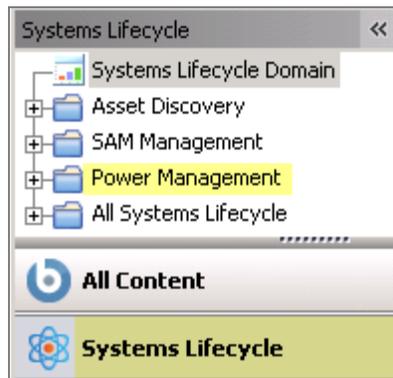
- Windows XP, Windows Vista, Windows 2003, Windows 7
- Mac OS 10.4 and 10.5

Using the New BigFix Console

This version of BigFix Power Management encompasses a host of new and upgraded features that provide enhanced visibility into the power settings in your deployment.

In addition, the BigFix Console changed after version 7.2, which resulted in several new navigation updates for accessing your data. This section will address how to get around in the new Console.

The navigation tree in the BigFix Console, which is available for all BigFix products, will serve as your central command for all Power Management functionality. The navigation tree gives you easy access to all reports, wizards, Fixlet messages, analyses and tasks related to managing the power settings in your network.



Components

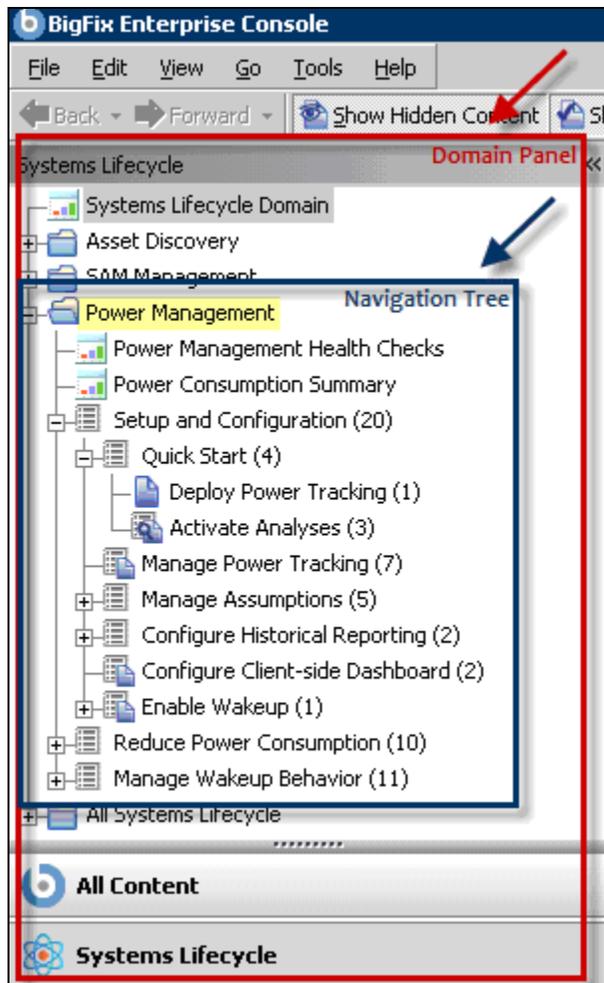
The BigFix Console organizes content into four parts:

- *Domain Panel* – Includes navigation tree and list of all domains
- *Navigation Tree* – Includes list of nodes and sub-nodes containing site content
- *List Panel* – Contains listing of tasks and Fixlets
- *Work Area* – Work window where Fixlet and dialogs display

In the context of the BigFix Console, products or *sites* are grouped by categories or *domains*. For example, Power Management is one of the sites contained within the *Systems Lifecycle* domain, along with SAM Management and Asset Discovery.

The domain panel is the area on the left side of the Console that includes a navigation tree and a list of all domains. The navigation tree includes a list of nodes and sub-nodes containing site content.

In the image below, you will see a navigation “tree” at the top with expandable and collapsible nodes, and a list of domains at the bottom. By clicking the *Systems Lifecycle* domain at the bottom of the domain panel, a list of sites associated with that particular domain will display in the navigation tree at the top.

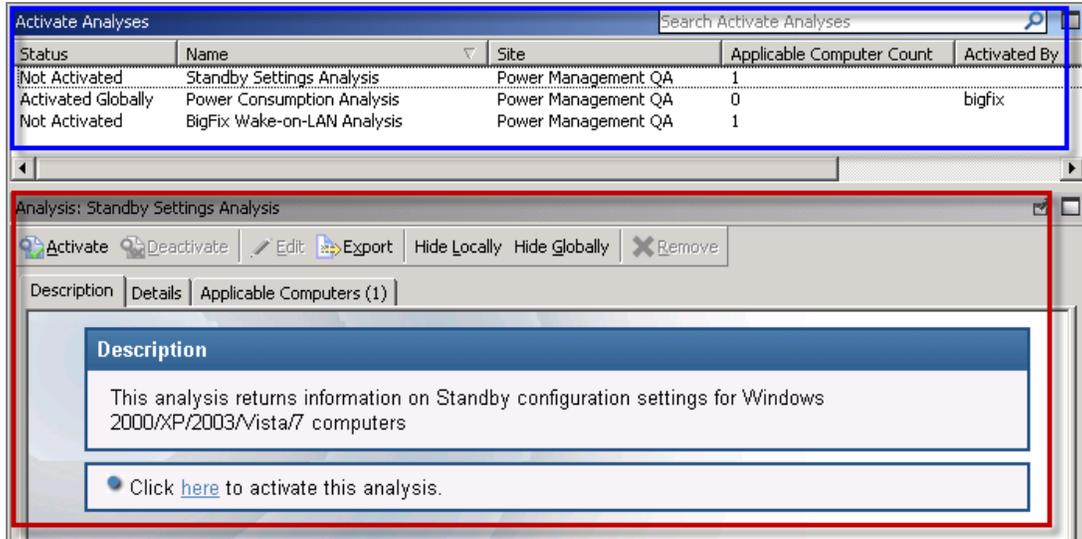


The red-outlined area represents the entire Domain Panel (including the navigation tree and list of domains), and the blue box contains just the Navigation Tree for the *Systems Lifecycle* domain.

