High-Level Feature Overview

PowerPlug Pro 3.1

January, 2014

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PC Power Management - Background

PC Power Management involves the powering-down of PCs when they are not used, leading to cost savings. Effective PC power management can reduce a PC's power consumption by up to 70% (compared with an always-on PC), translating into savings of $50-$70 per PC in most countries[1]. In addition to cost savings, PC power management provides the following benefits:

Reducing Carbon Footprint – Generating the electricity needed to power organizational PCs causes extensive greenhouse gases emissions. On average, producing enough electricity to run 15 computers for a year causes the same amount of pollution as driving 20,000 kilometers in a family car. Managing the power consumption of 1,000 PCs can cut carbon emissions by over 200 tons annually.

Prolonging PC Lifespan – The mechanical parts of PCs (hard drives, fans) have a defined lifespan, measured in the number of operations they perform or the hours they are active. The routine powering-off of these moving parts therefore increases the longevity of PCs and reduces hardware faults.

Increasing Information Security – Powered-down PCs are less vulnerable to both intra-organizational breaches and to attacks originating outside the organization.

Reducing Cooling Costs – More than 30% of the electricity consumed by a computer is released as heat, mostly by the power supply unit and the CPU. Powered-down computers do not emit heat, reducing the strain on the air conditioning system.

When it comes to PC Power Management, the demands of enterprise computing differ substantially from those of a single PC. Managing the power consumption of numerous computers, in different departments, supporting varying end-user profiles, requires a system that is flexible enough to optimize savings while maintaining the end-user experience unaffected.

PowerPlug Pro 3.1 for PC Power Management

PowerPlug Pro is a leading PC Power Management platform, enabling organizations to monitor, manage and reduce PC power consumption. PowerPlug Pro ensures that PCs throughout the organization comply with organizational power-saving policies, while making sure that power savings do not interrupt IT or end-user activities.

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[1] Actual savings potential depends on the specific electricity tariff used.
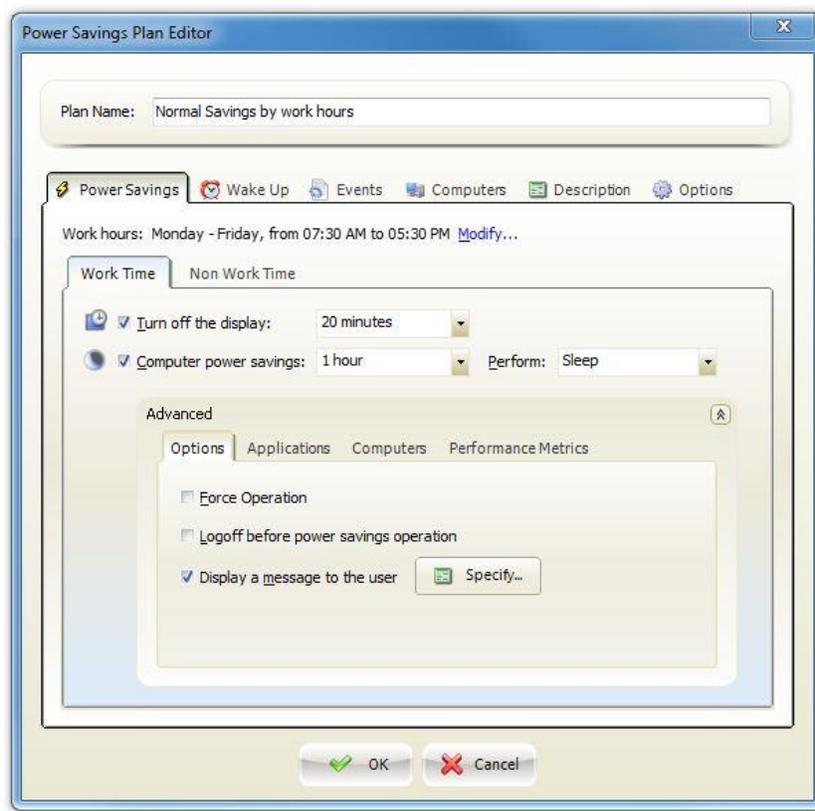
Power Management Features

Centralized PC Power Management

PowerPlug Pro lets administrators define power saving plans at a click, and assign them to computers, groups, or organizational units (OUs). Saving plans can be tailored to the needs of different departments or parts of an organization, maximizing savings while keeping the user experience uninterrupted. No scripting or network adaptations are needed to create or manage power plans.

Time-based Savings Plans

PowerPlug Pro saving plans differentiate between work hours and non-work hours, assigning different power management rules for each period. For example, savings during work hours may be enacted only if a computer is left idle for extended periods, to guarantee that PCs are not powered-down while they may be needed. After work hours (usually during evenings, nights and weekends), the savings plan may dictate more proactive saving policies (powering-down computers faster), maximizing savings while no users are affected. Different work hours may be configured for different parts of an organization – an office and a call center, for example, may have very different working hours.

