

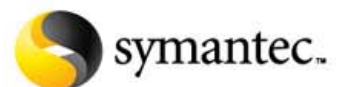
ALTIRIS.  
SMART DECISIONS.



## Going Green with Dell Client Manager™

USING DELL CLIENT MANAGER'S POWER SCHEMES

ALTIRIS: NOW PART OF SYMANTEC



## About Altiris, Now Part of Symantec

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# Introduction

Today's organizations are increasingly pressured to develop and communicate a clear and effective strategy for environmental stewardship. Such programs may include efforts to conserve product energy consumption, reduce or eliminate materials for disposal, prolong product life span and/or provide effective and convenient equipment recovery solutions.

Dell and Altiris, now part of Symantec, have added features to Dell Client Manager™ making it easier than ever for customers to manage the power settings of their Dell hardware. This free tool is part of Dell's OpenManage product line and is available for download to all Dell customers. For more information, visit [www.dell.com/openmanage](http://www.dell.com/openmanage), then click the "Client Management" link.

Specifically, Dell Client Manager provides pre-built Power Scheme inventory tasks that let you collect current power scheme settings on Dell Latitude, OptiPlex and Precision computers running a Windows operating system. Power Scheme configuration tasks are also provided and allow you to remotely activate customized power schemes, or replicate an existing power scheme from an inventoried system. A task is also available to ensure that power options are always set according to your company's energy policy.

Additionally, Dell Client Manager can be used to set power-management-related BIOS parameters and leverage Intel® vPro™ processor technology for remote, scheduled power on/off of managed devices. Actively managing power settings in your environment can generate significant savings in power consumption.

Dell Client Manager can be particularly helpful for those customers who are purchasing Dell Energy Smart hardware. Energy Smart is an offering that helps further reduce power consumption and energy costs by combining energy efficient hardware with OS and CPU power management technology. Dell Energy Smart settings optimize energy savings by enabling Low Power Mode and AMD Cool 'n' Quiet CPU technology, as well as setting OS power management capabilities to send the system into a low-power state after 15 minutes of inactivity. Dell's website allows customers to enable the Energy Smart system configuration online at the time of purchase (see Figure 1).

Figure 1: Ordering Dell Systems Pre-configured with Energy Smart Settings

**ENVIRONMENTAL OPTIONS**

**Environmental Options**  
Want to help the environment? Through Dell, you can plant a tree to help offset the carbon dioxide emissions generated to power your new system.

Select options below

- Plant a Tree for Me - Offset a Desktop [\$6]
- Plant a Tree for Me - Offset a CRT Monitor [\$4]
- Plant a Tree for Me - Offset a LCD Monitor [\$3]

**Dell Energy Smart and Energy Star 4.0**  
In addition to Dell's already energy efficient designs, the Dell Energy Smart offering helps to further reduce power consumption and energy cost by combining energy efficient hardware (including an 80-PLUS certified power supply) with OS and CPU power management technology. Dell Energy Smart settings optimize energy savings by enabling Low Power Mode and AMD Cool 'n' Quiet CPU technology, as well as setting OS power management capabilities to send the system into a low-power state after 15 minutes of inactivity.

Energy Star 4.0, Compliant, 80PLUS Power Supply, Dell Energy Smart settings

[? Help Me Choose](#)

- Energy Star 4.0 Category A (50W Idle) & Dell Energy Smart settings add \$0
- Energy Star 4.0, Compliant, 80PLUS Power Supply, Dell Energy Smart settings [Included in Price]
- Energy Star 4.0 Category C (95W Idle) & Dell Energy Smart settings add \$0

Maintaining Dell's Energy Smart configuration for workstations, desktops and notebooks can reduce power consumption by as much as 78 percent (assuming an annual usage profile of 1 hour maximum performance, 7 hours office productivity, 1 hour idle and 15 hours sleep state for 264 days a year; 24 hours sleep state for 101 days).

