CASE STUDY:

Mainline improves processing speed by 10x, cuts hardware maintenance expense by 50% and increases energy efficiency with upgrade to IBM Flex System

THE BUSINESS CHALLENGE

"If it works, don't fix it." That rule guides most small and midsize businesses when they think about investing in their internal IT infrastructure. There are more promising areas to invest in: raising customer service levels, training staff, increasing the value offered to customers.

If email works, just keep it coming. That was the principle at Mainline Information Systems, where the internal IT infrastructure hosted IBM Notes and Domino communications, VMware-virtualized servers and desktops, and other applications that serve 500 employees.

Eighteen months ago, there was a challenge. "Storage performance problems slowed down our virtual machines," recalls Jeff Bauer, director of IT for Mainline. "Email was affected for hours. Many of the 500 employees are in the field, and email is critical, so management gave the green light to evaluate an upgrade."

Funds, however, would be diverted from other critical areas. What solution made the most strategic and business sense? How could returns be maximized.

THE SOLUTION

The Mainline IT team evaluated x86-based rack-mounted and blade server solutions from IBM and other key vendors. One of the options was an upgrade to IBM Flex System, which was new at the time. It's an infrastructure in a box: servers, enterprise storage, networking, virtualization and management are included in a single 14U structure, optimized and pre-tested to work together for greater flexibility and streamlined, unified management. It proved to be the right fit at Mainline for a number of reasons.

THE RESULT

Time to value: twice as fast

Because the system is pre-configured and pre-tested, it's easier to deploy. "It arrived on a Monday and two of us were moving production virtual machines onto it by Friday, while doing our normal jobs that week," said Jon Grauer, senior network and systems administrator at Mainline. The team estimates that 20 staff hours were needed to get the system into production, less than half of what a traditional server upgrade would have required.

A "wow" on 10x performance

Once in production, results were surprising. "We have a five-node Flex System, and each node has 128 gigabytes of memory, yet the memory slots are only half full," Bauer said. "We have more memory in the five nodes than we had in 13 servers in our prior environment."

Performance has jumped as a result of the upgrade to IBM Flex System. "Our IBM Domino administrator said, 'Wow, what did you guys do?' Bauer said. "He knew what we were doing, but was surprised at how dramatic the change was. Everything our virtual desktop users do is much faster. The same virtual machine images are now sitting on faster processers with higher-speed storage and a 10-gig Ethernet switch — which we didn't have before. All the nodes are talking to each other 10 times faster than they used to."

Customer: Mainline Information Systems
Headquarters: Tallahassee, Florida
Employees: 500

THE BUSINESS CHALLENGE

- Boost infrastructure performance
- Maximize availability and resilience
- Reduce space, power, and cooling costs
- Minimize IT overhead

THE SOLUTION

- IBM Flex System

THE RESULT

Operational efficiency
- Cut time-to-value in half compared to a traditional infrastructure upgrade
- Faster performance for virtual desktops and applications serving 500 users
- 1,000 administration hours annually reclaimed for higher value projects
- 70% reduction in rack space

Cost savings
- 20% drop in power consumption
- 50% reduction in annual server hardware maintenance costs
- Estimated $25,000 in network switches included for price of server upgrade

Buy servers, get switches free

The new switch that Bauer mentions is one of two fibre channel switches and two Ethernet switches inside the IBM Flex System. "They are much better than any of the fibre channel and Ethernet switches in our prior environment," he said. "They represent an upgrade to 10 gigabit Ethernet and 8 gigabit fibre channel, all in the same box. For the same cost we would have spent to upgrade our previous servers, with the upgrade to IBM Flex System we get switches and more functionality. I'd say the value of the switches is as much as $25,000."

Integrating the Flex System with the company's Cisco Catalyst 6500 Series Switch was easy, the team said. "We just ran two EtherChannels over to our core switch, because the core only has gig ports, for now," says Grauer.

Slashing power, space and support costs

Power consumption dropped by 20 percent after the team migrated workloads from 13 servers to the five nodes inside the Flex System. "We're probably getting a similar reduction in cooling as a result of the upgrade to IBM Flex System," Bauer said. "We're moving from early generation Intel Xeon processors to Intel Sandy Bridge processors, which take less power and run cooler. And we're saving about 70 percent in rack space and 50 percent on annual server support costs."

There are savings in other areas. Two of the blade servers that the Flex System is replacing will be moved to the disaster recovery site, where they will replace six older servers, increasing performance while reducing costs. And the remaining 11 servers from the prior environment will be decommissioned.

Gaining 1,000 hours a year to add value

"Because we have one unified platform for production, rather than pieces and parts everywhere, the upgrade to IBM Flex System saves us 20 hours a week in maintenance and administration time," Bauer said. "That gives us more time to help the sales force and take on other higher value projects."

"The IBM Flex system was quite pleasant to install, and it was easy for us to understand," Bauer says. "Now our Ethernet is faster. Our backplane is faster. The fibre channel's faster. Our processor caches are bigger. Upgrading our infrastructure to an all-in-one chassis is a big win."

For more information, call your Mainline account representative or call Mainline directly at 866.490.MAIN(6246).