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Intelligent Utilities for ABSOLUTE Control

Faronics Deep Freeze and BC Hydro

CASE STUDY

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Delta School District 37 and Vancouver School District 39

“The computer power management software eliminates workstation downtime by preserving the computers’ original configurations and making them completely invulnerable to hacking. This ensures 100% workstation availability.”

Paul Parsons, Foreman – Electronic and Computer Services, Delta School District 37

“Installing computer power management software is not only saving on energy costs, but is also dramatically reducing computer support costs by minimizing the time needed to visit each computer for manual shutdown and software maintenance.”

Steven Robson, Supervisor – Technical Support, Vancouver School District 39

The Situation

Like most school districts across the province, School District 37 (Delta) and School District 39 (Vancouver) operate large computer labs – roughly 5,500 in Delta and 8,900 in Vancouver. Computers are significant users of electricity, and one of the problems involved in operating computer labs is the difficulty in getting people to turn the machines off at the end of the day. Leaving computers on results in a substantial waste of electricity and higher-than-necessary operating costs. Indeed, about 500 gigawatt hours of electricity are wasted each year in B.C. because workplace computers are left on at night and during inactive periods. This translates into approximately \$29 million in annual electricity costs.¹

Both school districts were looking for ways to reduce their operating costs. As Power Smart Partners, they contacted BC Hydro for assistance and, with the help of their BC Hydro Key Account Manager, identified the potential for saving energy and money by reducing unnecessary computer use.

The Solution

BC Hydro assisted School Districts 37 and 39 in evaluating the potential energy savings and costs of installing computer power management software that automatically shuts down computers when they are idle and at the end of the day. BC Hydro also helped the school districts build business cases for implementing the initiatives. Together with school district staff, BC Hydro did site pre-analysis by monitoring consumption prior to the installation of the software and by establishing consumption patterns.

Both Delta and Vancouver chose a computer power management software product called Deep Freeze Enterprise edition, manufactured by Faronics Corporation. The software is a workstation security solution, which protects original workstation configurations by restoring the computer settings to their original condition with a simple reboot. In addition, the software can enforce workstation shutdown based on a user-defined schedule or a customized idle time configuration. While these projects used Deep Freeze, there are other computer power management software available in the market and IT department personnel will be able to determine which ones will best suit each school’s needs.

In both school districts, senior management approved the projects based on the significant electricity savings that would result from implementing scheduled and idle time workstation shutdown with the software.

The installations were completed in 2004:

- School District 37 (Delta) installed the computer power management software on 2,600 computers in some elementary and secondary computer labs in the district.
- School District 39 (Vancouver) installed the computer power management software on 8,900 computers in all elementary and secondary computer labs in the district.

¹ Calculations performed by BC Hydro Technical Solutions based on average computer hours of operation obtained from BC Statistics 2005

Both Delta and Vancouver have been very pleased with the results of the installations and have been motivated to pursue other energy efficiency projects. Delta plans to install the software on its remaining 3,000 computers and also to install energy-efficient occupancy sensors and LED exit signs. Vancouver plans to implement a comprehensive energy efficiency project including lighting and mechanical retrofits at the Britannia Community Complex, which includes a secondary school, elementary school, ice rink, swimming pool, library and community centre.

The Benefits

Electricity savings

For both school districts, the computer power management software produced significant energy savings. Delta has reduced its electricity use by over 660,600 kilowatt hours (kWh) a year, worth approximately \$40,000 in annual cost savings. Vancouver is saving over 2,313,680 kWh a year, which translates into savings of approximately \$139,000 each year. Shutting down computers also reduces the amount of heat produced, decreasing the schools' cooling loads.

Reduced computer support costs

The computer shutdown Deep Freeze Enterprises software is also dramatically reducing computer support costs. The software eliminates workstation downtime by preserving the computers' original configurations and making them completely invulnerable to hacking. Each restart eradicates all changes and resets the computer to its original state, down to the last byte, ensuring 100 per cent workstation availability and a reliable parallel-computing environment.

Longer equipment life

Running computers for fewer hours a day should extend their operating life. This in turn means reduced environmental impacts because fewer computers need to be discarded.

Contact Us

Find out how the Power Smart Product Incentive Program can help your school district energize its bottom line. Call us today at 604 522-4713 in the Lower Mainland or 1 866 522-4713 elsewhere in B.C.