

SysTrack® Power Manager

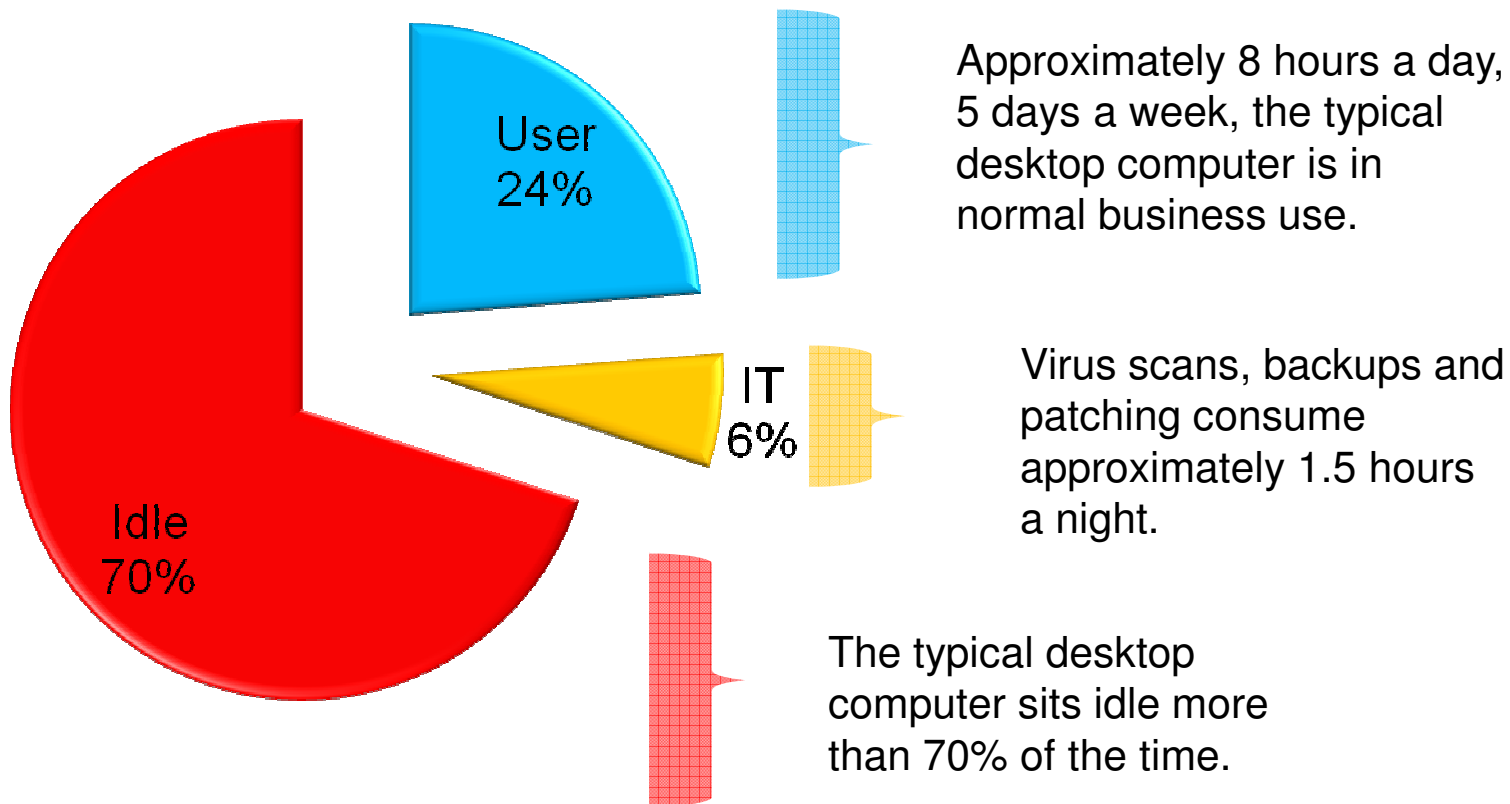
Energy Savings through Automated PC Power Management