Dell customers will find it both helpful and interesting to experiment with Dell's online energy calculators to determine potential savings for using the power management features built into Dell's newest systems.

For example, a Dell Latitude D620 with the Energy Smart configuration-enabled that also uses a 17" flat panel as many as 4 hours day will use only 157kWhrs in a year, saving you as much as \$80.90 annually over previous-generation hardware. If you are using 500 Latitude D620s, that's a savings of \$40,450.00 a year—and you've reduced CO2 emissions by 323.60 tons. That's the equivalent of NOT driving your car 664,998 miles.

You can generate your own savings analysis online by selecting from a variety of Dell models and configurations. For more information, visit <http://www.dell.com/html/us/products/OptiPlex/calculator/index.html>.

Please note that these savings projections assume that power configurations are maintained throughout a system's lifecycle. If settings are disabled soon after purchase, obvious increases in energy consumption will result.

Dell Client Manager can ensure that power configurations are enabled and unchanged across all the Dell systems in your environment. If they do change, notification policies can inform you via e-mail or automatic help desk tickets, or they can enforce a variety of other automated responses. This not only helps achieve power savings projections, but can increase the lifespan of your hardware. Proactive power management reduces the amount of notebook battery and power supply replacements which, in turn, can reduce the number of help desk tickets and increase your return on investment.

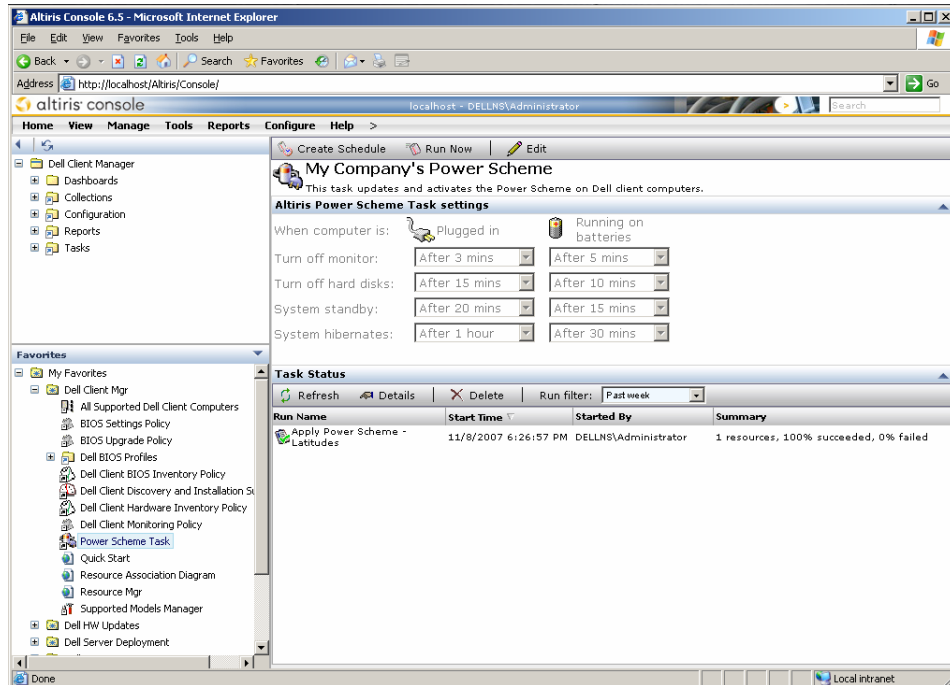
Dell Client Manager is an important part of making your company's environmental policy an effective and enduring reality.

## How it Works

Dell Client Manager includes the free Altiris® Task Server™ component. Task Server allows you to define actions (that is, tasks) to be performed on any managed system. A variety of task types are provided with Task Server to perform actions such as running scripts, powering systems on or off, executing service control operations, and setting power scheme configurations. Multiple tasks can be sequenced together to create a "job." The Power Scheme task allows power scheme settings to be applied across all users for each Dell-managed computer.

