Virtualstor™ Scaler

High-performance unified scale-out storage

Features List

- Scale-out Software Defined Storage
- The only Multi-Tenant Storage that can support SAN / NAS / Object protocols
- High-performance backend storage engine – BigteraStore
- Seamless data migration from legacy storage system
- Real-time data replication and asynchronized remote replication
- Volume Snapshot and Snapshot Clone
- N+M Erasure coding for data protection
- Decentralized management console and open management API
- **7.0** Consolidates standard storage – SAN, NAS, DAS to utilize legacy device
- **7.0** Reduce SSD write wear-out
- **7.0** Capacity and performance prediction
- **7.0** SSD life prediction
- **7.0** Multiple file systems

Currently there are several pressing concerns facing IT administrators, with the foremost being, rapid data growth, rapid response to storage requests, and finding a cost effective efficient solution to handle their infrastructure's needs. While the amount of data that businesses are generating is ever increasing, IT budgets are not keeping pace with what traditional storage would cost to facilitate handling big data. Traditional storage solutions scale up which means that heavy investment and massive over provisioning is the solution to capacity planning.

VirtualStor™ Scaler moves companies to a far more effective and efficient pay-as-you-grow operating model. The scale out architecture of VirtualStor™ Scaler eliminates over provisioning, brings resource cost under control, and eliminates capacity planning.

High Performance

Turbocharge your infrastructure.
Data centers must have the capacity to store, but they must also have the processing power and throughput to handle applications and workloads. Many data centers today must support a variety of performance intensive applications and workloads. While traditional storage is able to handle capacity, new storage technologies are needed to tackle capacity and performance issues.

VirtualStor™ Scaler brings blazing performance to your data center in several ways. First, by leveraging SSD technology, Improves data workload and application performance at least 10X. Administrators can improve performance further by adding more SSD (SATA, SAS, or PCIe) or by scaling out.

VirtualStor™ Scaler scales out, throughput and IOPS performance also significantly improve, improve performance high-performance backend storage engine – BigteraStore.

Read IOPS   Write IOPS
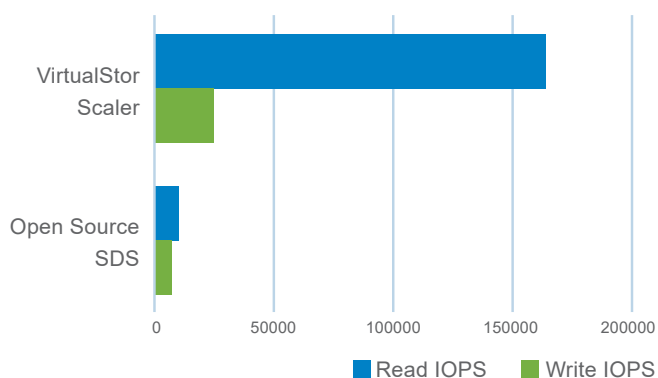
Unified Storage

One platform to unify and rule them all.
Over time data centers become a mix and match of many different types of storage (SAN, NAS). This is due to budgets, availability of storage devices, immediate resource needs, and storage requirement needs. Mixing and matching storage types makes management far more complex as more and more storage devices become part of the data center.

VirtualStor™ Scaler provides a unified storage platform so companies do not need to choose between the types of storage they need. As more appliances are added, the appliances seamlessly become part of a single massive decentralized storage entity.

VirtualStor™ Scaler can be partitioned into storage of any type, accomplishes this by abstracting the storage

hardware from the control layer, supports creating network attached storage (NAS) and storage area networks (SAN) that can run simultaneously. These storage types are supported by several storage protocols: SAN (iSCSI / FC), NAS (CIFS / NFS), and Object Storage (Amazon S3 / OpenStack Swift).

The latest version of VirtualStor™ Scaler 7.0, can consolidate any brand of traditional storage (SAN, NAS, and DAS) into a single massive storage entity, with Bigtera's unique storage virtualization technology. When administrators are provisioning storage resources for different workloads, the resources are not limited to the capability or capacity of any single storage type.

