



## KEY HIGHLIGHTS

INDUSTRY: FINANCE



## CHALLENGE

Support expansion of branch numbers across India while ensuring maximum utilization of datacenter capacity and hardware resources.

## SOLUTION

VMware Infrastructure enables multiple virtual machines to be run on blade servers, reducing rack space and heating and cooling requirements, while meeting business growth.

## VMWARE AT WORK

- VMware Infrastructure 3 Enterprise, featuring:
  - ESX 3.0.1
  - ESX 3.5

## DEPLOYMENT ENVIRONMENT

- ESX on IBM HS21 blade servers with 2.75-3GHz quad-core Intel Xeon processors and 12 to 16GB RAM
- ESX on HP ProLiant BL460c servers with 2.75 to 3GHz quad-core Intel Xeon processors and 12 to 16GB RAM
- IBM System Storage DS4300 and DS4800 disk storage systems
- EMC CLARiiON CX3-10 and CX3-40 networked storage systems
- Guest operating systems: Microsoft Windows 2003 Server Enterprise Edition, Microsoft Windows Server 2003 Standard Edition
- Virtualized production applications: Multi-currency trading and risk management application, online trading application, SQL Server and Oracle Database 10g

*“VMware has enabled us to support 600,000 clients, including 50,000 who conduct trades on a daily basis, while giving us headroom to support growth fuelled by an expected increase in branch numbers to 500 across India.”*

Saurabh Srivastava, Head—Infrastructure (IT)  
Religare Securities

## Religare Securities

Religare Securities Limited is one of India's leading equities and securities firms and offers services spanning equity broking, depository participant, portfolio management, institutional brokerage and research, investment banking and corporate finance. With 50,000 of Religare's 600,000-strong client base conducting trades on a daily basis, the organization employs 150 staff to ensure the IT infrastructure underpinning the business can support demand. The infrastructure operates across a production datacenter in New Delhi, another center in Mumbai and servers housed in co-located datacenters run by third parties.

“Our production datacenter currently hosts about 300 servers with the majority catering to trading requirements,” said Saurabh Srivastava, Head—Infrastructure (IT), Religare Securities. “We have huge traffic at any given time.”

With demand surging and plans to expand to 500 branches across India, Religare turned to VMware virtualization to deliver horizontal scalability. “Right now, we have 250 servers and we are running a further 35 as virtual machine hosts to support forecast load increases,” Srivastava said. “We are running about 150 virtual machines at up to 12 per physical host depending on the hardware specifications.”

Religare Securities is currently implementing blade chassis housing up to four servers each in its datacenters to increase utilization of rack space and ease datacenter real estate, power and cooling loads. The virtualized environment spans up to 60 machines allocated to user acceptance testing as well as multiple virtual machines hosting application and Web servers.

“We are running business-critical trading applications in our virtualized environment with no problems at all,” Srivastava said. “There has been no performance degradation despite intense application usage.”

## Results

- Achieved a server consolidation ratio of up to 12:1
- Increased average CPU utilization from 25-30% to 60-70%
- Saved almost Rs.10 million (US\$231,965) in server hardware acquisition costs
- Cut power consumption by 10-20%
- Improved application availability and reduced downtime
- Provided a platform to establish a DR site by the end of 2008