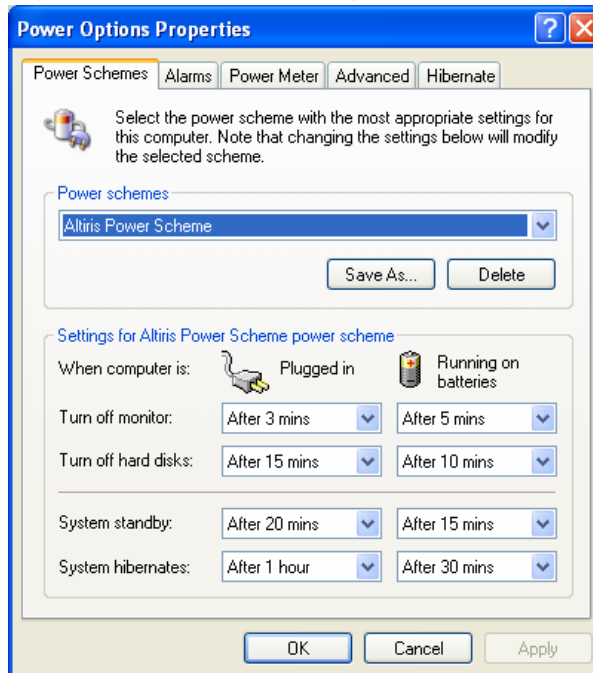
Dell Client Manager supports many different models of Dell OptiPlex, Latitude and Precision systems and requires a Microsoft Windows 2000 or later operating system. Consult product documentation for a detailed listing of support models and system requirements. For more information, visit <https://kb.altiris.com/article.asp?article=36899&p=1>.

Figure 2: Dell Client Manager Power Schemes



To keep things as simple as possible, the Power Scheme's user interface (see Figure 2) was designed to look and function similarly to the Power Options dialogue box in the Windows Control Panel (see Figure 3). This allows administrators to quickly and easily define the power settings to be enforced across the organization.

Figure 3: Windows Power Options Dialogue



Note that when a power scheme is activated on a remote system it is added to the list of available power schemes under the name “Altiris Power Scheme” (see Figure 3).