Power Management tasks are sorted through upper and lower task windows, which are located on the right side of the Console.

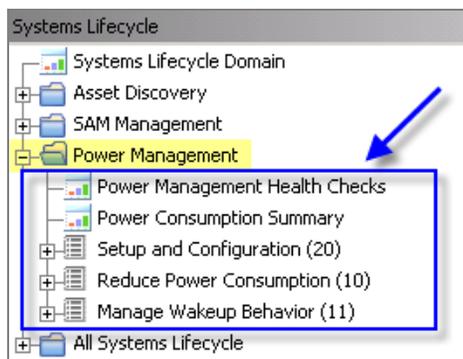
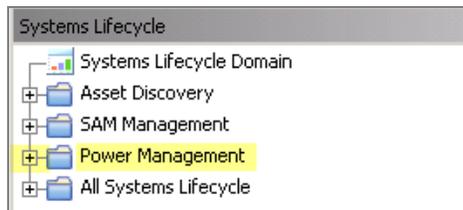
The upper panel, called the *List Panel* (blue), contains columns that sort data according to type, such as Status, Name, Site, Applicable Computer Count, etc.

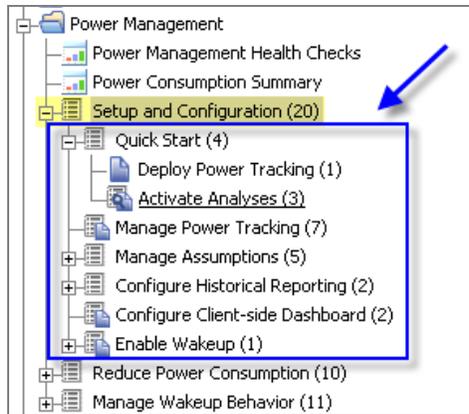
The lower panel or *Work Area* (red) presents the Fixlet, task screen or Wizard from which you will be directed to take specific actions to customize the content in your deployment.



Working with Content

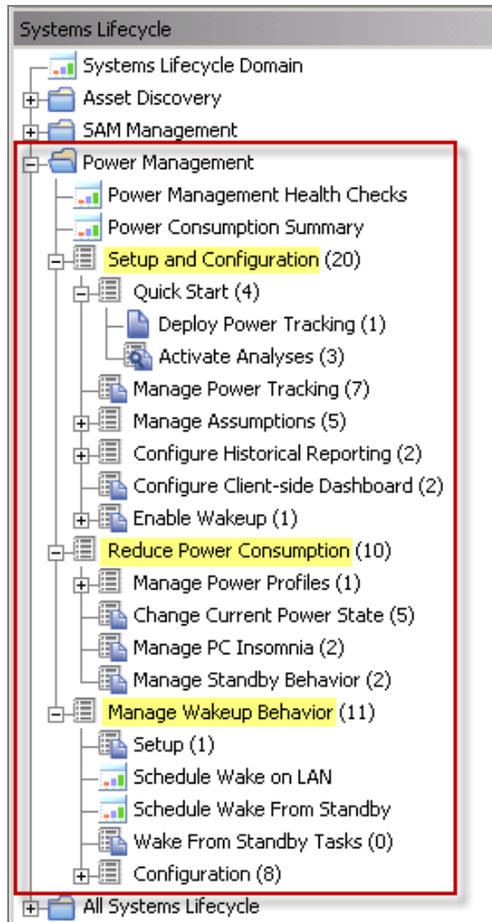
The “nodes” in the Power Management navigation tree expand and collapse to enable you to easily navigate and manage relevant components in your deployment.



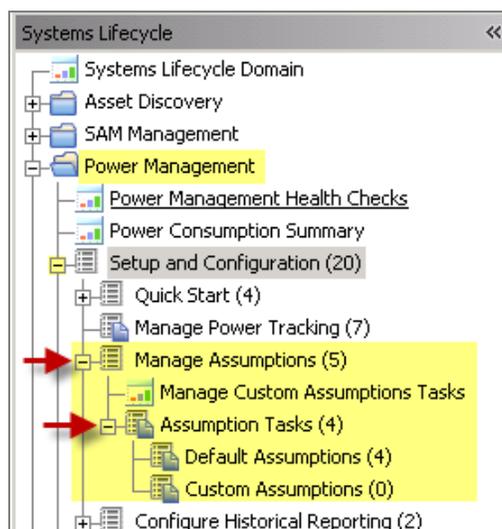


Note: Depending on your operating system, your system may display the “+” and “-“ icons in the navigation tree as triangles. Specifically, the “+” and “-“ icons will display on Windows XP/2003/2008/2008R2 machines, and triangles will display on Windows Vista/7. This feature was designed so that the Console matches the standards and conventions of your specific operating system. Regardless of the particular icon, the functionality of these buttons works the same way to either expand or collapse content.

You will use this same expand/collapse method to move through the entire navigation tree. Click each “+” to display each piece of related Power Management content.



