



FARONICS
POWERSAVERMAC™

User Guide

AUTOMATED Energy Conservation

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About Faronics

Faronics delivers innovative solutions that help manage, simplify, and secure complex IT environments. Our products ensure 100% workstation availability, and have dramatically impacted the day-to-day lives of thousands of information technology professionals. Fueled by a market-centric focus, Faronics' technology innovations benefit educational institutions, healthcare facilities, libraries, government organizations and corporations.

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Contents

Power Save Mac Overview	7
About Power Save Mac	7
About the Power Save Report Generator	7
About Apple Remote Desktop (ARD)	7
Command Line Control Capability	7
System Requirements	7
Installing Power Save Mac	8
Installing Using a Customized Power Save Mac Installer	8
Installing Using the Basic Power Save Mac Installer	8
Licensing	8
Installing via Apple Remote Desktop	8
Installing Over Previous Versions	8
Uninstalling Power Save Mac	8
Using the Power Save Mac Preference Pane	9
Creating a User	9
Editing User Properties	10
Enabling or Disabling Power Save	10
Inactivity Tab	10
Inactivity Definitions Tab	11
Schedule Tab	12
Creating or Modifying a Scheduled Action	12
Deleting a Scheduled Action	13
Shutdown Options Tab	13
Reports Tab	14
Deep Freeze Tab	16
Appendix I: Power Save Mac Assistant & Customizing the Installer	17
Appendix II: Apple Remote Desktop Integration Tasks	21
Adding Targeted Computers to the Task List	27
ARD Sample Output	28
Sample Command Line Script	28
Appendix III: Power Save Report Generator	29
Configuring Power Save Report Generator	29
Configuring Report Generator on Workstations	32
Generating a Report	33
Creating Groups	34

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Power Save Mac Overview

About Power Save Mac

Power Save Mac uses intelligent energy management to ensure workstations are available when system resources are required, while conserving power during productivity downtimes. Power Save Mac provides organizations with real financial and energy savings on every computer deployed, as well as seamless integration with Apple Remote Desktop.

About the Power Save Report Generator

The Power Save Report Generator allows users to create customized energy savings reports based on the configuration of one or more machines. The Power Save Report Generator calculates savings based on native power consumption events (restart, shutdown, etc.) as well as events executed through Power Save. This means that Power Save may be disabled but still continue to calculate savings. For information on how to use the report generator, see [Appendix III](#).

About Apple Remote Desktop (ARD)

Apple Remote Desktop is Apple Computer's complete desktop management solution for macOS. Faronics does not provide sales or technical support information for Apple Remote Desktop. More information regarding ARD can be found at <http://www.apple.com/remotedesktop>.

Command Line Control Capability

Tasks referred to in [Appendix II](#) for use with ARD can also be used in other third-party command line control programs.

System Requirements

Power Save Mac requires Intel-based macOS v10.9, 10.10, 10.11, 10.12 or 10.13.

ARD integration requires Apple Remote Desktop version 3.2 or later.

Installing Power Save Mac

Installation and configuration of Power Save Mac requires administrative access.

Power Save Mac is distributed on a CD-ROM in a media package, or as a downloadable file via the Internet.

Installing Using a Customized Power Save Mac Installer

A customized Power Save Mac Installer can be created using the Power Save Mac Assistant. Refer to [Appendix I](#) for more information.



Gatekeeper is a security feature in OS X Mountain Lion that can be configured in the System Preferences. Since the Power Save Mac custom installation package is not digitally signed by Faronics, it may be blocked by Gatekeeper. To override Gatekeeper, use control-click to open the Power Save Mac custom installation package.

Installing Using the Basic Power Save Mac Installer

To install Power Save Mac on a single computer, complete the following steps:

1. Double-click the file *Power Save.pkg* to begin the installation process. (Depending on the configuration, the file extension may not be visible.)
2. Follow the steps presented, and read and accept the license agreement.
3. Click *Install* and Power Save Mac is installed on the computer as a preference pane accessible in System Preferences. The computer requires a restart to complete the installation.

Installing via Apple Remote Desktop

Power Save Mac is distributed as a standard installation package file and can therefore be installed over a network using Apple Remote Desktop's *Install Packages* command. Refer to the Apple Remote Desktop user guide for more information. Refer to [Appendix II](#) for more information about controlling Power Save over a network using Apple Remote Desktop.

Installing Over Previous Versions

It is recommended that previous versions of Power Save Mac be uninstalled before installing a newer version, though this is not necessary.

Uninstalling Power Save Mac

To uninstall Power Save Mac, click the *Action* icon and select *Uninstall* from the action menu.

Follow the steps presented; a restart is required to complete the uninstall process.




If Power Save Mac is installed on a machine with Deep Freeze, the machine must be in a Thawed state for the uninstall to be successful.

Using the Power Save Mac Preference Pane

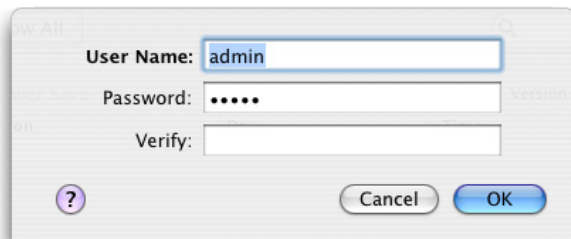
To open the Power Save Mac preference pane, open *System Preferences* and click the Power Save icon listed under *Other*, as shown:



The first time Power Save Mac is run, the *Inactivity* tab appears. To perform any action in Power Save Mac, click the lock icon  to unlock the preference pane. When the changes are complete, click the icon again to lock the screen and prevent any other changes.

Creating a User

When the lock is clicked for the first time, the following dialog appears:



Enter a *User Name* and *Password*, confirm the password and click *OK*.

Licensing

To specify a License Key, click the *Action* icon and select *Enter License*. Enter the *License Key* in the *License* dialog. If no License Key is specified, Power Save will expire in 30 days.

Editing User Properties

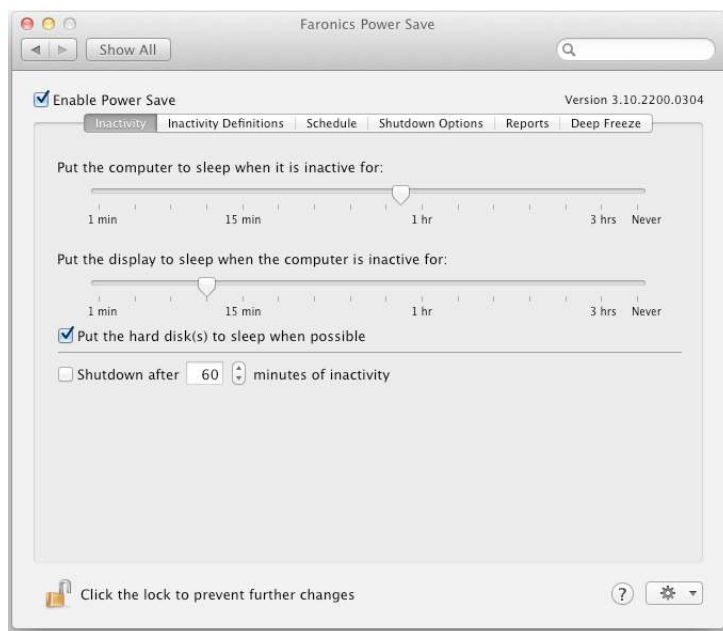
To edit the properties of a user after they have been set, click the *Action* icon in the main screen and select *Edit User* from the action menu. Enter the new User Name and/or Password and click OK.