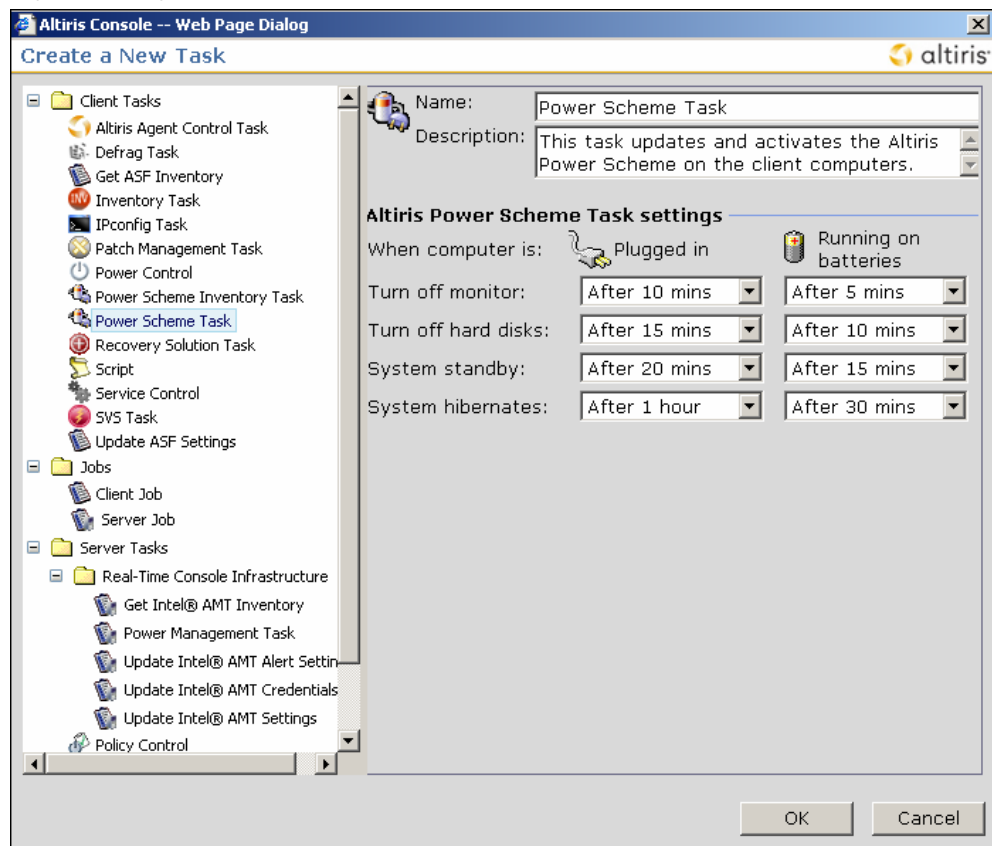
## Setting Up a Power Scheme

The instructions below walk through the steps required to distribute a power scheme to remotely-managed Dell systems.

### CREATING A POWER SCHEME

1. In the Dell Client Manager console navigate to **View → Tasks** on the menu bar.
2. In the left tree pane, expand **Tasks → Task Management → Client Tasks**.
3. Right-click on the Client Tasks folder and then click **New → Task/Job**.
4. From the Job/Task dialog, click **Power Scheme Task**.
5. In the right pane of the Create a New Task dialog, configure your power scheme settings to the desired setting.

Figure 4: Creating a Power Scheme Task

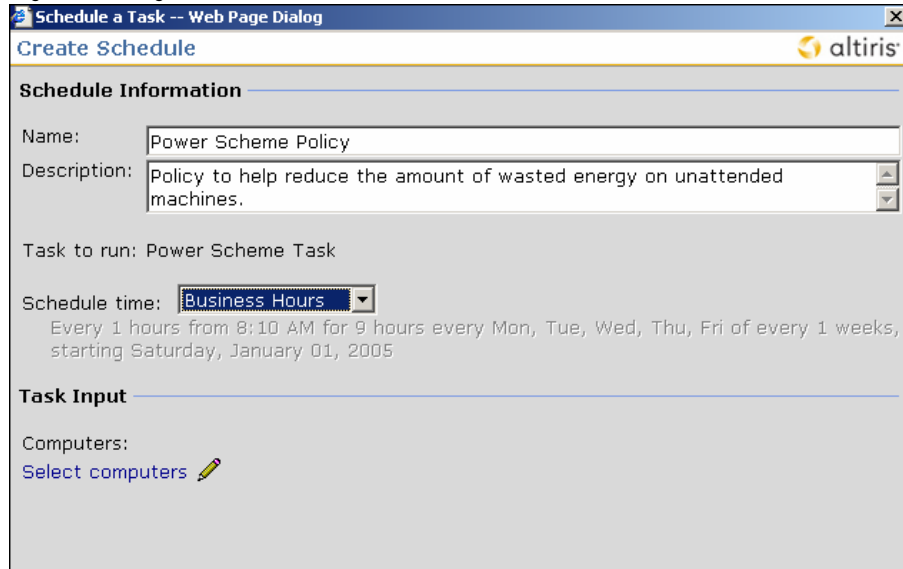


6. Click **OK**.

## DISTRIBUTING A POWER SCHEME

1. In the left tree pane of the Dell Client Manager console click **Tasks** → **Task Management** → **Client Tasks** → **Power Scheme Task**.
2. In the right pane, click **Create Schedule**.
3. Provide a **Name** and **Description** for the instance of the task you are about to run.

Figure 5: Creating a Schedule



**Create Schedule**

**Schedule Information**


Name: Power Scheme Policy

Description: Policy to help reduce the amount of wasted energy on unattended machines.

