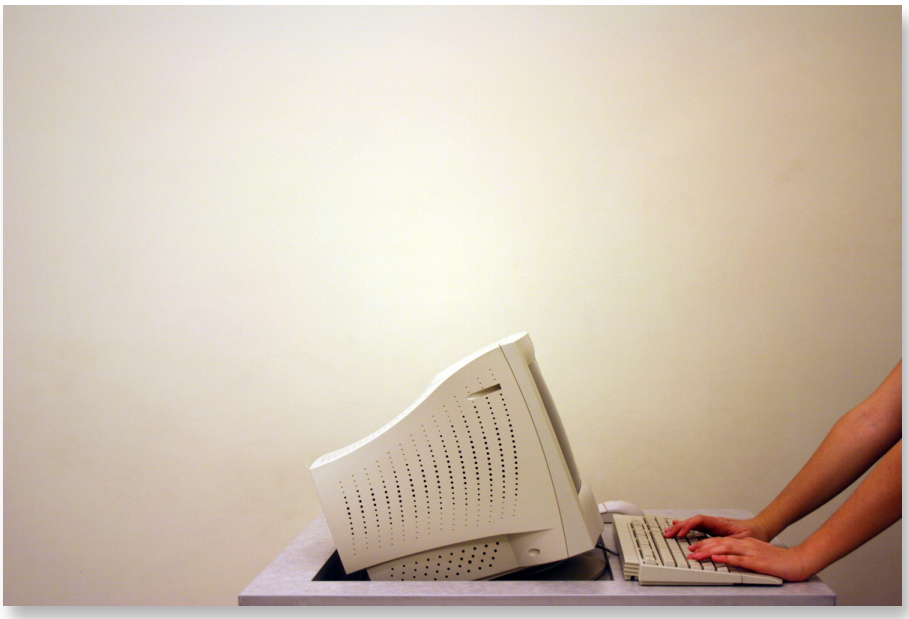
enpower™

PC POWER MANAGEMENT
plugging the leak

PC Power Management - An Introduction

The world today faces unprecedented problems due to rapid climate change which are now receiving attention from governments and businesses across the globe. As concern for climate change and sustainability continues to grow, and actions now ramp up, businesses are grappling with reducing carbon footprints while remaining profitable. Feeling pressure from customers and other stakeholders, organizations around the world have begun to make serious improvements in their environmental performance, recognizing that if they fail to deliver on this, it frequently translates into a negative impact on profit. Businesses have realized that taking initiatives that have a positive effect on the environment also helps their bottom-line while simultaneously enabling them to use technology efficiently.



Great opportunities lie in the IT department and CIOs across organizations are taking decisions on major purchases and infrastructure revamps to mitigate the environmental impact of technology. The solution resulting in the quickest ROI is energy efficiency and one of the simplest ways to improve an organization's energy efficiency is PC power management.

THE POWER OF POWERING DOWN

Gartner estimates that a company with 2,500 PCs and a power management system can save 433,000 kWh per year in comparison to one that doesn't have PC power management installed. That's over 40,000 USD saved annually.

Many workers unknowingly waste their organization's money through one simple act: leaving their PCs on when not in use, especially overnight and during the weekends. As an example, US organizations waste $2.8 billion every year powering 108 million unused PCs. According to estimates[1], a desktop computer in a normal usage pattern is in active mode for approximately 2,279 hours annually. It is reasonable to say that computers are used efficiently for about five hours on an average workday and for 200 days per year, equal to 1000 hours. Based on an average workday, this means that every computer is in active mode for 1,279 hours per year while not utilized - or roughly a third of the year!

IS INDIA IMMUNE?

According to IDC's Worldwide Quarterly PC Tracker for Q408, there will be 4.1 million more desktop PCs and 2.4 million more notebook PCs in use in India in 2009. By 2010, the country's installed base of PCs will reach 47 million units. This amounts to wastage of USD 960.68 million due to idle PCs that are not powered down.[2]