Overview Presentation



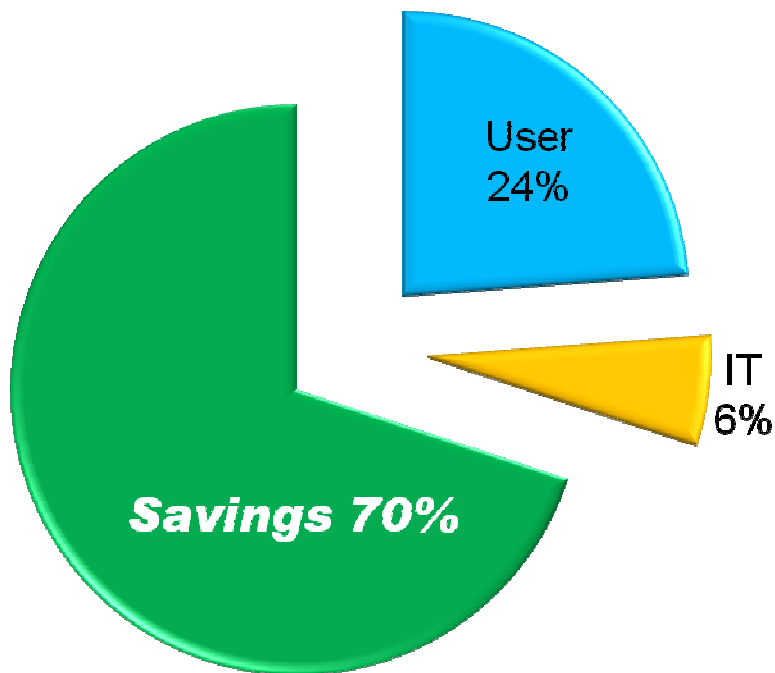
It's good to be green

Desktop Computer Usage



consuming power 100% of the time...

Desktop Computer Usage



- Hands-off PC Power Management can save \$10 per pc per month
- Captures user behavior patterns to maximize savings
- Will not interrupt users or IT operations

Enterprise Savings:
10,000 PC's X \$0.33 cents/day =
\$1,204,500.00 per year



How to reduce Power demand

- **The typical desktop is used for 9 hours per day**
- **Virus scanning, backup, patching and other IT operations take 2 additional hours**
- **Weekend usage is even lighter**
- **Turn it off through automation!**



Why don't we turn it off?

- **IT operations (virus scan, backup, patch, etc) run during off hours so that users are not impacted**
- **Multiple products and people are involved**
- **It's hard to set a fixed schedule since people work varying hours**
 - Flex time
 - Work-from-home
 - Traveling workers
- **The cost of energy is cheap compared to the cost of people's time**

What has been tried

- **Windows provides an inactivity timer to allow hibernate or sleep**
 - This typically defeats backups and patches
 - Virus scans will run when people are around
 - Windows XP has no GPO to set this up
- **Products exist to set fixed schedules**
 - It's hard to set schedules that apply to everyone
 - They require lots of setup time
 - They don't deal well with staggered schedules that are typical for backups and patches
 - They can't adapt to mobile work forces
 - They rely on Wake-on-LAN

Competitive Landscape

Wake-on-LAN Limitations



- Requires hands-on BIOS configuration; must touch the PC to enable it
- Magic packets are typically filtered by firewalls and non-routable
- Unreliable wake from S4 (hibernate) and S5 (soft off)
- Requires all IT-driven products (backups, patches, etc) to have the capability
- Doesn't work well for decentralized IT-driven operations (e.g. virus scan) where there's no remote server

SysTrack PM does not suffer any of these limitations!