Task to run: Power Scheme Task

Schedule time: Business Hours  
Every 1 hours from 8:10 AM for 9 hours every Mon, Tue, Wed, Thu, Fri of every 1 weeks, starting Saturday, January 01, 2005

**Task Input**

Computers:  
Select computers 

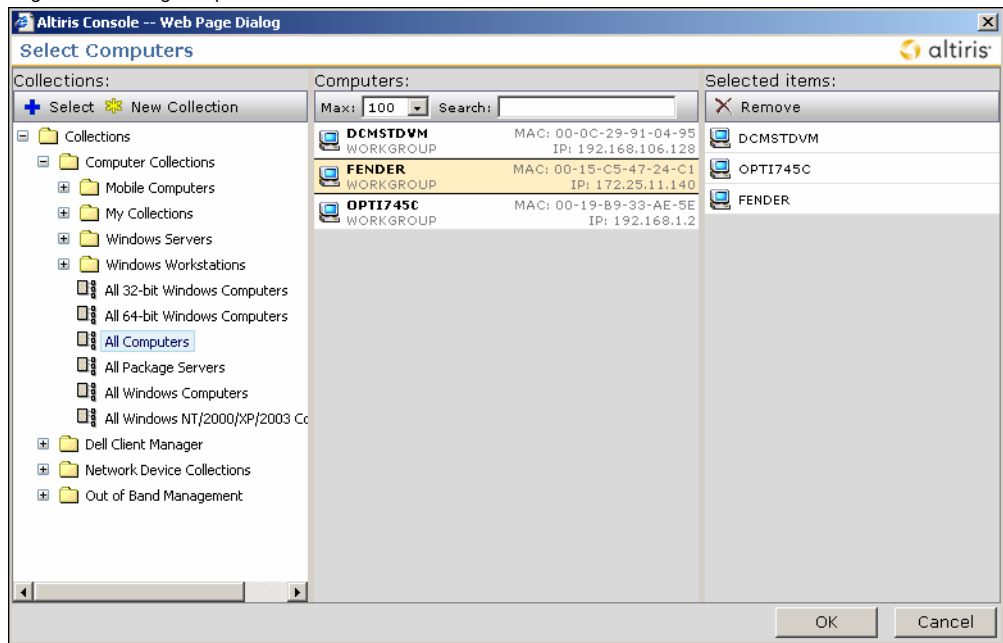
4. Leave the default, **Business Hours** schedule.

5. Click **Select Computers**.



6. Select either a collection or the computers you want the power scheme to be applied to.

Figure 6: Selecting Computers for Task Execution



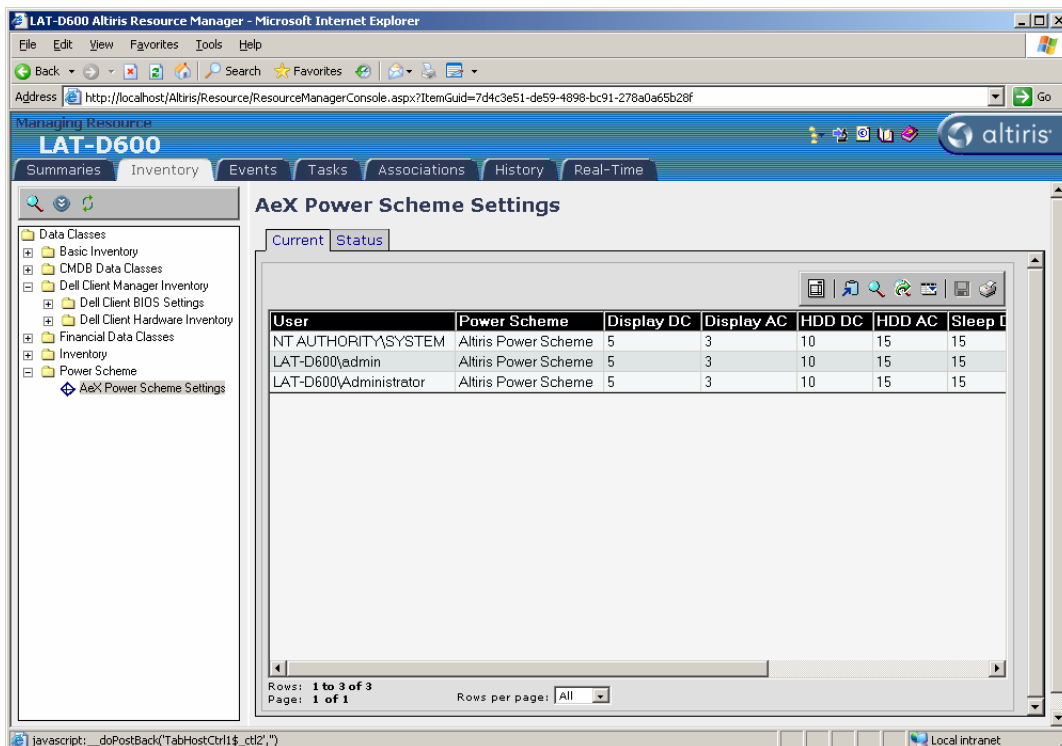
7. Click **OK**.