Independent Power Management Mechanism (IPMM)

The PowerPlug Pro Agent, installed on all organizational PCs, includes an independent mechanism for monitoring computer activity - IPMM. IPMM provides features that go far beyond native power management. For example, IPMM eliminates 90% of Windows Insomnia - a phenomenon whereby various applications, sometimes even parts of the operating system itself, fool Windows into thinking the computer is active and should not be powered down. Other features available as a result of IPMM are the above-mentioned process exclusions and flexible scheduling. The result is a more reliable power management system, one which yields greater savings.

Save Money While Keeping Critical Processes up - Advanced Conditions

PowerPlug Pro saving plans allows administrators to define advanced power-down conditions. Under these conditions, PCs running certain processes can be excluded from power-down operations. Example for such processes are backup operations, anti-virus scans, overnight software builds or critical business processes. The exclusion from power saving activities may depend on the presence of specific processes, on the level of activity of these processes (e.g. anti-virus software generating a 2% CPU utilization may not delay a shutdown, but 10% utilization will), or on the activity pattern of the PC as a whole.

These advanced conditions allow enforcing power management policies on the entire range of computers, knowing that no PC will be powered-down when it is running a critical process.
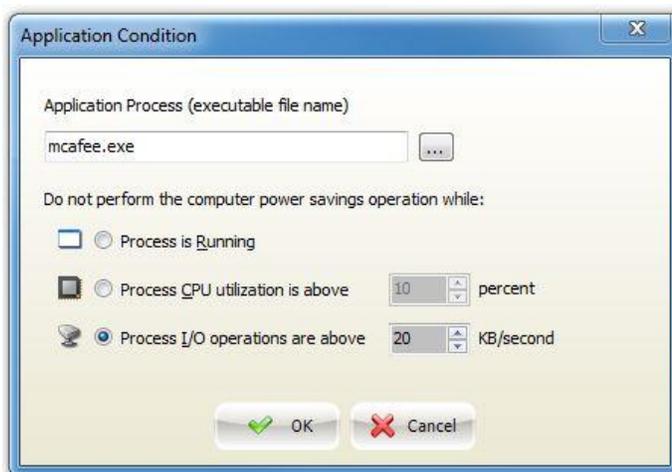
Custom Code (Scripts) on Power Events

PowerPlug Pro allows system administrator to attach custom code to be performed before and after power events. This ability enables both initiating maintenance operations (such as: wakeup computers on Tuesday at 2:00am and immediately start a virus scan after wakeup) and handling home-grown applications that do not perform well with power management (For example: old client – server applications).

Another use of Power Events scripts is to create custom conditions for powering down computers. For example: a script that prevents a system standby as long as there is an open Microsoft Office document on a network shared drive with un-saved changes.

Wakeup Features

Wake-on-LAN Mesh – a PowerPlug Innovation

A proprietary extension of Wake-on-LAN (WOL) technology, PowerPlug's WOL Mesh enables PowerPlug Pro to wake up computers in complex network environments comprised of numerous subnets. Whereas standard WOL is limited to the local subnet or VLAN where it originates, PowerPlug Pro wakes up PCs across the organization, regardless of the underlying network structure, and with no need for network or software reconfiguration.

Scheduled Computer Wakeup for IT Activities

As part of its saving plans, PowerPlug Pro can schedule when PCs are powered-up. This ability allows the IT department to schedule software updates, upgrades and backups for non-work hours, while ensuring they will not be limited by power-saving operations. Another use for this feature is waking up computers at the start of the work day, shortly before employees arrive at work.
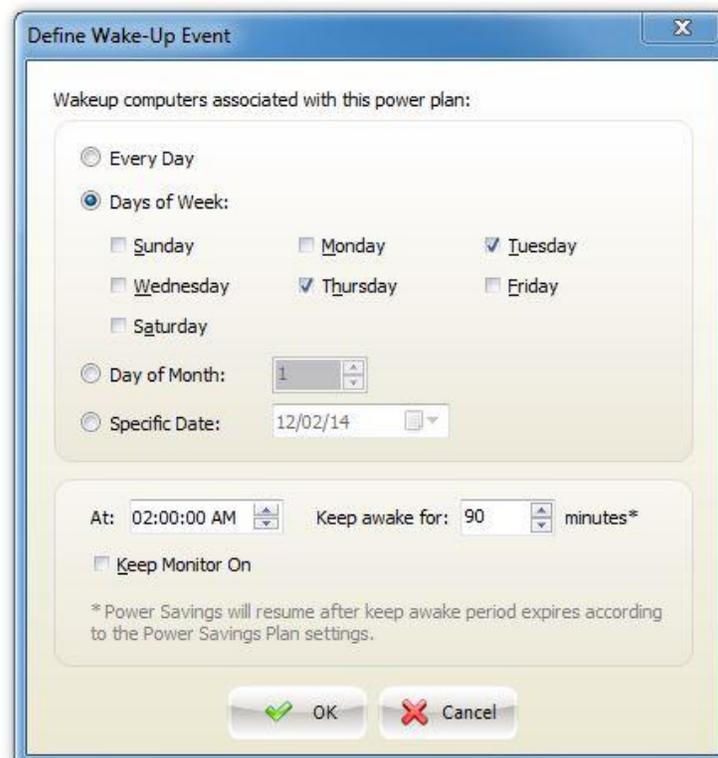
On-demand Computer Wakeup

