BIGTERA

VirtualStor™ Scaler

High-performance unified scale-out storage

Highlight

- High Performance
- Unified Storage
- Efficient Storage
- Resilience
- Flexibility

Features list

- Unified scale-out architecture support SAN / NAS / Object storage
- High-peformance backend storage engine -- BigteraStore
- Real-time data replication and asynchronized remote replication
- Thin-provision, data deduplication, data encryption and data compression
- Snapshot and Clone
- Erasure coding for data protection
- IP takeover, self-healing and DNS round-robin
- VAAI
- Seamless data migration
- Cloud backup and restore
- Decentralized management console and open management API

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 eliminate capacity planning.

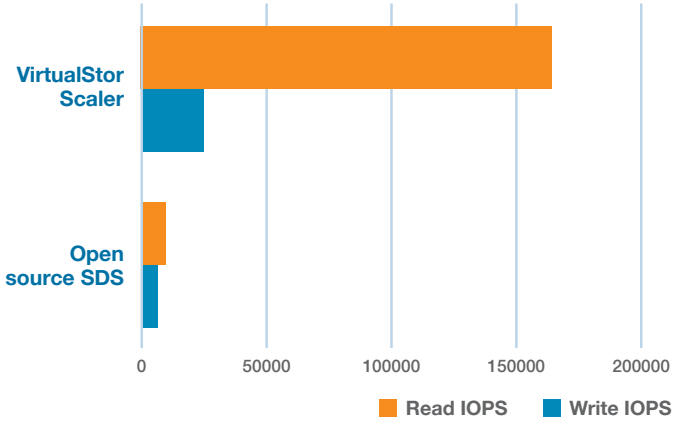
High Performance

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 Intel® SSD DC S3710, VirtualStor™ Scaler improves data workload and application performance at least 10X. Administrators can improve performance further by adding more SSD (SATA/SAS, PCIe) or by scaling VirtualStor™ Scaler out.

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



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 type of storage they need. As more VirtualStor™ Scaler appliances are added, the appliances seamlessly become part of a single massive decentralized storage entity. The single massive storage entity can be partitioned into storage of any type. VirtualStor™ Scaler accomplishes this by abstracting the storage hardware from the control layer. VirtualStor™ Scaler 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).

Efficient Storage

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. With VirtualStor™ Scaler administrators can assign various services on data to virtually extend the available space, with compression, data deduplication, and erasure coding being the foremost.

VirtualStor™ Scaler automates efficient optimization of your storage resources in several ways. First, VirtualStor™ Scaler using 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.

This extends the life of storage devices. Finally, VirtualStor ™ Scaler utilizes the Intel® SSD DC S3710 and memory for caching hot and warm data and fast data processing, while using HDD for cold data or applications that do not need SSD's lightning fast performance.

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.

Data availability is critical for any business. VirtualStor™ Scaler data availability functions includes data replication, erasure coding, self-repair, and software RAID features. This means that there is no single point of failure for any of the data blocks.

Erasure coding offers administrators an alternative to data replication, when capacity usage is critical to the adminis-

trator. Like data replication this ensures that there is no single point of failure for any of the data blocks. To ensure system availability 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.