BigFix Power Management content is organized into 3 primary nodes - *Setup and Configuration*, *Reduce Power Consumption*, and *Manage Wakeup Behavior*. Each node expands into sub-nodes that contain additional content. See how the Manage Assumptions sub-node below expands to display additional tasks and content:

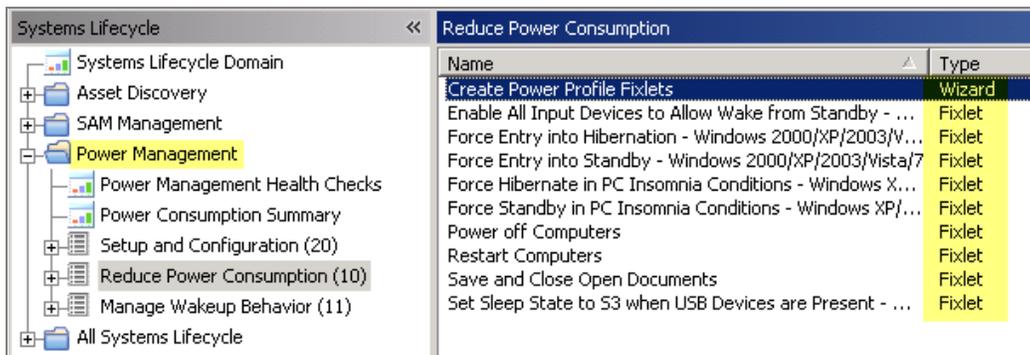


Use the same approach of clicking the “+” and “-” to open and close each node and sub-node.

Composite View

For an overall view of the “type” of Power Management content, click on each node and review the List Panel on the right. This will display content according to type:

- Analyses
- Dashboards
- Fixlets
- Wizards



This content represents actions that will enable you to successfully reduce power consumption in your deployment.

Subscribe to the New Site

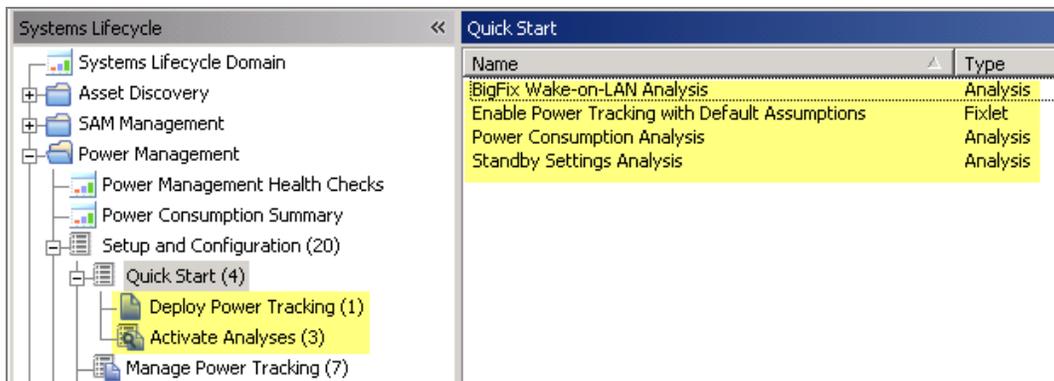
The process for site subscription depends on the version of the BigFix Console that you have. Click [here](#) to get specific site subscription directions from the BigFix Knowledge Base.

Setup and Configuration

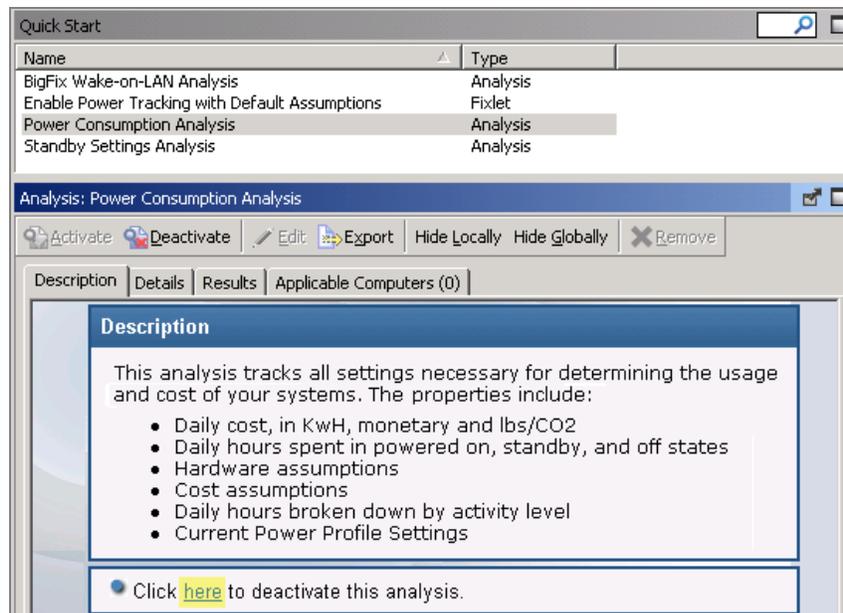
Quick Start

After you subscribe to the new Power Management Fixlet site, you will need to enable and configure Power Management with some basic configuration steps using the BigFix Console.

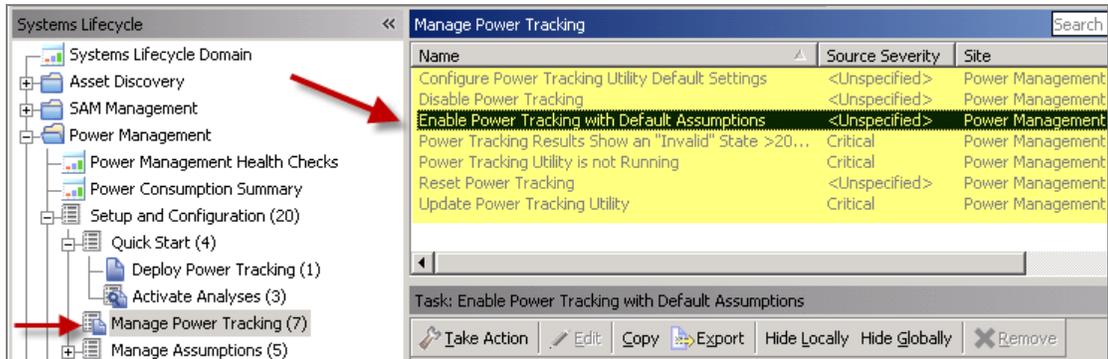
The *Quick Start* sub-node under *Setup and Configuration* includes several analyses and Fixlets for setting Wake-on-LAN, Power Consumption, Standby, and Power Tracking parameters in your deployment.



