

# **BigFix®** Power Management

User's Guide

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Part One



The BigFix Power Management solution allows IT organizations to enforce conservation policies across the enterprise, while providing granularity that enables application of these policies to a single computer. Specifically, it allows you to monitor, manage, and control the power usage settings on the computers in your network.

This *User's Guide* will describe some of the primary features of Power Management and how to optimize its benefits within your deployment. For questions about installing and activating the Power Management tool within your environment, see the Power Management *Setup Guide*.

### User Idle Time Tracking and PC Insomnia Prevention

BigFix Power Management provides the capability to track user idle time on client machines. This information can be used to determine if a computer is not entering Standby mode when it should (commonly called "PC Insomnia") and to take actions to enforce system Standby.

#### Tracking User Idle Time

Operators using version 7.1 of the BES Console can track user idle time with the *Enable User Idle Tracking* Task in the *Idle Tracking and Control* section of the Power Tracking Information dashboard.

The *Enable User Idle Tracking* Task will launch an idle tracking utility in the user space of the locally logged-in user of Windows XP and Vista computers. The idle tracking utility only tracks the locally logged-in user, so the Task will not be relevant on computers that have multiple or remote users. Once enabled, the utility will track the amount of time since a user moved the mouse or entered a keystroke.

**Note:** In order to minimize impact on the system, the utility will not report idle times of fewer than five minutes.

Once Idle Tracking is enabled, the *User Idle Tracking* Analysis can be used to return idle time statistics, such as how long a user has been idle and the last time the machine went idle. This Analysis will also report which machines don't have idle tracking functioning because of multiple or remote users.

By default, the *Enable User Idle Tracking* Task will launch as a Policy Action because the idle tracking utility needs to be re-launched every time a user logs in. By launching as a Policy, the Action will automatically reapply whenever the idle tracking utility is disabled.

**Note:** If the *Enable User Idle Tracking* Action is set as a Policy Action, it will automatically re-apply even if tracking is disabled using the *Stop User Idle Tracking* Task. To prevent this, close any open *Enable User Idle Tracking* policy actions. The description of the *Stop User Idle Tracking* Task will provide a list of all open idle tracking policy actions.



#### Force Standby in PC Insomnia Conditions

It is possible for certain applications to "block" entrance into system standby even when the feature is enabled. If a machine experiencing this problem has Idle Time Tracking enabled, it will become relevant for the *Force Standby in PC Insomnia Conditions - Windows XP/Vista* Task to be enabled. Using this Task, machines that are idle for a time longer than its minimum standby interval will be forced to enter standby. This task can be set as a policy action to ensure that computers will always enter standby when specified in the Windows Power Profile.

### **On-Demand Wake-on-LAN**

In version 7.1 of the BigFix Platform, Console Operators can instantly wake any Wake-on-LAN enabled computer in the deployment, regardless of subnet, without issuing a BigFix Action. Previous versions of the BigFix Platform required that either the targeted computer(s) be in the same subnet as the computer issuing the Wake-on-LAN packet or that routers allowed directed broadcasts.

# Wake-from-Standby

The Wake-from-Standby feature is managed through the *Wake-from-Standby Scheduling Wizard*, which can be accessed through the dashboard or the Wizards menu. The Wizard will output BigFix content that will create a Windows scheduled task on targeted endpoints that is used to wake them from Standby using the scheduling and recurrence options specified.

**Note:** Wake-from-Standby will not wake a computer that is in Hibernate mode. To wake a hibernating system, use the Wake-on-LAN feature.

#### Mac Support

Power Management now supports the following features on Macintosh computers:

- Track powered-on time per day
- View power settings
- Change power settings via the Power Profile Wizard
- Enforce power policies
- Track power consumption and savings over time via the Power Trend Overview and Historical Power Savings web reports and the Power Tracking Information dashboard
- Turn off computers
- Restart computers
- Override power assumptions

### Last Man Standing

In order to wake a computer, at least one computer must be active in the target computer's subnet. To increase the likelihood that at least one computer in each subnet will be available to serve as a wake-up point, BigFix provides Last Man Standing functionality.

Last Man Standing computers are configured to ensure that they remain active and available to power-on other computers. When a computer is designated to be a Last Man Standing computer, it will be:

- Excluded from BigFix Power Management actions that would turn the computer off
- Excluded from actions that may change the computer's sleep state, such as the Force Entry into Standby Task
- Excluded from Fixlets created by the Power Profile Wizard
- Configured to not enter system Standby, Hibernate, or hard-disk Power Management modes
- Configured to serve as a Wake-on-LAN packet forwarder

#### Selecting Last Man Standing Computers

Operators using version 7.1 of the BES Console can configure a computer to be a Last Man Standing using the *Designate Last Man Standing* Task, which can be accessed from a link in the On-Demand Wake-on-LAN section of the Power Tracking Information dashboard. When the BigFix Wake-on-LAN analysis is enabled, the *Designate Last Man Standing* Task will provide a table of Last Man Standing computers by subnet. This table is meant to help operators identify "orphaned" subnets that do not currently have a Last Man Standing computer.



