

John Muir Health



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—Ryan Mahon,
Systems Integration Analyst,
John Muir Health

RESULTS

VMware vFabric™ tc Server delivers the following business results to John Muir Health:

- More efficient application deployment
- Improved server deployment and management
- Rapid response time – reduced from hours to minutes
- Fast problem resolution – cut by 50%
- High availability and increased quality of testing
- Enhanced security and integration with VMware

VMware vFabric tc Server Streamlines Application Deployment

John Muir Health is a not-for-profit health care organization that includes two of the largest medical centers in Contra Costa County, California – the Walnut Creek and Concord campuses of John Muir Medical Center.

John Muir Health is recognized as a leading provider of cardiovascular care, orthopedics, neurosciences, cancer care and high- and low-risk obstetrics. Other areas of specialty include general surgery, advanced endoscopic and robotic surgery, weight-loss surgery and neurology.

The Integration Group in John Muir Health’s ITS department is responsible for maintaining a broad range of applications that link all the department systems to the core health system, enabling data exchange, enhancing functionality and improving productivity throughout the organization.

Challenge

“Before we started using tc Server, we used Tomcat and all deployments were done manually – it was time consuming,” explains Ryan Mahon, System Integration Analyst at John Muir Health. “Every time we redeployed, we had to restart Tomcat. We could easily spend 30 minutes to an hour every time, just setting up an instance and getting it up and running.”

The Integration Group did not have much information on the servers, either, making it a challenge to select which server to deploy on. Logging into each individual server to find the right one was time consuming. Consequently, they would simply pick a server and deploy on it, and try to solve any resulting problems afterward.

“We also did not have any JVM monitoring tools,” Mahon adds. “So if something went wrong, we didn’t know right away. That was a big concern for us because if we got an out-of-space error, the server would look fine but Tomcat would crash and all our applications would go down.”

“We needed to improve our response times so we could fix problems before the users would notice,” he continues. “We wanted a monitoring tool that would enable alerts so we could quickly respond.”

Solution

John Muir Health deployed VMware vFabric tc Server, the enterprise version of Apache Tomcat, the world’s most widely used open source application server. tc Server is a lightweight server offering operational management, advanced diagnostics, and mission-critical support capabilities.

“The alerting with tc Server is better than anything we have had before. I recently got an alert and fixed the problem in ten minutes. On the old server, there was a time when it crashed after hours and took about 4 hours to be notified and resolved.”

—Ryan Mahon,
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John Muir Health utilizes tc Server for production as well as testing of applications. The company’s ultimate goal is to move all internally developed applications onto tc Server instances, which are deployed on VMware ESX® servers. tc Server also provides John Muir Health with powerful insight, enabled by VMware vFabric Hyperic, to monitor JVMs.

Benefits

tc Server delivers the following business results to John Muir Health:

More Efficient Application Deployment

“With tc server, we have a more reliable and maintainable deployment strategy and it takes a lot less time,” Mahon explains. “During testing, with the redeployments and having to restart Tomcat, we could easily spend 30 minutes to an hour just setting up an instance and getting running. Now, with tc Server, it’s a few clicks, and it takes less than 15 minutes to get an application up and running.”

In addition, tc Server enables the Integration Group to browse through available servers and choose the most appropriate server to deploy on, without expending time logging into each individual server to investigate. Through the management console, they can see how many applications are deployed to a server, and its current load and resources, and make smart deployment decisions.

Improved Server Deployment and Management

Mahon says a top advantage of tc Server is easy deployment of new server instances – a vital capability since the need for applications and servers continues to grow at John Muir Health. tc Server’s operational management capabilities allows the Integrations Group to deploy and monitor all the servers from one console.

“With tc Server, we can roll out new servers very quickly,” says Mahon. “I recently had to add a new tc Server instance on the fly, to satisfy a new testing need. I just ran a simple script command to create a new instance, instead of having to download and reinstall a new instance of Tomcat. It was very quick.”

Rapid Response Time

tc Server provides early alerting on potential problems to expedite the Integration Group’s response time.

“The alerting with tc Server is better than anything we have had before,” Mahon notes. “On tc Server, I recently got an alert and fixed the problem in ten minutes. On the old server, there was a time when it crashed after hours and took about 4 hours for us to be notified.”

Fast Problem Resolution

Once alerted to a problem, the Integration Group at John Muir Health uses the detailed metrics delivered by tc Server to quickly diagnose and resolve server issues.

“tc Server cuts our problem resolution time in half,” Mahon confirms. “In the past, we would get an email that the disk space was low or there was an error condition, and we would have to log onto the box and research what caused the problem. Today, tc Server gives us all the information we need to troubleshoot the issue.”

High Availability

John Muir Health uses tc Server to maintain a production cluster to ensure high availability for the company’s internally developed applications. In the event of an issue that could cause application downtime, sessions are now rolled over to another server in the cluster. The failover is transparent to end users, allowing the Integration Group to solve the problem before it impacts the user. “Before tc Server, we didn’t have any redundancy in our environment,” Mahon explains. “With tc Server, we were able to set up a production cluster – a capability we never had before – which has reduced downtime of our applications.”

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Increased Quality of Testing

Although John Muir Health implemented tc Server mainly to gain production benefits, the company gains similar benefits in the area of testing, which is conducted on tc Server so the test environment is identical to the production environment. tc Server accelerates application testing in the same way that it impacts application deployment, because the applications can be restarted much more quickly. Mahon also points out that the ability to count sessions and get more information out of the server has improved the overall quality of testing.

Enhanced Security

As a healthcare organization dealing in private patient information every day, data integrity and application and server security are essential for John Muir Health, and tc Server helps the company maintain stringent security guidelines. “We are required to run applications and tc Server instances under designated accounts linked to specific directories,” Mahon explains. “Security is very easy to set up in tc Server’s management console, and we don’t need to log back onto the server. We don’t have to worry about where the accounts are and how they are writing to which directories, because once tc Server has been set up according to our corporate security policies, everything stays within those guidelines. This has made security better for us.”

Integration with VMware

John Muir Health’s tc Server instances are set up on 10 VMware virtual machines, and Mahon asserts that tc Server’s compatibility with VMware is an added advantage, enabling expanded use of a virtual infrastructure. “We are pushing to use more virtual servers and tc Server runs very well on a VM,” Mahon confirms. “While some other server vendors don’t support VMs, we have not had any performance issues running tc Server on a VM.”

About VMware

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About VMware vFabric

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