PwrSmart® – Energy Savings Projects

Experience Control™
Simple. Automated. Granular.

The following project descriptions illustrate the breadth and depth of New Boundary Technologies' PC power management o ! ering and our project support capabilities.

Public Schools, Virginia

Project Objectives

- Provide centralized PC power management solution to control energy consumption on desktop computers.
- Provide technical support and training.

Project Parameters

- Computers: 2,290
- Schools: 11 schools + central o " ces
- Contract start: 3/26/2014
- Contract duration: 5 years

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Implementation Highlights

- **Evaluation:** ***** County #rst began evaluating PwrSmart in September, 2013. They installed the PwrSmart agent on less than 10 computers to assess features and capabilities. Their computers were in low power 20.9 hours/day using the PwrSmart Best Practice scheme.

- **Agent Deployment**
  - Schools IT used SCCM and Active Directory GPOs to deploy the PwrSmart agent.
  - Schools IT experienced a few minor issues during agent installation, one involving Symantec Endpoint Protection and another with SCCM. These were resolved after consulting with Nathan Kurtz and Travis Ausen, who suggested switching to Active Directory GPOs since many of their PCs did not communicate with SCCM.
  - The initial rollout phase was to 1,364 computers in October, 2013.
  - The rollout was complete by the end of January, 2014.

- **Baseline:** ***** County wanted to include as many computers as possible when establishing their PC power management baseline. After the initial rollout to 1,364 computers (across several schools) in mid-October, they ran a baseline assessment for a 2 week period. This produced a baseline value of 4.6 hours/day in low power when centralized PC power management was not being applied.

- **Projected Savings:** Schools IT assigned a PwrSmart power management strategy after the baseline period to gauge the e ! ectiveness of centralized PC power management. They saw an improvement to 19 hours/day in low power for a net improvement of 14.4 hours/day. We therefore projected an annual savings of 12 hours/day which translates to $72.27/PC annually (based on 150 watts per PC, $0.11/kWh).

Results

- Student and Teacher Impacts
  - A primary objective for ***** County Schools was to minimize impact on teachers and students. After trying a variety of approaches, they settled on the use of standby events to force computers to sleep in the evenings, but otherwise leave them alone during the day.

  - ***** County also uses Stay Awake events to allow IT to perform routine patching and upgrades at night without impacting students and teachers.

Since implementation was completed in early December, 2013, centralized PC power management at ***** County Public Schools is consistently putting computers into a low power state 20 hours/day or more. This translates to a net improvement of over 15 hours/day/PC, far exceeding the projected savings of 12 hours/day. The net improvement of 15 hours/day translates to $90/year/PC in net savings.

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******* County Public Schools, Maryland**

Project Objectives

- Provide centralized PC power management solution to control energy consumption on desktop computers.
- Provide technical support and training. Project Parameters
- Computers: 32,995
- Schools: 170+
- Districts: 5
- Contract start: 8/26/2013
- Contract duration: 10 years

Implementation Highlights

- Evaluation: XXXX #rst began evaluating PwrSmart in November, 2012. They installed the PwrSmart agent on a few hundred computers, assigned a PwrSmart scheme, and in the #rst day saw a 50% reduction in full power uptime over the #rst 15 hours.
- Training & Support: Nathan Kurtz provided formal training, in webinar form, for the IT sta ! from each of the 5 school districts in early September, 2013. Jeremy Norton provided M&V consulting to the customer throughout the project.

Agent Deployment

- ***** took a phased approach to the agent rollout across the school districts. Since the elementary and middle schools were in the middle of state-wide testing, they began with a subset of high schools within a single district.
- ***** uses a 3rd party deployment tool, which made it easy for them to install the agent.
- The #nal phase of the rollout took place in September/October, 2013, district by district, to reach the current level of over 29,000 computers. Most were added over a 4 day period, with 18K being added on a single day.

- The rollout was complete by the end of October, 2013.

- Although laptops were contractually excluded by *****, some IT administrators added laptops inadvertently. This was easily remedied in the PwrSmart console because there is a Laptop group that can be periodically purged.

- **Baseline**: ***** established their formal PC power management baseline of 3.0 hours/day in low power in early December, 2012. It involved a sample of 271 computers from di ! erent schools within a single district over a 1 week period.

- **Projected Savings:** Early experiments by ***** with di!erent PwrSmart power management strategies suggested the average time spent in low power per PC could be improved from 3.0 hours/day to over 17 hours/day – a di!erence of 14 hours/day. Since this was based on a small sample size, we projected an improvement of 11 hours/day, which in turn translates to projected savings for ***** of $66.25/PC annually (based on 150 watts per PC, $0.11/kWh).

- **Student and Teacher Impacts**
  - A primary objective for *****, since inception, was to minimize impact on teachers and students. To limit exposure they have been using a standby setting of 2 hours. Despite cutting savings by ~10%, they currently feel it is the correct tradeo!.

  - Some teachers reported that their monitors failed to come out of sleep mode. A joint investigation found this to be an issue with a speci#c model of monitor, and was independent of PwrSmart. The strategies were modi#ed to exclude those speci#c computers (of which there were only a few).

Results

Since implementation was completed in early November, 2013, centralized PC power management at ***** is consistently putting computers into a low power state 18 hours/day/PC. This translates to a net improvement of 15 hours/day/PC, far exceeding the projected savings of 11 hours/day. The net improvement of 15 hours/day translates to $90/year/PC.