PowerPlug Pro can wake up PCs on demand, using Wake-on-LAN (WOL) technology. PCs can be woken up from every power state (including when they are turned off), by transmitting a Wake-on-LAN signal picked up by their network interface adapters.

Wakeup Portal for End-Users

PowerPlug Pro is integrated with the PowerPlug Wakeup Portal. The Wakeup Portal lets end users wake up their PC remotely, for example, when they need to connect to it from home. This allows an organization to implement power savings without interfering with users' needs for remote connectivity, anywhere and anytime. The PowerPlug Wakeup Portal is accessible from any device – users can wake their PC up from their mobile phone.

Automatic Wake-on-LAN PC Configuration

As part of the PowerPlug agent installation, PowerPlug Pro agents enable WOL support on organizational PCs. Wake-on-LAN is not enabled by default, yet without Wake-on-LAN organizations lose the critical ability to wake up PCs that have been powered-off in the process of power management.

Automatic Configuration of Mouse and Keyboard Wakeup

PowerPlug Pro agents configure every computer they are installed on to wake up from Standby mode when a user presses a keyboard key or moves the mouse. This is not a default setting in some PCs, and it is essential for a quick, smooth wakeup. Turning this setting on minimizes support calls by end-users, since they can wake up their PCs quickly and instinctively.

General Features

Support for Differential Electricity Tariffs

PowerPlug Pro includes a database of electricity tariffs that is updated to support the tariffs applicable to the customer. PowerPlug Pro supports differential electricity tariffs – complex tariffs that include several electricity prices, depending on the time of day and time of year.
Additionally, different tariffs can be used for different locations, and tariff increases or decreases are accounted for by PowerPlug reports.

Multilingual Support

PowerPlug Pro – both Agent and Console – are easily customizable to support different languages. The PowerPlug Pro agent currently supports 10 languages, and detects the PC locale to display the appropriate language. The console is currently available in English, Russian, Chinese and Hebrew, with more languages scheduled for 2012.

Out of Box Integration with Microsoft SCCM

PowerPlug Pro contains a built-in integration with Microsoft System Center Configuration Manager. The integration enables PowerPlug Pro to automatically wake-up relevant SCCM Collections few minutes before a distribution is scheduled and keep the relevant computers up and running until the distribution is completed successfully – without changing anything in SCCM or in individual distribution jobs!
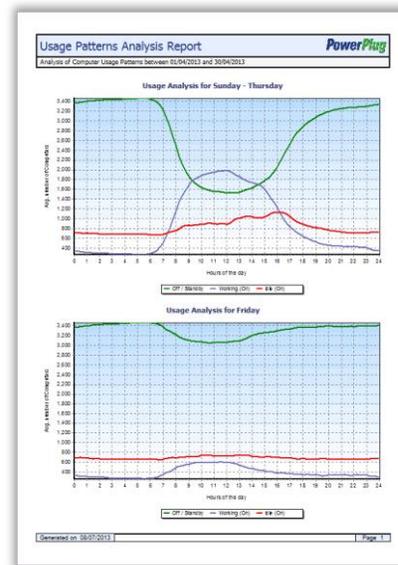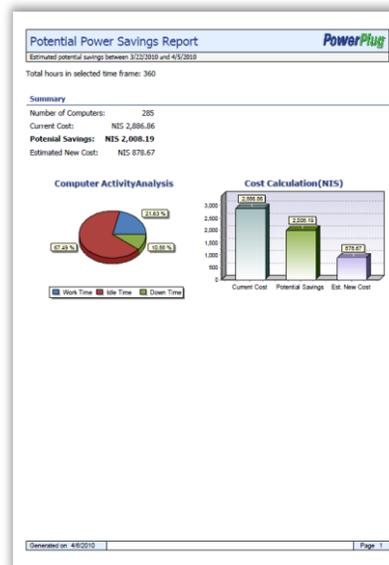
The integration is performed on both the Server and the Agent side, automatically by PowerPlug Pro. On the Server side, PowerPlug Pro Server detects upcoming distributions. Once a distribution is detected, PowerPlug Pro Server resolves the computers that belong to the target collection(s) and wake up these computers using PowerPlug Pro's Wake-On-LAN Mesh technology. On the Agent side, PowerPlug Pro Agents monitors the SCCM Agent on each PC and verifies that the computer will stay on as long as a distribution is pending or being performed.

