

Tivoli. *Power Management*

Setup Guide





Note: Before using this information and the product it supports, read the information in Notices.

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Part One

Introduction

This publication 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 on 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 that enables you to view power usage

System requirements

- Windows XP, Windows Vista, Windows 2003, Windows 7
- Mac OS 10.4, 10.5 and 10.6

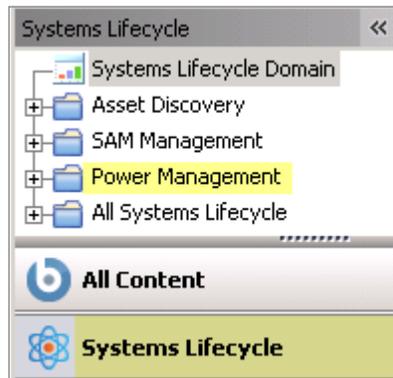
Subscribe to the site

The process for site subscription depends on your version of the BigFix Console. To get specific site subscription directions for the BigFix Knowledge Base, click [here](#).

Use the BigFix console

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

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



Components

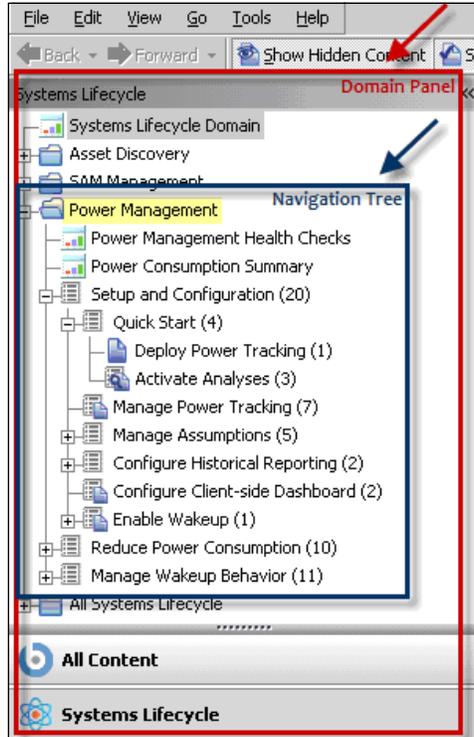
The BigFix Console organizes content into the following parts:

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

In 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.

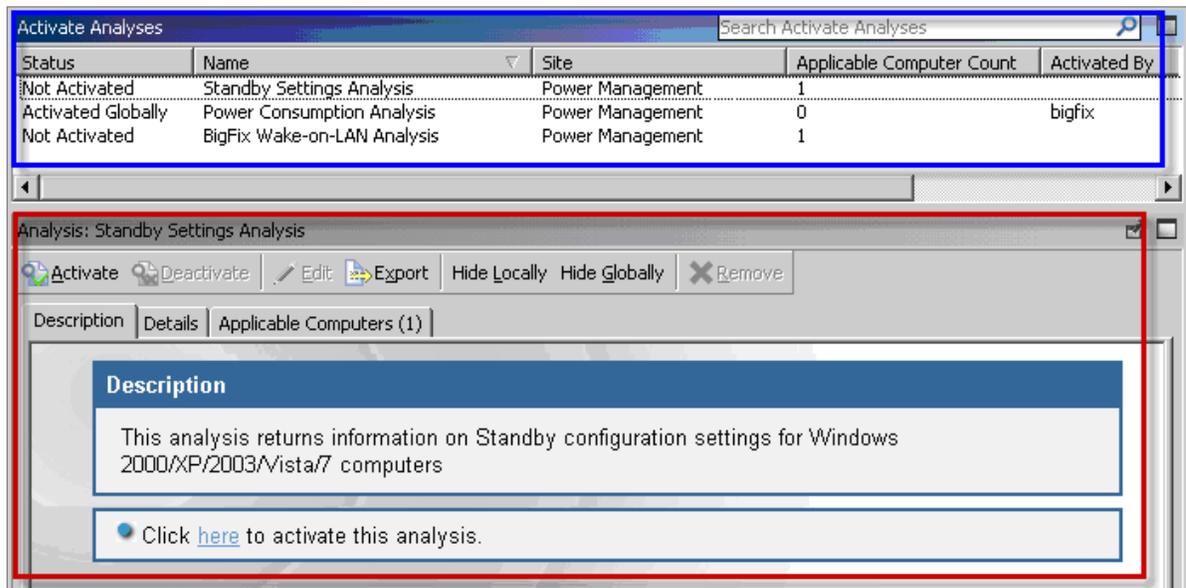
The Domain Panel is the area on the left side of the Console that includes a navigation tree and a list of all domains. The navigation tree includes a list of nodes and sub-nodes containing site content.

In the image below, you 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 displays at the top of the navigation tree.