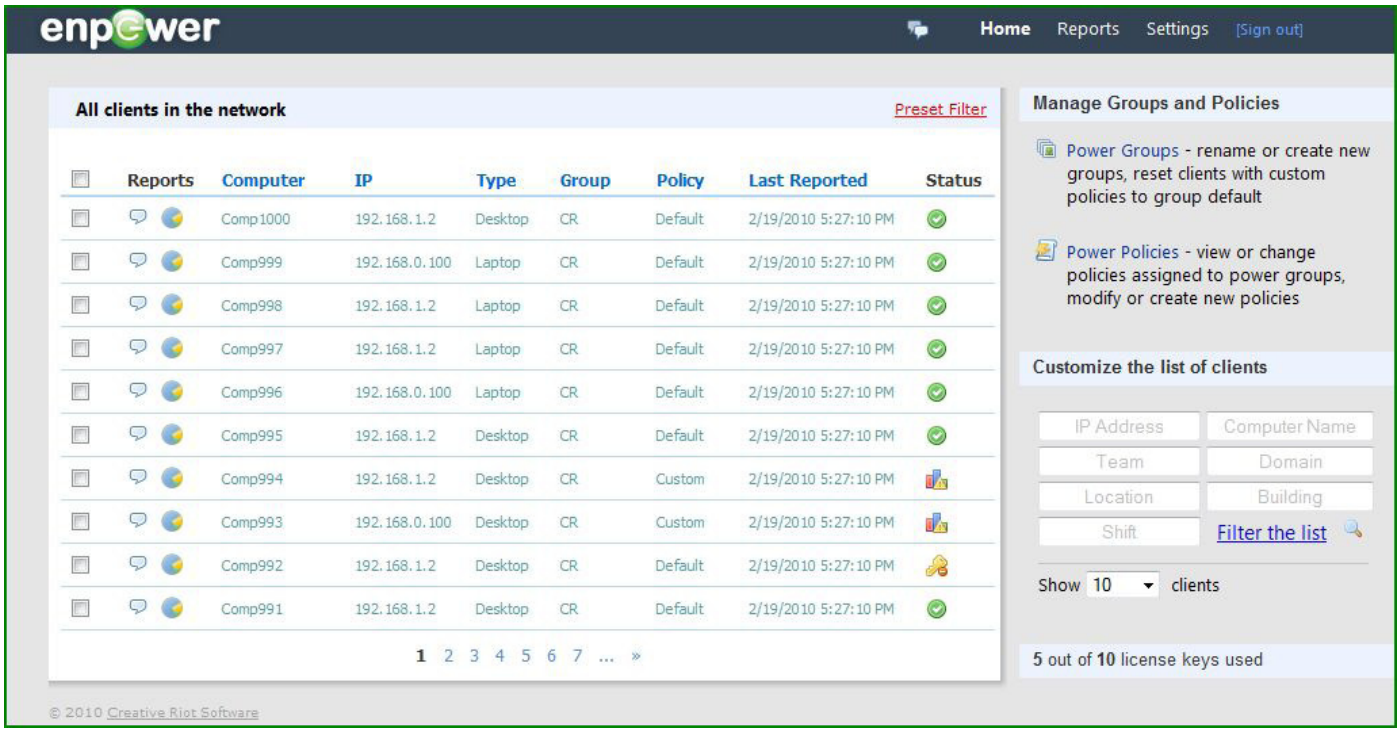
Perhaps the greatest external factor responsible for environmentally friendly initiatives in organizations has been government regulation.

As stringent regulations have yet to see the light of day in developing economies, the motivation for businesses in these countries to adopt green practices and lower their carbon footprint remains low. What's undeniable, though, is the role that these economies will essay over the coming decade. A country like India, undergoing phenomenal economic growth and social change, will increasingly contribute to CO2 emissions. The numbers today, as illustrated, are worrying and warrant immediate action.

ENPOWER - PC Power Management Simplified

ENPOWER is an intelligent, centralized power management and monitoring solution for computer networks. It enables IT admins to optimize PC power consumption on their networks by effectively transitioning idle machines into power saving modes and ensuring that only the machines that are in use are actually on and drawing power. The tool is divided into two components - a central server and individual client agents.

ENPOWER's server monitors all your workstations, and lets you group them into logical collections called 'Power Groups'. You can then define 'Power Policies' for individual workstations as well as power groups. An interactive, analytical reporting module exposes energy consumption, costs, CO_2 emissions avoided, energy savings estimates and much more at the individual workstation, power group or organization level. These comprehensive reports let you track your savings and realize your ROI in real time.