Use the List Panel on the top right of your Console to access each analysis and Fixlet. Click on the applicable item, and click as indicated in the Actions box of the Work Panel to deploy the action.



Manage Power Tracking



Manage Power Tracking, located under the *Setup and Configuration* node, includes seven tasks for configuring, setting, enabling and updating your Power Tracking capabilities. These tasks are optional and are not required for your initial setup. They may be utilized 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 may choose the default values or you may override them with known values specific to your computers and costs.

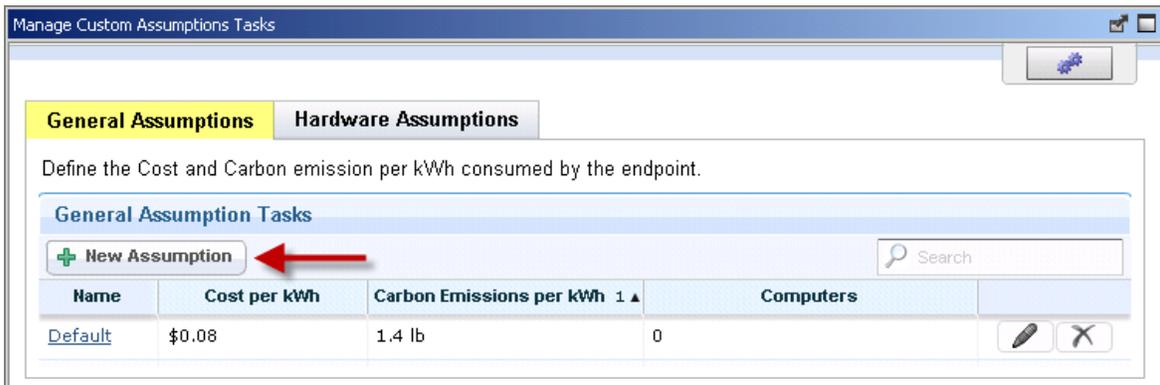
Note: Managing Assumptions is an optional feature in BigFix Power Management. If you do not set custom assumptions, default assumptions will be used.

General Assumptions

The *General Assumptions* tab in the *Manage Custom Assumptions* wizard will enable you to define the cost and carbon emissions per kWh that are consumed by your endpoints. Click the *General Assumptions* tab in the wizard to access this control. The wizard will display information through the following fields:

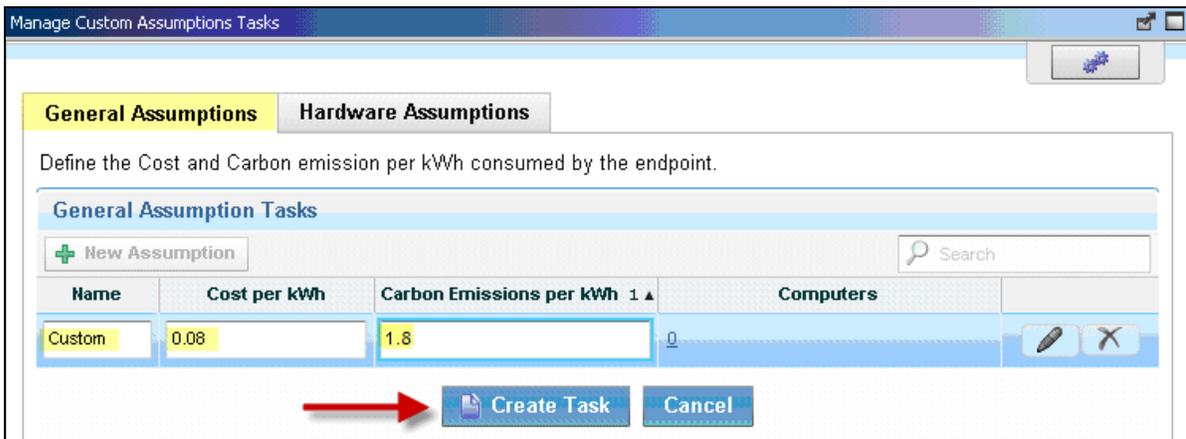
- Name
- Cost per kWh
- Carbon Emissions per kWh
- Computers

If you do not have any General Assumptions set, then you will automatically be using the default values. Click *New Assumption* to override the default values and use values specific to your deployment.

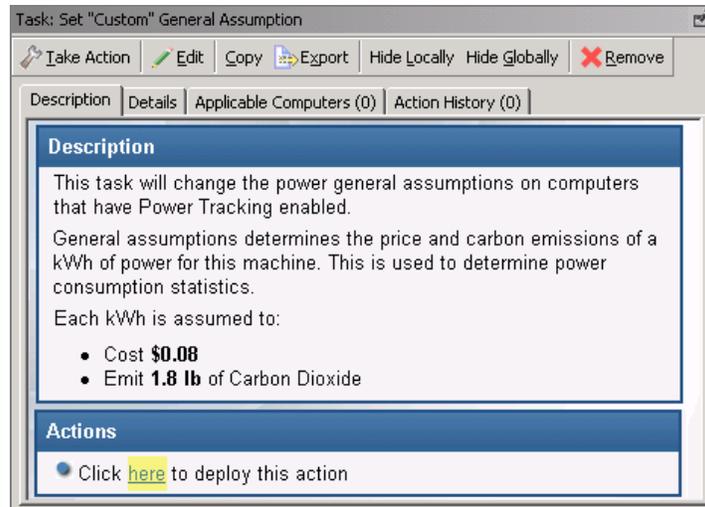


Your electricity provider can provide your cost per kWh of electricity and the amount of carbon released to create each kWh. If you have multiple providers, you can choose to average the values and assign them to all computers. Alternately, you can create multiple assumptions and assign each assumption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

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



When the Work Panel displays, click *OK* at the bottom of the window and enter your Private Key Password. When the task has gathered the required information, the task window will open as shown below. Click as indicated in the Actions box to deploy the action.

