Lowering Energy Costs with Desktop Authority

A ScriptLogic Product Positioning Paper

Lowering Energy Costs with Desktop Authority

Abstract

The Environmental Protection Agency (EPA) introduced energy conservation methods for businesses to help them reduce the amount of energy used to run their company and, in turn, give companies who comply the ability to enjoy tangible savings through rebates and discounts. This paper outlines the potential cost and energy savings available when Desktop Authority's Power Management feature is implemented. It also describes how this solution not only addresses the environmental concerns of your organization, but also the need for a secure, consistent and efficient way to manage your Windows desktops.

Why Are All My PCs On?

With the cost of electricity on the rise and the fact that power companies are offering rebates for organizations who take a "green" approach to their business, why have so many organizations been slow adopters of power management initiatives? The basic reason is that the management of power settings is a cumbersome task. And quite often, the actual return-on-investment is not easy to calculate. Organizations need the ability to have users' machines available for patches, software installation, and remote access, and quite often this results in desktops and laptops left running even after work hours resulting in wasted energy and money.

Participating in a power management program is even MORE crucial in this day and age where organizations are much more focused on their environmental impact. This document will outline the reasons why this initiative is often neglected, uncover the potential cost savings realized when it is implemented, and depict how ScriptLogic's Desktop Authority can help your organization make power management objectives a reality.

First, let's consider a couple of methods of power management and uncover the issues that prevent administrators from using them in their day-to-day operations:

On foot – Running around and manually setting up 5 machines is fine, but when there are 500, that's a different story. This method also lacks the ability to have the power management settings change based on who logs onto a given machine. Additionally, there is no way to ensure consistency across the enterprise.

Scripting – This solution would require a utility (mostly because power settings are not scripted) that would be kicked off by a script. And scripting comes with all the inherent problems: writing, testing, and debugging prior to release, not to mention continual maintenance and the fact that free utilities are often poorly supported.

Why put your OWN energy to waste? Central management of power settings based on your individual organizational needs as well as the granular control to customize configurations is the answer.

Use Desktop Authority and Save

Desktop Authority provides simple, flexible control over power settings. The Power Schemes element, shown in Figure 1, gives administrators the ability to easily create, modify or remove Windows power schemes and power plans, giving them centralized control over both laptops and desktops. Power saving options such as Standby/Hibernate and turning off monitors and disks, all add to the savings for both the environment and your organization's wallet.

The settings make it possible for organizations to establish power policies across the enterprise, ensuring each and every desktop is participating and saving the organization money. The EPA estimates that 58% of the time, machines are left inactive throughout the business day. Desktop Authority's settings such as turning off the monitor and disks are good examples of cost savings during business hours. Desktop Authority also makes it easy to enable hibernation and set machines to become dormant after a predetermined period.

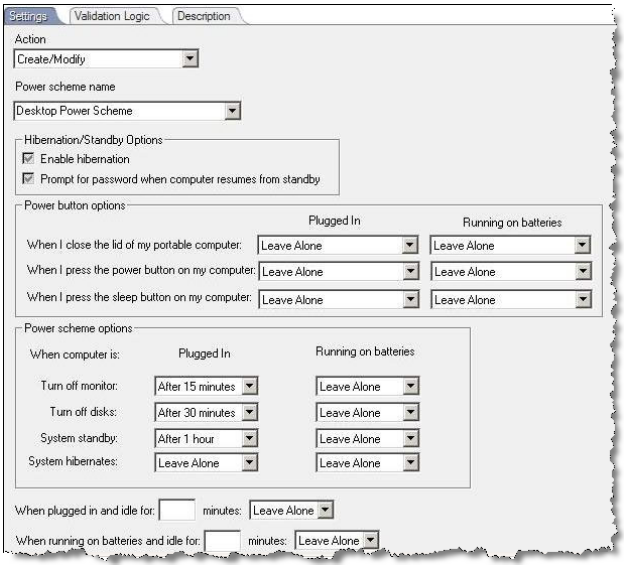

Figure 1: Centrally configure a comprehensive set of power management options

There's Power in Our Power Management

As stated previously, the reason organizations do not implement power management is simply because they lack the granularity to manage it. This is where Desktop Authority truly shines. The Power Management element (along with every other element within Desktop Authority) uses ScriptLogic's patented Validation Logic (shown in Figure 2) to select who in the organization will get specific settings. Using multiple elements, organizations can create appropriate power and shutdown settings to meet