THE ENPOWER SERVER INTERFACE

An ENPOWER agent on every workstation enables each employee to make the most of PC power management in a manner that best suits his/her usage pattern. This agent allows the user to define inactivity-based timeouts for shutting off the monitor and putting the system on standby or into hibernate/shutdown. Scheduling of hibernation/shutdown of the workstations at a fixed time is also possible. Arguably one of ENPOWER's most powerful features is its ability to let users to define what 'inactivity' means to them – no more will that critical download or unsaved document be lost on account of a scheduled shutdown. An elegant widget shows users how much they've saved in real time and helps them get involved in your green initiative.

THE ENPOWER AGENT INTERFACE

ENPOWER can be deployed on workgroups as well as domain based networks and offers significant benefits over Windows' default power management techniques.

Why plain vanilla Windows Power Schemes don't work

Windows has basic power management capabilities that allow automated power transitions. Power management in Windows has the potential to help minimize power losses when machines are idle. It, however, suffers from two fundamental shortcomings.

CENTRAL CONTROL IS DIFFICULT - Since Windows lacks a comprehensive console for exhaustive, centralized power management, it becomes extremely difficult to centrally administer and deploy power policies on networks. What's more, it isn't possible to monitor machines for compliance or to measure savings. ENPOWER is that comprehensive, centralized, feature-rich PC power management console that Windows always needed.

A RIGID INACTIVITY DEFINITION - What does 'inactivity' mean to you? Is your computer inactive merely on account of the absence of keyboard or mouse input? Windows has a rigid definition for inactivity that may not be compatible with your requirements. You can tell ENPOWER when you feel your workstation is 'inactive' so that power transitions never happen unless you have authorized them.

ENALYTICS - Reporting Dashboard

ENALYTICS is the underlying reporting platform for our suite of energy management and auditing products. It helps enterprises make smarter decisions by providing comprehensive information and insight into the organization's energy savings, energy consumption, network status and environmental footprint.

Filters

The generated reports can be filtered using a combination of various parameters including
→ Time span (day / week / month / year)
→ Type of computer (desktops/laptops/servers)
→ Groups / Department / IP range
→ Configuration / OS / Savings / Consumption / Settings

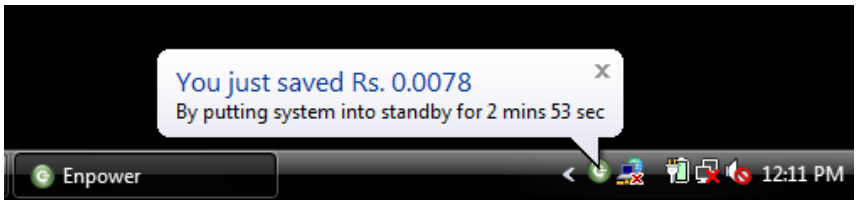
Reports

→ Energy Savings and Consumption
→ Efficiency Rating
→ Network snapshot to identify the network state/load on a given day
→ Exception reports for machines that do not support low power states such as standby/hibernate
→ Environmental Footprint

ENOUNCE

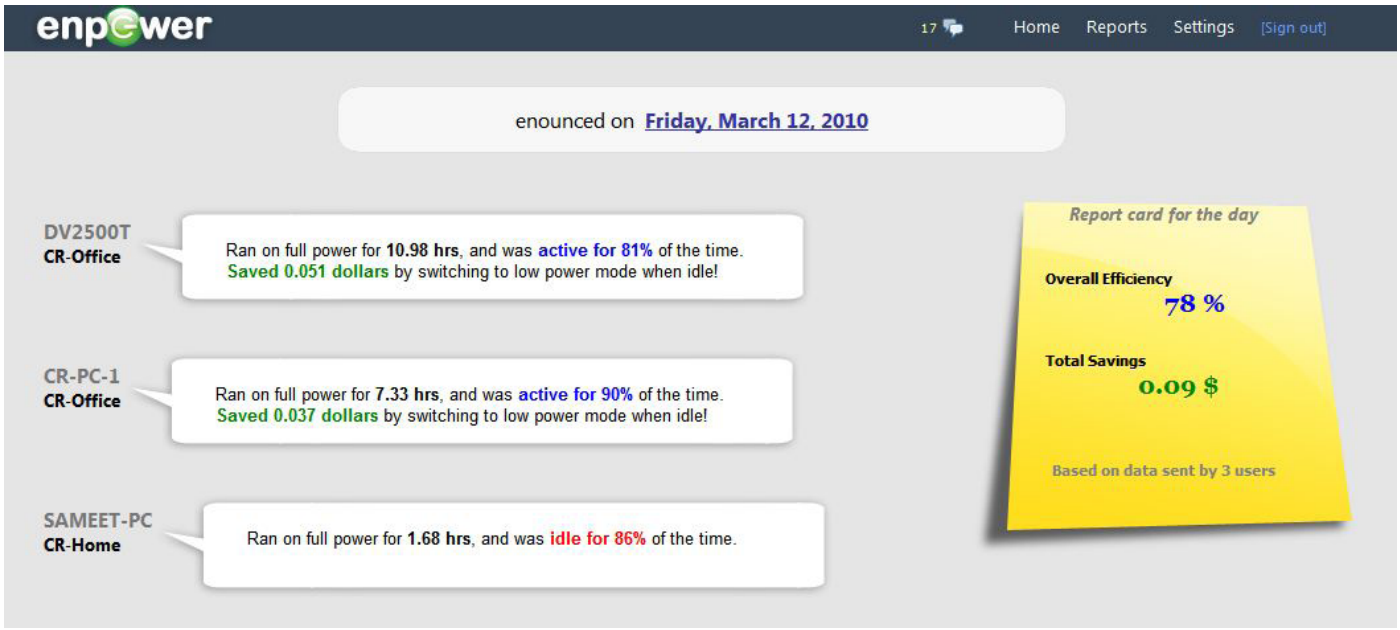
ENOUNCE is an internal notification service that streams messages called 'enouncements'.