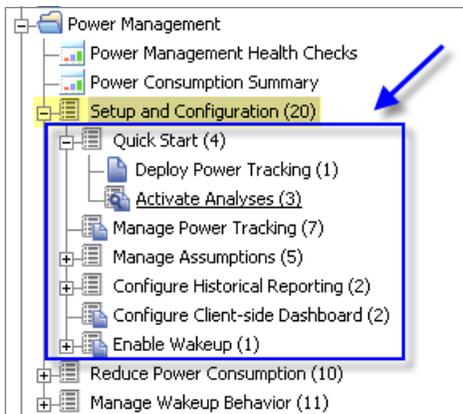
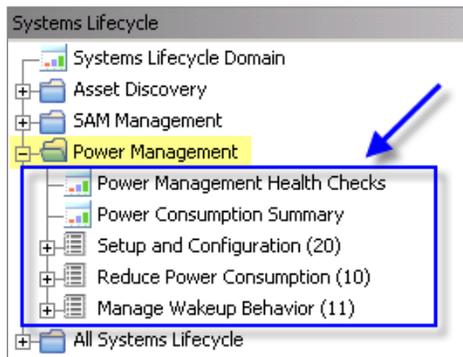
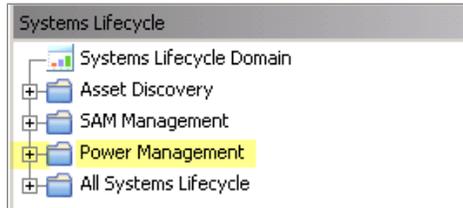
The red-outlined area represents the entire Domain Panel, including the navigation tree and list of domains. The blue box contains the navigation tree for the *Systems Lifecycle* domain.

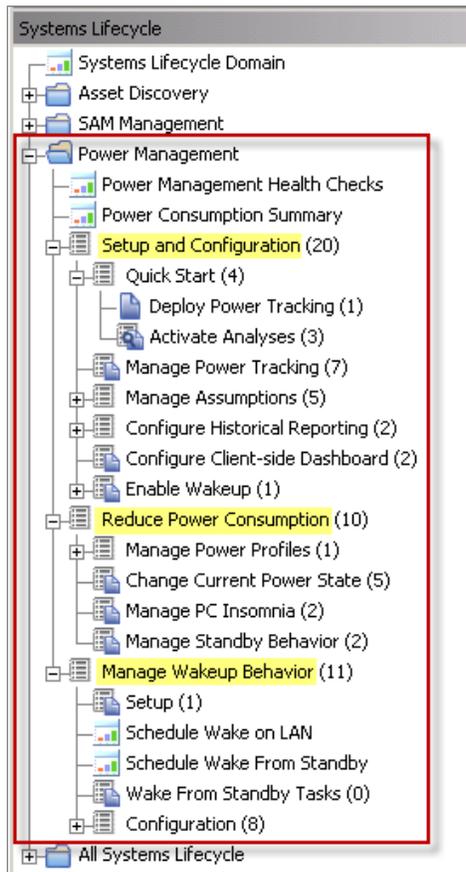
Power Management tasks are sorted through upper and lower task windows, which are located on the right side of the Console. The upper panel, called the *List Panel (blue)*, contains columns that sort data according to type, such as Status, Name, Site, and Applicable Computer Count. The lower panel or *Work Area (red)* presents the Fixlet, task screen or Wizard from which you take specific actions to customize the content in your deployment.



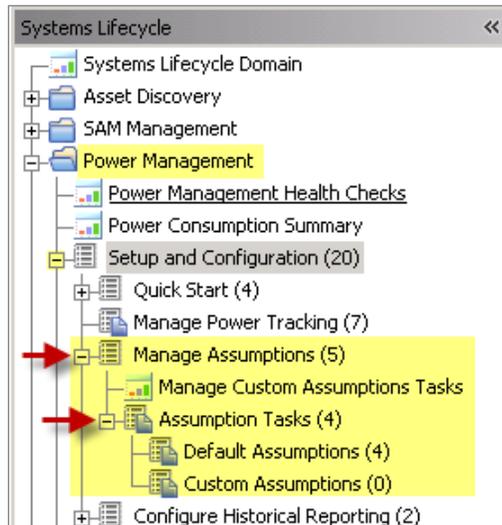
Working with content

You can expand and collapse the nodes in the Power Management navigation tree to navigate and manage relevant components in your deployment.





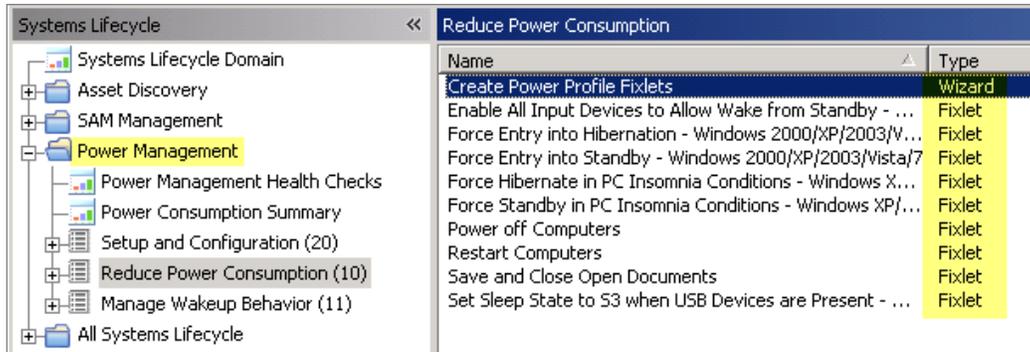
You can see from the image above that BigFix Power Management content is organized into 3 primary nodes - *Setup and Configuration*, *Reduce Power Consumption*, and *Manage Wakeup Behavior*. Each node expands into subnodes that contain additional content. In the image below, you can see how the Manage Assumptions sub-node expands to display additional tasks and content:



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. Content is displayed by the following types:

