

Jackson Energy Authority turns to HP LeftHand SANs and Microsoft Hyper-V to run virtually everything



“The usability and straightforwardness of the HP LeftHand SANs solution is amazing. Your most junior server administrator can become an HP LeftHand SANs guru in just a couple of days.”

– Michael Johnston, Vice President of Information Technology,
Jackson Energy Authority

Industry: Public utilities

Solution: HP LeftHand SANs with Microsoft Hyper-V virtualization

Objective:

Implement storage area network (SAN) to support virtualized infrastructure

Approach:

Deploy HP LeftHand SANs working with Microsoft Windows 2008 Hyper-V virtualization

Business technology improvements:

- Simple, easy-to-learn user interface
- Easy capacity and performance scalability without disrupting operations
- Fast, trouble-free deployment of replicated SAN environment

Business outcomes:

- User-friendly interface allows for junior staff to administrate SAN, helps optimize human resources
- Easy scalability reduces administrative time and cost to respond to changing needs
- Built-in high availability
- Thin Provisioning features reduce infrastructure acquisition cost

Storage is the utility that powers virtualization

Jackson Energy Authority (JEA) is a public utility that provides electric, natural gas, water and wastewater, cable, Internet and telephone services to about 40,000 residences, businesses and industries in Jackson, Tennessee and the surrounding area. Like many forward-thinking companies, JEA decided to explore virtualization as a way to boost application availability, improve utilization of hardware and streamline its technology infrastructure. JEA runs an

entire Microsoft® ecosystem – including Microsoft Exchange, SharePoint and SQL Server – and manages this environment via Microsoft System Center products.

Says JEA's Vice President of Information Technology Michael Johnston, “When we selected Microsoft Windows® Server 2008 Hyper-V to create our virtualized environment, we knew that we needed a storage system that could easily support our Microsoft applications. The solution had to be very flexible, easy to manage and able to address our availability needs. So, choosing the right SAN was critically important. Without the storage component, we wouldn't have a comprehensive virtualized IT solution.”

Energizing the right solution, managed with one GUI

After evaluating its options, JEA selected HP LeftHand SANs as the ideal storage solution to complement its virtual infrastructure. HP LeftHand SANs deliver best-in-class features that keep storage networks operating at peak performance.

“For starters,” says Johnston, “we knew that we wanted an iSCSI solution because we had deep technical expertise in the IP realm that we could leverage, which we didn't have with Fibre Channel. From there, it came down to a comparison between EMC and HP LeftHand SANs. The HP LeftHand SANs solution won that challenge pretty handily because of its flexibility and manageability, plus the simple user interface.

“HP LeftHand SANs are more manageable than competitive SANs. The GUI [graphical user interface] is unbelievable. We can take our most inexperienced, most junior technicians, and in a couple of days they can administer the SAN – including creating storage volumes, allocating storage and reconfiguring. In contrast, with EMC you need a Ph.D. just to configure

Customer solution at a glance

HP LeftHand SANs and Microsoft Hyper-V virtualization

Primary applications

- Business applications
- E-mail
- Virtualization

Primary hardware

- 15 HP ProLiant servers (multiple models)
- HP LeftHand SANs on HP ProLiant DL320s Storage Servers and industry standard x86 servers

Primary software

- HP SAN/iQ Software
- Microsoft Windows Server 2008
- Microsoft Windows Server Hyper-V virtualization
- Microsoft Exchange Server
- Microsoft SQL Server
- Microsoft SharePoint Server
- Microsoft System Center

Why HP?

- Flexibility, manageability and unified user interface
- Familiarity with iSCSI-based solution
- Built-in high-availability features of HP LeftHand SANs
- Easy scalability of HP LeftHand SANs

the system. With EMC, if you wanted to do all the things HP LeftHand SANs do, you'd have to pool together five or six different programs and work with five or six different GUIs. With HP LeftHand SANs, you have one tight GUI. The manageability of HP LeftHand SANs has probably saved us at least one full-time equivalent in staff we have not had to add."

Keeping it all running, all the time

HP LeftHand SANs support all of JEA's business applications and supporting data. For instance, storage for their Microsoft 2008 Hyper-V virtualization environment is on HP LeftHand SANs, including the virtual servers. "We have all our business critical data on HP LeftHand SANs," says Johnston. "More and more of our critical applications are on SQL databases, and every bit of our SQL data is on HP LeftHand SANs."

To provide that support, JEA deployed a multi-site HP LeftHand SAN Solution with 10 TB of physical storage, providing 5 TB of useable storage with 1:1 replication. JEA uses the real-time replication capability of the HP SAN/iQ Software to replicate data to the second site 10 miles away, providing automatic failover between the two sites and high-availability for the applications.

In this "stretch cluster" topology, the HP LeftHand SAN extends across two sites. It appears as one SAN to the applications and servers, while providing the high-availability benefits of a two-site replicated SAN. The Network RAID feature of the HP SAN/iQ Software provides an additional layer of data protection by extending RAID across the stretch cluster.

Shrinking technology utility bills

With HP LeftHand SANs, JEA enjoys enterprise-class availability and business continuity features, including instantaneous snapshot backups, remote IP data replication and multi-site recovery capabilities. These high-availability features built into HP LeftHand SANs eliminate the need and expense of third-party backup

and recovery software. "We estimate that we save tens of thousands of dollars by not having to buy third-party software," says Johnston.

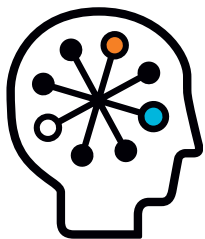
HP LeftHand SANs scale easily and non-disruptively to meet the needs of an ever-changing application and virtualized server environment. This keeps administrative costs to a minimum and allows JEA to "pay as you grow", which reduces the project costs associated with new initiatives. Since high-availability features are built into the HP SAN/iQ Software, JEA can implement high availability for all applications without having to budget funds for each new addition.

The Thin Provisioning feature built into the HP SAN/iQ Software helps JEA prevent over-allocating storage and save money on storage capacity. "I can tell the server that it has a terabyte of storage," explains Johnston, "but Thin Provisioning only gives it what it needs, and saves the storage until it really requires it...if it ever does. The result is we don't have to buy as much storage, and we save money."

Summing up JEA's experience with HP LeftHand SANs, Johnston says, "We brought our first server up on a Monday, and had a fully replicated file server by Friday. Having a fully redundant, remote site setup within a few days is really amazing. We were told to expect the solution to be easy to deploy and manage, and it has consistently delivered on that promise."

About Jackson Energy Authority

Jackson Energy Authority (www.jaxenergy.com) has a heritage that started in the late 19th century, providing electric power, manufactured gas, and a public water and wastewater system in Jackson, Tennessee. In 1959 three separate utilities came under one umbrella as the Jackson Utility Division. In 2001, the Division changed its name to the Jackson Energy Authority. JEA has operation and distribution centers, treatment plants, substations, pumping stations and other facilities located throughout the Jackson area.



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