→ An enouncement on the client keeps the employee involved in the company's green initiative by making him/her aware of his/her contributions.



ENOUNCE ON THE ENPOWER CLIENT AGENT

→ The enouncements on the server induce a little competitive spirit and lets employees see how they are faring against their colleagues.



ENOUNCE ON THE ENPOWER SERVER

Features and Benefits - An Overview

Comprehensive Power Policies

→ IT admins can configure different policies for different machines based on their usage.
→ Scheduled hibernation and shutdown along with wake-up ensure workstations are switched off when not in use, without hindering employee productivity.

Quick and easy installation

→ Silent installation ensures zero impact on user productivity.
→ Does not lead to any lost opportunity costs due to minimal downtime.

Notifications

→ Notifications during power state transitions enable the user to cancel the transition if the user is present in the vicinity of the computer.
→Central notifications enable the system administrator to keep track of changes on client agents and ensure compliance on workstations across the network.

SAVINGS FOR LARGE NETWORKS

An organization using ENPOWER can, for every 2500 PCs, realize annual savings of about[3]

- Monetary - 43,300 USD
- Energy - 433,000 kWH
- CO_2 emissions reduced - 280 tons
- Trees not required to sequester CO_2 emissions - 92 acres
- Comparable auto emissions avoided - 59 cars
- Equivalent homes powered - 40 homes

Automatic Centralized Updates

→ Continuous updates ensure easy maintenance.
→ Centralized updates are silent and require no user input from workstation users.

Automatic Configuration Detection

→ ENPOWER automatically detects the configuration of each workstation.
→ Accurate reports for each workstation can be generated based on the configuration.

Individual and aggregated reports

→ All reports are easily accessible from a centralized interactive dashboard.
→ Detailed workstation utilization reporting allows you to see how much power you are saving based on your regional electricity cost.
→ Power consumption and savings reports can be displayed per workstation, per energy consumption profile or for the entire organization, over a selected timespan.
→ Additionally, Enpower displays environmental goals that have been met through the reduction of computer energy waste.

Granular Control with Enhanced Inactivity Definition

→ Enpower allows each user a custom definition of inactivity and enforces power transitions using inactivity based timeouts.

Enhanced Data Security

→ Enpower ensures idle PCs are powered off, thus preventing unauthorized access.

Network Administration

→ All PCs can be turned on for critical patches or updates.

Lowered Cooling Costs

→ PCs dissipate less heat; cooling requirements are consequently lower.

Creative Riot Software - About Us

Supported by
CIIE, IIMA

Creative Riot Software is a product oriented green software development company.

We are the first company to graduate from an alliance between the Centre for Innovation, Incubation and Entrepreneurship, IIM Ahmedabad and Microsoft Corp., India and are currently supported by the country's premier business incubator.

1 'Your PC and the climate' - TCO Development, May 2008
2 Using Gartner's annual wastage estmate of 360 kwH per PC per year, average electricity tariff INR 6 per unit and corrections for notebook PCs
3 Windows Vista Energy Conservation Whitepaper and Climate Savers Computing

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