



ORANGE COUNTY PUBLIC SCHOOLS GIVES RED HAT ON SAP AN A+

FAST FACTS

Industry	Local government/education
Geography	Florida
Business Challenge	Running on a costly AIX server that required an expensive maintenance contract and was close to end-of-life, frustrating OCPS's IT department and draining taxpayer money
Migration Path	SAP on AIX to SAP on Red Hat Enterprise Linux; Domain Name Server on Windows to Red Hat Enterprise Linux
Software	SAP running on Red Hat Enterprise Linux
Hardware	HP Superdome and HP BL460s and BL860s
Benefits	Deploying Red Hat Enterprise Linux to run business-critical SAP solutions gave OCPS a cost-effective, stable operating system that requires less maintenance and increases security



BACKGROUND

Orange County Public Schools (OCPS), the public school district for Orange County, Florida, is the twelfth largest school district in the county and the fifth largest in Florida. Nearly 180,000 students from kindergarten through twelfth grade attend the district's 180 schools. OCPS, which continues to be one of the fastest-growing school districts in the country, employs more than 25,000 faculty and staff members. In addition to traditional K-12 education, OCPS also offers an adult education system with six dedicated campuses, four special education-focused centers, a hospital/homebound program, and several alternative education centers. In total, OCPS boasts 190 locations across the county.

The Information, Communications, and Technology Services (ICTS) department within OCPS is responsible for the entire school district's computing and IT functionality, and must ensure that operations run smoothly, even on an increasingly tightened budget. The department runs and maintains about 1,100 servers spread out over 20 square miles and ensures that Web-based and client/server applications are accessible for students, parents, and staff.

OPPORTUNITY

Originally, OCPS almost exclusively utilized a mix of Microsoft Windows and an IBM mainframe. In 1998, the ICTS department migrated to SAP's enterprise resource planning (ERP) solutions on AIX for administrative and operational processes and simultaneously brought in Red Hat solutions to run the domain name system (DNS).

Shortly after going live with SAP 4.0b on AIX and Windows, the OCPS ICTS department ran into challenges with load balancing, viruses, and integration issues that had potential to cause greater problems. "If we had stayed with the mixed AIX and Windows environment, we would have been forced to rewrite a large amount of custom code," said Thomas McNabb, assistant director, device management with OCPS. In addition, ICTS noticed memory leaks that caused application failure and unexpected downtime, and identified security weaknesses in the form of several penetration points where unauthorized persons could access data. The high cost of the required AIX hardware and software added to the level of frustration and led OCPS to search for a new operating system solution.

SOLUTION

After deploying Red Hat Linux 9, and later Red Hat Enterprise Linux, on its DNS server, OCPS was fully satisfied with the benefits provided by the open source solution. Using Windows, the DNS server had to be rebooted every Tuesday with the latest Microsoft patches. With Red Hat solutions, few updates were needed and the server ran much more smoothly.

This first deployment of Red Hat solutions in OCPS's IT environment was so successful that ICTS decided to replace its troublesome AIX servers with two Linux servers to run SAP. When selecting a Linux solution, OCPS evaluated Red Hat Enterprise Linux and Novell SUSE. Ultimately, the ICTS department selected Red Hat solutions due to the company's early success with Red Hat, and because the internal staff was comfortable using the solution.

"The migration from AIX to Red Hat Enterprise Linux was painless and seamless," said McNabb. "In the previous environment, we were constantly concerned about making sure we had regular updates to protect against viruses, but with Red Hat we have no concern about that and we've had no issues with downtime."

"Deploying Red Hat alleviated our concern about viruses and the number of penetration points, allowing us to focus on more productive IT initiatives. Running SAP on Red Hat Enterprise Linux has given us the more secure and scalable operating system that we needed to stay within budget without sacrificing performance"

**-Thomas McNabb,
assistant director, device management,
Orange County Public Schools**



The smooth migration meant that end users were not impacted and were able to keep working effectively while the environment was migrated. The Red Hat Enterprise Linux deployment allowed OCPS to migrate off costly AIX hardware and smoothly run SAP solutions, including human resource functions, purchasing, e-recruiting, and almost all other business functions for the district.

BENEFITS

OCPS's ICTS department has enjoyed numerous benefits since migrating from AIX to Red Hat Enterprise Linux. In addition to hardware cost savings, the department has saved valuable manpower resources in troubleshooting time, allowing IT professionals to work on other projects to maximize resources. Using Red Hat Enterprise Linux for its DNS server, OCPS was able to save money by using a more energy-efficient box. Both the cost and time savings have been critical as the district is faced with a shrinking budget.

Another example of OCPS's success with Red Hat Enterprise Linux is the district's HP Superdome. The Superdome is partitioned into two portions – one that runs on Windows Data Center and one that runs an Oracle database with SAP on Red Hat Enterprise Linux. The Windows side costs more than \$25,000 per year to support and maintain, while the Red Hat side requires just one license and little necessary maintenance.

Red Hat's patching system, which requires no reboots, has given the district a more stable operating system with less maintenance troubles. With no memory leaks and fewer restarts, the environment has been beneficial to both ICTS staff and end users. "We feel much more comfortable and secure in this environment," said McNabb. "Deploying Red Hat alleviated our concern about viruses and the number of penetration points, allowing us to focus on more productive IT initiatives. Running SAP on Red Hat Enterprise Linux has given us the more secure and scalable operating system that we needed to stay within our budget without sacrificing performance."

The use of Red Hat solutions at OCPS has been so successful that the district is looking to move as many systems as possible to Red Hat. Many applications are being re-implemented so that they can be redesigned to run on Red Hat Enterprise Linux. Applications, including spam filters and Web filters, now run on Red Hat. "Whenever someone wants to run a new piece of software, we ask if it runs on Linux. If the answer is no, we try to find an alternative so that we can stay Linux-based," said McNabb. "When it comes to infrastructure systems that just have to run, we run it on Red Hat Enterprise Linux."



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