Master Operators will also be presented with a link to download additional BES properties. These properties can be used to filter computers in the Take Action dialog, aiding in Last Man Standing selection.

lame:	Designate Last Man Standing									
reset:	Default						Show on	ly personal presets	Save Preset	Delete Preset
rget farget: Of	Execution Specific com	Users puters s	Messages elected in th we property v	Offer 1	Post-Action	Applicability	Success Criteria	Action Script		
	<ul> <li>Apple</li> <li>By</li> <li>By</li> <li>By</li> <li>By</li> <li>By</li> <li>By</li> <li>By</li> </ul>	Able Con Active I Retriev By Big 19 9 9 9 9 9	puters (5) Directory ed Propertie Fix Wake-on 2.168.101.0 2.168.104.0 By Comput By Last Ma Comput By Last Ma Comput By Last Ma Comput By Comput By	s -LAN Subni 1/24 (1) 1/22 (4) er Name in Standing id (4) Computer Last Repor OS CPU Locked IP Address Llocked IP Address	Name t Time	Comput AMAKHH ENU-WIP NINJABIJ SAM-POO	er Name * Larserv-G RD CONDAP RO-SP4	Last Report Time 9/10/2008 5:10:16 P 9/10/2008 12:07:30 9/10/2008 0:07:30 9/10/2008 0:05:09 P 9/10/2008 5:03:04 P	OS M Win PH Win M Win M Win	№ 5.1.2600 2000 5.0.2195 № 5.1.2600 № 5.1.2600 2000 5.0.2195

We recommend that at least one computer in each subnet be designated as a Last Man Standing computer. However, since Last Man Standing computers have system Standby disabled and are excluded from most Power Management actions, only a few should be selected from each subnet.

Any computer running version 7.1 of the BES Client can become a Last Man Standing computer. However, the best practice is to select computers that tend to consistently remain active, such as servers or Relays.

#### Managing Last Man Standing Computers

While Last Man Standing computers are set to be excluded from Power Management actions that could hinder their ability to serve as wake-up points, custom actions taken outside of Power Management or outside of BigFix could change their configuration. If this occurs, the *Improperly Configured Last Man Standing* Fixlet will become relevant. Run this Fixlet to reconfigure broken Last Man Standing computers.

**Note:** Fixlets created with an outdated version of the Power Profile Wizard will not properly exclude Last Man Standing computers and may cause them to become improperly configured. The *Improperly Configured Last Man Standing* Fixlet will contain a list of all outdated Power Profile Fixlets. These Fixlets should be removed and recreated using the updated Power Profile Wizard.

The *Remove Last Man Standing* Task can be used to remove Last Man Standing exclusions from a computer. Once this Task is run, selected computers will be included in all Power Management actions. However, they will continue to function as Wake-on-LAN forwarders and their Standby Power Management settings will be left disabled until a new Power Profile is applied to them.

#### Forced Standby or Hibernation

Forced Standby or Hibernation actions will force the target machines to go into the appropriate mode when they are run. Go to the Power Controls box in the dashboard and click on the appropriate setting.



Once the Fixlet window opens, click where indicated in the Actions box and set desired parameters in the Take Action dialog.



# **Using Power Management**

Open the Power Management tool by selecting *Power Tracking Information* from the Dashboards pull down menu at the top of the BigFix Console. Click where indicated to enable power monitoring, and enter your Private Key Password.



This action opens the primary Power Management control window.

ower Tracking Information		
Track power information for computers Target more computers Target fewer computers	Start Monitoring	Stop Monitoring
Power Controls		
Power Settings <u>View Power Settings</u> <u>Set Power Settings</u>	Schedule Wakeups Wake-on-LAN Scheduling Wizard Wake-from-Standby Scheduling Wizard	Power Tracking Configuration Inaccurate Power Monitoring Statis (0 relevant) Reset Power Statistics Override Power Assumptions
Shutdown/Restart Computers Save and Close Open Documents Power off Computers Restart Computers Force Entry into Standby Force Entry into Hibernation	On-Demand Wake-on-LAN Disabled ( <u>Enable Learn More</u> ) <u>Designate Wake-on-LAN Forwarders</u> <u>Designate Last Man Standing</u> <u>Improperly Configured Last Man</u> <u>Standing</u> (O relevant)	Idle Tracking and Control Enable User Idle Time Tracking Force Standby in PC Insomnia Condi - Windows XP/Vista Stop User Idle Tracking User Idle Tracking Analysis

From the Power Controls box in the primary window, you can view and set power settings, shutdown and restart computers, schedule wakeups, enable and disable On Demand Wake-on-LAN, work with Power Tracking configurations, and track and control idle times.

#### **Setting Power Profiles**

1. To set power profiles for your deployment, select the *Set Power Settings* link from the Power Tracking Information dashboard.

