HP LeftHand SANs keep the energy flowing for Florida Municipal Power Agency

"Having the HP LeftHand SANs means we don't have to worry about service interruptions and inconsistencies with our storage. It's hard to put a price on that kind of dependability."
– Carter Manucy, manager of information systems, Florida Municipal Power Agency

Industry: Public power utility

Solution: HP LeftHand SANs

Objective:
Reliable, high-performance storage area network (SAN) to support virtualized infrastructure

Approach:
HP LeftHand SANs working with VMware

Business technology improvements:
- High availability with Network RAID and clustering capability
- Data redundancy with synchronous replication
- Increased data protection with Snapshots
- Capacity optimization with Thin Provisioning

Business outcomes:
- Reliable data access helps keep power plants running smoothly
- Built-in replication and Network RAID features reduce software acquisition cost
- Cost savings through capacity optimization

Florida Municipal Power Agency (FMPA) is a wholesale power company owned by 30 municipal electric utilities within the state of Florida. FMPA provides economies of scale in power generation and related services that benefit nearly 2 million Floridians.

FMPA already had VMware virtualization in place when the agency first considered HP LeftHand SANs. "We weren't very happy with the original storage area network we purchased to support our virtualized application servers and databases," says Carter Manucy, the manager of information systems at FMPA. "We were looking for a more robust SAN solution with better performance and a higher degree of reliability."

Passing the "pull-the-plug" test
The HP LeftHand SANs appealed to FMPA because of their ability to protect against system and site failures with built-in Network RAID and synchronous replication – capabilities that provide more protection than typical hardware RAID, which only protects against disk failures. Network RAID stretches RAID data distribution – and data protection – to physical devices across the whole clustered network infrastructure, rather than a single box.

"I think the Network RAID functionality was what really hooked me about HP's solution," says Manucy. "I purposely unplugged the power cords on the back of one of three HP storage modules while they were running a throughput performance test, and the test just kept on going."

Reliable data keeps power plants humming
For FMPA, reliability and consistency are the primary benefits of deploying HP LeftHand SANs. "Our people can't do their jobs properly if they can't access their applications and data," says Manucy. "Fortunately, with the HP LeftHand SANs, we have reliable access to everything – from financial information to asset management software that helps keep physical assets like our power plants running smoothly."

FMPA has implemented a Campus SAN topology, with a main site in Orlando and a co-location site, also in Orlando. The agency's HP LeftHand SAN Solution extends across both locations, with three

Customer solution at a glance

HP LeftHand SANs and VMware

Primary applications
- Financial management
- Asset management
- E-mail

Primary hardware
- 4 HP ProLiant DL385 servers
- HP LeftHand SANs on 6 HP ProLiant DL320s Storage Servers

Primary software
- HP SAN/iQ Software
- Microsoft® Windows® Server 2000 and 2003
- VMware ESX
- CentOS Linux
- Microsoft Dynamics SL accounting software
- Lotus Notes e-mail
- IBM Maximo Asset Management Software

Why HP?
- Replication and Network RAID
- Reliable storage support for VMware virtualized infrastructure
- Economy of built-in features

HP ProLiant DL320s Storage Servers at each site. The synchronous replication capability built into the HP SAN/iQ Software replicates data back and forth in real time between the two sites. With up-to-the-minute copies of their data in both places, if one location goes down, the agency can bring up volumes at the other location; when the first location is back in operation, HP LeftHand SANs replication automatically restores its data from the second location.

"The HP LeftHand SAN Solution stretches across two locations, and has built-in replication," explains Manucy. "In the event of an emergency, we wouldn't have to move anything or copy anything or do anything; the data would just be there. That gives us a great degree of peace of mind."

Clustering and Snapshots mean no outages for data

The Storage Clustering capability of the HP LeftHand SANs gives FMPA an increased level of data protection and higher availability. "By combining storage units into a cluster, we have mirroring on top of RAID," says Manucy. "Reliability is not dependant on just one box; with the HP LeftHand SANs, storage availability stretches across the whole topology, from one location to the other."

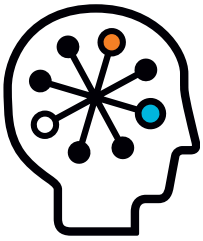
FMPA also uses the Snapshots capability of the HP SAN/iQ Software. "Snapshots allow us yet another level of protection against data loss," says Manucy. "We snapshot some critical volumes on a scheduled basis, just in case someone does something they shouldn't – then we know we can access a point-in-time snapshot of that data before the incident."

FMPA was also pleased with the financial savings the HP solution afforded through its built-in, enterprise-class feature set. "The HP LeftHand SANs give us a feature-rich, reliable storage architecture that works perfectly right out of the box," says Manucy. For example, the Thin Provisioning capability of the HP SAN/iQ Software allocates only as much capacity as is needed, only when it is needed. "Thin provisioning is great if you don't know what the volume use is going to be in the future," explains Manucy. "It can save money by allowing us to purchase additional capacity only when we really need it."

The fact that data replication is built into the HP SAN/iQ Software saves money. "If we hadn't gone with HP," says Manucy, "we would've had to spend additional money on a third-party product. Depending on how we implemented it, that could cost as much as $10,000 to $20,000 – not to mention additional time babysitting that third-party product to make it work properly."

About Florida Municipal Power Agency

Florida Municipal Power Agency (www.fmpa.com) was formed in 1978 as a governmental legal entity authorized under Florida law to undertake joint projects for its members, 30 municipal electric utilities. FMPA has five power-supply projects and one pooled financing project. The Agency supplies all the power needs for 15 of its members and some of the power needs for other members. Overall, FMPA supplies nearly 50 percent of its members' power needs.



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