- Analyses
- Dashboards
- Fixlets
- Wizards



Name	Type
Create Power Profile Fixlets	Wizard
Enable All Input Devices to Allow Wake from Standby - ...	Fixlet
Force Entry into Hibernation - Windows 2000/XP/2003/V...	Fixlet
Force Entry into Standby - Windows 2000/XP/2003/Vista/7	Fixlet
Force Hibernate in PC Insomnia Conditions - Windows X...	Fixlet
Force Standby in PC Insomnia Conditions - Windows XP/...	Fixlet
Power off Computers	Fixlet
Restart Computers	Fixlet
Save and Close Open Documents	Fixlet
Set Sleep State to S3 when USB Devices are Present - ...	Fixlet

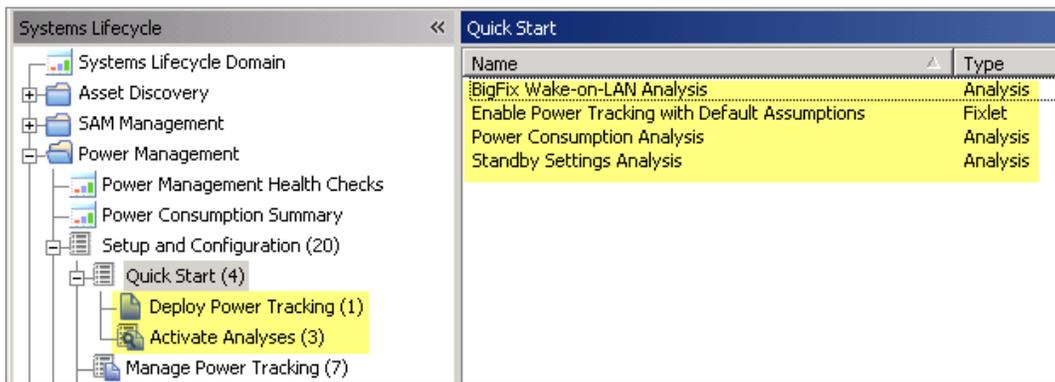
This content represents actions that must be addressed to successfully reduce power consumption in your deployment.

Setup and configuration

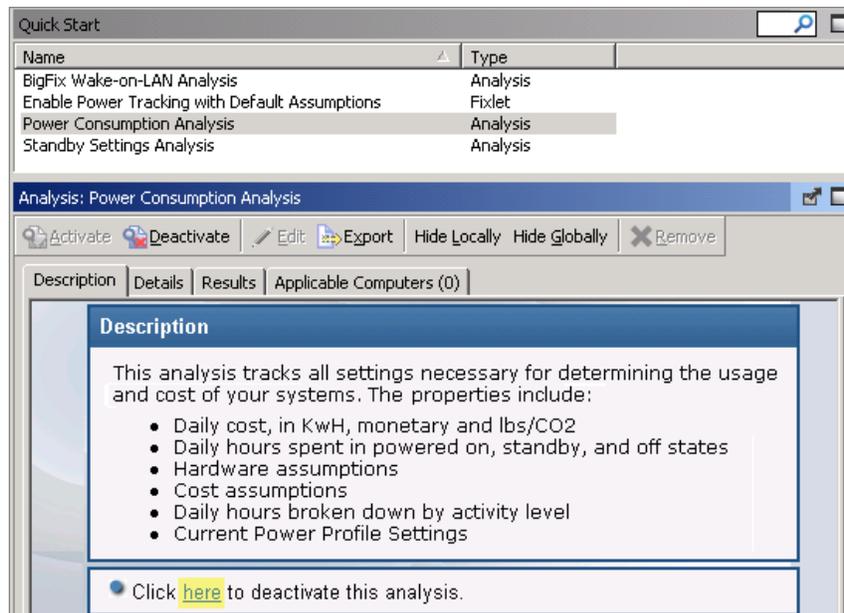
Quick Start

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.

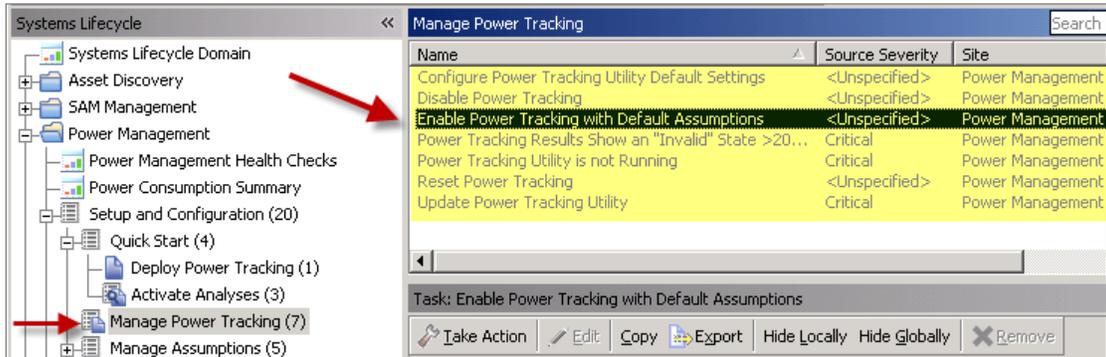
The *Quick Start* sub-node under *Setup and Configuration* includes several analyses and Fixlets for setting Wake-on-LAN, Power Consumption, Standby, and Power Tracking parameters in your deployment.



Use the List Panel on the top right of your Console to access each analysis and Fixlet. Click on the applicable item, and click 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, includes tasks for configuring, setting, enabling and updating your Power Tracking capabilities. These optional tasks are not required for initial setup and 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 can choose the default values or you can override them with known values specific to your computers and costs.