Power Tracking Information
Track power information for computers           Target more computers         Target fewer computers
Power Controls
Power Settings View Power Settings Set Power Settings

BigFix Power Management also includes a Wizard that enables you to change power settings for Windows 2000, Windows XP, Windows 2003, Windows Vista, and Macintosh OS 10.4/10.5 computers. (Macs do not use the concept of a power profile name – they will show up as 'custom'.)

2. To use the Wizard, select the *Power Profile Wizard* from the Wizards pull down menu at the top of the Console. When the Wizard opens, select a power profile to use and click *Next*.

Power Profile Wizard		
This Wizard will enable you to change power sett Mac OS 10.4/10.5 computers.	ings for Windows 2000/XP/20	03/Vista and
Select a power profile:		
Home/Office Desk		*
Home/Office Desk		
Portable/Laptop		
Presentation		
Always On		5
Minimal Power Management		
Max Battery		
Balanced (recommended) [Vista]		
Power Saver [Vista]		
Custom		
Custom		
	Next	Cancel

3. When the *Set Power Profile* window opens, you can select when to turn off hard disks, monitors, and go into system standby. The Wizard also allows you to select how and when to hibernate your system.

Set Power Profile options:		
Choose the options this fixlet will set and the	amount of	idle time before the Power
Management policy is enacted. Enter "0" to i	never turn o	off selected device.
Set Harddisk: V Turn off Harddisk after	0	minutes.
Set Monitor: V Turn off Monitor after	20	minutes.
Set Standby: 🗹 Go into Sytem Standby after	þ	minutes.
Set Hibernation:		
Enable/disable Hibernation (sets acro	oss all prof	iles):
Enter Hibernation Enter Hibernation	tion after	minutes.
O Disable Hibernation		
Note: Hibernation will not be applied to Ma	ac OS X.	
Create a one-time action. Leave this u	nchecked to	create a Fixlet you can reuse.

4. When complete, click *Finish* to open a Fixlet Editing window. This will allow you to modify Fixlet parameters.

¢	
	This Fixlet sets the Power Profile in Windows 2000/XP/2003/Vista and Mac US 10.4/10.5 computers.
	This Fixlet will set the "Home/Office Desk" profile to be active with the following settings:
	<ul> <li>It will turn off monitor after 20 minutes.</li> <li>It will never turn off hard disk</li> <li>It will never enter standby mode.</li> </ul>
	The information is the same information that is shown in the Windows dialog "Control Panel" > "Display" > "Screen Saver" > "Power" or "System Preferences" > "Energy Saver" for Mac OS X.
	Note: This task is not applicable on computers designated as Last Man Standing.
.0	ctions
	Click here to initiate the deployment process.

5. At the Fixlet window, you may edit or change the information listed in the Description box. When finished, click the *OK* button at the bottom of the window and wait a moment while these settings are processed. Then click in the Actions box to initiate deployment and enter your Private Key Password.



Alternatively, if you would like to create a one-time action, click the *Create a one-time action* box at the bottom of the Wizard (shown in step 3 above), which will open a Take Action dialog.

🍣 Take Action			
Name: Set "Home/Office Desk" Power Profile Options			
Preset: Default	Show only perso	Save Preset.	Delete Preset
Target Execution Users Messages Offer Post-Action A	pplicability Success Criteria	Action Script	
Target: O Specific computers selected in the list below All computers with the property values selected in the tree The computers specified in the list of names below (one per	below r line)		
😠 🌉 All Computers (218)	Computer Name 🔺	OS	CPU 🔥
	Aberlard-333369 Aberlard-35993 Aberlard-493770 Ambrose-97400 Ambrose-97400 Ambrose-968866 Anaximander-215216 Anakimander-215216 Anakimander-215216 Andem-612543 Andem-612543 Andem-612543 Antishtness-700254 Antishtness-70025	Win95 OSR2.6710975 WinXP 5.1.2600 WinXP 5.1.2600 WinXP 5.1.2600 WinXP 5.1.2600 WinXP 5.1.2600 WinXP 5.1.2600 HP-UX 8.11.11 WinXP 5.1.2600 HP-UX 8.11.10 WinXP 5.1.2600 WinXP 5.1.2600	1796 Mh2 Penti 1812 Mh2 Penti 1812 Mh2 Penti 1812 Mh2 Penti 1781 Mh2 Penti 1793 Mh2 Penti 1793 Mh2 Penti 1812 Mh2 Penti 1812 Mh2 Penti 1774 Mh2 Penti 1796 Mh2 Penti 1796 Mh2 Penti 1796 Mh2 Penti 1815 Mh2 Penti 1817 Mh2 Penti 1197 Mh2 Penti 1197 Mh2 Penti 1197 Mh2 Penti 1197 Mh2 Penti 1197 Mh2 Penti 1197 Mh2 Penti
ОК	Cancel		.:

6. Select the computers to which to apply the action. Click the *OK* button at the bottom of the window and enter your Private Key Password. For more information about setting options using the tabs in the Take Action window, consult the <u>BES Console Operators Guide</u>.