Enabling or Disabling Power Save

Check *Enable Power Save* in the header of any tab to enable Power Save's functionality. Uncheck *Enable Power Save* to disable Power Save.

Inactivity Tab

The *Inactivity* tab is used to configure what action (sleep or shutdown) will occur for what length of time when a workstation becomes inactive, and appears as follows:



To manage energy used by the computer's CPU, and put the computer into Sleep mode when inactive, use the appropriate slider bar and adjust the number of minutes to initiate the *Sleep* function.

To manage energy used by the computer's display, and put the display into Sleep mode when the computer is inactive, use the appropriate slider bar and adjust the number of minutes to initiate the *Display Sleep* function.

To manage energy used by the computer's hard disk, check the *Put the hard disk(s) to sleep when possible* checkbox.

To save energy used by the computer's CPU, and shut the computer down when inactive, check the *Shut down after xx minutes of inactivity* checkbox and use the spin box to choose the number of minutes for this action to occur. The *Put the computer to sleep when it is inactive for* option is set to *Never* (disabled) if this option is selected.



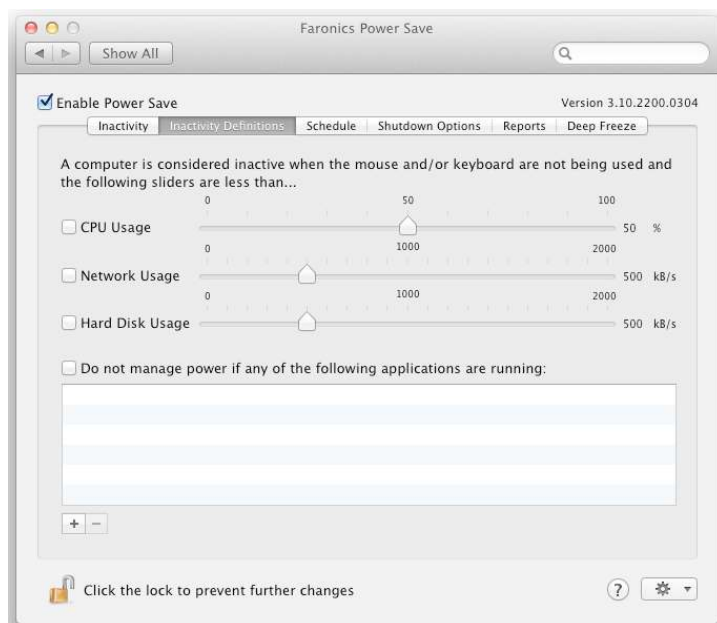
The user can always cancel any action by moving the mouse or using the keyboard.

Inactivity Definitions Tab

The *Inactivity Definitions* tab is used to define when a workstation is inactive.

The basic definition that Power Save uses to define inactivity is stated at the top of the tab: *the mouse and/or keyboard are not being used*. The other options are in addition to this definition.

By default, the four configurable options are not selected (unless pre-set via the Power Save Assistant). If no configuration is done to this tab, the only element of inactivity will be keyboard and mouse movement.



To include CPU activity in the inactivity definition, select *CPU Usage* and use the slider bar to configure the percentage of CPU usage which defines inactivity.



To include network activity in the inactivity definition, select *Network Usage* and use the slider bar to configure the amount of network traffic (in kB/s) which defines inactivity.

To include hard disk activity in the inactivity definition, select *Hard Drive Usage* and use the slider bar to configure the amount of hard disk traffic (in kB/s) which defines inactivity.



For all of the above inactivity definitions, the program will check for activity every 30 seconds to determine if the utilization is below the designated amount.

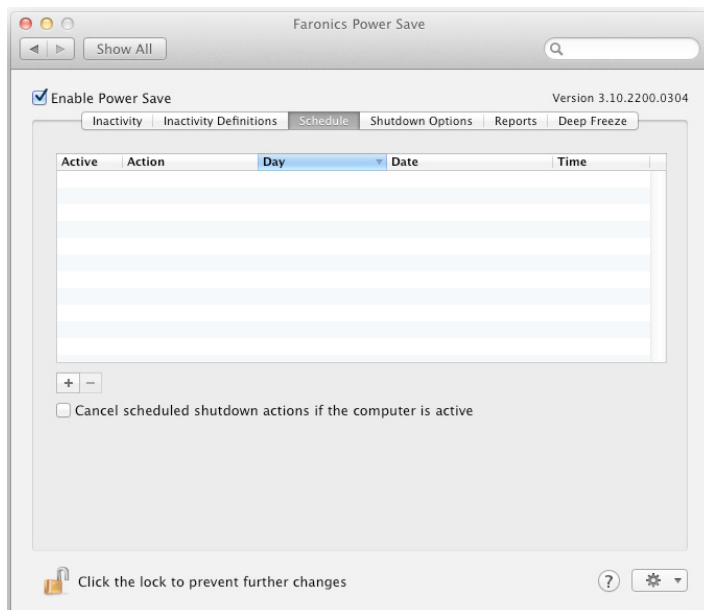
To include the activity of running applications in the inactivity definitions, select *Do not manage power if any of the following applications are running*. If any of the applications which are added to this list are running, the computer is considered active and shutdown/sleep actions will not occur.

To add an individual application to the list, click the  icon, browse to the location of the desired program, and click *Choose* or drag and drop the program into the list. The application is then added to the list. To remove an application from the list, select it and click the  icon.

Power Save will continue to manage monitor power when CPU Usage, Network Usage or the Hard Disk Usage is above the threshold set in the Inactivity Definitions tab.

Schedule Tab


The *Schedule* tab is used to customize scheduled energy management tasks. All scheduled actions appear in the scheduled action window as shown below:

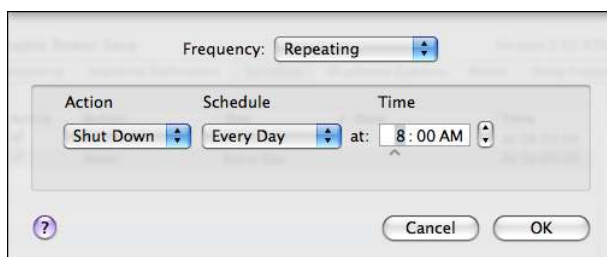


Clear the corresponding checkbox under the *Active* column to render any scheduled shutdown action inactive.

Select *Cancel scheduled shutdown actions if the computer is active* to prevent scheduled actions from occurring if the computer is active (in accordance with the designated Inactivity Definitions). This option is selected by default.

