



KEY HIGHLIGHTS

INDUSTRY: **GOVERNMENT**



CHALLENGE

The Department of Energy's Savannah River Site industrial complex wanted to deploy new servers to improve performance and efficiency while reducing administrative burdens and procedural paperwork.

SOLUTION

The site implemented VMware Infrastructure 3 to virtualize its servers and is also considering VMware Virtual Desktop Infrastructure (VDI) to virtualize its desktops.

VMWARE AT WORK

VMware Infrastructure 3 Enterprise, featuring:

- ESX Server 3 with VMFS
- VirtualCenter 2
- VMotion

DEPLOYMENT ENVIRONMENT

- ESX Server 3.0.1 and VirtualCenter 2.0 on eight HP ProLiant DL380 and DL 580 servers
- Network Appliance FAS 270c SAN
- Guest operating systems: Microsoft Windows 2000 Server, Windows Server 2003, Windows XP Professional, Windows Vista, Solaris 10
- Applications: Documentum, EnCase Enterprise, GT STRUDL, Ipswitch What's Up Pro, Lotus Domino server 7.0.2, Microsoft SQL Server 2005, Primavera, Visual Intercept, Visual SourceSafe

"My required uptime during normal duty hours is 99.6 percent. With the physical environment in the past, there was no way we could maintain that, so we got dinged every month on performance bonuses. But since the implementation of VMware, we're exceeding 99.9 percent."

Joe Collins, Senior Systems Administrator, Department of Energy, Savannah River Site

The Department of Energy's Savannah River Site (SRS), located in Aiken, South Carolina, provides safe, secure and cost-effective management of nuclear weapons stockpiles, nuclear materials and the environment. The site's two-person IT department supports 600 users, with the potential for up to 13,000 users of hosted applications.

Speaking of servers that were up to 12 years old, Senior Systems Administrator Joe Collins says, "We held them together with baling wire, bubble gum and spit." Yet because SRS is an ultra-secure government installation, each new server would require a lengthy purchase-order process and a security scan before it could be put on the network.

Results

- Avoided \$320,000 in hardware acquisition costs: "We would have purchased at least 20 more servers at \$16,000 apiece," says Collins
- Increased processor utilization from 2–3% to about 20%
- Put every employee on VMware virtual machines
- Achieved more than a 5:1 server consolidation ratio
- Increased average uptime from 99.6% to more than 99.9%
- Halved development time for new applications
- Slashed administrative burden: "Without VMware software, we'd need four administrators rather than two," says Collins
- Started considering VMware Virtual Desktop Infrastructure (VDI) for classified network workstations to help address security issues surrounding storage media