# Overriding Power Assumptions

The BigFix Power Management site includes a Wizard that enables you to override the power assumptions used in the dashboard. You can apply these overrides to individual computers or to groups of computers. If an override is not applied to a specific computer, Power Management uses the assumptions stored in the dashboard.

#### Accessing the Wizard

1. Click the Override Power Assumptions link in the Power Controls section of the dashboard.

Power Controls		
Power Settings <u>View Power Settings</u> <u>Set Power Settings</u>	Schedule Wakeups Wake-on-LAN Scheduling Wizard Wake-from-Standby Scheduling Wizard	Power Tracking Configuration <u>Inaccurate Power Monitoring Statistics</u> (0 relevant) <u>Reset Power Statistics</u> <u>Override Power Assumptions</u>

2. In the Task window, click where indicated in the Actions box to open the *Power Assumptions Override Wizard*.

B Descript	ask: Override Power Assumptions ES Power Management im Datate Applicable Computers Action Michael
Ov BES	Power Management
	Description
	This Task will enable you to override the power assumptions used in the Power Tracking Information dashboard.
	Power consumption and cost data computed in the Power Tracking Information dashboard will incorporate these a computer, the assumptions in the dashboard will be used.
	You can view custom assumptions using the Power Assumptions Override Analysis.
	Actions
	Click here to Override Power Assumptions.

A Power Assumptions Override	e Wizard 🛛 🗙
Power Assumption	ons Override Wizard
This Wizard will enable you to o in the Power Tracking Informatio	verride for targeted computers the power assumptions used n Dashboard.
Override assumptions for targete	ed computers:
Set Cost: O Use dashboard default	<ul> <li>Cost per kWh to: \$.08</li> </ul>
Set CO2 Emissions: • Use dashboard default	O Set CO2 per kWh to 1.4 Lbs.
Set Computer's Active Power Dra Use dashboard default	W: O Set power draw to 58 Watts
Set Computer's Power-Managed • Use dashboard default	Power Draw: O Set power draw to 28 Watts
Set Monitor's Active Power Draw	
Set Meniter's Dewer Managed Do	Set power draw to jou watts
Use dashboard default	Set power draw to 6 Watts
Set Hard drive Sleep Power Savin	ngs:
Ose dashboard default	O Set power draw to 8 Watts
	Finish Cancel

3. Select the override assumptions for your targeted computers, then click *Finish*. A *Take Action* window opens.

1 .			1
set: Fixlet Action Defaults	Show only personal preset:	Save Preset	Delete Preset
get Execution Users Messages Offer P	ost-Action Applicability Success	Criteria Action Scri	pt
rget:			
Specific computers selected in the list below			
C All computers with the property values selec	ted in the tree below		
C The computers specified in the list of names	below (one per line)		
m 📃 (II Computers (31)	Subpat Addrace	Computer +	05
	192.168.104.0	BASE10A	Wip2000.5.0.2
	192.168.104.0	BOSTON	WinXP 5.1.2600
	192,168,104.0	Default	Win95 Initial.67
	192.168.104.0	DRONGO	WinXP 5.1.2600
	192.168.104.0	einstein	Linux Fedora C
	<multiple results=""></multiple>	KOOKABURRA	WinXP-2003 5
	192.168.104.0	linux	Linux (2.4.19-6
	192.168.104.0	localhost.locald	Linux Fedora C
	192.168.104.0	MARKWIN2K3	Win2003 5.2.3
	192.168.104.0	NT_SERVER	WinNT 4.0.1381
	192.168.104.0	other	Mac OS X 10.4.11
	192.168.104.0	parrot	Linux Red Hat E
	192.168.104.0	QABES	WinXP-2003 5
	192.168.104.0	QABIG	WinXP-2003 5
	192.168.104.0	QAN140WKS	WINNI 4.0.1381
	192.168.104.0	QAWIN903E	WIN90 Second
	192.100.104.0	Rupp Russells	Mac OS V 10 4 11
1	192.168.104.0	socrates	SUDOS 5 10.(G
1	192,168,104.0	SUZV	Linux SuSE Ent.
1	192 168 104 0	TEMPVISTARI 1532	WinVista 6 0 6000
	222 manual 2		•

4. Select the computers to which to apply the override, and click *OK*. Enter your Private Key Password. For more information about setting options using the tabs in the Action window, consult the <u>BES Console Operators Guide</u>.

#### Removing Power Assumption Overrides

To remove power assumption overrides:

- 1. Click the *Tasks* tab.
- 2. Select All Tasks, then click By Site and select BES Power Management. Double-click the Remove Override Power Assumptions Task on the right.



This will open the Task window.

