

VIRTUALIZATION DREW SCALABILITY AND PERFORMANCE

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Kotak Securities Ltd., a 100% subsidiary of Kotak Mahindra Bank, is one of the oldest and largest stock brokers in the industry with offerings that include stock broking services for trading through the branch and the internet, investments in IPO mutual funds and portfolio management services.

Business Situation

With a network spanning over 400 cities with 1200 outlets, Kotak Securities has been growing rapidly, leading to an exponential increase in data volume. Some of the business benefits that Kulin Takkar, Senior Vice President-IT and Group Infrastructure Head. Kotak Securities wanted to witness.

- New Storage for various applications including VMware
- HA functionality for the production data
- Scalability to cater to future growth Disaster recovery capabilities for critical applications using asynchronous/ long distance data replication
- Leverage the benefits of current storage infrastructure

Solution Implementation

We evaluated multiple storage infrastructures from different vendors before settling on IBM's XIV storage systems. While Kotak as a group used 80 terabytes of data, we wanted to replicate about 6 terabytes of product data on the new XIV platform. VMware data migration was done from the existing IBM's DSBSOO system to the XIV storage using VMotion capabilities. The production data was also moved to the XIV system, which would then act as a fail over for the DSBBOO. As the data needed to be accessible 24/7 the XIV system needed to keep the data available in case of downtime. The new storage

System was virtualised using IBM's SVC (SAN Volume Controller) software. Designed to take control and retain existing information. Using VDisk Mirroring. The SVC writes the same data onto two Storage regions residing in different Managed Disk Groups (MDGs) on different back-end storage subsystems.

Benefits

IBM incorporated industry-standard components in its storage system rather than specialized and vendor specific components. The intelligent distribution algorithm and parallelism in the new storage infrastructure ensured that no single disk or component became a bottleneck. XIV enabled all disks to participate in the recovery to reduce downtime and avoid further failures. In case of a disk failure, performance is also maintained during the addition or removal of hardware by redistributing the load across all disks to keep the system balanced. Kotak Securities can therefore run critical business applications devoid of all issues. Using the snapshot functionalities, the XIV storage system helped create multiple copies for the testing and development requirements of Kotak Securities without impacting production. Data migration from other systems to XIV was achieved by using a phased approach. Finally, the thin provisioning capabilities of the XIV system allowed Kotak Securities to use less physical space and remain alert to any eventuality by constantly monitoring storage consumption and sending notifications when space utilization exceeded a user-defined threshold. Besides, Kotak saw a drastic reduction in the cost of per GB storage. Having used the storage virtualisation tool we found per GB costing Rs 175, and if we had deployed enterprise tools to migrate the product data, every GB would have been around Rs 1000.