Keeping the IT information flowing

Hewlett Packard Enterprise provides the right tower portfolio to meet Rivanna Water & Sewer Authority's needs

**Objective**
Provide flexible computing to handle emergencies and launch new capabilities

**Approach**
Deploy HPE ProLiant ML30 Gen9 servers with supervisory control and data acquisition (SCADA) integration

**IT Matters**
- Simplify setup and management
- Fit within tight budgets
- Support a wide range of functions
- Improve responsiveness
- Ensure disaster protection

**Business Matters**
- Deliver reliable performance
- Help improve public utility operations
- Replace outdated systems
- Gain durability for tough environments

In the public utility world, the importance of keeping IT infrastructure working goes beyond business concerns. If the electric plant’s network is compromised, thousands of residents could suddenly be powerless. A computer glitch could mean loss of gas for residents. Or, the loss of a server could mean whole neighborhoods don’t have access to clean water.

That’s the concern for Rivanna Water & Sewer Authority. Rivanna’s servers operate in 10 damp, chlorine-infested water plants throughout Albemarle County in Virginia. That means Rivanna needs either expensive servers that can stand up to the harsh environment—if such a server even exists—or a stockpile of less-expensive servers that are easily replaced without too much damage to the bottom line.

Rivanna chose the latter route, says Steven Miller, Rivanna’s information services administrator. It relies on 10 HPE ProLiant MicroServer Gen7 and Gen8 servers for its harsh environments, with two live spares ready for deployment.
“These MicroServers are really our workhorses,” Miller says. “They’re inexpensive, so we’re able to have three on a shelf, which is nice. If one dies, I just load the latest backup on it and, bam, it’s there. They seem to hold up really well in rough environments, and even if they didn’t, they’re inexpensive and easy to replace, so they’re sacrificial.”

Pumping the well to get more for less

Rivanna is a regional water authority controlled by the city of Charlottesville and Albemarle County, which are also Rivanna’s customers. Rivanna wholesales the water, which the city and county sell to residents. Besides water plants, the Authority also has wastewater plants, solid waste disposal plants, pump stations, dams, and water tanks. Each facility has a unique IT network, workstations, camera equipment, network video recorders, tons of points of single contact as part of the supervisory control and data acquisition (SCADA) network, and printers, all connected to a wide area network that consists of broadband links from the main plant to a 1 GB fiber link, Miller says. Internally, some plants have 100 MB fiber links, some have DSL, and some use cellular.

A plant can have 30 to 40 employees on the network at a time, with a couple hundred devices on the network simultaneously at the biggest plant, Miller says.

For the not-so-harsh environments, Rivanna uses six HPE ProLiant ML110 Gen9 servers that also analyze data from SCADA. “The ML110 servers are nice, robust machines,” Miller says. Rivanna also has three ProLiant ML310 servers used just for storage. “We wanted servers that could run a whole bunch of large drives and handle whatever I/O we threw at them,” Miller says. The files they contain include “a ton” of SCADA data and generations of server and file backups.

“All our HPE servers are performing valiantly, sometimes in some not-so-great environments,” Miller says. “We’ve been so pleased with HPE servers that they’re all we use these days.”

But, because Rivanna is a nonprofit public utility, money is always tight. So Miller is always looking for ways to get more for less in his servers. And recently, he found a way to do that: the HPE ProLiant ML30 Gen9 server.
Immersing themselves in the HPE ML30 Gen9 Server

Miller and Jon Lowry, Rivanna’s IT SCADA specialist, recently tested an ML30 as a SCADA server hosting a program that gathers data from all their devices, archives them in SQL databases, and communicates with a separate archiving server.

The improved responsiveness is noticeable, he says. When he remotes into it, running it without a GUI, it pops right up.

“The MicroServers are fine for normal day-to-day use, but if we start doing heavy stuff, they get a little bogged down,” Lowry says. The ML30 gets processes moving faster. “When we do programming to configure the data people want to access, the quicker I can do that, the better—time is money.”

Solid design, without the waste

The ML30 has a nice form factor that makes it easier to physically work with, Miller says. While it’s more powerful than the MicroServers, it doesn’t take up any more space. Smart array controllers can be added, although the one onboard is good, Miller says. The ML30 server smart array options provide RAID mirroring and striping capabilities to protect critical data, while the Flash-backed write cache (FBWC) captures and holds data indefinitely in the event of a power loss, equipment failure, human error, or virus attacks.

The ML30 is also a lot easier to configure out of the box. “Building servers isn’t necessarily my greatest skill set, but these are simple enough where I could take one out of the box and have it deployed fairly quickly,” Lowry says.

For any public utility, stretching each dollar is essential. The ML30 will let Miller do that. “We always have to do more with less,” he says. “Plus, the ML30 has the perfect blend of price point and power.”

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And the biggest benefit

To Miller and Lowry, flexibility is the ML30’s biggest benefit. “When something breaks around here, we have to replace it quickly,” Miller says. “We can’t say, ‘We’ll have it back up Thursday, sorry, south side of town, you have no water.’ That doesn’t fly.

“So, having something reasonably priced that can do multiple jobs means I can have three on the shelf and I can replace servers as needed. That makes us that much more flexible in our ability to deal with emergencies or to deploy something new.”

“The ML30 is easy to use, has a reasonable price point, and can perform a large number of functions. It’s like a utility outfielder,” Miller says.

HPE ProLiant ML30 Gen9 server: A machine for public utilities

For offices in need of a server that delivers the essential availability and expansion to accommodate changing business needs, like Rivanna Water & Sewer Authority, the HPE ProLiant ML30 Gen9 server delivers. This single-socket 4U tower server is ideal for remote sites and corporate branch offices running file/print, web messaging, and small vertical applications or databases.

Featuring the latest Quad-Core Intel® Xeon® E3-1200V5 3.0 GHz processor, the ML30 gives you seamless and high-speed processing power.
Customer at a Glance

Application
Flexible servers enable Rivanna Water & Sewer Authority to quickly deal with emergencies or deploy new services.

Hardware
- HPE ProLiant ML30 Gen9 Server
- HPE ProLiant ML110 Gen9 Server
- HPE ProLiant MicroServer Gen8

Our solution partners

intel®
Powerful Productivity Outside.

The 4 GB DDR4 memory allows you to perform memory-intensive tasks with increased bandwidth, while the server’s data transfer rate of 10/100/1000 Mbps enables high-speed connectivity and transfer speeds to all connected devices.

For more information, contact your reseller or visit hpe.com/info/towerservers.

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