Creating or Modifying a Scheduled Action

To add a scheduled action, click the  icon and choose the type of action required. The following configuration screen appears:



From the *Frequency* drop-down menu, select if this action will repeat or is a one-time only action. For *Repeating* actions, choose from the available options:

Item	Options
Action	Choose from the following action items: <i>Start Up</i> , <i>Shut Down</i> , <i>Wake</i> , or <i>Sleep</i>
Schedule	Choose from the following schedule: <i>Every Day</i> , <i>Weekdays</i> , <i>Weekends</i> , or a single specified day of the week

<i>Time</i>	Choose a specific time of day for the action to occur
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For *Once* actions, choose from the available options:


Item	Options
<i>Action</i>	Choose from the following action items: <i>Start Up</i> , <i>Shut Down</i> , <i>Wake</i> , or <i>Sleep</i>
<i>Date</i>	Enter a date and time at which the action will occur

Once the action has been configured, click **OK** to save the action and return to the *Schedule* tab.

Click *Cancel* at any time to cancel adding or modifying the action and return to the *Schedule* tab.

To modify an existing action, double-click it in the list.

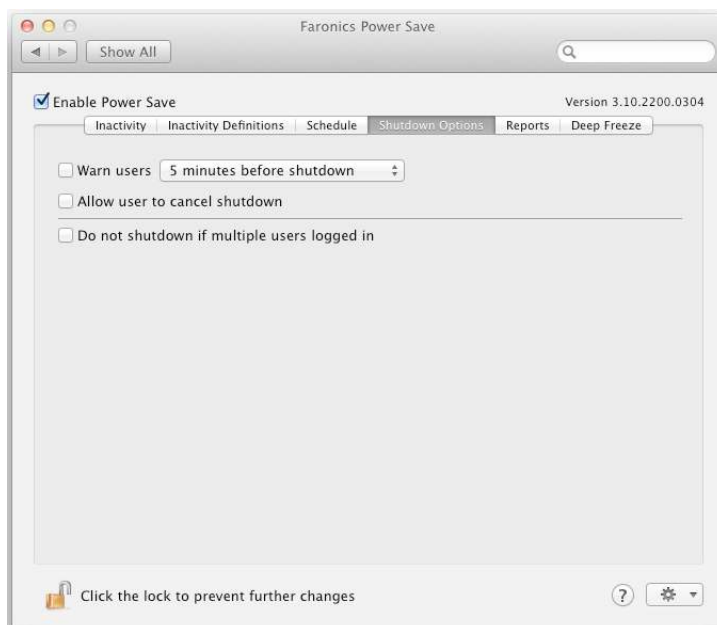
Deleting a Scheduled Action

To delete a scheduled action, select the action in the list and click the  icon. Multiple actions can be selected by command-clicking the desired actions or shift-clicking a continuous group of actions.

A dialog appears confirming that the selected actions are to be deleted. Click *Delete* to permanently remove the action, or click *Cancel* to return to the *Schedule* tab.

Shutdown Options Tab

The *Shutdown Options* tab is used to customize various options that affect shutdown.



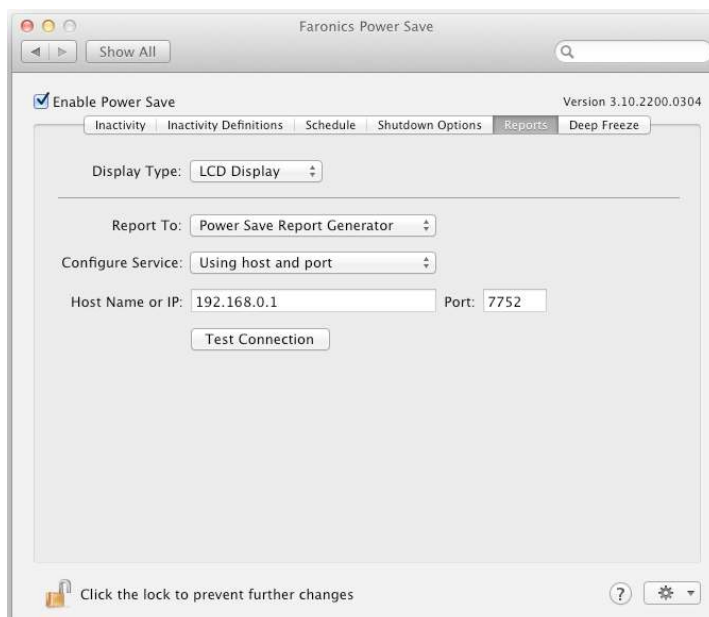
To warn users before a pending shutdown, select the *Warn users* checkbox and choose to have the warning appear either 5, 10, or 15 minutes before shutdown.

To allow users to cancel pending shutdowns, select the *Allow user to cancel shutdown* checkbox.

To automatically cancel shutdowns if multiple users are logged into a computer, select the *Do not shutdown if multiple users logged in* checkbox.

Reports Tab

The *Reports* tab allows configuring various parameters required to generate reports.



The following fields are available in the *Report* tab:

Report to

Select the application to which Power Save sends the workstation events. The following options are available:

- Do not report events - select this option if you do not want Power Save to report workstation events.
- Faronics Core
- Power Save Report Generator

For example, if you want Power Save to report to Faronics Core, select *Faronics Core* in the *Report to* drop-down.

Configure Service

Select the communication protocol. The following options are available:

- Using host and port - this is the only option available if *Faronics Core* is selected in *Report to* drop-down.
- Using Bonjour service name

For example, if you want Power Save to report to Power Save Report Generator, you can select *Using host and port* in the *Configure Service* drop-down.

Host Name or IP

Specify the Host Name or IP address of the computer where the Power Save Report Generator or Faronics Core is installed.

Port

Specify the *Port* of the computer where the Power Save Report Generator or Faronics Core is installed. Click *Test Connection* to test the connectivity between Power Save Mac and the computer where the Power Save Report Generator is installed.



If Faronics Core is selected, specify the Port number as 7752. The Port number for Report Generator must be between 1024 and 65535.

Service Name

Specify the *Service Name*. This field is displayed only if *Using Bonjour service name* is selected in the *Configure Service* field.

Generating Power Save Reports via Faronics Core

If Power Save Mac is configured to report to Faronics Core, Power Save Reports for Power Save Mac can be generated via Faronics Core in Windows. The Power Save Loadin must be installed prior to generating Power Save Reports in Windows. The Power Save Loadin now provides predefined Energy Consumption profiles that can be used to generate reports.

For more information on how to generate Power Save Reports via Faronics Core, refer to Power Save User Guide available at <http://www.faronics.com/library>.



Power Save Mac reports to Faronics Core only if the Enable Power Save check box is selected.

Dynamic Custom Workstation Groups in Faronics Core

In a scenario where you have multiple managed workstations, Faronics Core provides a feature to create Dynamic Custom Workstation Groups. This feature allows you to create workstation groups and dynamically update the workstation list based on predefined parameters. Dynamic Custom Workstation Groups can be created based on Mac workstations in your organization.