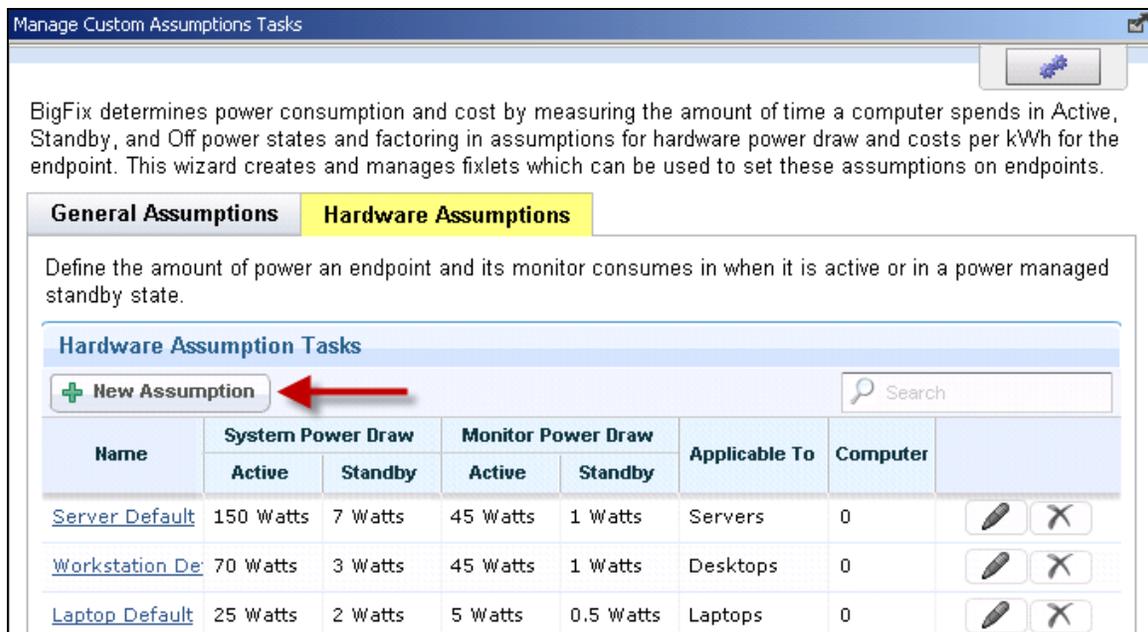


Hardware Assumptions

The *Hardware Assumptions* tab allows you to define endpoint power consumption in Active or Standby mode. This tab displays information through the following fields:

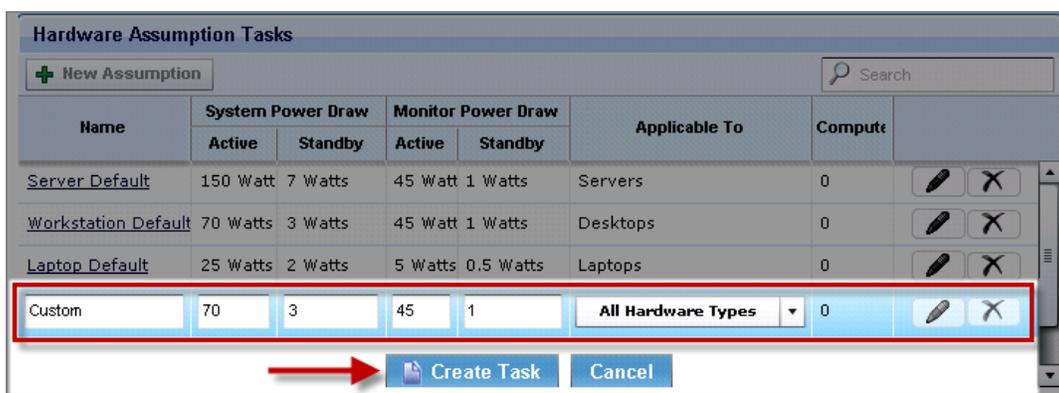
- Name
- System Power Draw (Active or Standby)
- Monitor Power Draw (Active or Standby)
- Applicability (to hardware such as servers or desktops)
- Computers

If you do not have any Hardware Assumptions set, then you will use the default values. Click *New Assumption* to override the default values with values specific to your deployment.



To effectively set assumptions, you need to 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). As power usage varies only minimally per computer model, you may want to check power values for representative models. If you have many computer models, you may choose to average the values and assign them to all computers or, alternately, create multiple assumptions and assign each assumption to the appropriate computers based on their models. The latter approach is more accurate, but it will more time consuming and difficult to maintain over time.