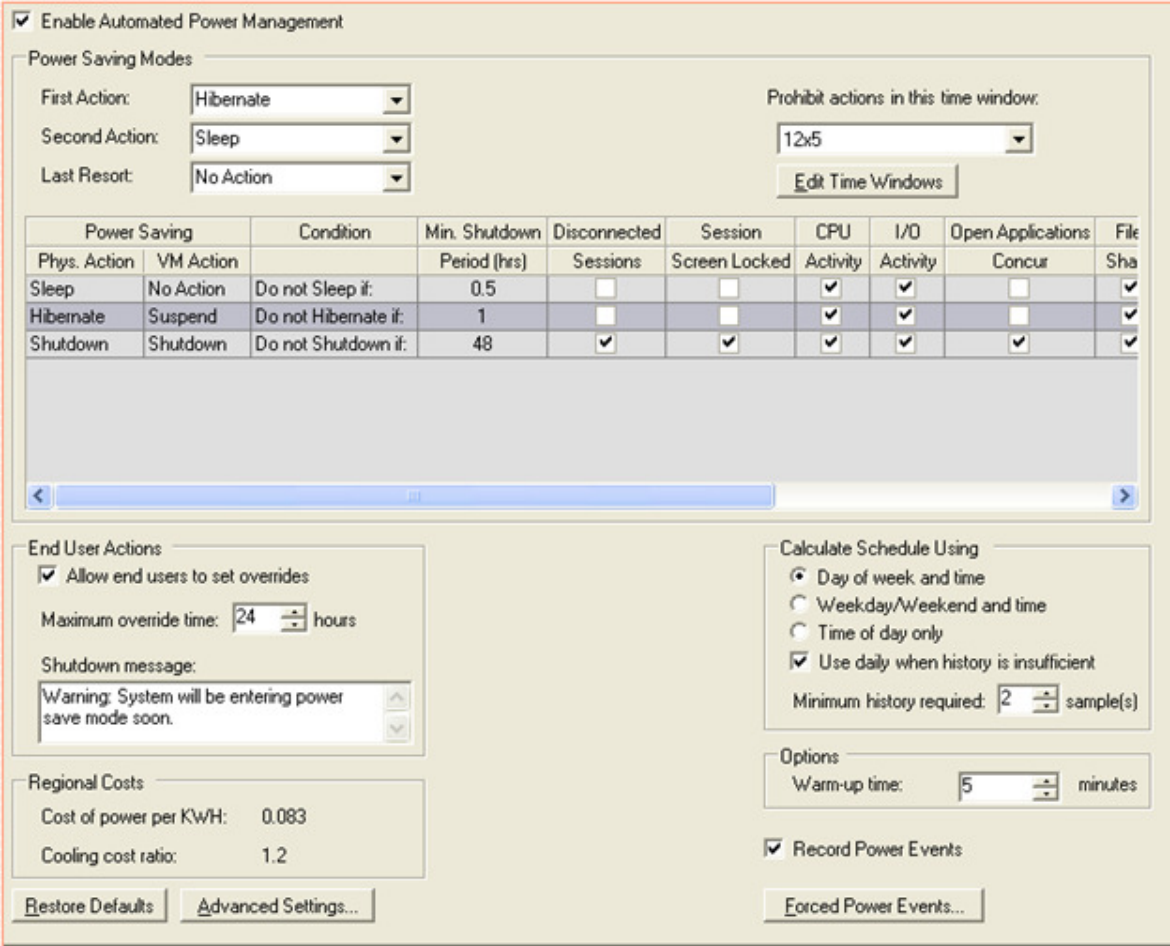
SysTrack Power Manager



- **Uses built-in behavior analysis to determine user and IT-driven system needs**
 - Automatically senses user's daily patterns (arrival, lunch, breaks, meetings, departure, etc)
 - Automatically determines IT-driven daily patterns (backups, virus scans, patches, etc)
- **Actively manages system power state based on administrator set policies and user schedules**
 - Both shutdowns and wakeups are fully automated
 - Doesn't require Wake-on-LAN
- **Supports Windows XP, Vista, Windows 7 with enterprise scalability**

Configuration is Simple

- Establish desired policies
- Capture behavior for 3-14 days to detect patterns
- Supports multiple policies for complex environments
- Addresses both physical and virtual systems