the needs of the executives, IT, Accounting, or the general population of the organization.

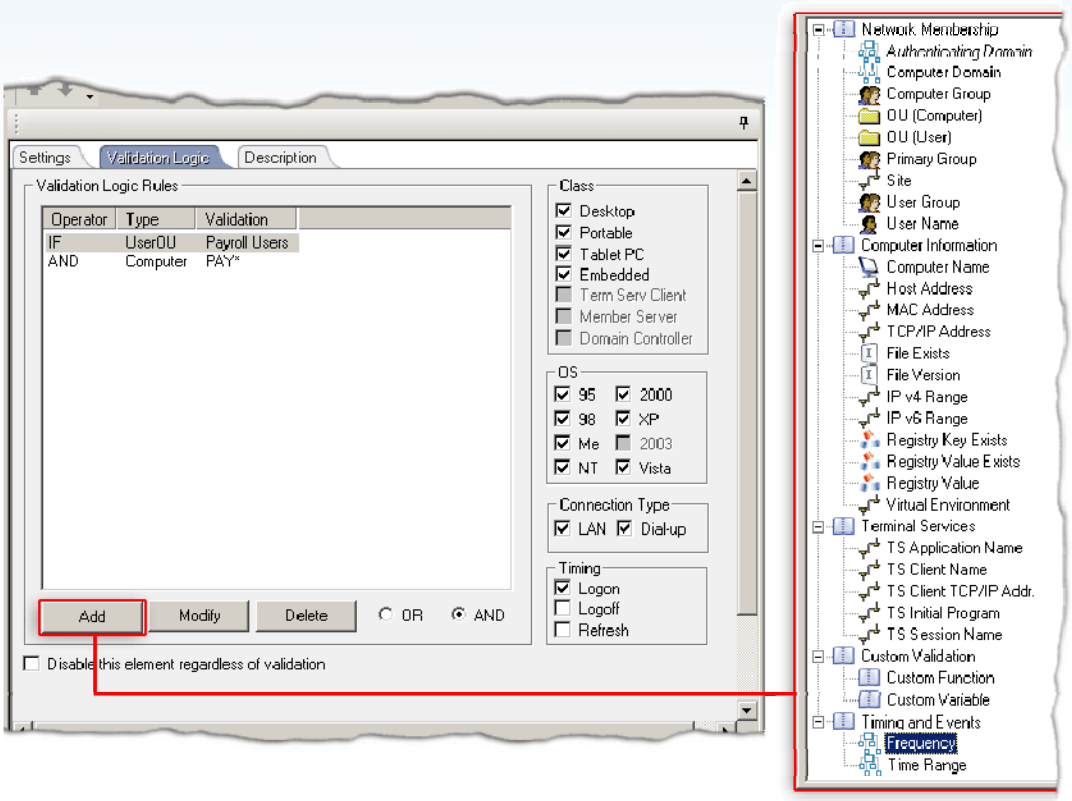

Figure 2: Patented Validation Logic empowers organizations to apply power management granularly

How Much Will I Save?

To determine this, we first need to establish how much energy each desktop, laptop and monitor is using when:

- ✓ Fully utilized
- ✓ Sitting idle (but not in standby or hibernation)
- ✓ In Hibernation mode

Table 1 shows an **example** of average energy usage you may incur using values from current lines of Dell products. The listed minimum and maximum watts have been used to serve as a range of potential use by computers from any manufacturer. Note the vast difference between the minimum watts in use with that of the watts used when off or in sleep mode. The ultimate goal of IT should be to get a PC operating in that state as often as is possible with minimal impact on the user. The following scenarios give examples of this potential savings.