8. Click **OK** to save the task settings. Alternatively, you could click the **Run Now** button to apply the settings immediately.

## Notification Policies

Dell Client Manager can also inventory active power scheme settings for each user on a managed system. This inventory is reported back to the Altiris configuration management database (CMDB) and can be used for a variety of reporting and alerting functions. Power Scheme settings for a computer can also be viewed under the Inventory tab of that computer's Resource Manager (see Figure 7).

Figure 7: Power Scheme Settings Displayed in Resource Manager



The screenshot shows the Altiris Resource Manager interface for a device named LAT-D600. The 'Inventory' tab is selected, and the 'AeX Power Scheme Settings' view is active. A table displays the power scheme settings for three users:

User	Power Scheme	Display DC	Display AC	HDD DC	HDD AC	Sleep I
NT AUTHORITY\SYSTEM	Altiris Power Scheme	5	3	10	15	15
LAT-D600\admin	Altiris Power Scheme	5	3	10	15	15
LAT-D600\Administrator	Altiris Power Scheme	5	3	10	15	15

At the bottom of the table, it indicates 'Rows: 1 to 3 of 3' and 'Page: 1 of 1'. The interface also shows a navigation pane on the left with 'AeX Power Scheme Settings' selected, and a status bar at the bottom with 'Local intranet'.

Power Scheme inventory can be particularly helpful if administrators configure notification policies to watch for non-compliant settings as regular inventories are posted into the system (see Figure 5). Notification policies can be configured to regularly check for non-compliant settings. Once a non-compliant setting is detected, a variety of automated actions may be performed. These include creating a help desk ticket to ensure IT is tracking the issue, sending a notification e-mail to an administrator, e-mailing a report, and so on.

To create notification policies from the console menu bar, click:

1. **View → Tasks**
2. Browse to **Assets and Inventory → Inventory → Windows → Notification Policies**
3. Right-click the Notification Policies folder and then click **New → Notification Policy** from the pop-up menu.

Figure 8: Notification Policies

### Power Scheme Notification Policy

Enable (currently enabled)

Name: Power Scheme Notification Policy

Description: Email an administrator when any machine is discovered to be running a non-compliant power scheme

Source: Query -- Edit Query -- -- Edit Parameters --


Enable Schedule: Business Hours  
Every 1 hours from 8:10 AM for 9 hours every Mon, Tue, Wed, Thu, Fri of every 1 weeks, starting Saturday, January 01, 2005