PowerPlug Pro SCCM Connector works with SCCM versions 2007, 2007 R2, 2007 R3, 2012, 2012 R2 and supports distributions for both computers and users.

PowerPlug

Comprehensive Reporting Capabilities

PowerPlug Pro collects all power consumption and savings data into a central database. The system includes internal reporting capabilities, as well as a report generator, providing an up-to-date picture of organizational power consumption, savings potential and the actual savings achieved by the active power saving plans.

Power management data can be filtered according to dates and computer groups, enabling organizations to make informed decisions about power management policy. PowerPlug Pro can compare power consumption before and after the activation of a power savings plan, or compare different saving plans.

PowerPlug Pro Savings
Since Installation

3.027 GWh CO_2 1,649.61 t
$ 1,465,558   1,374.68

Energy Usage
Efficiency:

Show: Power Consumption and Savings   for: Last 30 Days
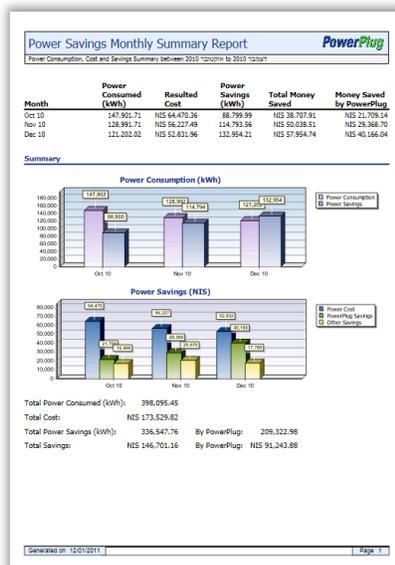
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Summary

PowerPlug Pro enables organizations to implement power savings on their corporate PCs without interfering with end-users work or IT related activities. PowerPlug Pro can achieve up to 70% reduction in PC power consumption, resulting in significant savings for the organization.

Appendix – Feature List

Features	PowerPlug Pro
Power Management	
Define idle time for powering off monitors and computers	√
Support for Standby, Hibernate, Hybrid Sleep and Shutdown	√
Define Power Savings Plans	√
Central Management of Power Savings Plans	√
Associate Computers and OUs \ Groups to Power Savings Plan	√
Define different policy according to the time of day (work/non work hours)	√
Display a message to the user before a power savings operation	√
Allow the user to abort / suspend a power savings operation	√
Ability to define applications that will prevent power savings operation	√
Ability to operate the system in learn-only mode (no power savings)	√
Define emergency plans without changing normal power savings plans	√
Run custom code (scripts) on power events	√
Create custom conditions using scripts	√
Wake-up Capabilities	
Ability to define schedule wake-ups	√
Ability to define "must-on" time periods (for IT operations)	√
Remote computers wake-up on demand	√
Automatic support for WOL over VLANs and Subnets	√
Wake-On-LAN support without changes to network infrastructure or security risks	√
Recover from complete power failure (for all computers in a VLAN / Subnet)	√
Automatic configuration of WOL support in Windows	√
Real-time computer status display (ON/OFF)	√
Remote Shutdown / Restart / Standby on demand	√
Power Consumption, Cost & Savings calculation	
Define power consumption data for computer type (laptop/desktop)	√
Define power consumption data for computer manufacturer & model	√
Define power consumption data for specific computers	√
Auto synchronization of power rates (Israel)	√
Power Consumption calculation based on real-time data	√
Ability to calculate potential power savings (without power savings enabled)	√
Calculate achieved power savings - consumption and cost	√
Calculate software savings vs. user generated savings	√
Ability to calculate cost and savings based on time (differential power rates)	√
Reporting Capabilities	
Out-of-box reports for potential savings	√
Out-of-box reports for actual power consumption & cost	√
Out-of-box reports for actual power savings achieved	√
Ability to customize reports & save report definitions	√
Export to PDF, Microsoft Excel, HTML, XPS	√

End-User Capabilities	
Ability to show/hide the end-user user interface	√
Display Power Savings Plan details to the end-user	√
Support for "Presentation Mode"	√
Allow end-user to postpone power savings (downloads, nightly builds, etc')	√
Display messages to end-users	√
End user multi language support (including Hebrew)	√
Integration Capabilities	
Automatic integration with Microsoft SCCM (2007 – 2012 R2)	√
Direct Computer Wakeup from Corporate Portals	√
Computers wake-up from external systems using PowerPlug Pro Server SDK	√
Ability to export information to external reporting / BI systems	√