	Average maximum watts‡ when in use	Average minimum watts‡ when in use	Watts‡ in use when in "sleep" mode or hibernating
Desktop PC	123.15	64.59	2.14 (hibernating)
Laptop PC	44.46	32.76	.908 (hibernating)
17" CRT Monitor	78.75	53.5	2.88 (sleep)
17" LCD Monitor	57.88	32.76	1.4 (sleep)

Table 1: Energy Usage

‡Values determined using average energy usage as listed on 10/20/05 from: http://www1.us.dell.com/content/topics/global.aspx/corp/environment/en/prod_datasheets?c=us&cs=555&l=en&s=biz: Desktop – Optiplex line, Laptop – Latitude line,Monitor (LCD) – 17**FP* line,Monitor (CRT) – E771* line

Scenario 1: The 10K-seat HQ for a major Home Improvement company

This company has approximately 5900 desktops and 4400 laptops. While operations are mostly 9-to-5, approximately 25% of the desktop workforce runs 24x7. All machines are configured with the following power management settings:

- Monitor shuts off after 15 minutes of inactivity
- Disks turn off after 30 minutes
- Machine will hibernate after an1 hour

Scenario 1: Home Improvement HQ (10,300 seats)	
Number of Desktops with 17"CRT Monitors	5800
Number of Desktops with 17" LCD Monitors	100
Number of Laptops	4400
Cost per kWh	$.077
Hours in a work day	See above
Days in a work week	5
Current Energy Costs (using Avg. Rated Wattage)	
Desktops	$ 428,865
Laptops	$ 84,449
TOTAL	**$ 513,315**
Power Managed Energy Costs (using Avg. Rated Wattage)	
Desktops	$ 121,799
Laptops	$ 20,766
TOTAL	**$ 142,565**
Annual Savings	**$370,749**

Table 2: Scenario 1 Energy Savings Calculation

Scenario 2: A 3,500 seat K-12 school district

This school district has 12 schools and an administrative building servicing over 10,000 students using 3,500 desktops and laptops. All of the machines used by students are utilized within school hours and any administrative machines are utilized within normal business hours. The student and administrative machines are already separated into different Active Directory OU structures for other uses within Desktop Authority, so giving different power settings to each one can easily be accomplished using Validation Logic. For instance:

- All machines will be configured to reduce power usage during school hours via a power scheme that turns the monitors off after 15 minutes of inactivity
- Student machines will be configured to hibernate if 30 minutes of inactivity are detected
- Administrative machines will hibernate, but only if 60 minutes of inactivity are detected

Granular configuration of desktop power management to meet the needs of the environment is what makes Desktop Authority such a powerful solution.

Scenario 2: School District (3,500 seats)	
Number of Desktops with 17"CRT Monitors	1100
Number of Desktops with 17" LCD Monitors	2000
Number of Laptops	400
Cost per kWh	$.077
Hours in a work day	8
Days in a work week	5
Current Energy Costs (using Avg. Rated Wattage)	
Desktops	$ 222,348
Laptops	$ 7,557
TOTAL	**$ 229,905**
Power Managed Energy Costs (using Avg. Rated Wattage)	
Desktops	$ 36,526
Laptops	$ 1,610
TOTAL	**$ 38,137**
Annual Savings	**$ 191,768**

Table 3: Scenario 1 Energy Savings Calculation

Calculating Your Potential Savings

A downloadable Power Management ROI calculator, shown in Figure 3, is available online at **http://www.scriptlogic.com/da/power.** It estimates the substantial savings you could achieve by implementing Power Management. This calculator is based on the assumption that you are shutting down inactive machines, or letting power management automatically hibernate them. Then, using industry averages as a guide, you can get an accurate estimate on the amount of energy actually conserved with the power management feature and get a comparison to the investment costs of purchasing Desktop Authority.