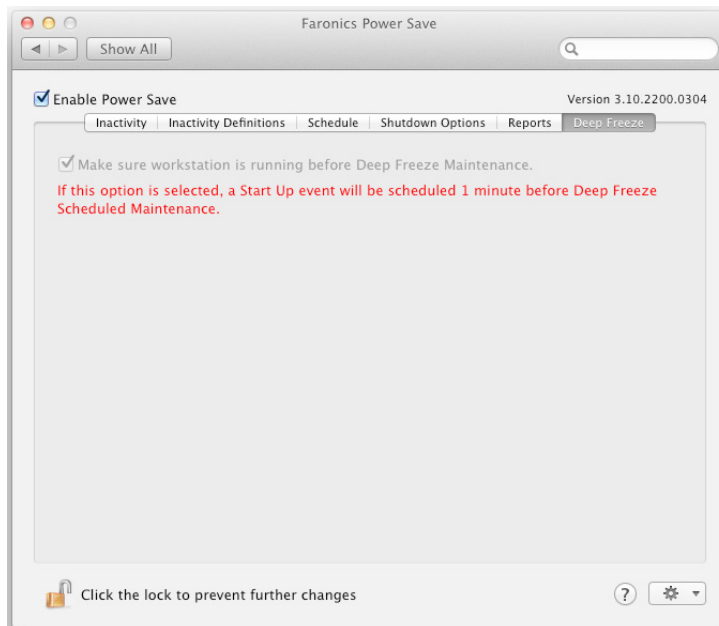
For more information on Dynamic Custom Workstation Groups, refer to the Faronics Core User Guide available at <http://www.faronics.com/library>.

Deep Freeze Tab

The *Deep Freeze* tab is used to ensure compatibility with Deep Freeze Maintenance Periods. If Power Save Mac is installed on a computer which is also running Deep Freeze, Power Save will automatically inform the user if configurations changes are attempted while the computer is Frozen.

The possibility also exists that Power Save may shutdown a machine prior to a Deep Freeze scheduled Maintenance Period.

To ensure that these Maintenance Periods run as scheduled, Power Save is able to detect the time of the Deep Freeze Maintenance Period and will automatically schedule a start-up action one minute prior to its occurrence.



If Deep Freeze is installed and is configured with a scheduled Maintenance Period, select the *Make sure workstation is running before Deep Freeze Maintenance* checkbox.

If Deep Freeze is not installed, the check box will be grayed out. If Deep Freeze has been installed and a Deep Freeze maintenance schedule is not configured, this option can be left unselected.

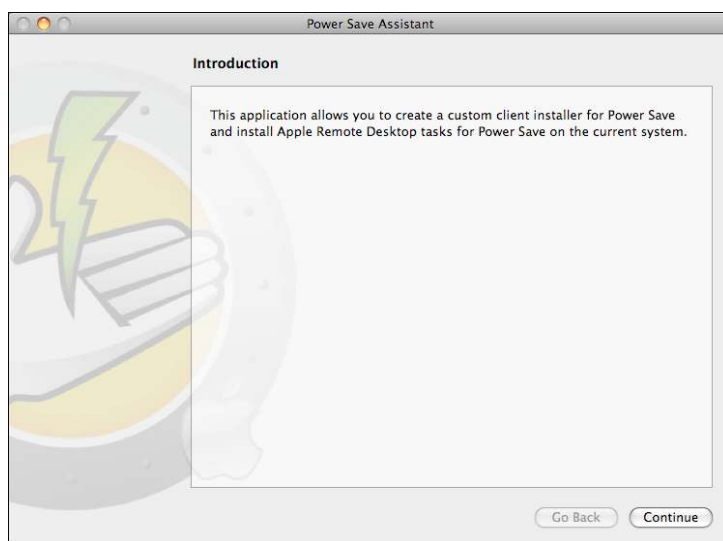
Appendix I: Power Save Mac Assistant & Customizing the Installer

Power Save Mac Assistant can be used to create customized Power Save Mac installation packages and allows for the creation of global settings for multiple workstation environments.

Power Save Mac Assistant can also directly install Power Save Mac specific Saved Tasks into the Apple Remote Desktop (ARD) console on the current system. ARD tasks are not part of the customized Power Save Mac installation package. Neither ARD nor the ARD agent can be running in order for the task installation to be successful.

To run Power Save Mac Assistant, complete the following steps:

1. Double-click the program icon to open Power Save Assistant. The *Introduction* screen appears:



2. Click *Continue*. The *Power Save Tasks* screen appears:

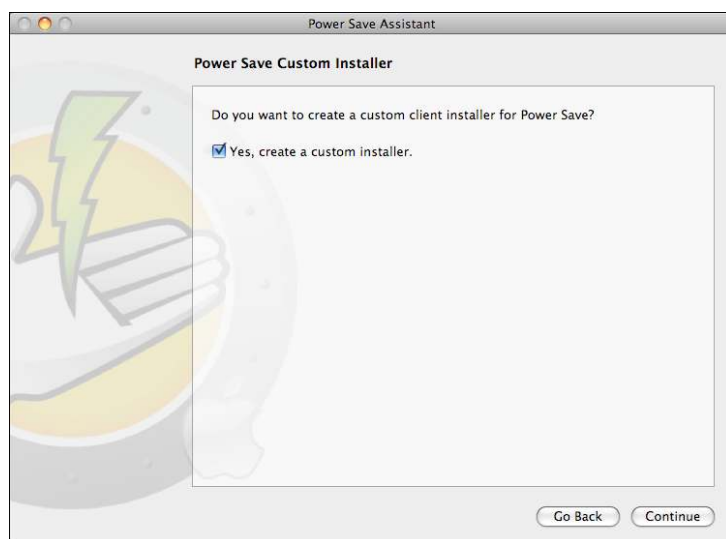




If ARD tasks were installed with a previous version of Power Save Mac, these tasks must be deleted prior to installing the tasks for the current version; previous tasks are not overwritten.

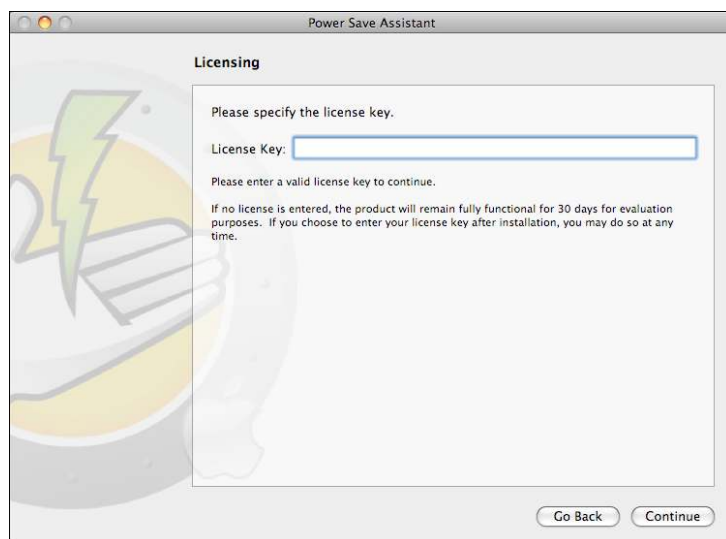
3. Select the box marked *Yes, Install Tasks* to install the Power Save Mac specific tasks into ARD on the current machine. A dialog may appear, stating that ARD or the ARD agent is currently running and giving the option to quit ARD immediately or at a later time. The Power Save tasks will only be installed if ARD is not running. Choose the preferred action, and click *Continue*.

The *Power Save Mac Custom Installer* screen appears:



To create a custom client installer, select *Yes, create a custom installer* and click *Continue*.

