VMware Server Software Reels in ROI for Conseco Finance

Citrix Implementation in Production Environment Posed Challenges
Conseco Finance, the financial services subsidiary of Fortune 500 firm Conseco, faced business challenges during the implementation of Citrix MetaFrame XP in its production environment. For example, Citrix MetaFrame XP improved its loan-processing application’s performance by a factor of four, which had direct positive impact on business results and delivered better network performance, needed for outsourcing business processes. However, this implementation required a large investment, and it would have taken Conseco Finance more than a year to realize a return.

Conseco Finance needed a solution that would allow it to:
• Proceed with a smooth Citrix deployment.
• Take advantage of Citrix’s increased efficiencies and performance.
• Recognize ROI more quickly.
• Capitalize on a cost-effective Citrix rollout.

VELOCITY IMPLEMENTATION

VMware Server Software Implemented in Citrix Deployment Across Three Data Centers

KEY SUCCESSES
- Delivered ROI in three months instead of one year using VMware virtual machine servers
- Instead of deploying 100 physical servers, used virtual machines on 12 physical servers
- Reduced needed servers by a factor of 8
- Supported 1,400 users on virtual machines
- Ran multiple different applications in VMware virtual machines, including Citrix, SAP, Siebel, custom client-server applications and other financial applications
- Reduced operations costs using SAN and NAS storage for archiving virtual machines
- Provided mainframe levels of reliability and data security at lower cost

VMware Server Software Delivers ROI Faster
Conseco Finance implemented both VMware server software products — VMware GSX Server and VMware ESX Server — to provide a secure, easily managed platform to deploy, manage, and remotely control more servers running in virtual machines. Conseco Finance used VMware server software to consolidate applications and infrastructure services for 1,400 users onto five 8-way physical servers and seven 4-way physical servers. The cost savings — in hardware, software, and operations — resulting from this server consolidation allowed Conseco Finance to realize ROI on its Citrix investment in three months – nine months ahead of schedule.

“...The cost model of deploying virtual machine servers versus physical servers brought a much better ROI, so we decided to base our deployment on virtual machine servers.”

Rod Lucero
Chief Architect, Conseco Finance
The Citrix deployment was rolled out across three of Conseco Finance’s data centers on VMware virtual machines. VMware server software has become the company’s standard deployment mechanism for new servers. Using VMware server software for server consolidation and rapid server provisioning resulted in:

- **Lower Total Cost of Ownership (TCO).** To realize ROI in three months, Conseco Finance needed to reduce the TCO of its overall server infrastructure. The company reduced its hardware and software costs significantly by using VMware server software to consolidate applications and infrastructure services onto fewer highly scalable, highly reliable enterprise-class servers.

- **More Server Flexibility and Availability.** Conseco Finance saw the power of combining virtual storage and virtual machines. By storing complete virtual machine images on EMC SAN and NetApp NAS disk storage, the company reduced by a factor of 10 the time spent on server provisioning, backups, and recovery.

- **Faster Impact on the Bottom Line.** VMware server software improved the responsiveness of applications, resulting in more revenue for the company. For example, Conseco Finance was able to reduce the cost of customer service by outsourcing business processes — virtual machine servers were easily deployed from a centralized location.

**VMware Server Software Passed Every Test**

Conseco Finance created a plan to test the VMware software-based environment against a physical server-based architecture. Working with Chief Architect Rod Lucero, Senior Linux and Windows 2000 Administrator Chuck Zlamal set up two production data centers — one with VMware GSX Server as the Citrix farm platform and an equivalent data center running on native hardware. After months of serving production users with both data centers, through application load testing Zlamal found that applications running on virtual servers performed as well or better than applications running on physical servers.

**Figure 1:** The virtual machine architecture across three Conseco Finance data centers provides maximum flexibility. Virtual machines are stored on Network Attached Storage (NAS) and provisioned out to servers running VMware GSX Server and VMware ESX Server.
VMware server software also simplifies server maintenance for Conseco Finance. Because all the virtual machine disks are hosted on the NAS, Zlamal's group is able to do “serverless backup.” Backups are completed on the file server. “We don’t have to back up individual servers any more,” said Lucero. “We get even more out of our enterprise storage and enterprise backup because we use virtual machines.”

Base installs for the servers are also a thing of the past. Using the virtual machine disks to get restarted, Zlamal’s group can react very quickly to any server going down. “We have enough headroom on the host servers to always be able to run another virtual machine. Effectively, it’s like having an N+1 high availability environment.”

Summary: “Rock Solid”

VMware server software provided a stable, secure platform for the Citrix deployment. Of the virtual machines, Zlamal spoke candidly, “We tried to knock these things down, and we just couldn’t. They were absolutely rock solid.”

“We found the flexibility offered by VMware server software in building servers to be highly valuable,” said Lucero. “We found the stability of Citrix on VMware software to be excellent. The cost model of deploying virtual machine servers versus physical servers brought a much better ROI, so we decided to base our deployment on virtual machine servers.”

Advantages for Operations

According to Chuck Zlamal, the three major advantages for operations, and the reasons VMware server software is a key part of the architecture, are:

1. Rapid deployment: “Virtual machines are the best mechanism for rapid distribution and deployment of servers across a world-wide infrastructure.”

2. Fault tolerance and rapid recovery: “If a machine goes down, we can have it back up in 10 minutes. Without virtual machines, it would take a day or more.”

3. Hardware utilization: “Virtual machines allow us to get the most utilization on our 4- and 8-way servers across a variety of applications that otherwise wouldn’t take advantage of that hardware.”

“Flexibility in building the server on the virtual machine environment is a real value,” said Lucero. “The first box is built as a template, we store it on the Network Appliance Filer (a NAS device), then just copy it, bring it up, change IP address, change the name and we’re up and running. Our system administrator configured 12 machines in less than 4 hours. Physical servers generally take one day each to build.”

Normally when provisioning a new server, the new server has to be budgeted, purchased, installed, manually configured, and tested. Using VMware server software, Zlamal’s group provisions a new server instantly—simply by copying a file. “When a project manager comes and requests a new server,” Zlamal said, “I can say, ‘Here’s your cost.’ When the manager asks when he can get it, I reply, ‘Is tomorrow okay?’”