SPower	Masgiment
Descri	stion
This !	Lask will remove Custom Power Calculation settings
If cur value	ton power calculation settings are set for a computer, power usage and cost information computed in the Power Tracking Dashboard will use custom power calculation setting . If a value is not set, then the dashboard values are used.
Vini	an view Custom Power Calculation settings using the Power Assumptions Overtide Analysis

- 3. Click where indicated in the Actions box to remove any custom power calculations.
- 4. When the *Take Action* window opens, select computers upon which to remove the override, click *OK*, and enter your Private Key Password.

# Saving Files

You can set BigFix Power Management to save and close files before shutting down or restarting computers in your network. Files can be saved and closed for the following applications:

- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Outlook
- WordPad
- Notepad

The Task saves documents to an operator-specified folder with the file name:

```
##BIGFIX-<application name><date><GUID>.
```

**Note:** The restart and shutdown actions will only run on computers that are not locked.

To run the Task, click the Save and Close Open Documents link in the Power Controls section of the Power Tracking Information dashboard.

er Tracking Information		<b>T</b> k
Track power information for computers Target more computers Target fewer computers	Start Monitoring Start Monitoring	Stop Monitoring Stop Monitoring
ower Controls Power Settings	Schedule Wakeups	Power Tracking Configuration
<u>View Power Settings</u> Set Power Settings	Wake-on-LAN Scheduling Wizard Wake-from-Standby Scheduling Wizard	Inaccurate Power Monitoring Statistics (0 relevant) Reset Power Statistics
/		Override Power Assumptions
Shutdown/Restart Computers	On-Demand Wake-on-LAN	Idle Tracking and Control
Save and Close Open Documents	Disabled (Enable Learn More)	Enable User Idle Time Tracking
Bernen off Commuteur	Design of the last of the second seco	France State II and Transmith Constitutions

Eask: Save and Close Open Documents     Ecs Nouver Nonsogenent     Ecs Nouver Nonsogenent     Ecs Nouver Nonsogenent     Ecs Nouver Nonsogenent
Save and Close Open Documents BES Power Management
Description
This Task will save and close open documents for the following applications:
Microsoft Word     Microsoft Excel     Microsoft Dutlook     Microsoft PowerPoint     Wicrosoft PowerPoint     WordPad     NotePad     NotePad
These documents will be saved to a user specified forder, with the file name a seto-fix- <abplication <ul="" names=""> <li><ul> <li><ul> <li><ul></ul></li></ul></li></ul></li></abplication>
Unsaved Microsoft Outlook messages will be saved as a draft in Outlook, and not in the user specified save folder.
You can use the take action dialog to set granular scheduling criteria, optionally display a user message, etc.
The restart and shutdown actions will only run on computers that are not currently locked.
Note: When running the actions below, you should pay careful attention to the action deployment options in order to avoid po
Note: This Task is not applicable on computers designated as Last Man Standing.
Actions
Click here to save open documents.
Click here to save open documents and restart the computer.
Click here to save open documents and shutdown the computer.

- 1. At the *Task* window, click the appropriate link to save open documents, save open documents and restart the computer, or save open documents and shutdown the computer.
- 2. A Take Action window opens. Select computers to which to apply the Task, and click OK.
- 3. In the *Action Parameter* window, enter the directory path to which files will be saved. Click *OK* and enter your Private Key Password.

Action Parameter	X
Please enter the directory path to which files will be saved.	<
zi\BESAppSave	
OK Cancel	

#### Working with Wake-on-LAN

The BigFix Power Management site includes the ability to remotely power-on a computer using Wake-on-LAN technology.

Since many companies have hundreds or thousands of subnets, network limitation is a severe restriction on the use of Wake-on-LAN. BigFix solves this problem by enabling BigFix Clients to wake other computers in the same subnet. As long as you have at least one BigFix Client powered-on in the subnet, you can wake your other computers.

#### Understanding the Wake-on-LAN Wizard

The first time you run the Wake-on-LAN Wizard, it will create a retrieved property called *Wake-On Address*. This property will link a computer's MAC address to its IP address, which will allow BigFix to know how to wake each computer.

Once the Wizard has created this property and clients have reported back, open the Wake-on-LAN Wizard again. You can now use BigFix Clients to wake up computers in selected subnets. The Wizard will list the available subnets with the number of computers in each subnet.

After selecting a subnet and clicking Next, you will be presented with deployment options:

- **Expiration Time** Sets the length of time BigFix will attempt to wake computers. Expiring Wake-on-LAN actions helps optimize system performance.
- Temporal Distribution Sets the span of time between Wake-on-LAN packets. Since Wake-on-LAN traffic is all on a local LAN, the network speeds tend to be very fast. Nevertheless, as a precaution against sending too much data in a short burst, set large time intervals. For example: If there were 200 computers on a subnet and you spread out the Wake-on-LAN packets over 10 minutes, the network traffic used for the Wake-on-LAN packets would be extremely low.
- Wake-up Points Sets the time in which a client must have reported to be considered a Wake-up Point.

