Need for next generation storage

Enterprises face challenges in managing rapid growth of large volume of data. Mind boggling explosion of structured and unstructured data exerts pressure on finding efficient systems to handle it. The number of devices that generate data have multiplied over the years. Storage systems have to adapt to the newer changes that are brought in by the digital eco system and still strive to meet business goals.

Compute density

The density in terms of virtualized workloads, Virtual Machines and Containers have gone up owing to advancements in semiconductor industry. The increase in density demands higher IOPS, lower latency, higher throughput to meet application performance and end user experience.

Data growth

Enterprises were limited with business data that reside in ERP, CRM, email solutions. In current digital age, data gets created from newer business applications, devices, analytics engines and a lot more. The exponential data growth has led to higher capacities being stored in silos.

Business uptime

As more and more businesses turn online businesses, the uptime of the services and applications have become uptime of business. The need of services uptime demands infrastructure, hence storage to be made available all time with automated failover.

Data types

The type of data that gets generated from IoT devices, AI systems, analytics engines end up being majorly unstructured. Data warehousing solutions extend to handle structured and unstructured data on collection, management, analysis and reporting. These different types of data demand different storage backends types – block, file and object.

The foresaid multifarious technical reasons with generic operations hassles make the traditional storage not suitable for the next generation needs. Maintaining multiple silo storages on hardware bound devices ends up being practically unfeasible.

Software Defined Storage

IT Infrastructure over the years has become Software Defined. Physical Servers have been virtualized a lot. The same has to be extended to all components of infrastructure to derive larger benefits and to manage a seamless backend to applications services. Software Defined Storage (SDS) is a technology that decouples control plane and data plane, runs the control plane on software programs. This approach helps Enterprises to avoid hardware controller storages managing silos. SDS is deployed on Industry Standard x64 architecture on commodity hardware, that prevents spend on costly proprietary offerings, alleviates the pain of vendor lock in.

SDS being built on X64 Server hardware, gives the choice to customers to populate them with latest Solid State Drives that provides higher IOPS to meet the technical requirements of high dense compute environments.

SDS gets deployed on clusters with servers acting as nodes. SDS supports scale out architecture, wherein additional storage nodes are added as and when storage capacity augmentation is required. SDS grows to multi Petabytes and Exabytes orders, without requiring architectural disturbance or forklift upgrades.

Data that stored on SDS cluster gets replication across multiple disks and nodes, with customizable options for multiple pool in terms of resiliency. Storage nodes are configured with automated failover, that ensures uptime is maintained at higher orders of nine. In addition, across geography replication provides business continuity with disaster recovery.

SDS supports all type of data to be stored, structured or unstructured. SDS provides backend for Object, Block and File. Being a unified storage, custom creation of pools for variety of data types serving to varied applications.

> In a highly virtualized world, SDS is the optimal storage solution to meet the next generation requirements of Enterprises

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