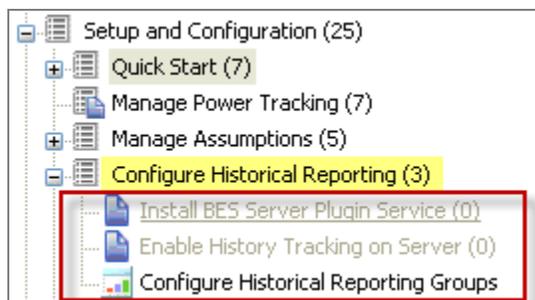
After clicking *New Assumption*, an additional line will display at the bottom of the window, which will allow you to manually populate fields corresponding to the new task Name, System Power Draw, Monitor Power Draw, and the applicability to different hardware types. When complete, click *Create Task*,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



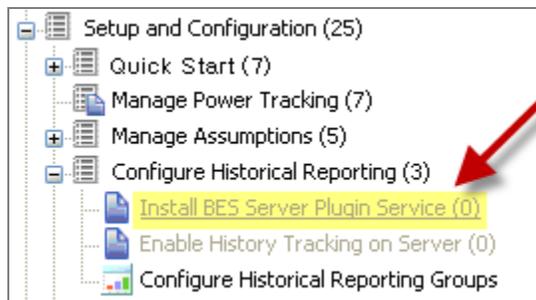
Configure Historical Reporting

BigFix Power Management will provide power information based on the current state of computers in your deployment. It will also allow you to see historical data trends for power usage and capture historical data to address reporting needs.

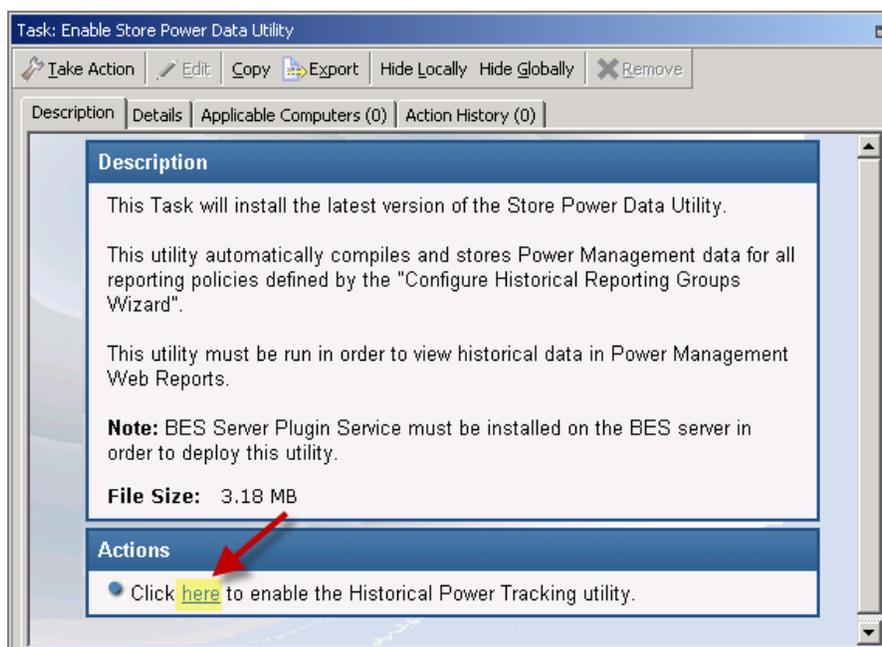
The *Configure Historical Reporting* sub-node under *Setup and Configuration* includes tasks for installing the BES Server Plugin and enabling historical tracking on a server, as well as a wizard for configuring historical reporting groups. The BES Server Plugin Service facilitates communication and automation of the BigFix Server and Web Reports components with server side utilities. Several BigFix Applications, such as Power Management, require this Plugin Service in order to fully utilize the available functionality.



Before you can use the historical reporting feature, ensure that the BES Server Plugin service has been installed. If this service has not already been installed, use the instructions in this [Knowledge Base Article](#) on the BigFix support website for information and installation.



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

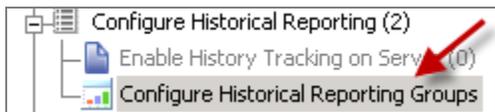


Configuring Historical Reporting Groups

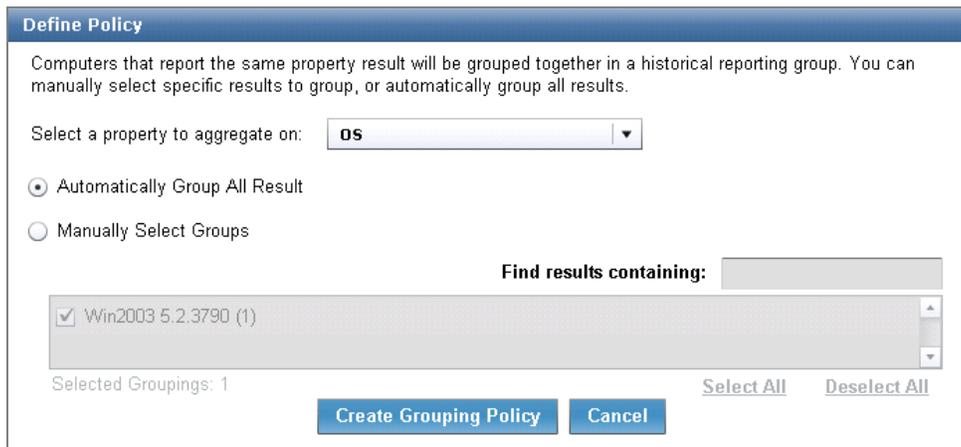
When the *Store Power Data Utility* is enabled, Power Management will store daily aggregated historical data, which can be viewed in Web Reports. By default, all power managed computers will be rolled into one *All Computers* historical grouping. However, you may use the *Configure Historical Reporting Groups* wizard to create additional historical aggregation groupings. Choose a BigFix property and Power Management will group computers by the results of that property.

Note: You may add historical reporting groups at any time. However, the data will only be captured going forward. As data is aggregated based on daily snapshots, there is no way to retrieve power data from points in time before the historical reporting group is created.