The Wizard creates a BigFix action that will download the BES Wake-on-LAN utility to your Wake-up Points. The Wake-up Points will then send special Wake-on-LAN packets to every computer that you select in the subnet. These packets are sent on port 10 using the behaviors you chose in the Wizard.

**Note:** A subnet must have at least one awake computer to awaken another computer within the subnet.

#### Running the Wake-on-LAN Wizard

1. Go to the Wizards pull down menu and select the *Wake-on-LAN Scheduling Wizard*. The Wake-on-LAN Wizard opens.



2. Click the link to activate the *Wake-on-Address* property. The *Create Property* window opens. Assign a frequency for evaluation, and click *OK*.

🔍 Create Prop	erty 'Wake-On Address'
Name:	Wake-On Address
Namespace:	
Relevance:	if (exists (broadcast address of item 1 of it, mac address of item 0 of it) of (adapters of it, ip interfaces of it) whose (address of item 0 of it = address of item 1 of it) of network as string) then ((broadcast address of item 1 of it, mac address of item 0 of it) of (adapters of it, ip interfaces of it) whose (address of item 0 of it = address of item 1 of it) of network as string) else nothings
Evaluate every	Every Report
	OK Cancel

3. After your computers report, open the Wizard again. The first page of the Wizard will ask you to select one or more subnets on which to apply Wake-on-LAN.

🛦 Wake-on-LAN Scheduling Wizard	
Wake-on-LAN Scheduling Wizard	
Wake-on-LAN Scheduling Wizard	
This Wizard will enable you to use BES Clients to wake up compu (s). Each targeted BES Client will send out a special Wake-on-LA within their respective subnet.	iters in the selected subnet N packet to local computers
Select one or more subnets. The numbers in parentheses ind computers which return a valid "Wake-on Address" property resu	licate the number of Ilt in each subnet.
	Subnet 💌
192.168.104.0 - (2 computers)	
Use the 'Ctrl' key to select multiple subnets.	
	Next Cancel

4. Select the subnet or subnets, and click Next. The Select Computers window opens.

🛦 w	/ake-on-LAN Scheduling	g Wizard		
v	Vake-on-LAN Scl	heduling Wizard		
Sele	ect Computers:			
Se	lect the computers that you v	vould like to turn on.		
St	atus Definition:			
<b>"</b> O	ff" computers have not repor	ted back in 15 🛩 minutes.		
56	Direct the specific computer	ers you wish to target	-	
	9 Include selected computers	. O Exclude selected computer	2,	
	Computer Name	Subnet	Statu	5
	HAMERKOP	192.168.104.0	Active	
	HAMERKOPCLIENT	192.168.104.0	Active	
	<u> </u>			
		Bar	k Next	Cancel
		Dat	next	Connect

5. Select the computers you want to turn on. The *Status Definition* section of this page determines what Power Management considers an "off" computer. This consideration is used to aid in individual computer selection. However, a wakeup action is sent to the selected computers whether or not they are awake or asleep when the action is sent. Click *Next*. The last window opens.

🛦 Wake-on-LAN Scheduling Wizard 🛛 🛛 🗙
Wake-on-LAN Scheduling Wizard
Selected Subnets:
192.168.104.0
Deployment Options:
Expiration Time: This action will expire in 6 💌 hours.
Temporal Distribution: Wake-up packets will be distributed over an interval of 5 💌 minutes.
Wake-up Points: <ul> <li>Use computers that have reported within the last 15 v minutes.</li> <li>Use all computers as Wake-up points.</li> </ul>
Action Summary:
All clients in the selected subnets have reported within the last 15 minutes. Please change your deployment options or select a different subnet.
Open the 'Take Action' dialog box for advanced scheduling and deployment options.
Back Finish Cancel

- 6. In this window:
  - a. Confirm your choice of subnet or subnets.
  - b. Set an expiration time for the Action.
  - c. Set an interval for distribution of wake-up packets.
  - d. Select whether to use all computers as wake-up points, or specific computers based on reporting.
  - e. Check the Take Action dialog box for advanced scheduling and deployment options.
  - f. Click Finish.

If you did not check the "Open the Take Action box" at the bottom of the last screen, the Action will run. If you have checked the box, a *Take Action* window will open providing you with more options. Set the parameters in the Take Action box and click *OK*. Enter your Private Key Password. For more information about Action window options, consult the <u>BES Console</u> <u>Operator's Guide</u>.

Part Three

# Viewing Web Reports

BigFix Power Management stores data to make it visible in two reports through the Web Reports interface: *Historical Power State* and *Power Trend Overview*. You may also use the web reporting interface to view the *Daily Power Statistics by Computer* report, as well as to use the *Wake-on-Web* report.

To access Web Reports, use the Tools pull down menu and select *Launch Web Reports*. The applicable reports will be visible in the Content Reports section of the Reports page.