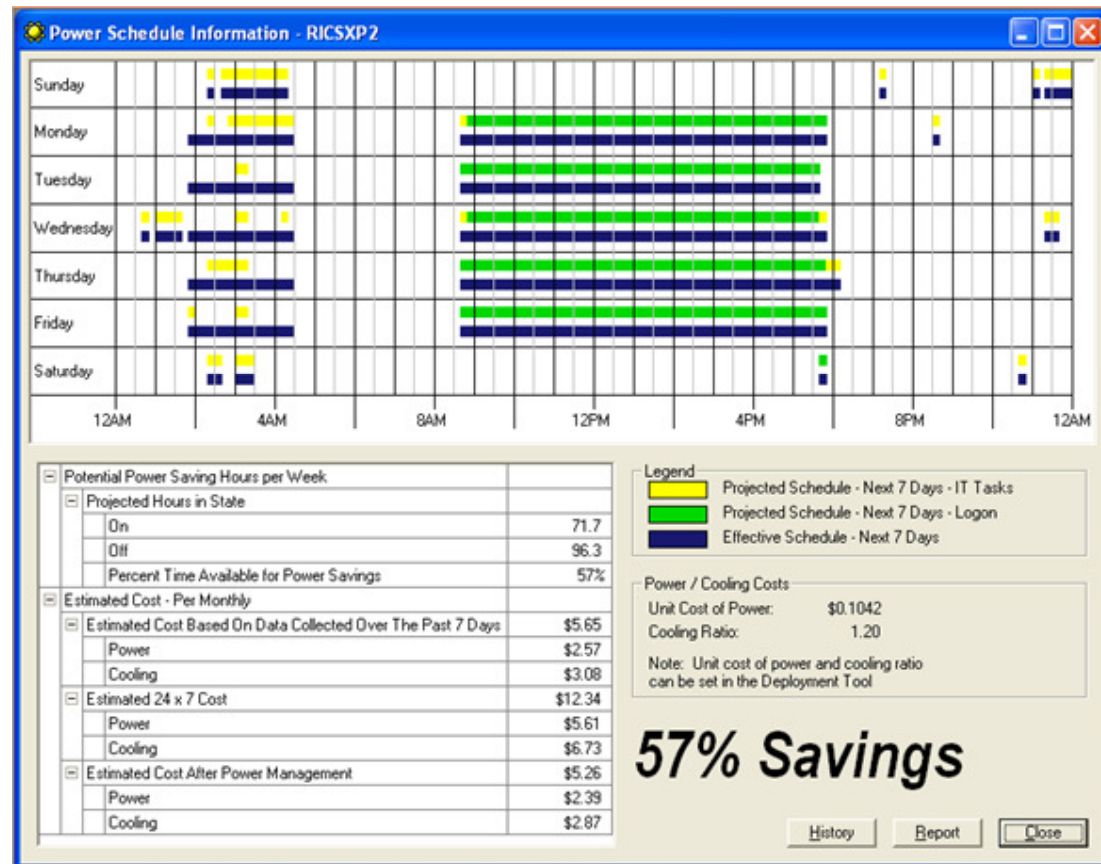


The screenshot shows a configuration window for power management. At the top, there is a checkbox for "Enable Automated Power Management" which is checked. Below this, the "Power Saving Modes" section includes three dropdown menus for "First Action" (set to "Hibernate"), "Second Action" (set to "Sleep"), and "Last Resort" (set to "No Action"). To the right, there is a "Prohibit actions in this time window:" dropdown set to "12x5" and an "Edit Time Windows" button. A central table lists various power saving actions and their conditions. Below the table, there are sections for "End User Actions" (including a checked "Allow end users to set overrides" and a "Maximum override time" of 24 hours), "Regional Costs" (with "Cost of power per KWH" at 0.083 and "Cooling cost ratio" at 1.2), and "Calculate Schedule Using" (with "Day of week and time" selected). Other options include "Use daily when history is insufficient" (checked), "Minimum history required" of 2 samples, "Warm-up time" of 5 minutes, and "Record Power Events" (checked). Buttons for "Restore Defaults" and "Advanced Settings..." are at the bottom left, and "Forced Power Events..." is at the bottom right.

Power Saving	Condition	Min. Shutdown	Disconnected	Session	CPU	I/O	Open Applications	File	
Phys. Action	VM Action	Period (hrs)	Sessions	Screen Locked	Activity	Activity	Concur	Sha	
Sleep	No Action	Do not Sleep if:	0.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hibernate	Suspend	Do not Hibernate if:	1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shutdown	Shutdown	Do not Shutdown if:	48	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Built-in Automated Reporting

- Monitors device inventory and usage and tracks estimated power consumption
- Reports show instantaneous and total power consumed
- Reports show group and enterprise total savings
- Before and after reports demonstrate and quantify client savings from SysTrack PM



Savings at Enterprise Customer (sample)

- **A customer has 70,000 desktops**
 - Estimate 100 watts typical
 - \$10/month * 36 months * 70,000 desktops = \$25.2 M
 - \$25.2M - (less solution cost)
- **How many PCs do you manage/own?**



SysTrack® Power Manager

**“Saving the planet for future generations
one desktop at a time”**



It's good to be green