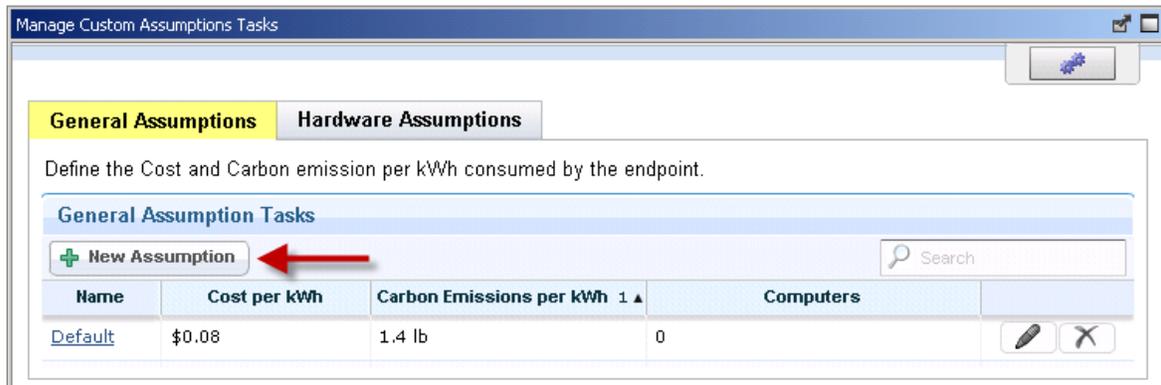
Note: *Managing Assumptions is an optional feature in BigFix Power Management. If you do not set custom assumptions, default assumptions are used.*

General Assumptions

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

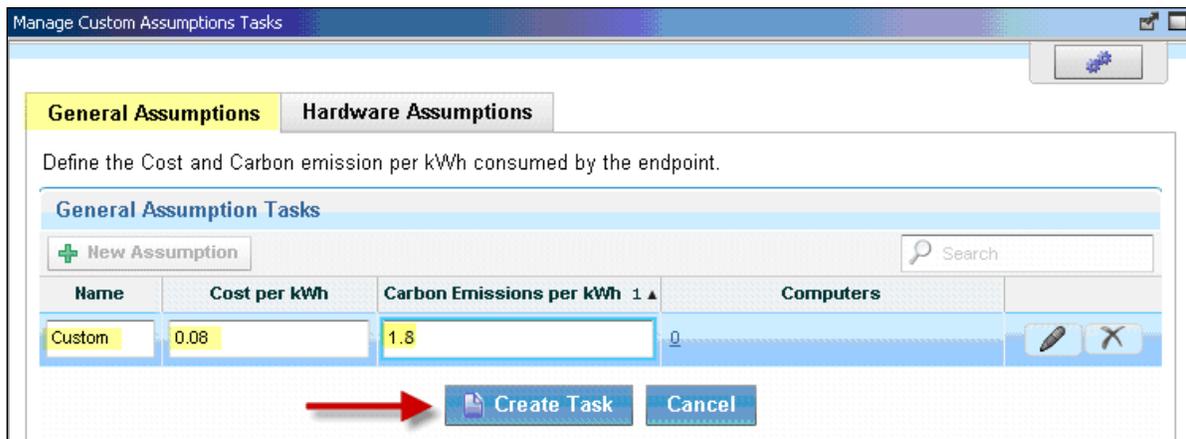
- Name
- Cost per kWh
- Carbon Emissions per kWh
- Computers

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*.

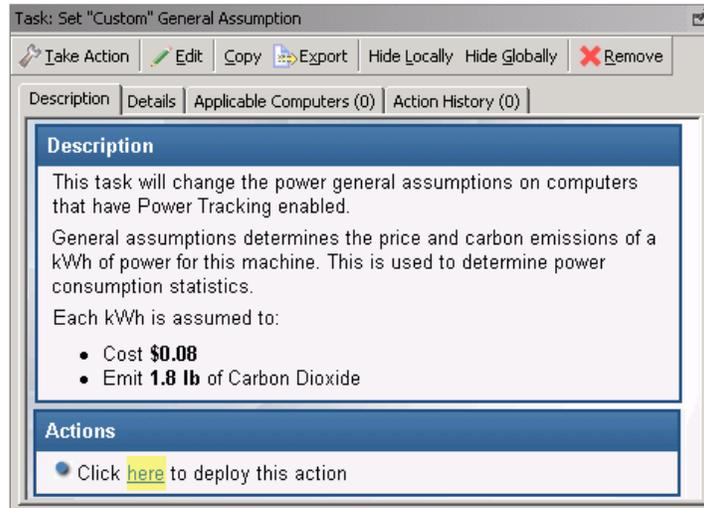


Your electricity provider can provide your cost per kWh of electricity and the amount of carbon released to create each kWh. If you have multiple providers, you can choose to average the values and assign them to all computers. Alternately, you can create multiple assumptions and assign each assumption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



When the Work Panel displays, 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.