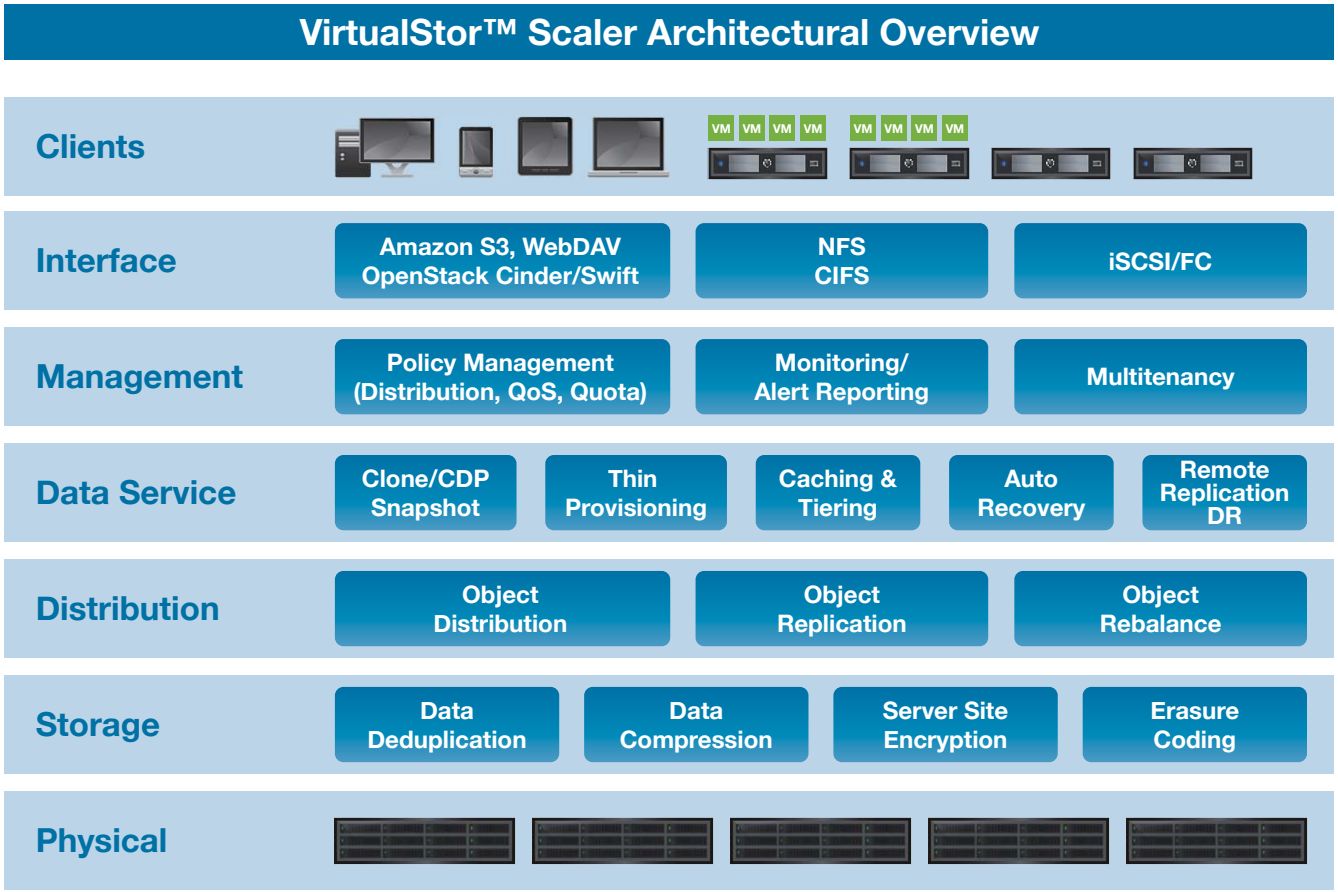
Flexibility

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 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, VirtualStor™ Scaler provides the flexibility and agility to deliver.

When it comes to capacity, VirtualStor™ Scaler scales out to increase capacity. If administrators want to squeeze the most out of the investment administrators can enable data services (data compression, data deduplication) and data protection (erasure coding, software RAID) features.

If performance is the primary concern, scaling VirtualStor™ Scaler out increases IOPS and throughput performance. VirtualStor™ Scaler provides SSD acceleration (data caching, sequential write) and cluster caching to further improve IOPS.Finally, VirtualStor™ Scaler gives administrators the freedom to choose the data protection that meets their needs. Erasure coding and the software RAID are more storage efficient, while data replication provides better application and workload performance. All while other data protection features (snapshot backups, cloud backup) support the infrastructure.



Model	BT-V2120	BT-V4240	BT-V4360	BT-V4600
Picture				
Form factor	2U, Single Node	4U, Single Node	4U, Single Node	4U, Single Node
Data disks	12 x 3.5" HDD	24 x 3.5" HDD	34 x 3.5" HDD	60 x 3.5" HDD
Cache disks	2 x 2.5" SATA SSD	2 x 2.5" SATA SSD	4 x 2.5" SATA SSD	6 x 2.5" SATA SSD
Network Connections	Dual 10Gb or Quad 10Gb 2x1Gb RJ45	Dual 10Gb or Quad 10Gb 2x1Gb RJ45	Dual 10Gb or Quad 10Gb 2x1Gb RJ45	Dual 10Gb or Quad 10Gb 2x1Gb RJ45
Data Protection	RAID 1/5/6/10 Multiple replicas N+M Erasure coding	RAID 1/5/6/10 Multiple replicas N+M Erasure coding	RAID 1/5/6/10 Multiple replicas N+M Erasure coding	RAID 1/5/6/10 Multiple replicas N+M Erasure coding
Storage Protocols	iSCSI/FC CIFS/NFS Amazon S3 OpenStack Swift	iSCSI/FC CIFS/NFS Amazon S3 OpenStack Swift	iSCSI/FC CIFS/NFS Amazon S3 OpenStack Swift	iSCSI/FC CIFS/NFS Amazon S3 OpenStack Swift
Minimum nodes	3	3	3	3
Usage scenario	Small scale of cluster Virtualization	Requires higher bandwidth	Requires higher bandwidth and larger capacity	Requires larger capacity and higher density

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To find more about Bigtera Software Defined Storage (SDS) solutions, visit **www.bigtera.com**

Contact us：**info@bigtera.com**