#### Automated Actions

Name	Type	Description
------	------	-------------

Add action type: E-mail Automated Action Add

Test Notification Policy

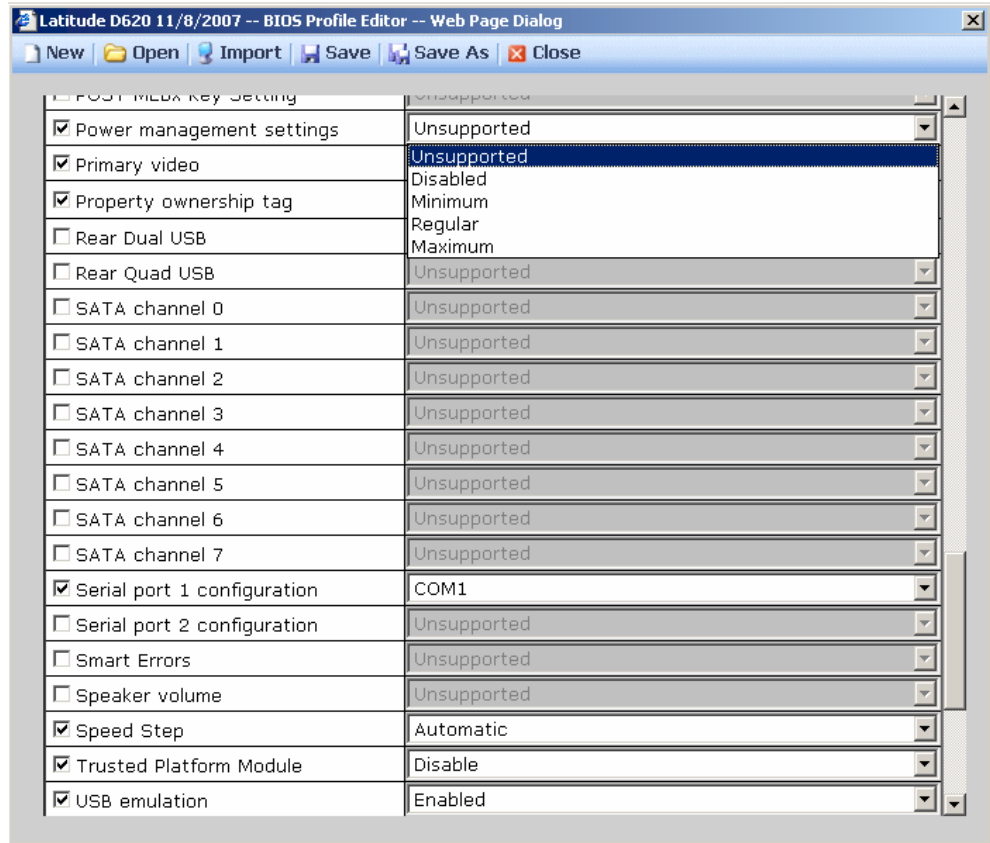
Apply Cancel  The notification policy has been successfully saved

# Beyond Power Schemes

In addition to configuring Windows power schemes across your organization, Dell Client Manager can be used to manage power settings in a variety of additional ways.

For example, Dell Client Manager can be used to set policies that enforce a variety of BIOS settings related to power management, including enabling/disabling SpeedStep, enabling/disabling Power Management, enabling/disabling wireless functions, and so on.