To store your data for reporting, click the *Store Historical Data* button on the dashboard. Additionally, check the Power Management *Setup Guide* for details on how to set up storing of historical data. For more information about Web Reports, consult the <u>BigFix Enterprise Suite Web</u> <u>Reports User's Guide</u>.

#### Power Trend Overview

The Power Trend Overview report displays Power Cost, CO<sub>2</sub> Emissions, and Power Consumption statistics on a per computer or aggregate deployment basis. The *Cumulative Savings Over Time* table displays cumulative power, cost, and CO<sub>2</sub> savings over the user-specified custom date range.

The Potential Power Usage section of the report can be used to model the impact of changes to power settings. Use the inputs to enter goals in either absolute or percentage terms and then click the *Show* button to display the potential savings. The potential power consumption statistics are computed with current dashboard and calculation override settings and will display in the graphs as dotted blue lines.

t Report						
		Cumu	lative Savings Ove	r Time		
	Enter a start savings calc	t date for 06/27/200	8 📰 Enter savin	an end date for gs calculations: 04/23	7/2009 🔳 🗌	Show percenta <u>c</u>
Onenation	Total Cu	ımulative Savings Ov	er Time	Cumulative	Savings per Compute	r Over Time
		D (1111)	(02 (Ib)	Cost (cont)	Dower (Wh)	CO2 (lb)
Operator	Cost (\$)	Power (KWh)	CO2(ID)	cost (cent)	Fonci (mil)	002 (10)
bigfix	Cost (\$) -35.67	-440.64	-617.14	-315.9	-39,491	-55.29
bigfix	Cost (\$) -35.67 +13.86	-440.64 +186.23	-617.14 +261.61	-315.9 +1,499.8	-39,491 +187,475	-55.29



## **Historical Power State**

The Historical Power State report displays information about your power usage, cost, and  $CO_2$  emissions both per computer and per network total. If you view the graph per computer, you see the average power usage, cost, or  $CO_2$  emissions. If you view the graph as totals, you see the minimum potential/maximum potential, and actual total daily power usage, cost, or  $CO_2$  emissions.

The report also tracks the types of computers on which you manage power (laptop, workstation and/or server). Finally, the report includes a graph showing the percentage of total monitored computers with Power Management-enabled monitors, hard drives, Standby-enabled machines, and the average daily powered-on time.



# Daily Power Statistics Report

The Daily Power Statistics Report generates "per computer" statistics from the *Power Monitoring* Analysis, which is generated by the *Power Tracking Information* dashboard. Navigate to this report by opening Web Reports from the Tools pull down menu. Then click the *Reports* link at the top of the page to see a listing of available Content and Public reports.

BES W	'EB REPORTS ■ Reports   ≌ Create   ● Schedule   ∞ Email   よ Users   ■ Da	tabase	
Favorites *	Report Management 😰		
Recent History *	Content Reports (7 reports found. Displaying reports 1-7) Name	Sitename	Category
Overview     IClear History	[7] Core Protection Module - Health Status Report	Trend Core Protection Module	Core Protection Module
[older r listory]	[2] Core Protection Module - Top 25 Most Recent Spyware	Trend Core Protection Module	Spyware
	Core Protection Module - Top 25 Most Recent Viruses	Trend Core Protection Module	AntiVirus
	Daily Power Statistics by Computer	BES Power Management	Power Management
	[2] Historical Power State	BES Power Management	Power Management
	[2] Power Trend Overview	BES Power Management	Power Management
	[2] Wake on Web	BES Power Management	Power Management

The report displays information two ways – by Computer Type and by Computer.

elect Operator:	bigfix v					(	Print Repo	
		Daily Powe	er Statistics by Co	nputer Type				
Туре	Total Computers	Average On-time	Total Cost	Total CO2	Cost Per Computer	CO2 P	er Computer	
Workstation	1	02:17:00 - 10%	\$0.03	0.443 lb	2.5¢		0.443 lb	
Laptop	0	00:00:00 - 0%	\$0	0.000 lb	0¢		0 Ib	
Server	0	00:00:00 - 0%	0100100 - 0% \$0		0.000 lb 0¢		0 lb	
		Daily Po	ower Statistics by	Computer				
			Daily Statistics		Power Man	agement Si	ettings	
Compute	r Type	Average On-tir	me Cost	02	Monitor S	tandby	Hard Driv	
		Non 02:17:00 - 10		0.443.05				

**Note:** Since this is a "per computer" report, we recommend using filters for large deployments when possible, though we have optimized it to load quickly even on our largest deployments.

# Wake on Web Report

A commonly requested use case for the BigFix On-Demand Wake-on-LAN is to wake computers from a VPN to allow for remote login. Web-based access to On-Demand Wake-on-LAN allows end users to awaken computers without access to the BigFix console. The report also displays whether a machine is BigFix Wake-on-LAN capable.

The Wake on Web Report allows users to send a Wake-on-LAN request to one or more computers. Once you've logged into the Web Reports site, click the *Reports* link at the top of the page and locate the Wake on Web Report from the Content Reports list.