4. The *Licensing* screen appears:



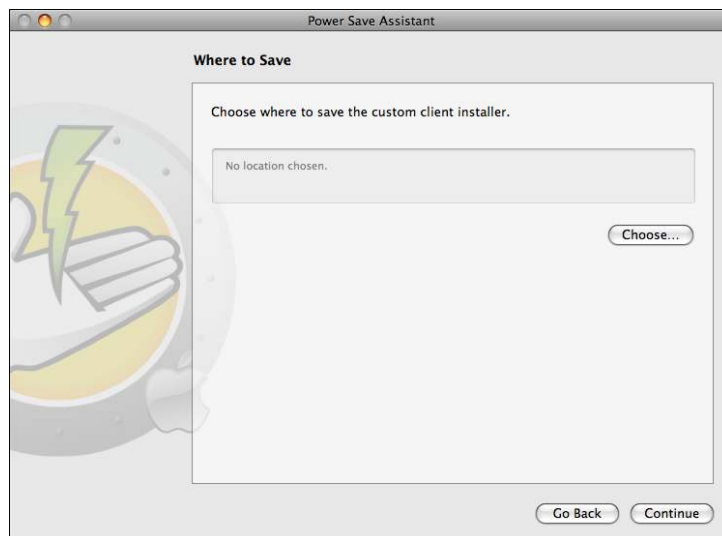
Specify the *License Key*. If no License Key is specified, Power Save is installed in Evaluation mode. The Evaluation mode will expire in 30 days. Click *Continue*.

5. Enter the *User Name* and *Password* of the Power Save Administrator to be created by the custom installer and used by Power Save Mac's Apple Remote Desktop tasks. Retype the password to verify it and click *Continue*.
6. The remaining screens provide options to pre-configure all settings for the [Inactivity](#), [Inactivity Definitions](#), [Schedule](#), [Shutdown Options](#), [Reports](#) and [Deep Freeze](#) tabs. Refer to those respective sections in this user guide for more information.
7. Once Configuration is complete, the *Choose Power Save Mac Installer* screen appears:



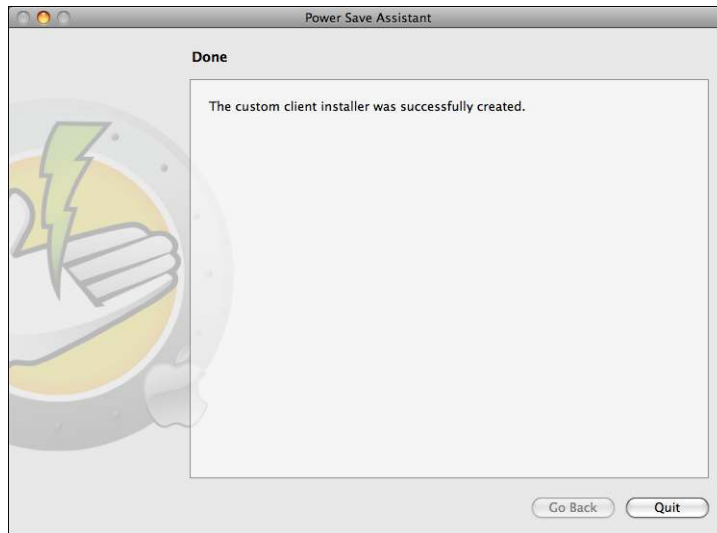
8. Click *Choose* and browse to the location of the Power Save Mac installer package (*Power Save.pkg*) located in the Power Save Mac folder. Alternatively, drag and drop the package file into the *Choose* dialog screen.

Click *Continue*. The *Where to Save* screen appears.



9. Click *Choose*. A standard *Save* dialog appears. Browse to a location to save the custom client installer and select it. Alternatively, drag and drop the preferred *Save* location into the *Choose* dialog screen. Click *Continue*.

The final screen appears, stating that the custom client installer was successfully created and that the Power Save Mac tasks were installed into ARD.

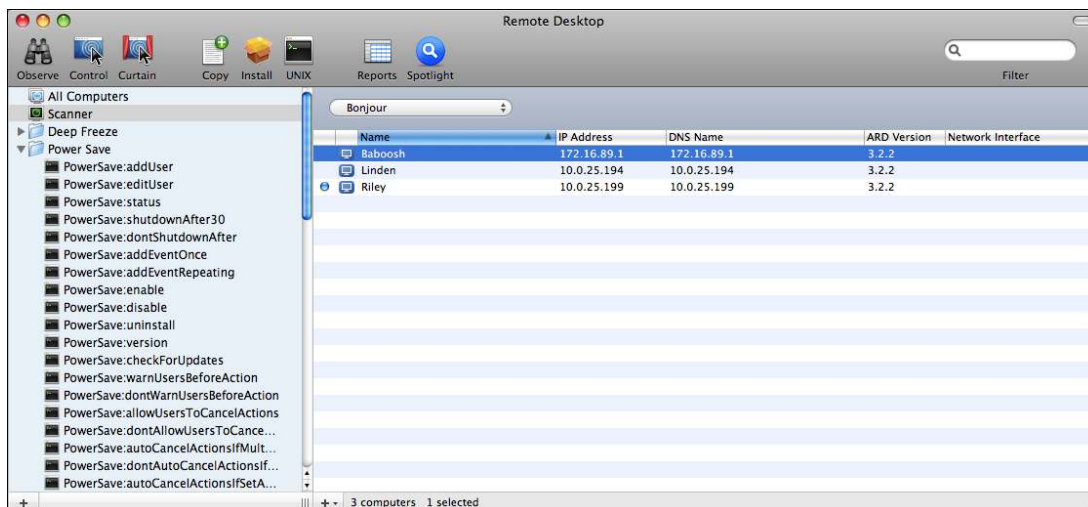


10. Click *Quit* to close the Power Save Mac Assistant.

The custom installation package can now be deployed to a single computer or group of computers either locally or remotely.

Appendix II: Apple Remote Desktop Integration Tasks

Power Save Mac Assistant can install *Saved Tasks* for use with Apple Remote Desktop. These tasks can be used as supplied or as a starting point for controlling Power Save Mac with ARD.



The functions of each task are described below. Each task can be configured in the Power Save Mac preference pane, except for *status*. The *status* command returns the same settings in the Power Save GUI.