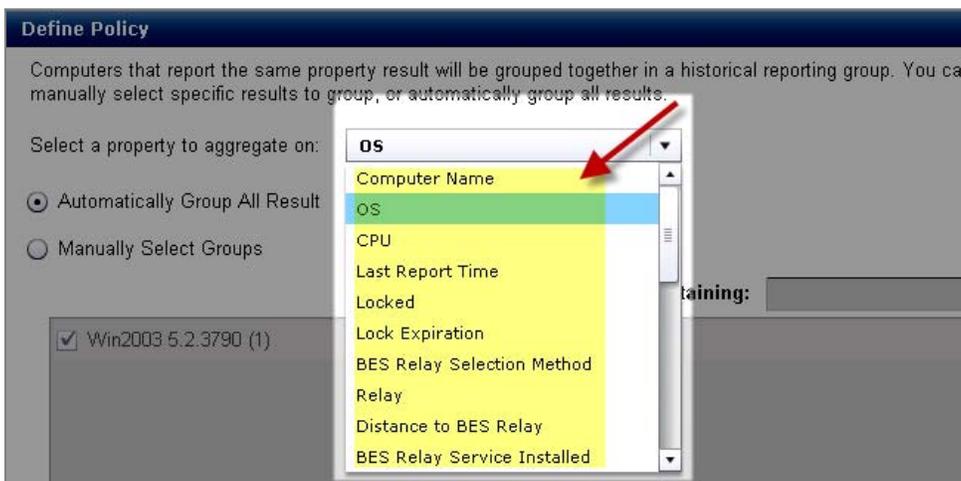
Click on *Configure Historical Reporting Groups* from the navigation tree.



This will open the wizard in a separate window within the Work Panel.



Start by selecting a property from the pull-down list.



Then choose how you want to select groups by clicking the *Automatic* or *Manual* button.

- Automatic selection means that an aggregation group will be created for every result that currently exists, and new groups will be created as new results are returned.
- Manual selection allows you to select the specific results on which to create groups. New results will not have a new aggregation group created for them.

To manually select groups, use the sort field on the right side of the window to locate your desired group.

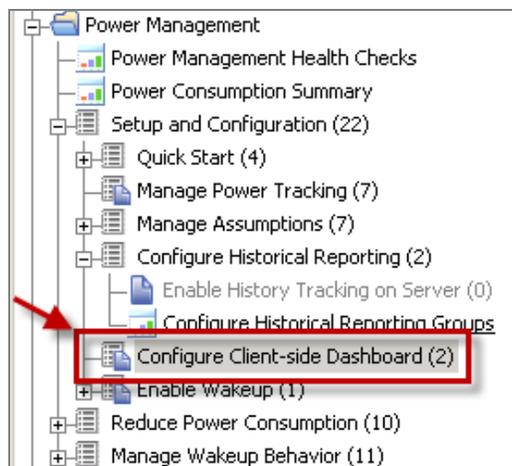
Note: Power Management *Web Reports* performance will degrade as you create more groups. Therefore, it is recommended that you avoid creating groupings on properties that have too many unique results, such as Computer Name or IP Address.



When complete, click *Create Grouping Policy* at the bottom of the window.

Configure Client-side Dashboard

The Client-side Dashboard provides end users with their individual power footprint. Power Management includes tasks for enabling and disabling the client-side dashboard, which are available from the navigation tree.



Click on the appropriate task, and then click the link in the Actions box of the task window to initiate deployment.

Configure Client-side Dashboard Search Configure Client-side Dashboard

Name	Source Severity	Site	Applicable Computer Count	Op...	Category
Disable Client Dashboard	<Unspecified>	Power Management	0 / 1	0	Maintenance
Enable Client Dashboard	<Unspecified>	Power Management	0 / 1	0	Maintenance

Task: Enable Client Dashboard

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

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

Description

Use this task to enable a client dashboard which contains a report of local power usage tracking and analysis.

It will then copy the Client dashboard files to the necessary location on the endpoint.

Note: Do not set the "Reapply" behavior when taking this action or you may cause endpoints to constantly reset this setting.

Note: This will restart the BES Client. If you are deploying to a large number of endpoints, you should use the temporal distribution option to avoid all clients restarting at once.

Important Note: This will replace any previous client dashboards you may have already created. BigFix has detected that there are 0 computer(s) that contain the Trend Micro Core Protection dashboard.

File Size:
60 KB

Actions

- Click [here](#) to initiate the deployment process.

BigFix Support Center

File Edit Help

Dashboard | Offers | Progress

Your Power Footprint

With better power management, annually You Can Save

Cash \$63	Energy 784 kWh	CO₂ 1098 lbs
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Current Power Scheme

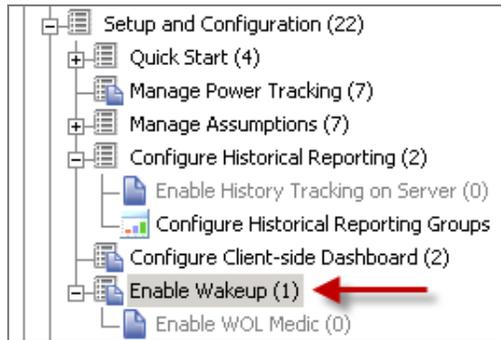
Turn off monitor:	Plugged in
Turn off hard disks:	00:20
System standby:	Never
Hibernation:	Never
	Disabled

Best Case ? Actual Consumption* Worst Case ?