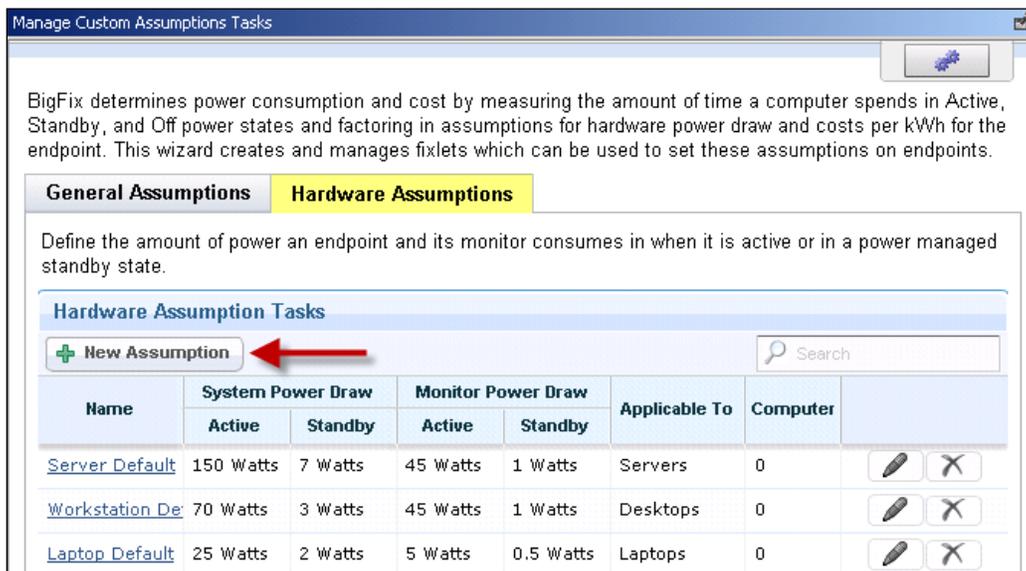


Hardware Assumptions

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

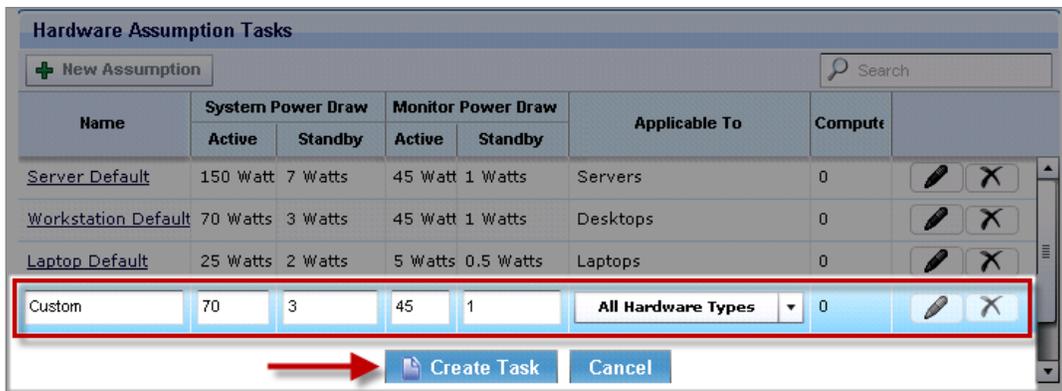
- Name
- System Power Draw - Active or Standby
- Monitor Power Draw - Active or Standby
- Applicability to hardware such as servers or desktops
- Computers

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*.



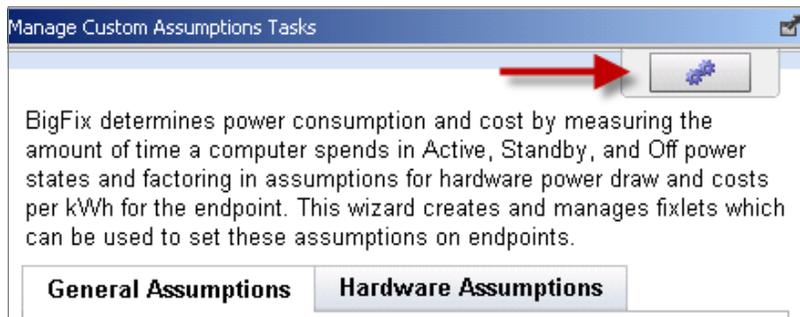
To effectively set assumptions, you must discover the amount of electricity used by your computers. You can determine this amount by plugging systems into an electricity usage device, such as a *Kill a Watt* electricity usage monitor. As power usage varies only minimally per computer model, you might 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 line displays at the bottom of the window, which allows 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 in the Actions box to deploy the action.



Global Settings

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



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: ▼

Currency Unit: ▼

Weight Unit: ▼

\$

€

£

¥

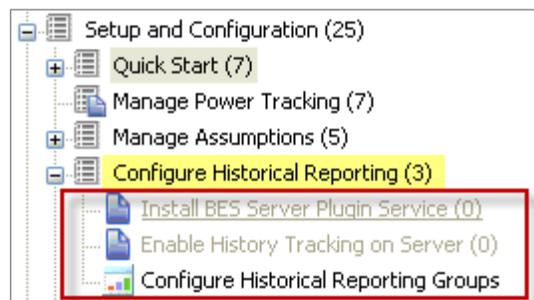
□

Custom

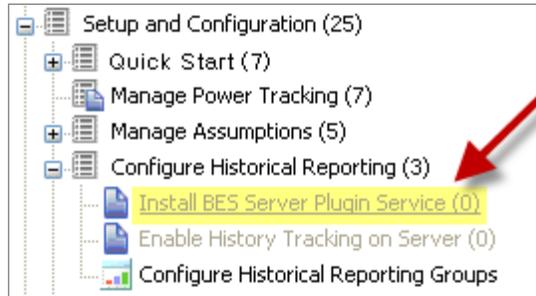
Configure Historical Reporting

BigFix 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.