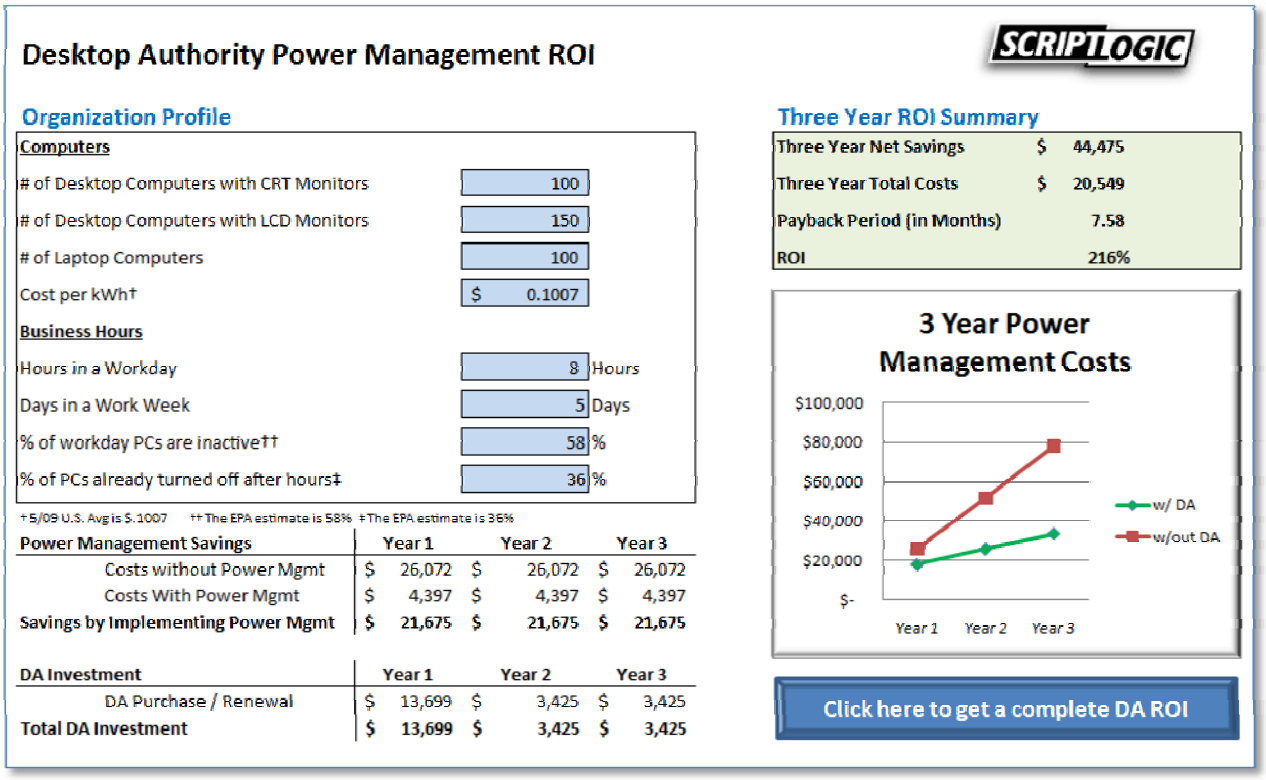

Figure 3: ScriptLogic's downloadable calculator provides a simple ROI estimation of the amount of energy and dollars an organization could save with Desktop Authority's Power Management.

Power Savings Reporting

Desktop Authority also offers comprehensive power usage reporting direct from the report generation interface in the management console. Based on defined settings and the actual hardware in your organization, Desktop Authority can provide a customizable power savings report to depict an estimate of "energy saved" in your organization. This flexible reporting also simplifies the ability to perform 'what-if' scenarios and illustrate how setting and hardware changes could potentially affect your power savings.

