

UNOS Deploys Windows Server 2008 Enterprise

Organ Transplant Network Ensures High Availability of Critical Services

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The United Network for Organ Sharing (UNOS) administers a database system that transplant providers use to register patients and match organs to transplant candidates. UNOS needs to keep its network fully accessible and secure, 24 hours a day, every day of the year. To enhance its disaster recovery system and the performance, stability, and security of its network, UNOS is deploying Windows Server® 2008 Enterprise.

Business Needs

The United Network for Organ Sharing (UNOS) helps match transplant patients with donated organs. From its headquarters in Richmond, Virginia, the nonprofit corporation administers the Organ Procurement and Transplantation Network (OPTN), bringing together medicine, public policy, and technology to facilitate organ transplantation in the United States. The OPTN serves more than 5,000 members, including transplant centers, organ procurement organizations, hospitals, doctors, and patients.

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Greg White
Lead Architect,
UNOS

Put simply, UNOS helps change and save lives—it is one of those organizations that helps to define the term “mission critical.” The right organs need to get to the right patients, and it needs to happen fast, whatever the time of day. People have to communicate complex information quickly. Rapid delivery has to be coordinated. The consequences of mistakes or delays couldn't be more grave.

UNOS has developed a transplant information database system that OPTN members use to register patients, match organs to transplant candidates, and manage patient data. The OPTN must distribute a limited number of donated organs among thousands of patients, and it relies on the rigorous processing of the UNOS database to help doctors make transplant matches that are medically appropriate, equitable, and above all timely. Obviously, UNOS needs to keep its network accessible and secure, and must provide full service 24 hours a day, every day of the year.

UNOS maintains a disaster recovery site to help ensure continuity in its network, its transplant database, and all the information and coordination services it provides to OPTN members. The organization wanted to minimize the amount of time it might take to bring the recovery site online if a disaster compromised the main network.

Always searching for ways to enhance the performance, stability, and security of its network, UNOS keeps its IT environment as updated and advanced as it can. "If a product offers new features that can enhance the services we provide, we'll take advantage of the opportunity," says Greg White, Lead Architect at UNOS.

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Solution

UNOS has long used Microsoft® technology to support its network infrastructure. With the help of Microsoft Gold Certified Partner SyCom Technologies, UNOS recently upgraded network and workstation functions throughout its enterprise to the Windows Vista® operating system, Microsoft Exchange Server 2007, Microsoft Office SharePoint® Server 2007, and Microsoft Office Enterprise 2007.

In its server environment, UNOS has been running the Windows Server® 2003 operating system on HP Proliant servers with Intel Core Duo processors. Based on its successful experience with Microsoft solutions, UNOS is working with SyCom to test features in the new Windows Server 2008 Enterprise operating system in its server environment.

One such feature is the Server Core installation. With Server Core installation, UNOS can install only the features in Windows Server 2008 that are required for the specified roles of a server. By dedicating servers to specific functions, and by installing only the features they need, UNOS administrators can simplify their management burden and reduce the vulnerability of the servers.

"Instead of having to find and turn things off or have extra things out there to worry about, now you just turn on what you need," says White. "The security footprint will be a lot less."

To enhance the stability and availability of its critical services, UNOS is also evaluating the improved failover clustering features in Windows Server 2008. By clustering groups of servers to run an application together, network administrators can reduce the possibility of a single component failure compromising the performance of the entire transplant information database or another critical UNOS application. By geographically dispersing clusters between the main network environment and the disaster recovery site, UNOS can simplify recovery if the network fails due to a location disaster.

Benefits

UNOS anticipates that with these and other features in Windows Server 2008, it will enhance the performance, stability, and security of its network. UNOS has begun deploying Windows Server 2008, and plans to begin migrating its server environment during the first half of 2008. The organization expects to simplify its IT infrastructure management, enhance network security, help ensure the availability of its services, and, ultimately, provide the best possible service to OPTN members.

Simplifying the Environment, Enhancing Security

By using the Server Core installation option to enable only the server functions it needs, UNOS will ease the management burden on its IT staff and help limit security risks by reducing the vulnerability of servers. "As products get more features, they usually get a bigger footprint to manage and protect," says White. "With Windows Server 2008, we'll be able to keep the attack surface of our servers greatly reduced."

Ensuring High Availability, Meeting Every Opportunity

By using the failover clustering features in Windows Server 2008, UNOS will be able to safeguard against the loss of access—or data—in its network or applications, and to help ensure its business continuity in the event of a location disaster such as a fire or catastrophic storm. "With geographic clustering in Windows Server 2008, it will be a lot simpler and faster to have the disaster recovery site up and running," says White.

By maintaining the high availability and high performance of its transplant information database and other services, UNOS is helping to ensure that at the critical moments when its network absolutely needs to perform, it will always be there to help patients and doctors make the most of every transplant opportunity.

Windows Server 2008

Windows Server 2008, with built-in web and virtualization technologies, enables you to increase the reliability and flexibility of your server infrastructure. New virtualization tools, web resources, and security enhancements help you save time, reduce costs, and provide a platform for a dynamic and optimized datacenter. Powerful new tools like IIS 7.0, Server Manager, and Windows PowerShell™, allow you to have more control over

your servers and streamline web, configuration, and management tasks. Advanced security and reliability enhancements like Network Access Protection and the Read-Only Domain Controller option for Active Directory® Domain Services harden the operating system and protect your server environment to ensure you have a solid foundation on which to build your business.

For more information, go to: www.microsoft.com/windowsserver2008