High Efficiency

Less is more.
As companies grow, so too does their infrastructure. This requires a significant investment in time, effort, and money, and leads to issues of capacity planning which in turn leads to over provisioning. VirtualStor™ Scaler can use RAID-5 together with two replica copies or N+M Erasure Coding, so as to provide more efficient space utilization than other software defined storage with 3 replica copies. Besides, administrators can assign various services on Bigtera's unique multi-tenant storage technology "Virtual Storage" to virtually extend the available space, and enable compression and data deduplication for those backup/archive date.

VirtualStor™ Scaler automates efficient optimization of your storage resources in several ways. First, provides Thin Provisioning to provide resources just as they are needed. Second, storage resources are balanced across storage nodes so no single node carries more than their fair share of the load.

Resilience

Robust and resilient.
Regardless of how well a solution performs, robustness and resilience are critical aspects for any solution. VirtualStor™ Scaler ensures business, data, and application continuity on several fronts, everything from data and service availability to data security.

VirtualStor™ Scaler data availability functions include data replication, erasure coding, self-repairing, and RAID features. Erasure coding offers administrators an alternative to data

replication, Like data replication this ensures that there is no single point of failure for any of the data blocks.

VirtualStor™ Scaler uses round-robin DNS and IP take-over services. Round-robin DNS uses a list of IP addresses for workload balancing , if any of the appliances encounter issues, the remaining appliances take over application and workload services seamlessly by taking over the IP of the appliance that encounters issues.

VirtualStor™ Scaler can protect data stored with Amazon S3 API using Intel® AES-NI encryption technology. Encryption can be enabled for critical data or applications, while data that has a lower level of confidentiality can be left unencrypted.

Flexibility

Storage that fits.
Administrators are constantly faced with a number of challenges when trying to satisfy the requirements that their data center needs. Administrators must try and juggle customer requirements with the solutions that are available in the infrastructure. This is where VirtualStor™ Scaler shines as a storage solution.
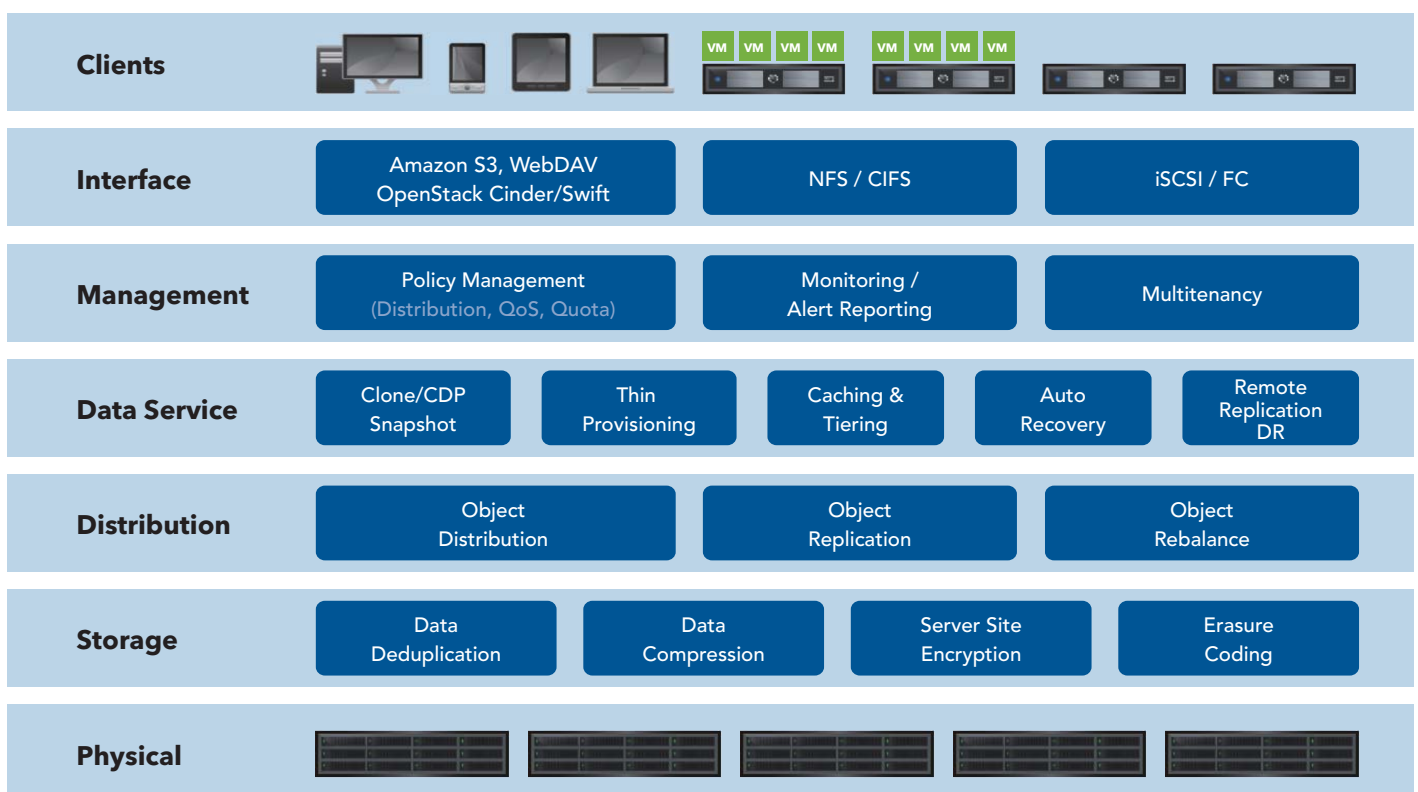
VirtualStor™ Scaler is the Multi-Tenant Storage, extremely versatile and can be configured to suit whatever environment customers need. Whether storage type (NAS, SAN, DAS), capacity, performance (IOPS, throughput), or data protection are of primary concern for the customer or a balance of two, three or all of them are needed, provides the flexibility and agility to deliver.