Cash	\$5	\$67	\$119
Energy	57 kWh	841 kWh	1489 kWh
CO ₂	79 lbs	1177 lbs	2085 lbs

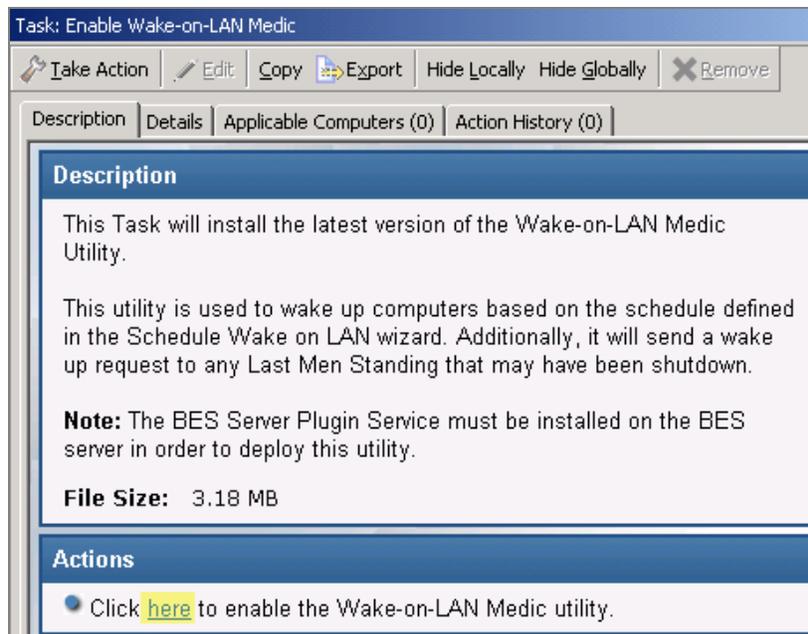
*This data is based on your computer usage from last 11 days.

Enable Wakeup



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

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



Remove the Previous Version of Power Management

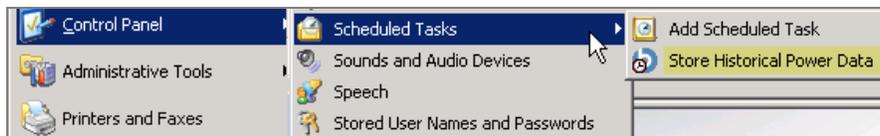
You may choose to keep both versions running for a while if desired. However, the new version of Power Management uses different collection techniques. Thus, when you remove the old version, your historical data will not be transferred.

Note: It is recommended that you remove the previous version of BigFix Power Management after the new version is installed.

Disable Previous Historical Tracking

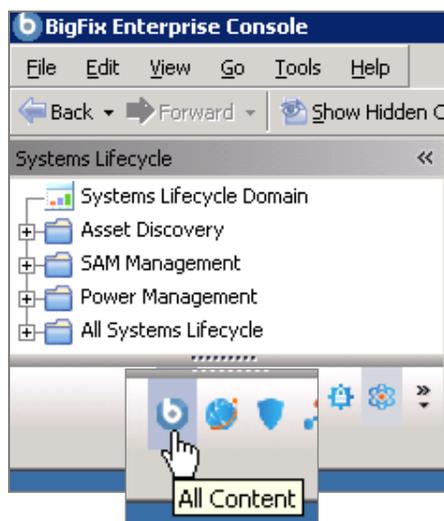
The previous version of BigFix Power Management used a user-defined scheduled Task in Windows to run the “Store Historical Power Data” process. If you have previously set up this Task, you will want to disable it after you remove the older Power Management Fixlet site.

To disable previous historical tracking, you will remove the scheduled task for storing the power results utility. To do this, click the Windows *Start* menu on your BigFix server, select Control Panel, and then click Scheduled Tasks. Locate the *Store Historical Power Data* task, right-click on it, and select *Delete*.

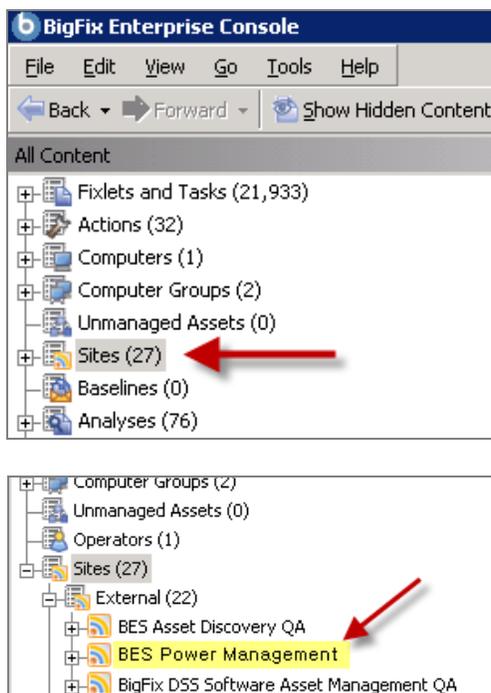


Unsubscribe from Site

To unsubscribe from the previous site, click the *All Content* domain in the domain panel. You can access this domain by clicking the domain icons at the bottom of the domain panel.



Once you click the *All Content* domain, the *All Content* navigation tree will display in the domain panel on the left. In the *All Content* navigation tree, click to expand the *Sites* folder. Highlight the previous Power Management site and click *Remove* from the Work Panel.



Remove Custom Analyses

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

Removing the previous Analysis after you unsubscribe from the older Power Management site is recommended but not required.

To remove custom analyses created in the previous Power Management site, click on 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 should be called *Power Monitoring Analysis*. As there may be several sites within your Console, right-click on each site called *Power Monitoring Analysis* and select *Remove* from the drop-down list.

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

Support

BigFix offers a suite of support options to help optimize your user-experience and success with this product. Here's how it works:

- First, check the BigFix website [Documentation](#) page.
- Next, search the BigFix [Knowledge Base](#) for applicable articles on your topic.
- Then check the [User Forum](#) for discussion threads and community-based support.

If you still can't find the answer you need, [contact](#) BigFix's support team for technical assistance:

- Phone/US: 866 752-6208 (United States)
- Phone/International: 661 367-2202 (International)
- Email: enterprisesupport@bigfix.com