Data Synergy PowerMAN reduces PC energy costs by 80% at St Richard Gwyn School saving £6,600 per annum

Overview

St Richard Gwyn Catholic High School is an oversubscribed secondary school in North Wales with 1,000 students on roll. The school has approximately 500 computers with 425 being used by students and the remainder by teaching and office staff. Historically classroom computers are switched on in the morning and automatically shut down at the end of the school day.

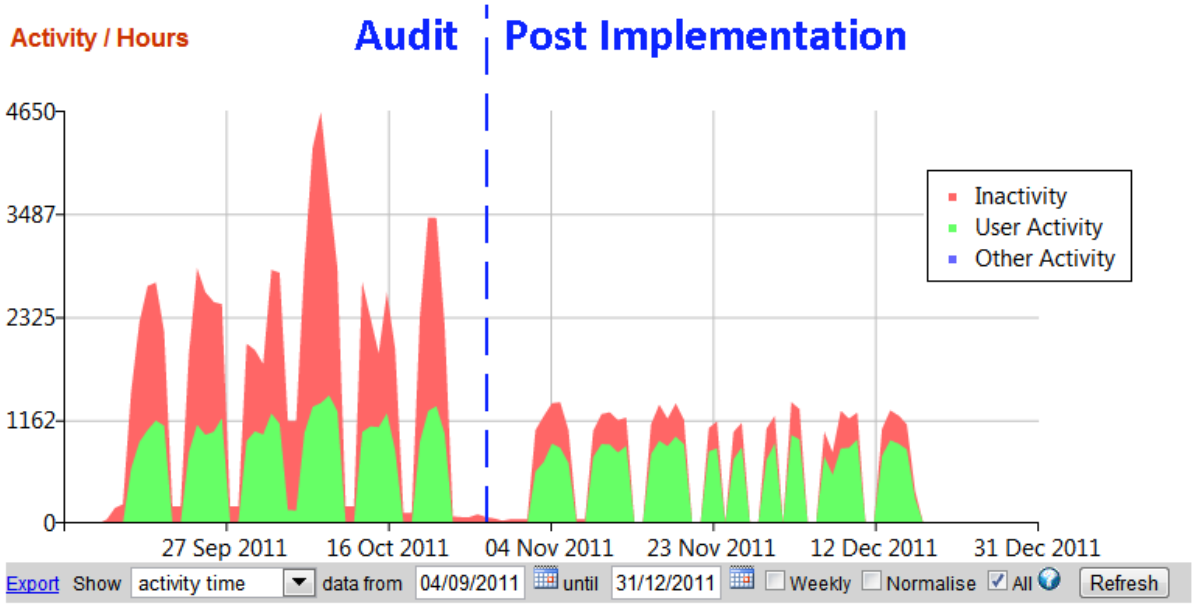
The motivation of the PowerMAN project was to reduce the school's annual energy consumption as part of a cost cutting initiative. The school's existing software could shutdown computers at the end of the day but lacked any real flexibility or functionality for daytime PC energy management. Steve Lightfoot, School Network Manager, wanted to achieve more for this important daytime period.

Energy Audit

Prior to starting any power management the school used Data Synergy PowerMAN to conduct an energy audit of the classroom computers. PowerMAN deployment was very straightforward using Windows Group Policy. Computers were grouped depending on their location and users. The audit period lasted from September until the first school half-term in October 2011.

It was quickly apparent that classroom computers experienced high levels of inactivity and were often left idle more than being used. The audit found that, on average, a typical classroom PC was unused for 4.4 hours per day and had no logged on user 58% of the time. Across the 425 classroom PCs this energy waste was over 500,000 hours per year and equivalent to around £8,300 in unnecessary energy costs.

The graph below is a screenshot from the actual PowerMAN reporting system. This demonstrates the type of reports that can be quickly generated for any workstation or group of workstations. Each of the peaks records a school week whilst the gaps between peaks are the weekends. The green areas denote the amount of user activity that occurred whilst the red areas record the time spent with no user present and no useful activity occurring. The red areas therefore indicate the extent of the PC energy waste.



Remedial Plan

After discussing the findings with Data Synergy Technical Support the school formulated a remedial power saving plan. To minimise energy waste, classroom computers would go into sleep mode after five minutes of idle time on the logon screen but wake up instantly when the power button was pressed. Inactive users would be logged out after 30 minutes. Computers would initiate a controlled shutdown at the end of the school day but give those users who were still logged on an option to opt-out.

Conclusion

The new power saving scheme was implemented as the school returned from half-term in October 2011 and further data collected until Christmas. The results were immediately apparent. Classroom computers were now idle for only 0.9 hours per day. This was a reduction of 80% and equivalent to an energy cost saving of over £ 6,660. This can clearly be seen in the above graph as the reduction in the red area post implementation.

PowerMAN was straightforward to install and the whole experience stress-free thanks to friendly help and advice from Data Synergy Technical Support. The school continues to monitor the classroom computers using PowerMAN's on-going reporting features and can quickly refine the policy settings in the future as school requirements evolve.