VirtualStor™ Scaler can seamlessly migrate existing data from customer's legacy storage with minimum downtime. Then, consolidate the legacy storage in to the storage pool.

VirtualStor™ Scaler out increases IOPS and throughput performance, equips with high-performance backend storage engine BigteraStore, which provides SSD acceleration technology such as data caching and merging small I/Os into sequential I/Os to further improve IOPS.

The latest version of VirtualStor™ Scaler 7.0, optimizes the SSD usage to significantly reduce SSD write wear. It can increase your SSD lifespan endurance and decrease your CAPEX. It also can notify administrator when SSD life is running out, and predict the storage capacity and performance. These features help administrator to plan ahead and release the pressure, in order to decrease administrator's efforts.

VirtualStor™ Scaler Architectural Overview

Clients				

Interface	Amazon S3, WebDAV OpenStack Cinder/Swift	NFS / CIFS	iSCSI / FC

Management	Policy Management (Distribution, QoS, Quota)	Monitoring / Alert Reporting	Multitenancy

Data Service	Clone/CDP Snapshot	Thin Provisioning	Caching & Tiering	Auto Recovery	Remote Replication DR

Distribution	Object Distribution	Object Replication	Object Rebalance

Storage	Data Deduplication	Data Compression	Server Site Encryption	Erasure Coding

Physical					

Solutions	100 TB	300 TB	600 TB	1 PB
Component	3 x V2120	3 x V4360	6 x V4360	9 x V4360
Usable Capacity	120 TB	330 TB	660 TB	1000 TB
Storage Software	Bigtera VirtualStor Scaler 7.0			
Protocol Support	NFS / CIFS / iSCSI / FC / Amazon S3 / OpenStack Swift / Cinder RBD			
Data Disk	8 TB SATA disk	8 TB SATA disk	8 TB SATA disk	8 TB SATA disk
Cache Disk	Intel SATA SSD	Intel NVMe SSD	Intel NVMe SSD	Intel NVMe SSD
Network	10 GbE	10 GbE / 25 GbE	10 GbE / 25 GbE	10 GbE / 25 GbE
Disk Protection	RAID-5	RAID-5	RAID-5	RAID-5
Object Replication	2 Replicas	2 Replicas	2 Replicas	2 Replicas

BIGTERA

| GET MORE INFORMATION |

To find more about Bigtera Software Defined Storage (SDS) solutions, visit www.bigtera.com
Contact us: info@bigtera.com