

IBM Storwize V7000 Unified

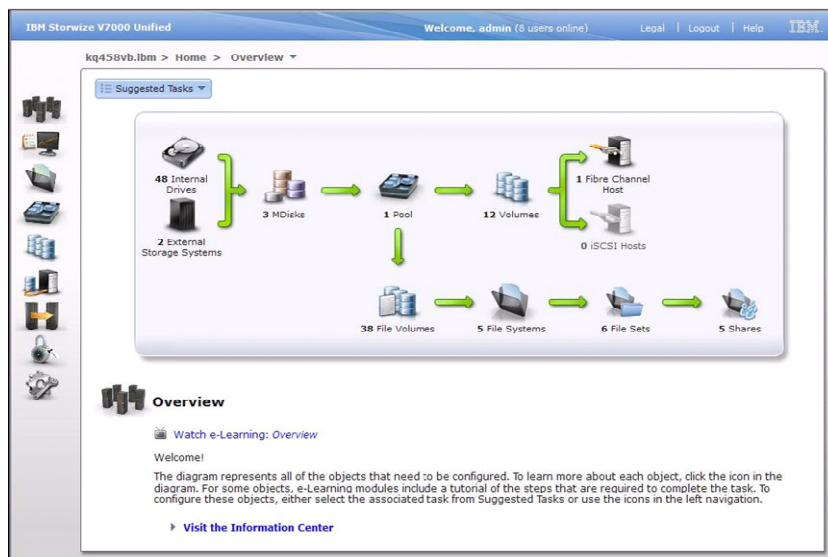
Ease of Use IBM Storwize V7000 simplifies management with a powerful, easy to use GUI designed to make provisioning storage easy.

Unified Storage Option for Block and File

Multi-protocol support for Fibre Channel, iSCSI, NFS, CIFS, HTTP, FTP when the File Services Modules are included, and managed from a single unified interface.

Active Cloud Engine for Files

Active/Active File Services Modules delivering a single namespace and with built-in policy-based file placement across multiple disk tiers. Files are migrated for information lifecycle management without losing their place in the directory tree.



Policy-Based File Migration to Tape Optional HSM integration will migrate files to tape as part of a life-cycle management strategy. Migrated files retain their place in the disk-based file directory tree.

Drive Choices IBM Storwize V7000 supports a full range of 2.5" 6gbps SAS and SSD drives as well as 3.5" 7200RPM Nearlines SAS drives. Each head unit or disk drawer holds either 24 x 2.5" drives or 12 x 3.5" drives, with up to 10 enclosures for a maximum of 240 drives. Non-disruptive drive firmware upgrades are also supported.

Automated Tiering

Easy Tier is included in the core function of every Storwize V7000. Easy Tier allows you the option of extracting maximum performance value from SSDs whilst taking advantage of the lower cost per TB of large SAS and SATA drives. IBM's Easy Tier will tune your system automatically, migrating 256 MiB chunks of data to and from SSD. Even if you don't have any SSDs, you can still turn Easy Tier on and it will give you some conservative estimates on what improvements it could make to your performance if you did add SSDs. IBM's key differentiator for Easy Tier is that it's easier to use than competing systems from other vendors.

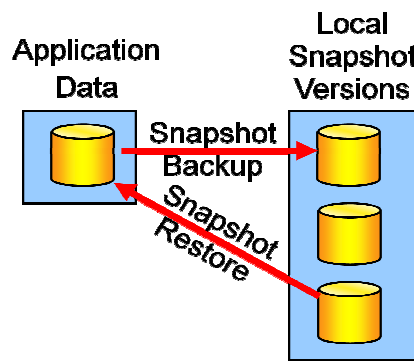


Easy Volume Migration

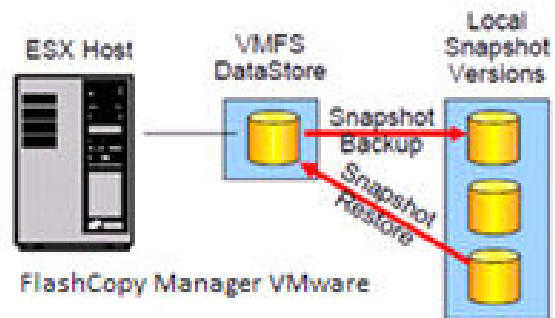
Storwize V7000 also allows storage administrators to non-disruptively migrate volumes between tiers of storage while applications are running.

Thin Provisioning Storwize V7000 also includes thin provisioning for block I/O volumes which can provide dramatic space savings and deliver excellent performance even for your tier 1 applications.

Snapshots Storwize V7000 also includes IBM volume FlashCopy point in time copying. FlashCopy includes writeable snapshots, as well as full volume cloning, and Reverse FlashCopy which allows instant restore of a volume. All of these functions are included in the base Storwize V7000 product and do not need to be licensed separately. You can also add Tivoli Storage FlashCopy Manager (licensed per TiB) to deliver application integrated hot snapshots (Oracle, MS SQL, MS Exchange, DB2, SAP). When the optional file services modules are installed files system and file set snapshots are included as well as file cloning.



