



Improved time to market of financial apps in a hybrid cloud environment



Reduced provisioning time from days to minutes



Greater agility for service delivery

# National Stock Exchange Partners With VMware To Offer Future Ready Solutions

Building hybrid cloud infrastructure to accelerate delivery of transformative modern applications

Given the volume of trading in equity shares, the National Stock Exchange of India (NSE) ranks as the second-largest electronic stock exchange in the world. As a catalyst to the nation's economic growth, NSE has been a pioneer in technological innovation. In order to stay competitive on the global stage, NSE sought to modernize its IT platform to keep pace with the growth in trading volume and introduce new solutions for its customers. As a trusted partner for six years, VMware stepped up efforts to address these unique challenges faced by NSE. With its suite of integrated solutions, VMware helped NSE achieve agility and scalability and accelerate the time to market through a hybrid cloud infrastructure.

## NSE's need for speed

The National Stock Exchange of India launched in 1994 with a first-of-its-kind electronic screen-based trading in India. In the last 25 years, NSE's sustained investment in technology has simplified the mechanics of trading systems and expanded participation to lakhs of users across the country.



Established in 1992, the National Stock Exchange of India is the first dematerialized electronic exchange in the country. NSE's index, the NIFTY 50, is used by investors around the world as a barometer of the Indian capital markets. In a world that changes shape by the second, NSE constantly reinvents itself to redefine the future.

### INDUSTRY

BFSI

### HEADQUARTERS

Mumbai, Maharashtra, India

### ABOUT THE PARTNER

Dimension Data is known globally for its specialized services in IT consulting technical and support services, and managed services. With close ties to NSE, Dimension Data was chosen to implement NSE's digital transformation journey.

### VMWARE FOOTPRINT

- VMware vCloud™ Suite
- VMware NSX® Data Center
- VMware vRealize® Network Insight™
- VMware Horizon®
- VMware NSX® Cloud
- VMware Cloud™ on AWS
- VMware Professional Services



Given its transaction-intensive business – where milliseconds define the difference between profit and loss – NSE saw an opportunity in launching a new technology initiative, which would enable it to align with the strictest international exchange standards. However, with an ever-increasing number of customers, its current IT infrastructure was thought to be inadequate for meeting the requirements of its developers to be able to build state-of-the-art apps. Hence, NSE collaborated with VMware to explore how a hybrid cloud platform could meet the exchange's transformative needs.

### Addressing 3S – speed, security, and scalability

As a leading financial services provider, NSE is mandated by government regulatory bodies to observe certain data residency requirements. Therefore, to comply with regulations, NSE adopted a private cloud infrastructure. With the volume of daily transactions only becoming larger, NSE's IT infrastructure struggled to cater to the transactional load. "Any market movement or an event would lead to an unprecedented surge in the transaction volume," says Shiv Kumar Bhasin, Chief Technology and Operations Officer. "And more often than not this would lead to delays in transaction execution time, which, in turn, hampered the quality of customer experience."



In order to stay ahead of the curve, NSE rolls out new services from time to time for its customers. However, the developers at NSE faced a serious IT resource crunch as the data center infrastructure was not at scale with the increasing demand from developers. Thus, provisioning of resources to developers became time-consuming, which delayed the roll-out of new business-critical applications by NSE.

Although NSE had already virtualized its IT environment by leveraging on the capabilities of VMware vSphere, which had established a robust foundation for a hyperconverged infrastructure. "With a virtual-first approach, we decided to implement a hyperconverged IT infrastructure by virtualizing not just our data center networks, but also compute and storage," explains Shiv Kumar Bhasin. "The idea was that it would help in ensuring high availability of IT resources for our developers."

As a result, NSE sought a hybrid cloud solution to further enhance its business agility and scalability in order to support the expanding trade volume without hampering performance.



### Going hybrid for scalability

An integrated VMware team, which included Professional Services technicians, partnered with Dimension Data to analyze the options open to NSE to make its IT infrastructure future-ready. VMware vCloud Suite and VMware NSX were the applications of choice to enable NSE to have continuous and consistent operations across its network and cloud infrastructure.

In collaboration with Dimension Data, a ubiquitous hybrid cloud was created leveraging VMware vCloud Suite that spanned public and private endpoints, with VMware Cloud on AWS underpinning the service. Meanwhile, VMware NSX played the pivotal role to provide agility and security for NSE's IT infrastructure.

With VMware Cloud on AWS, now NSE can easily extend its on-premises data center workloads to the public cloud and meet its resource scalability needs. It has also helped NSE to save on manpower training costs as they weren't required to retrain the IT staff separately for AWS.

## One-view across multi-clouds to drive efficiency

With the deployment of VMware solutions, NSE is now equipped with enterprise-grade capabilities to scale on-demand; improve time to market new products; and enhance operational efficiency for their new services and applications.

“Thanks to VMware solutions, we now have a holistic view of the entire IT infrastructure spanning across multi-clouds. We can operate resource-intensive applications with much greater scalability and flexibility. It has automated several manual processes for our IT team and has reduced the resource provisioning from days to minutes!” says Shiv Kumar Bhasin, NSE.

With this deployment, NSE has future-proofed itself to stay ahead of its competition with a hyperconverged IT infrastructure and hybrid cloud architecture. NSE has improved its business agility and increased the speed of app development, which has resulted in a top-of-the-line customer experience.

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“With the VMware Cloud on AWS-based hybrid cloud infrastructure, we have been able to simplify administrative tasks; automate manual processes; scale up on-demand; and improve our business agility. This deployment has helped us to stay at the cutting edge of technology for years to come. Our infrastructure is now future-proof.”

SHIV KUMAR BHASIN  
CHIEF TECHNOLOGY AND OPERATIONS OFFICER, NSE

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@NSEIndia collaborates with #VMware to deploy a hybrid cloud that will transform the trading experience.

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