After selecting the Wake on Web Report from the list, you may need to activate the *BES Component Versions* Analysis in the BES Support site, and the *BigFix Wake-on-LAN* Analysis in the BES Power Management site before viewing the report.

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A BES	Console C "BigFix	perator mus Wake-on-L4	t activate tl N Analysis"	he "BES C in the "BE	Component S Power f	t Versions' Manageme	Analysis in t nt" site in or	he "BES Si Jer to use	upport" site, this report.	and the

To activate analyses, return to the Power Tracking Information dashboard and click the *Analyses* tab in the center of your screen. Locate the applicable analyses in the list, right-click to Activate, and enter your Private Key Password. Follow this procedure for all applicable analyses. Then return to the Web Reports site to view the report.

- 📩 All Applicable Analyses (18)			
Analyses (21)     My Analyses (1)     My Analyses (1)     Gotally Hidden Analyses (0)     Globally Hidden Analyses (0)     Non-Master Operator Custom Analyses (0)	Status Not Activated Not Activated Not Activated Not Activated Not Activated Activated Glob Not Activated Not Activated Not Activated Not Activated Not Activated Not Activated	Name           Core Protection Module - Virus/Malware Information           Standby Settings Analysis           Core Protection Module - ActiveUpdate Server Settings           Core Protection Module - ActiveUpdate Server Settings           Core Protection Module - Endpoint Information           Core Protection Module - Spyware/Grayware Informa           BigFix Wale-cont-ANA nalysis           Power Monitoring Analysis           BES Relay Status           BES Relay Status           BES Relay Cache Informatii           BES Relay Cache Informatii           Globally Hilde           Globally Unhide	Site Trend Core Protection Module ESS Power Management Trend Core Protection Module Trend Core Protection Module Trend Core Protection Module ESS Power Management Master Operator Site ESS Support ES
et Messages Tasks Baselines Actions Computers	Computer Groups	Analyses Console Operation Locally Hide Locally Unhide	

Part Four



## FAQs

# How realistic are the power savings calculations? Are they estimates, or do the figures come from actual monitoring of devices?

Our calculations are based on actual usage as well as your organization's maximum potential and minimum potential usage scenarios.

Can I see how my power management efforts are affecting my CO<sub>2</sub> emissions?

Yes. The BigFix Power Management visual power spectrum provides data on the projected CO<sub>2</sub> savings from your power management efforts. You can select either kilowatt hours or CO<sub>2</sub> savings.

#### What is the methodology used in calculating carbon savings?

BigFix carbon estimates are based on the results of research studies that have determined the average carbon emissions needed to generate a kilowatt-hour of power. More information can be found on the DOE <u>Energy Information Administration</u> website.

# Are carbon savings findings robust enough to be used for external trading and regulatory reporting uses?

BigFix Power Management uses carbon estimates from the US Department of Energy for the average amount of  $CO_2$  released per kilowatt-hour. Carbon emissions per kilowatt-hour will vary per region and per power source. Check with your regulatory agency for more information about power compliance rules.

#### What if power settings are accidentally set on my servers and it causes a problem?

Typically power settings are set on endpoint computers rather than servers. If power settings are set on a server, the administrator has the ability to correct the issue within a matter of minutes.

Can I get a centralized view and control of my power management efforts?

Yes. You can centrally manage (control and report) up to 250,000 endpoints with a single BigFix Server. You can also view your deployment through the Web Reports feature. Centralized reporting at larger scale is fully supported with multiple BigFix servers.

# On what platforms can I use the BigFix Power Management solution to manage power settings?

Microsoft Windows 2000, XP, 2003 Server, Vista, as well as Macintosh.

Does BigFix Power Management support multi-site, cross-domain deployment?

The BigFix platform provides various features for multi-site, cross domain deployment, including active directory and other DNS capabilities, allowing for geographic as well as logical distribution.

Can I set different power schemes for different groups of computers?

Yes. You can easily apply different power schemes to a wide variety of different groups of computers (including ad hoc schemes), enabling you to target specific settings for specific groups (help desk workstations vs. mobile laptops).

Does BigFix Power Management include Wake-on-LAN capabilities?

Yes. BigFix Power Management includes the ability to power-on computers using Wake-on-LAN. In addition, it can also force standby, wake from standby, force hibernation, wake from hibernation, and save applications before suspending.

Does BigFix Power Management provide the ability to remotely restart and shut down a number of computers?

Yes. BigFix Power Management provides administrators with the ability to schedule remote restarts and shut downs for groups of computers with just a few clicks.

How can I change the information about the cost of power or the default workday?

Through the Power Tracking Information dashboard. After the information is changed, the power consumption statistics and cost figures will update immediately.

### Technical 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 <u>Documentation</u> page:
- Next, search the BigFix <u>Knowledge Base</u> 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, **<u>contact</u>** BigFix's support team for technical assistance:

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