Task	Argument	Function
addAppToList	<application_name>	Adds a new application to the auto-cancel list under Inactivity Definitions on the target computer(s)
addEvent (once)	(Argument 1) shutdown startup sleep wake (Argument 2) once (Argument 3) YYYY-MM-DD (Argument 4) HH:MM	Adds a one-time event on a specified date

addEvent (repeating)	(Argument 1) shutdown startup sleep wake (Argument 2) repeating (Argument 3) Everyday Weekdays We ekends Monday Tuesda y Wednesday Thursday Friday Saturday Su nday (Argument 4) HH:MM	Adds an event that repeats on a specified basis
NEWUSER NOPASSWORD addUser	(Argument 1) <new_user> (Argument 2) <new_password>	Creates a Power Save administrator on the target computer(s)
allowUsersToCancelActions		Allows user to cancel an impending shutdown on the target computer(s)
autoCancelActionsIfMultipleUsers		Automatically cancels an impending shutdown if multiple users are logged into the target computer(s)
autoCancelActionsIfSetAppsOpen		Automatically cancels an impending action if specific applications have been designated on the target computer(s)
cancelScheduledEventsIfComputerActive		Automatically cancels an impending scheduled action if the target computer(s) is active (as set in Inactivity Definitions)
checkForUpdates		Checks whether the present version of Power Save on the target computer(s) is the most current
CPUAutoCancelIfAboveThreshold	0 <percent>	Automatically cancels an impending action if CPU activity is above the designated level on the target computer(s)
CPUSleep	<minutes>	Automatically puts the target computer(s) to sleep after the designated amount of minutes

disable		Disables Power Save on target computer(s)
displaySleep	<minutes>	Automatically puts the computer display on the target computer(s) to sleep after the designated amount of minutes
dontAllowUsersToCancelActions		Users cannot cancel an impending shutdown on the target computer(s)
dontAutoCancelActionsIfMultipleUsers		Allows shutdowns to occur if multiple users are logged into the target computer(s)
dontAutoCancelActionsIfSetAppsOpen		Allows an impending action to occur even if specific applications have been designated on the target computer(s)
dontCancelScheduledEventsIfComputerActive		Allows an impending scheduled action to occur even if the target computer(s) is active (as set in Inactivity Definitions)
dontHDAutoCancelIfAboveThreshold		Allows an impending action to occur even if hard disk activity is above the designated level on the target computer(s)
dontCPUAutoCancelIfAboveThreshold		Allows an impending action to occur even if CPU activity is above the designated level on the target computer(s)
dontHDAutoCancelIfAboveThreshold		Allows an impending action to occur even if hard disk activity is above the designated level on the target computer(s)
dontHDSleepIfPossible		Turns off automatic hard disk sleep on the target computer(s)
dontNetworkAutoCancelIfAboveThreshold		Allows an impending action to occur even if network activity is above the designated level on the target computer(s)
dontShutdownAfter		Turns off inactivity shutdowns on target computer(s)
dontWarnUsersBeforeAction		Turns off user warnings before impending shutdown actions on the target computer(s)

editUser	(Argument 1) <old_user> (Argument 2) <new_user> (Argument 3) <new_password>	Makes changes to a Power Save administrator's username and password on the target computer(s)
enable		Enables Power Save on target computer(s)
getDisplayType		Lists the display type for a workstation. Legal values are: <i>Built-in</i> , <i>CRT</i> , <i>LCD</i> , and <i>None</i>
getLicenseInfo		Displays the License information.
getReportingService		Displays the Reporting service name, IP, and Port.
help		Displays the help.
HDAutoCancelIfAboveThreshold	0 <kB/s>	Automatically cancels an impending action if hard disk activity is above the designated level on the target computer(s)
HDSleepIfPossible		Automatically puts the hard disk on the target computer(s) to sleep when possible
networkAutoCancelIfAboveThreshold	0 <kB/s>	Automatically cancels an impending action if network activity is above the designated level on the target computer(s)
removeAppFromList	<application_name>	Removes a designated application from the auto-cancel list on the target computer(s)
removeEvent (once)	(Argument 1) shutdown startup sleep wake (Argument 2) once (Argument 3) YYYY-MM-DD (Argument 4) HH:MM	Removes a designated Power Save event on the target computer(s)

removeEvent (repeating)	(Argument 1) shutdown startup sleep wake (Argument 2) repeating (Argument 3) Everyday Weekdays Weekends Monday Tuesday Wednesday Thursday Friday Saturday Sunday (Argument 4) HH:MM	Removes a designated Power Save event on the target computer(s)
setDisplayType	Built-In LCD CRT None	Sets the workstation display type. Legal values are: <i>Built-in, LCD, CRT, and None</i>
setLicenseKey	<license_key>	Sets the License Key.
setReportingService	(Argument 1) FCC RG (Argument 2) host <hostname_or_ip> (Argument 3) port <port>	Sets the reporting service to Faronics Core or Report Generator. The Hostname, IP address and Port numbers can be set with additional arguments. These arguments are applicable when Faronics Core or the Report Generator is selected with Hostname or IP address.
setReportingService	(Argument 1) RG (Argument 2) name <service_name>	Sets the reporting service to Report Generator. The Hostname, IP address and Port numbers can be set with additional arguments. These arguments are applicable when the Report Generator is selected with the Bonjour Service.
setReportingService	None	To stop reporting events in Power Save.
shutdownAfter	<minutes>	Shuts down target computer(s) after 30 minutes of inactivity (this value is customizable)
status		Requests target computer(s) to display the status of various Power Save settings on the target computer(s)
uninstall		Uninstalls Power Save on the target computer(s)

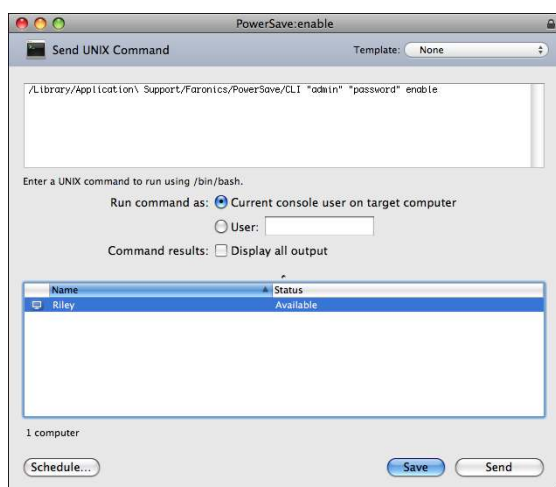
version		Requests Power Save version number on the target computer(s)
warnUsersBeforeAction	<minutes>	Warns users a designated amount of time before impending actions are to occur on the target computer(s)

Adding Targeted Computers to the Task List

In order to run a task, there must be computers targeted to run the task. To add one or more computers to be targeted to run the task, complete the following steps:

1. In the left column, double-click the task to be targeted to the specified computers.
2. The *Task Edit* window appears. At the bottom of the window is a dialog listing the designated computers assigned to the task. Before a computer is added to the list, it reads *No Computers*.
3. Drag and drop the preferred workstations or group of workstations into the dialog from the computers in the *All Computers* list. The number of computers assigned to a specific task appears at the bottom of the window.
4. Click *Save*.

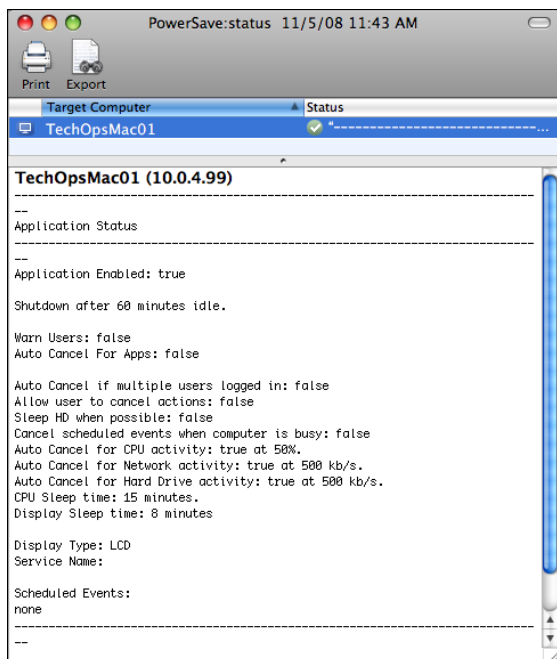
The following figure shows the *enable* task set to run:



Each task must be edited to use a Power Save administrator's user name and password for the target computer(s). In the above example, *admin* is the Power Save user name and *admin* is the Power Save password. The name and password may already be present in the task, depending on the settings that were specified in Power Save Assistant.