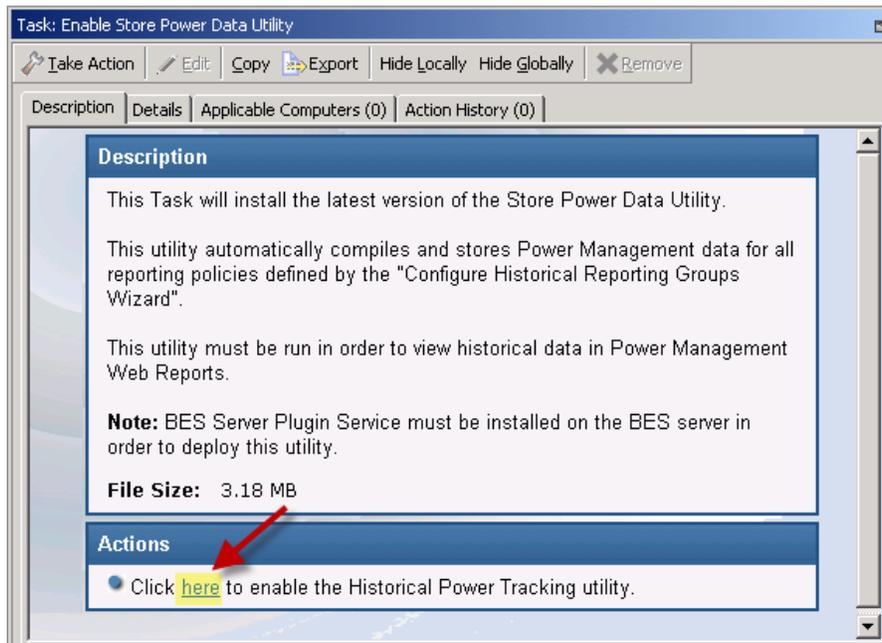
The *Configure Historical Reporting* sub-node under *Setup and Configuration* includes tasks for installing the BES Server Plugin and enabling historical tracking on a server, and a wizard for configuring historical reporting groups. The BES Server Plugin Service facilitates communication and automation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



Before you use the historical reporting feature, ensure that the BES Server Plugin service is installed. For information about installation, see the [Knowledge Base Article](#) on the BigFix support website.



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.

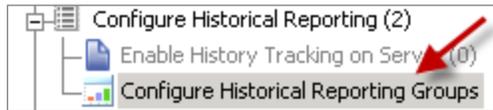


Historical Reporting Groups

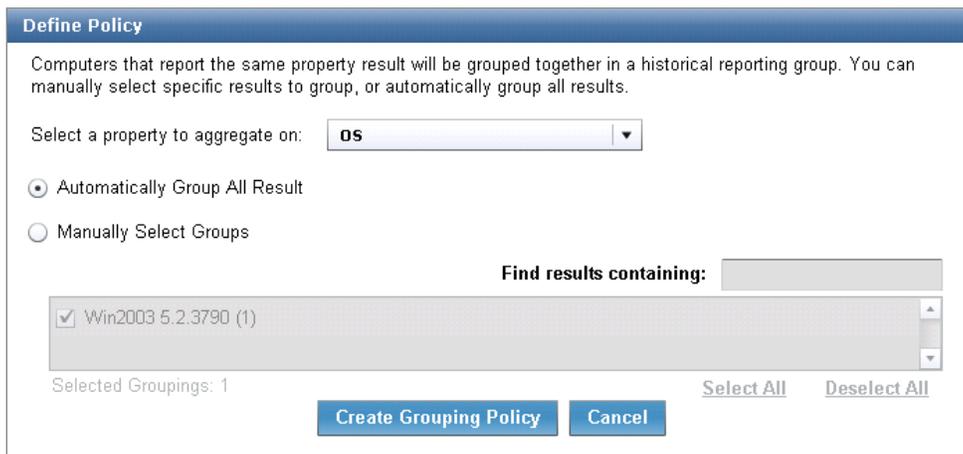
When the *Store Power Data Utility* is enabled, Power Management stores daily aggregated historical data, which can be viewed in Web Reports. By default, all power managed computers are included in one *All Computers* historical grouping. However, you can use the *Configure Historical Reporting Groups*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

Note: You can add historical reporting groups at any time. However, the data is only 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.

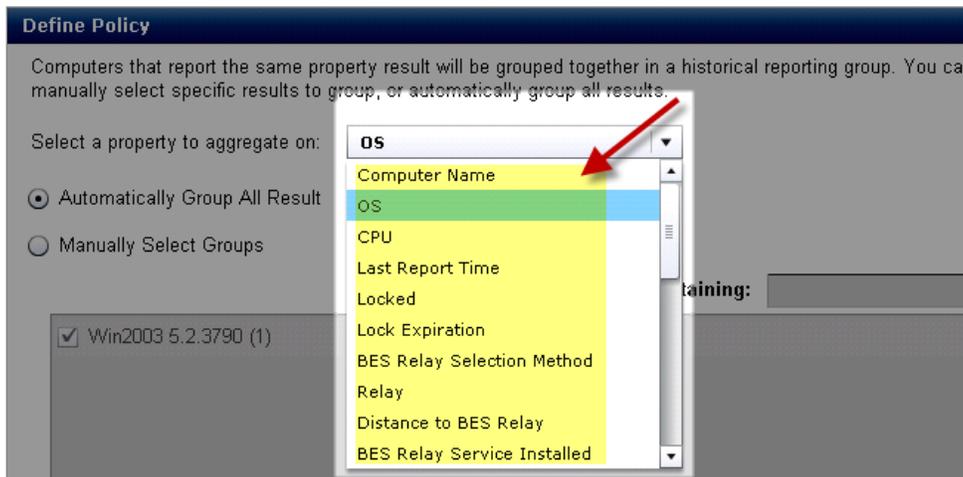
Click *Configure Historical Reporting Groups* in the navigation tree.



