



## What's New in Power Management

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# Windows 7 and Power Management

- Group Policy in Windows 7 and Windows Vista offer a way to centrally manage PC sleep features

*...however...*

- Windows default power management settings are not typically retained when operating systems are installed by PC makers, enterprise IT departments, computer resellers, or 3rd party service providers

## Windows 7 Power Management

- Power management settings the default in Windows 7
- Centrally control power management in the enterprise
- More reliable sleep settings
- Platform and processor efficiencies to reduce power consumption
- Enter low power states more frequently and less background processing
- Diagnostic tools to troubleshoot power management and efficiency



# Leading Orgs are Embracing CPM

- Acer
- Anheuser-Busch Companies, Inc.
- CA Department of Motor Vehicles
- Coeur d'Alene School District
- **Commonwealth of Massachusetts**
- County of Erie, NY
- **CSC**
- Dell
- FedEx Corporation
- Florida Department of Environmental Protection
- **Ford Motor Company**
- Fox Entertainment Group, Inc.
- Fujitsu
- Google
- Hitachi
- HP
- Intel
- Lenovo
- Los Angeles County Dept. of Public Works
- Microsoft
- **National Instruments**
- NEC
- Raytheon Missile Systems
- Schneider Electric
- Symantec
- Time Warner Cable
- WWF



# Many Network Software Options Exist for PM: What Gets Measured Gets Managed

## Commercial Solutions:

- 1E's NightWatchman
  - Faronics Power Save
  - BigFix Power Management
  - Symantec Altiris
  - Verdiem's Surveyor
  - Verismic's Power Manager
- + a many others (see resource links provided)

## Public Domain / Windows Options:

- Microsoft Group Policy to centrally manage Windows Vista and Windows 7 power management features.
- Microsoft Group Policy Preferences to centrally activate monitor and computer power management features on Windows Vista and XP machines
- EZ GPO allows a network administrator to centrally control computer power management settings on Windows 2000 and XP machines.
- Other free download

Go to: [www.energystar.gov/lowcarbonit](http://www.energystar.gov/lowcarbonit)  
and [www.climatesaverscomputing.org](http://www.climatesaverscomputing.org)  
for case studies and more information



# Server Power Management Approaches

## Select Server Power Factoids

- 4.7 million servers are powered every day without being used.<sup>1</sup>
- Nearly 72% of Server Managers expect to find at least 15% of their servers running continuously unused.<sup>1</sup>
- \$20.9 billion is wasted each year on hardware, maintenance and management.<sup>1</sup>
- \$3.8 billion is additionally wasted each year on energy for unused servers.<sup>2</sup>

***“An unnecessary amount of data servers are ‘plugged in’ 24/7 in an age when power-saving tools are available to businesses.”***

Kateri Callahan, President of the Alliance to Save Energy (ASE)

## Server Power Management Basics

- Hardware Energy Efficiency
- Vendor centric offerings
- New hardware independent software
  - Identifies and measures useful work
  - Dynamically control power consumption
  - Helps manage server sprawl (physical and virtual) and assists in decommissioning
  - Manages and reduces power among other benefits



1 Source: 1E Server Energy Report 2009

2 Source: Includes cooling costs with a Power Usage Effectiveness (PUE) rating of 2