Batlivala & Karani Securities migrates from traditional IT to Hyper-Converged Infrastructure with Galaxy as Implementation Partner

Batlivala & Karani [B & K] Securities India Pvt. Ltd. is a leading financial research and advisory firm in India. Established in 1875, B & K Securities leverages their research strengths, keen business insights and years of experience to offer unbiased and in-depth financial advice to institutional and corporate customers. Their scope of services includes providing Equity Advisory & Research services, Mutual Fund Analysis & Distribution, Strategic Consulting, Insurance Advisory & Broking, and Investment Banking.

Mukesh Mehta joined B & K Securities as Chief Technology Officer [CTO] in 2017. Since then, they've embarked on a digital journey by migrating traditional IT to hyper converged infrastructure. Mukesh says, "Traditional Infrastructures take potentially months of planning prior to an install, and can take weeks to even months whereas Hyper-Converged solutions can be sized to current needs, reducing planning time, installs typically take days or even hours."

The Challenges: -

Prior to virtual DC Infrastructure migration, B & K Securities had over 30 servers in their office [both Windows and Linux-based], with mixed bag of virtualized & stand-alone Servers. Thus, Warranty and end-of-life issues across components, product, as well as software used to be a major issue. Further, individual downtime & dependencies, scalability and handling issues with multiple consoles like admin/management modules (username/password & respective policies) turned out to be a hurdle in their smooth operations. On the other hand, Mukesh Mehta wanted to bring down the TCO (i.e. IT opex) costs linked to more space and electrical power consumption, as well as air-conditioned cooling requirements needed for so many physical servers. In addition, there were other operational costs linked to periodic maintenance, and additional resources needed to manage servers in different environments – Windows and Linux.

Journey to Integrated Infrastructure

Modern Data Center Environment: Elastic, Scalable, Efficient, Fast
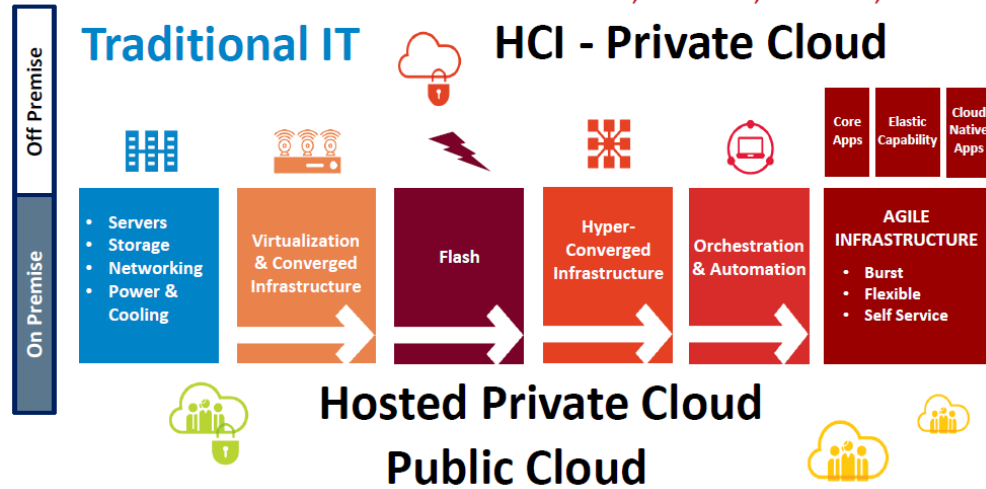
The Solution: -