The wizard is displayed in a separate window in the Work Panel.



Select a property in the list.

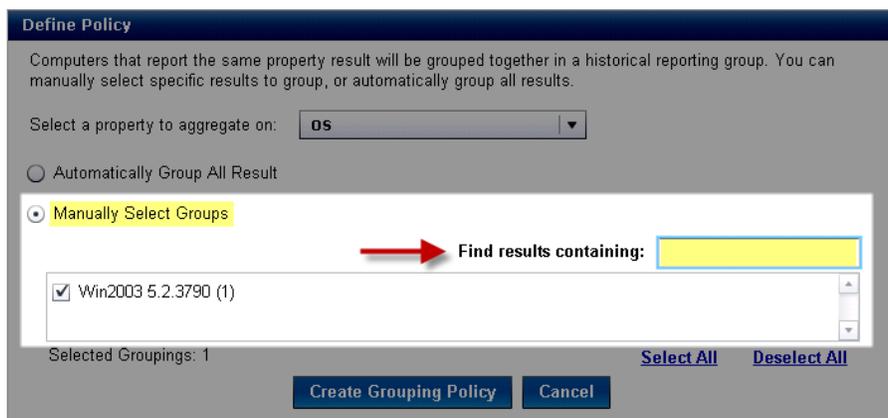


Choose how you want to select groups by selecting *Automatic* or *Manual*.

- Automatic selection means that an aggregation group is created for every result that currently exists, and new groups are created as new results are returned.
- Manual selection allows you to select the specific results on which to create groups. New results do 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 group.

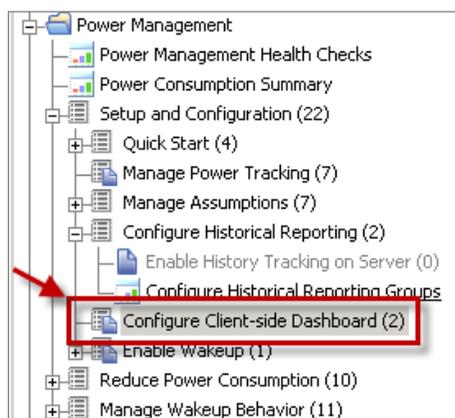
Note: *Power Management Web Reports performance degrades as you create more groups. It is recommended that you avoid creating groupings on properties that have too many unique results, such as Computer Name or IP Address.*



When complete, click *Create Grouping Policy*.

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

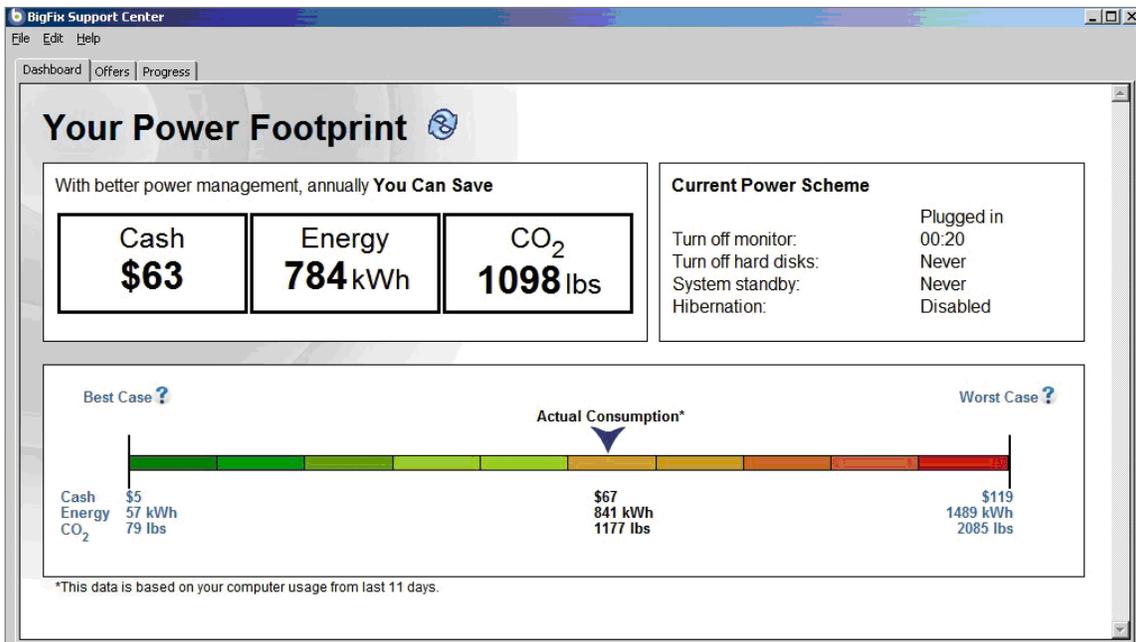
Note: This will restart the BES Client. If you are deploying to a large number of endpoints, you should use the temporal distribution option to avoid all clients restarting at once.

