VIRTUAL
TECH GURUS

GENERATIONS OF IT

A WHITE PAPER

GENERATIONS OF IT

Virtualization and Cloud

Today, many organizations are migrating their enterprise application loads to the cloud. The cloud is nothing but a remote data center of a cloud service provider. Customers rent the resources for Computer Storage and Networking from the Cloud. The evolution of the cloud was started from the Virtualization.

The Booming of Virtualization:

In earlier days, when people wanted to run their enterprise application loads, they were required to buy dedicated hardwares for different applications. All their applications utilized only 20% of the hardware resources in the non-peak time. So the wastage of the hardware resources meant poor ROI. This tradition increased the organization's CAPEX as well as OPEX. To solve this issue, engineers created a technology which revolutionized the IT infrastructure known as "Virtualization".

The Cloud Computing Era:

Cloud created a new generation of IT – whole new ecosystems, including Software Development Life Cycle got changed to utilize the cloud. Developers started to develop applications with "the Cloud in mind". The new generation applications can easily utilize the Compute, Content Delivery Networks and storage facilities of the cloud to improve the application performance significantly. A "pay for what you use model" of the Cloud has helped the organizations reduce expenses and to improve ROI. The complexity of IT operation has reduced by utilizing public, private and hybrid cloud models.

Private Cloud:

For organizations which needed more control over their IT infrastructure environment, Private Cloud was the way to go. This Secure Private Cloud can be deployed inside the organization premises or in the Cloud service provider's data centers. Organizations can use cloud software suits like VMware vCloud, and OpenStack to implement their own Private Cloud. This cloud model helps organizations to have more control over the infrastructure. For example, financial industries that need to store their data internally, as per the regulations or company policies, can go for a Private Cloud. They can utilize the cost and scalability benefits of the cloud while maintaining regularity compliance. So, all the data of a financial organization can be protected behind the firewall of the organization. These organizations can move their non-sensitive server loads to a Pubic Cloud to form a Hybrid Cloud Deployment. This Public cloud integration saves a lot of space in the Private Cloud by moving the non-sensitive loads out of the Private cloud.

The cost of the cloud is getting reduced every month to accelerate and encourage cloud migrations. SMB's can run their IT infrastructure completely in the Public Cloud, or as a hybrid cloud. For example, big consumers' products like DropBox, AirBnB and Pinterest are using the Cloud infrastructure of Amazon Web Services (AWS) to run their entire operations. These companies started their operations by utilizing the smaller resources of AWS and as they grow, they can easily scale up their AWS usage. These companies are spending less cost in non-peak hours by automatically turning off the servers. Choosing between the public, private or hybrid cloud can save lot of money and will improve the performance of the applications by scaling up the resources when required.