ARD Sample Output

The following figure shows the sample output from the `status` function. The *Display all output* checkbox must be selected in the Apple Remote Desktop Edit Task window in order to show the target's status.



Sample Command Line Script

The Power Save Mac tasks give network administrators increased flexibility when managing energy usage on Power Save Mac workstations. These tasks can be run with several different third-party enterprise management tools and/or central management solutions; this includes executing commands in *Terminal* while connected to a remote workstation via SSH.

A sample script using the `shutdownAfter30` command is shown below:

```
Library/Application\ Support\Faronics/PowerSave/CLI administrator password
shutdownAfter 30
```

In this example, `administrator` is the name of a valid Power Save Mac user and `password` is that user's password; the number 30 is customizable to the preferred length of time. The sample script can be modified to run any task listed in the *Task* table.

Appendix III: Power Save Report Generator

The Power Save Mac Report Generator can be used to generate energy savings reports based on workstation events reported to the console. These events include:

- Sleep
- Wake
- Power On
- Power Off
- Display Sleep
- Display Wake

The Power Save Report Generator is able to track and report on the operating system's power management events when Power Save has been disabled. This serves to create a baseline report that displays the energy savings achieved via the operating system's current power management settings.

Generating a report when Power Save is enabled displays the energy and financial savings achieved by enabling Power Save on the workstation.

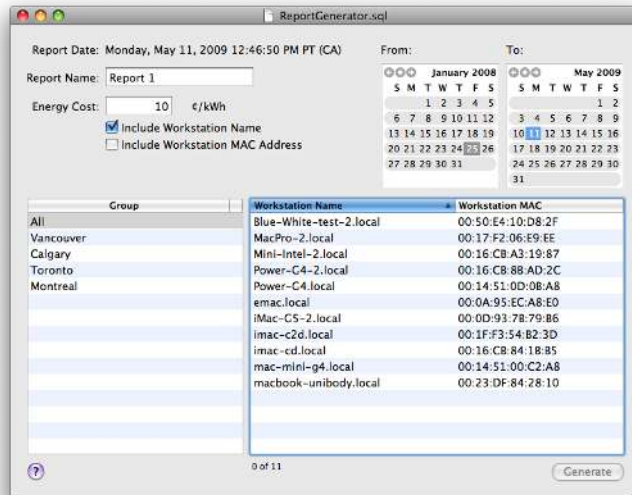
A comparison of the two reports reveals the additional financial and energy savings that Power Save is able to provide. The report lists all workstations reporting to the server machine and calculates savings with the user- entered power cost. These reports can be saved as both text and HTML files.

Events will not be recorded by Power Save if the computer is asleep or powered off.

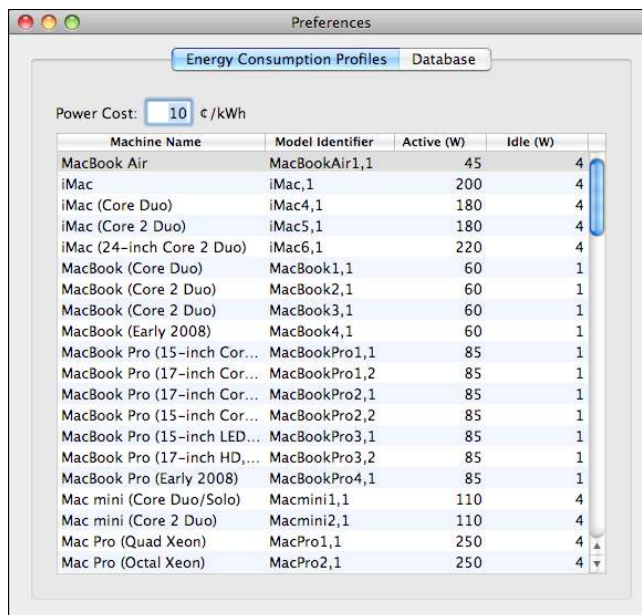
Configuring Power Save Report Generator

To set up the Power Save report generator, complete the following steps:

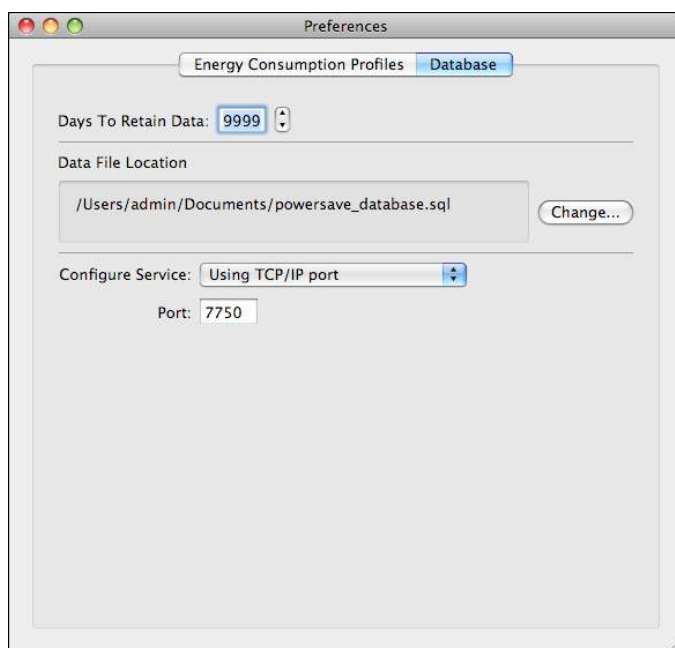
1. Double click on the Power Save Report Generator installer. Following installation a restart is not required.
2. Double click the program icon to open the Power Save Report Generator found in */Applications/Faronics/Report Generator*.
3. The first time the Power Save Report Generator is accessed, the user is prompted to specify the name and location of the data file. These settings can be changed later by opening the Power Save Report Generator menu and clicking on *Preferences > Database*. Authenticate by clicking the *Lock* icon before making changes. They can also be changed by importing another database file.



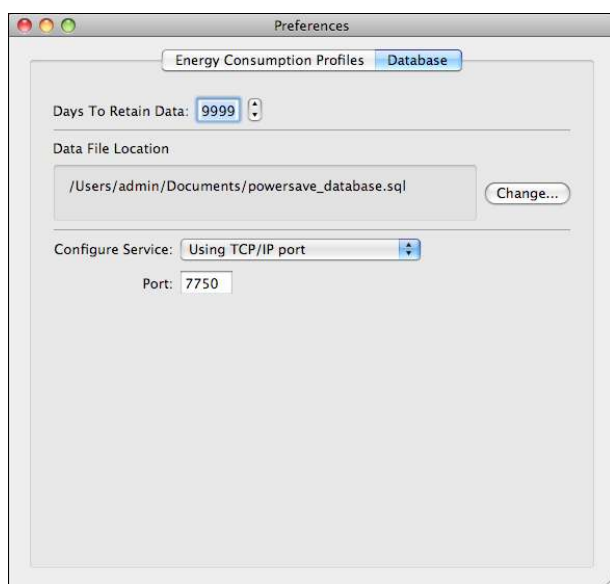
Use the *Preferences* window to specify the default power cost. This value appears as the default in the Power Save Report Generator main window and can be changed for each individual report.