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.

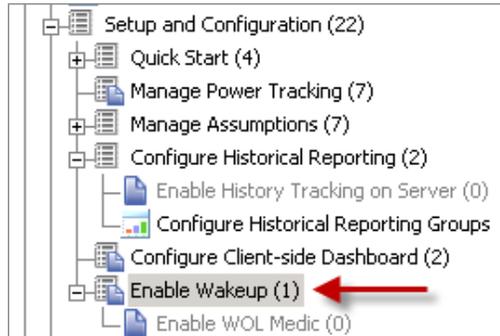
File Size:
60 KB

Actions

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

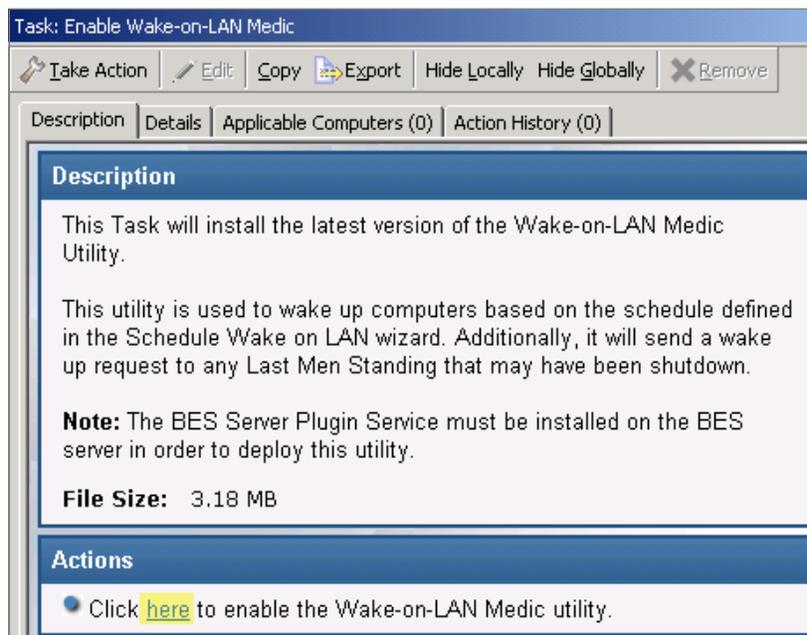


Enable Wakeup



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 send a wake up request to any Last Man Standing computers that are shut down.

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.



Remove previous version

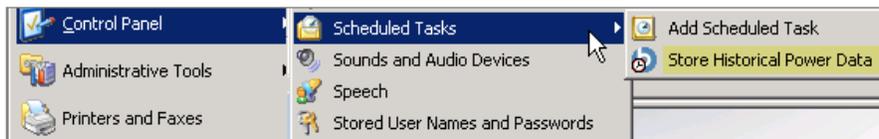
You can keep both versions of Power Management running. However, the new version of Power Management uses different collection techniques. When you remove the old version, your historical data will not be transferred.

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

Disable previous Historical Tracking

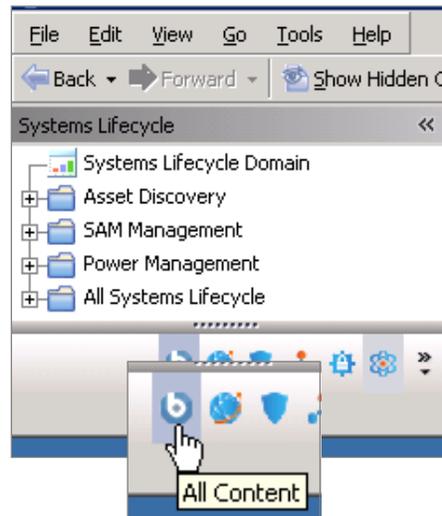
The previous version of BigFix Power Management used a user-defined scheduled Task in Windows to run the Store Historical Power Data process. If you previously set up this Task, you must disable it after you remove the older Power Management Fixlet site.

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.

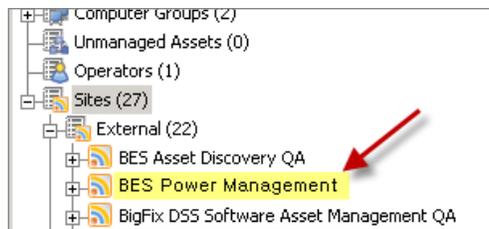
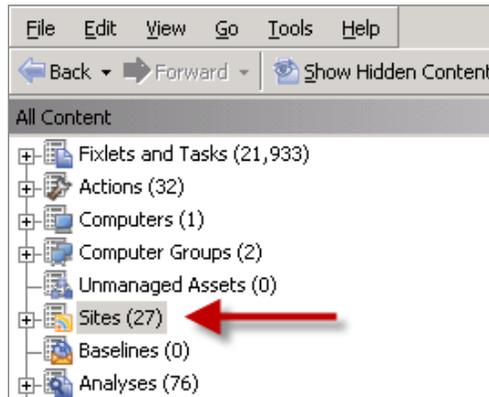


Unsubscribe from site

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.



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 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 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
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





Part Three

Support

Technical support

BigFix technical support site offers a number of specialized support options to help you learn, understand, and optimize your use of this product:

- [BigFix Support Site](#)
- [Documentation](#)
- [Knowledge Base](#)
- [Forums and Communities](#)





Part Four

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