Tivoli Storage FlashCopy Manager TSFCM optionally manages application-aware volume snapshot copies reducing backup windows and removing the need for backup software to access live production volumes. Includes VSS Restore of MS Exchange; File copy restore of a storage group or database from a mounted snapshot image; Restore into a Recovery Storage Group, alternate SG, or relocated SG; Individual mailbox or mail item restore from a snapshot; Also includes VSS Snapshot Restore of a full SQL database with file copy restore from a mounted snapshot, to an alternate database name, and to an alternate location. For more details see www.ibm.com/software/tivoli/products/storage-flashcopy-mgr



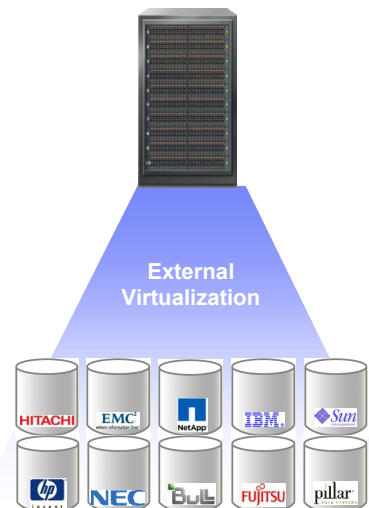
FlashCopy Manager VMware

Remote Mirroring Storwize V7000 optionally includes Global Mirror and Metro Mirror continuous remote volume mirroring software in support of your disaster recovery strategy. Replication of snapshots is also supported. Remote volume replication is licensed per physical enclosure. When the optional file services modules are installed, file-system replication over IP is included.

Easy Asset Migration Storwize V7000 allows you to easily perform on-line data migration from legacy Fibre Channel disk systems, all but eliminating the disruption normally associated with multi-vendor asset replacement.

Storage Migration Wizard Step 8 of 8

The data migration has begun. After it is completed, remove the image-mode volume copies from the migration pool and unzone and remove the original storage system.



Multi-Vendor Virtualization Storwize V7000 also supports optional long-term external virtualization of a huge range of multi-vendor disk systems. Multi-vendor disk systems can be managed and volumes provisioned as if the collected systems were a single resource. Long-term virtualization of external systems is licensed separately per external enclosure.

Quality of Service Storwize V7000 allows you to easily specify maximum IOPs or MB/sec on a per volume basis.

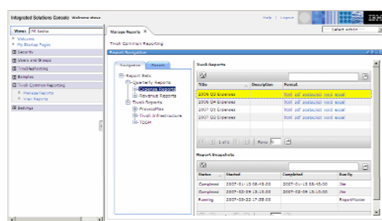
High Performance Storwize V7000 has been benchmarked at more than 56,510 SPC-1 IOPS for a single head-unit system. The built-in real-time performance monitor can be used to provide a quick performance view for the last 5 minute period. For fully detailed performance reporting and datamart-based capacity planning, Tivoli Storage Productivity Center for Disk MRE can be licensed per physical enclosure.



Tivoli Storage Productivity Center

TPC for Disk MRE optionally enables centralized management of multiple Storwize V7000 clusters, including device configuration, alerting, performance monitoring and capacity planning.

Administrators can warehouse and analyze statistics down to five minute intervals, monitor in real



time in the topology viewer, or have the system generate alerts at chosen thresholds to help ensure service levels are met. For more details see www.ibm.com/storage/software/center/disk/me

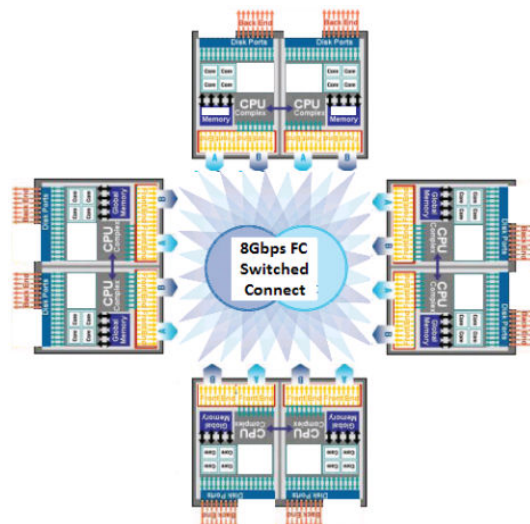
VMware Integration Storwize V7000 includes support for Virtual center, VMware Site Recovery Manager and VAAI including: Full Copy with block zeroing, Hardware-assisted locking; VMotion & Storage VMotion; VM creation/cloning/snaps/deletion; Extending a VMFS volume; Extending the size of a VMDK volume.

Clustered Expansion IBM Storwize V7000 block I/O systems further support scale-out clustering of two head units and up to 480 drives (and up to 4 head units and 960 drives with IBM lab approval) with the ability to share disks across the head units. Note that this is not a failover cluster. Failover is handled between the dual controllers within each head unit, not across head units.

IBM Storwize V7000



Start small **Grow BIG**



For more details see the product page at www.ibm.com/storage/disk/storwize_v7000 and the information center at publib.boulder.ibm.com/infocenter/storwize/ic including multi-media e-learning modules.