The Energy Consumption Profile tab lists the power consumption of all Mac computers.



4. Specify the computer name in the *Database* tab.
5. The number of events retained for inclusion in a report can also be customized through the Power Save Report Generator *Preferences* pane. Specify the number of days to retain data. Events older than the listed number of days are removed after a restart and every 24 hours afterwards. Select the communication protocol or the service from the Configure Service drop-down. Select Using TCP/IP port or Using Bonjour Service. The Port numbers for the Report Generator must be between 1024 and 65535. Select *Do not receive events* if you do not want the Report Generator to receive Power Save events.



6. Restart the machine.

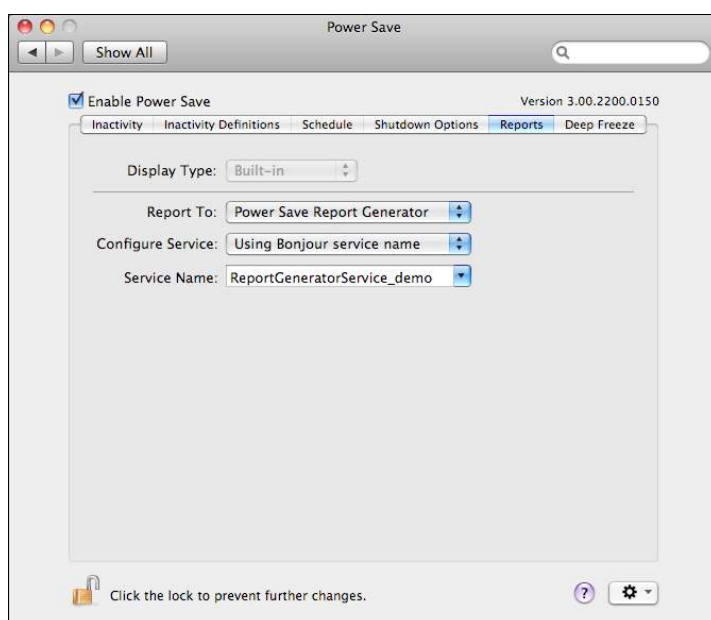


If the service name or the port number is changed in the Report Generator Preferences tab, the new name must be specified locally on each workstation through the Power Save Reports tab. It is not automatically updated.

Configuring Report Generator on Workstations

To set the Power Save configuration on a workstation that sends events, complete the following steps:

1. Open the workstation's *System Preferences* pane followed by *Power Save*.
2. Click on the *Reports* tab.
3. Specify the workstation display type and the name of the service to which it reports. If the display is built-in it will be detected automatically by Power Save.



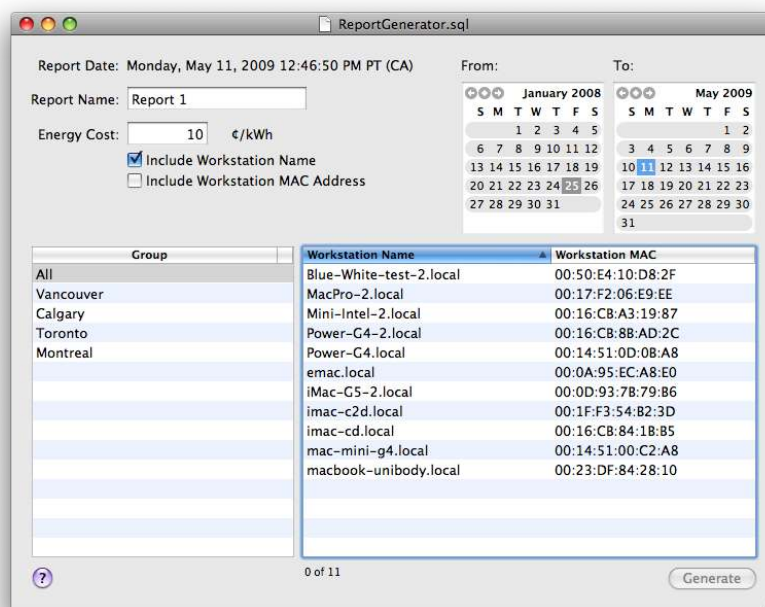
4. Exit the *Preferences* pane. A restart is not required.

Generating a Report

Once both the Power Save Report Generator system and workstation(s) have been configured, reports can be generated. To generate a report, complete the following steps:

1. Double-click the Power Save Report Generator. A list of all reporting workstations appears. These workstations can be organized according to groups. Open the Report Generator's *File* menu and select *Groups* to organize workstations into groups.

If an existing group is selected, all workstation which belong to that group are highlighted.



2. Specify the report name.
3. Specify the Energy Cost. The default currency matches the currency specified in the *Formats* tab found in the *International Preferences* pane.

The Energy Cost setting can be specified for each report generated. It does not replace the entry in the *Energy Cost* field of the Power Save Report Generator *Preferences* pane, only replaces it for that particular report.

4. The report can also be configured to list a workstation's name and/or IP address. At least one box must be selected.
5. Choose the start and end dates the report covers. The earliest start date is limited to the earliest date listing events in the database. The latest date that can be specified is today.

The number of events retained for inclusion in a report can be customized through the Power Save Report Generator *Preferences* pane. Click on the *Database* tab and specify the number of days to retain data. Events older than the listed number of days are removed after a restart and every 24 hours afterwards.

6. Select one or more groups and/or workstations. The highlighted workstations are included in the report.

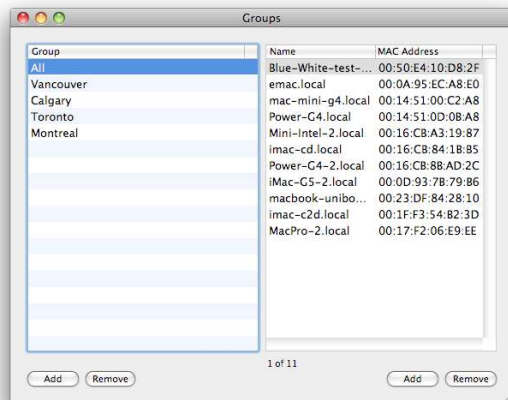
7. Click **Generate**.



The report is generated and displayed.

Creating Groups

Workstations can be organized into groups using the Groups Editor. Access the Groups Editor by opening the Power Save Report Generator *File* menu and selecting *Groups*.



To create a group, click the *Add* button in the bottom left of the Group Editor. Name the group and click *OK*. To re-name a group, double-click it in the Groups window. Groups can be deleted by selecting *Remove*.

To add a workstation to the group, click *Add* in the bottom right of the Group Editor and select it from the list. Click *OK*. A workstation can be listed in more than one group. Workstations can be removed from a group by clicking *Remove*. Multiple groups and workstations can be selected at once using the *Shift* key.