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KEY HIGHLIGHTS

tc Server delivers the following business results to NPC International:

- Enhanced Application Performance
- High Availability
- Increased Developer Productivity
- Greater Scalability & Improved User Experience
- Virtual Cloud Infrastructure
- Reduced Server Costs - reduced by 75 percent

VMware vFabric tc Server Helps NPC International Stay Connected to 1,200 Locations

NPC International, based in Overland Park, Kansas, is the largest Pizza Hut franchisee in the world and is owned by Merrill-Lynch Global Private Equity Group. NPC International connects to its 1,200 restaurants across the US via a web application deployed through the local POS system, providing a variety of essential corporate functionality such as payroll, vacation requests, compliance management, invoice approval and online employee training. The web-based system must be kept running at top performance to handle 170,000 page views per day by NPC International users.

Challenge

“Before tc Server, we deployed several JBoss application servers running on Solaris, but that was not working for us,” explains Jon Brisbin, Portal Webmaster for NPC International. “The application was not performing well. Given the hardware resources we had, it should have been much faster. In addition, there was a lot of downtime. Heavy users would take others off the system because the load would exceed what we had planned for capacity.”

Brisbin recalls that the application would lock up regularly, every time a server would receive an out of memory error, and he would have to restart the server.

“It caused all kinds of problems for our end-users,” Brisbin explains. “They would lose their work. One HR function is to take tests online. The employees would get half way through and the server would lock up, and they had to start over again. That is just one example of the significant problems we faced.”

The downtime and other performance issues not only caused problems for users, but also required a substantial amount of attention from the NPC International development team.

“Before we had tc Server, we would write an application, put it into production, and spend most of our time dealing with the problems it created,” Brisbin remembers. “When servers would go down, it cost a significant amount of developer time trying to figure out where it broke down.”

Brisbin uses the company’s approval application as just one example of how much time was wasted on these performance issues. Hours of developer time were spent every week dealing with multiple issues created by application downtime. It would set off a chain of events across the enterprise, and the developers had to identify and resolve all those problems. Brisbin knew that he had to get off JBoss but he just didn’t know where to go – until he discovered tc Server.

“In JBoss, I never knew if the application was going to be available or not. Now, with tc Server, I know that... the application will be available.”

Solution

NPC International replaced JBoss with 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.

In addition to the many advantages of tc Server, NPC International also benefits from the added value of integrating tc Server with several other VMware technologies. In NPC International’s environment, the tc Server instances are running on VMware ESX Server, and NPC International even builds all the web applications in Spring — the de facto standard platform to build, run and manage enterprise Java applications. Spring is driven by SpringSource, the home of the top contributors and thought leaders in both the Spring and Tomcat communities. Since tc Server has been optimized as the best deployment environment available for Spring-based applications, the transition to tc Server was seamless.

Benefits

tc Server delivers the following business results to NPC International:

Enhanced Application Performance

Simply migrating to tc Server has given NPC International’s applications a massive performance boost.

“Application performance is considerably faster, since we moved to tc Server,” says Brisbin. “Our real response time is almost always faster under tc Server than our previous application server because of the dramatic reduction in server overhead. We have been very happy with the performance — it is fantastic.”

High Availability

tc Server has virtually eliminated downtime for NPC International. Brisbin says the application server can handle all the traffic they give it, they do not run out of memory, and everything keeps running as expected. Users are no longer subjected to the constant lockups and restarts which used to disrupt business operations and waste time.

“In JBoss, I never knew if the application was going to be available or not,” Brisbin explains. “Now, with tc Server, I know that, barring some unusual circumstance, the application will be available.”

Increased Developer Productivity

Since tc Server has significantly reduced the number of problems that developers have had to address, they can spend their time on more productive tasks such as improving application quality and adding functionality.

“The entire focus of our developers has shifted from cleaning up messes to making the next application better than the last one,” says Brisbin. “Developers used to spend hours every week fixing problems caused by application downtime, OutOfMemoryErrors, and slow server response times. Now that we don’t have that instability as a factor, we don’t have as many issues to deal with.”

Greater Scalability

According to Brisbin, the demands on the NPC International IT department continue to grow. For example, PCI and SOX compliance has dramatically increased the amount of work the IT department has to do. Every few months there is another new responsibility for IT, and a new application that must be deployed. In the past, every new application was a concern for Brisbin because the application server could barely keep up with the current load. Today, Brisbin has confidence that tc Server will be able to handle any new applications.

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Virtual Cloud Infrastructure

tc Server has enabled NPC International to implement an internal, private cloud of VMware-based virtual server resources, to maximize efficient usage of existing infrastructure. Because tc Server’s footprint is small, 12 tc Server instances are running on a single physical box, with additional capacity available to install more tc Server instances when needed. Consequently, tc Server enables NPC International to maximize internal server resources by eliminating the multiple machines necessary to run numerous application servers.

“I could not have deployed the applications within VMware-based virtual machines without tc Server,” Brisbin says. “I need a small, lightweight server that starts in a few seconds. I need to run several instances so I can make use of all the CPU resources.”

Reduced Server Costs

Moving to the cloud environment means NPC International requires less machines, and consequently saves on server costs. In fact, when NPC International deployed tc Server, they transitioned from three machines to one. Now, they are running 12 tc Servers on one box and still using less than one-third of the capacity. “The server footprint has been dramatically reduced,” Brisbin confirms. “All of my virtual machines use 8GB hard drives. That is all I need.”

Improved User Experience

“tc Server certainly improves the user experience, especially in terms of perceived response times,” Brisbin concludes, “and in many ways that is all that matters. As long as the user thinks the application is working faster, then they are happy. The comment I have heard is that the application seems to pop up immediately. The perceived performance is through the roof.”

“With tc Server, the actual performance is definitely faster all around,” Brisbin continues. “It starts up in seven seconds, compared with JBoss, which takes at least 20-30 seconds to start up on a small installation. The users are noticing the performance improvement.”