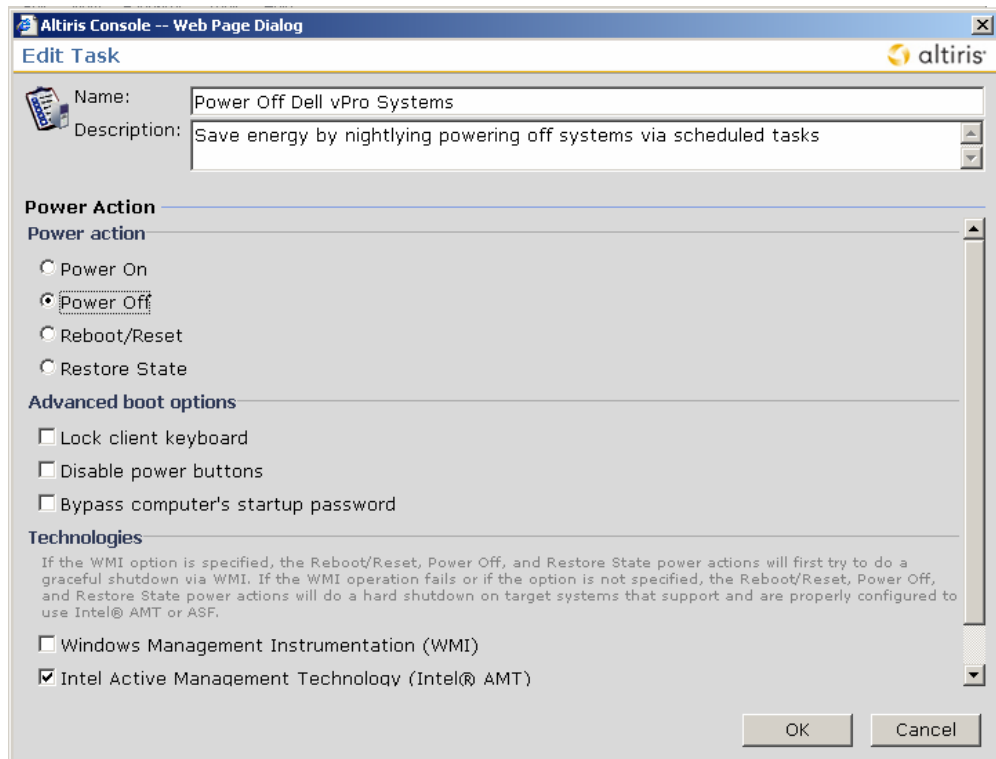
Figure 9: Dell Client Manager BIOS Settings Policies



In addition to BIOS settings management, Dell Client Manager supports the Intel vPro chipset available on many new Dell models. Among other things, Intel vPro processor technology allows for remote, secure power cycling of a computer. Management console policies can remotely ensure that all computers with Intel vPro processor technology on the corporate LAN are powered off after a certain time and then optionally powered back on before employees begin arriving for work. If your organization is billed on a time-of-use rate and you have a significant number of computers, using schedules to stagger how they are powered on could reduce peak demand usage.

Intel vPro processor technology power-on capabilities can also be leveraged for more advanced management functions, such as powering on computers to apply OS updates or update antivirus definitions and then powering them off again (see Figure 10).

Figure 10: Dell Client Manager Supports Dell vPro for Improved Power Management



## Conclusion

Dell Client Manager offers Dell customers a variety of options for building and implementing environmentally friendly computing policies. Power scheme management, notification policies, remote BIOS configuration and Intel vPro support are specific examples discussed in this document.

While Dell Client Manager is a free tool that offers significant value for organizations concerned with energy efficiency, it provides many features beyond power management. Learn more about Dell Client Manager™ at [www.altiris.com/dellclientmanager](http://www.altiris.com/dellclientmanager) or [www.dell.com/openmanage](http://www.dell.com/openmanage).

To learn more about what Dell provides as part of their Energy Smart program, visit [www.dell.com/environment](http://www.dell.com/environment).

## Additional Resources

Important links for additional information are listed below.

- Dell Energy Smart Overview  
[www.dell.com/energysmart](http://www.dell.com/energysmart)  
[www.dell.com/environment](http://www.dell.com/environment)
- Dell environmental efforts and commitment  
<http://www.dell.com/content/topics/global.aspx/corp/environment/en/index?c=us&l=en&s=corp&~ck=anavml>
- Dell energy calculators  
<http://www.dell.com/html/us/products/OptiPlex/calculator/index.html>
- Dell environmental statistics  
[http://www.dell.com/content/topics/global.aspx/corp/environment/en/prod\\_datasheets?c=us&l=en&s=corp](http://www.dell.com/content/topics/global.aspx/corp/environment/en/prod_datasheets?c=us&l=en&s=corp)
- Dell Client Manager  
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[www.dell.com/openmanage](http://www.dell.com/openmanage)