Mukesh says," Hyper-convergence solutions leverage Intel x86-based servers to natively integrate compute, storage, virtualization and management into a single turnkey platform. This replaces silos of servers, storage and virtualization, along with the need for having separate management tools and processes. A 100% software-defined storage solution runs on a hypervisor that aggregates the storage and compute performance between nodes and servers, thereby merging these discrete tiers into a single tier. As workload requirements grow, organizations simply add another node to an existing hyper-converged deployment to aggregate the additional resources into the cluster. A single vendor provides the hardware and software, eliminating all the complexity that comes with procuring and provisioning these components. Overall management and day-to-day operations are greatly simplified with only one system to manage. It's easy to see how businesses can attain enormous cost savings by eliminating expensive storage, overprovisioning, hypervisor licensing costs and the need for specialized skill sets to manage all the complexity. The end result of this shift is accelerated deployment, improved performance, and cloud-like consumption and management, all at a fraction of the cost of legacy system architectures."
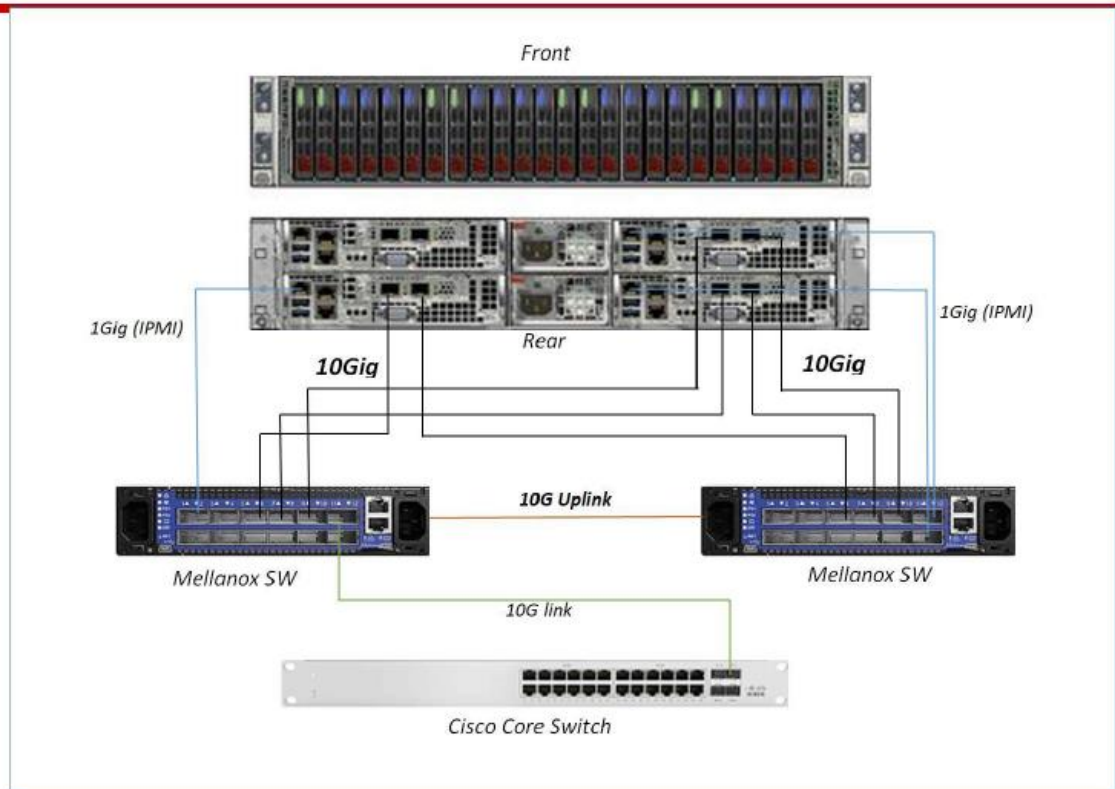
B&K's Journey – The Starting Point

Galaxy Office Automation Pvt. Ltd. was the preferred implementation partner for B & K Securities for this project. IT Infra team at B&K Securities along with Galaxy initiated HCI Implementation project. Galaxy team prepared the detailed blue print of the project with a tight and realistic timeline to migrate existing setup. A core team was formed which configured 3 Node cluster with Nutanix Acropolis Hypervisor (AHV), enabled Deduplication and compression features of CVM level and created a container to store different workloads of VMs i.e. App-Store, DB-Store and ISO-Store. Next step was to connect the port of each nodes 10G SFP+ interface with Two Mellanox 10G switch as Active and Passive (backup). Port of each nodes 1G connected on interface with Mellanox switch as an IPMI management and 10G - Uplink between both the Mellanox switch and single 10G cable connectivity with Cisco Core switch. In the final stage, the project team configured Nutanix Pulse and Remote support and created New VMs as per workload of application and database to migrate existing Physical servers (P2V) and KVM VM (V2V) to Nutanix appliance. Thus, all their old servers have now been replaced with just a single physical cluster box [2U] in their on-premises DC.

B&K's Journey – The Solution

Front

Rear

1Gig (IPMI)   1Gig (IPMI)

10Gig   10Gig

10G Uplink

Mellanox SW   Mellanox SW

10G link

Cisco Core Switch

The Business Benefits: -

Mehta elaborated that deploying HCI helped in simplifying operations as it empowered them with a single console to manage all layers, Dashboard, VM & Storage Summary. Other advantages were optimized Hosts, Controllers, IOPS, Latency and CPU – memory utilization. With various alerts, now 100s of predefined scheduled checks, as well as real-time monitoring is done after the deployment.

So far, B & K Securities team has only virtualized their existing infrastructure using Nutanix AHV. Although they haven't yet put their infrastructure on the cloud, they may do so in future using AWS, or Microsoft Azure. Migration to cloud can ensure a steady data backup and recovery in case of a disaster. Mukesh says, "This has been an excellent journey with Galaxy as partner, and Nutanix solution implementation has brought about an operational and cost efficiency, along with improved application performance, by moving existing workloads from legacy traditional three-tier datacenter infrastructures and placing new workloads on Nutanix HCI. Nutanix environment provides the agility and scalability they need to grow their businesses. This helps in working more for the business. So, B & K Securities IT team has now become more of a business enabler rather than a hindrance."

Mukesh was all praise for Galaxy as well as Nutanix Acropolis & Nutanix Prism, saying that they are far ahead in the competition and enable substantial efficiencies in terms of deploying, managing, and troubleshooting Nutanix solutions, especially for storage.