Report Parameters: Computer Name: All, Computer OU: All, Scanned Since: 12/20/2006 12:00:00 AM, % of Desktops with LCD Monitors: 100, % Daily Inactivity During Work Day: 58, Energy Cost Per kWH ($): 0.0867, Hours Per Standard Work Day: 8, Days Per Standard Work Week: 5, Min Inactivity Before Monitor Shut Off: 30, Min Inactivity Before HD Shut Off: Never, Min Inactivity Before Stand-By: 60

Summary of Inputs	
Number of Desktops with CRT Monitors	0
Number of Desktops with LCD Monitors	99
Number of Laptops	28
Energy Cost per kWH *	$0.0867
Hours in a standard workday	8
Days in a standard workweek	5
% of inactivity during the workday **	58.0%
Minutes of Inactivity before monitor shut-off	30
Minutes of Inactivity before hard drive shut-off	Never
Minutes of Inactivity before system stand-by	60
Current Energy Costs	
Avg Energy Cost per Work Day with No Power Management	$23.72
Avg Energy Cost per Non-Work Day with No Power Management	$21.96
Power Managed Energy Costs	
Avg Energy Cost per Work Day with Power Management	$9.58
Avg Energy Cost per Non-Work Day with Power Management	$0.78
Power Savings	
Saved Energy Cost per Work Day with Power Management	$14.15
Saved Energy Cost per Non-Work Day with Power Management	$21.18
Saved Energy Cost Per Year with Power Management	**$5,880.99**

So Why Desktop Authority?

The Desktop Authority product family provides a range of solutions for desktop management challenges. Besides providing highly effective power management for desktops and laptops, Desktop Authority also provides comprehensive desktop management by enabling administrators to proactively control, inventory, secure, and support desktops from the same management console they configure their power management profiles. Let's look at the five key areas where Desktop Authority delivers high impact in lowering the cost of desktop ownership:

Deliver a Consistent and Secure Desktop –Offers comprehensive configuration options combined with patented Validation Logic which provides flexibility and control over the desktop.

Eliminate the Need for Logon Scripts – Replace complex logon scripts and decrease the complexity associated with using many Group Policies for desktop management.

Take Advantage of Advanced Remote Management –Provides a web-based console for background management and excellent remote control features. Diagnose and fix desktops without interrupting the user.

Lock Down the use of Removable Storage Devices– Avoid theft of documents, images, and other records as well as set file permissions, clean out temporary folders on logoff and apply security policies.

Monitor and Enforce Power Management – Create, modify or remove Windows power schemes for centralized control over desktops with the additional ability to Lock, Logoff, Shutdown, or Restart when an inactivity threshold is achieved.

So whether you are looking for a better way to save energy costs, or manage the entire lifecycle of a desktop, Desktop Authority empowers administrators to proactively control, inventory, secure, and support desktops from a central location.

Conclusion

Whether your motivation is to save money or the planet, organizations implementing energy savings will see a positive effect to their bottom line. Utilizing Desktop Authority's power management features empowers organizations to centralize granular control of the power usage of machines throughout their enterprise. With its comprehensive approach to desktop management, Desktop Authority delivers cost savings throughout the desktop life cycle and pays for itself in a just a few months through reduced energy bills.

For information on Desktop Authority or other ScriptLogic software solutions, visit us at www.scriptlogic.com, or contact your authorized reseller or ScriptLogic representative.

About ScriptLogic

ScriptLogic Corporation, a wholly owned subsidiary of Quest Software (Nasdaq: QSFT), is a recognized leader in Microsoft Windows systems and security management. Empowering more than 26,000 customers worldwide with the ability to manage the desktop lifecycle, streamline Active Directory management, secure and protect Windows servers, and ease the burden for help desk administrators, ScriptLogic's award winning solution families can benefit small to enterprise-size organizations in any industry.