Quest

Quest DR Series Disk Backup Appliances

Back up more. Store less. Perform better.

Keeping up with the volume of data to protect can be complex and time consuming, but managing the storage of that data doesn't have to be. The Quest DR Series of disk backup appliances are engineered to handle hundreds of incoming backup streams with an all-inclusive software solution that simplifies management of backups, giving you more time to focus on other tasks.

The appliances work in conjunction with backup software applications to ensure data written to disks is protected for reliable recovery. New features such as storage groups, secure erase and user management give you the flexibility to tailor utilization policies to fit your organization's specific requirements.

With Quest DR Series Appliances you can:

- **Back up more** of your servers and applications — with support for more than 15 backup applications and enhanced security features such as encryption at rest and secure erase

- **Store less** backup data — using variable block, in-line deduplication and compression to lower backup storage requirements by an average of 15:1 at an average cost of $.16/GB

- **Perform better** during data ingest and management — with built-in accelerators, logical storage groups and support for Fibre Channel connectivity and VTLs

CUSTOMERS RESPOND TO AFFORDABLE APPLIANCES WITH LOW TCO

During the six years the DR series of appliances have been on the market, customers consistently report that they lower TCO for management of backup data. It's no wonder — the appliances are simple to deploy, easy to manage, and

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BENEFITS:

- Supports major backup applications for easy deployment.

- Lowers backup storage costs to as little as $.16/GB using deduplication and compression.

- Accelerates data ingest by up to 29TB/hr with built-in protocol accelerators.

- Decreases TCO with all-inclusive licensing.

- Enhances data protection and compliance with security safeguards (Encryption at Rest, Secure Erase).

- Provides best-in-class data integrity features (NVRAM, file-system health checks, RAID6 storage, hot spares).

- Remove tape management headaches with VTL libraries.

> Internal software automatically partitions existing capacity of the base unit and expansion shelves, relieving you from performing storage provisioning.

Edge-to-core protection
DR2000v virtual appliance helps protect data at local or branch locations

Scalability
Gain more than five petabytes of logical capacity with the DR6300

Pay-as-you-grow expansion
Support for up to one, two or four expansion shelves

Enhanced flexibility to fit your needs
Storage groups, Fibre Channel connectivity, and VTL replication

most of all, reliable. All-inclusive licensing means you never have to pay for future features or upgrades, or be concerned about additional fees for replication, encryption, etc.

FLEXIBILITY AND SCALABILITY TO HANDLE YOUR SPECIFIC NEEDS

The DR series is available in three physical and one virtual configuration:

- **DR4300e** — Starts with a base of 4.5TB which can be expanded in-place to 9TB usable capacity; expands up to 27TB with the addition of one 18TB expansion shelf

- **DR4300** — Base models available in 18 or 36TB of usable capacity; expands up to 108TB with two 36TB expansion shelves

- **DR6300** — Base capacities of 36 or 72TB usable; expands up to 360TB with four 72TB expansion shelves

- **DR2000v** — Software version of the appliance that installs on a VM server, using disks of that server to store data in capacities of 1, 2, 4 or 12TB

Data backed up to DR Series Appliances are handled as virtual shares or containers — eight for the DR2000v, 32 for the DR4300e, 64 for the DR4300 or 128 for the DR6300. The internal software built into the appliances automatically partitions existing capacity of the base unit and all expansion shelves, relieving you from performing any storage provisioning.

With the latest DR appliance operating system (4.0), you now have the ability to create logical storage groups so backup data can be separated by departments, workgroups, customers, etc. Storage groups define boundaries of backup data so that data from one group cannot bleed into any other data. For example, engineering data can be in one or more containers within storage group A, with customer service data in containers in Storage Group B.

IN-LINE DEDUPLICATION AND DR RAPID TECHNOLOGY PLUG-INS FOR BETTER PERFORMANCE

The DR Series Appliance deduplication algorithms efficiently handle hundreds of incoming data streams and deduplicate them using a variable-length sliding-scale format to assure optimal capacity optimization. To assure data integrity the appliance hardware contains a Write Acceleration Module card, collision detection and file system integrity checks, where existing data is read back periodically to compare checksums and verify data integrity.

To help accelerate your backups, appliance licenses include, at no extra charge, DR Rapid technology plug-ins. The modules are installed on client or media servers and used with applications from Veritas (OST for BackupExec or NetBackup) or Quest (RDA for NetVault Backup or vRanger) to speed up data ingest by performing chunking and hash computations at the source. For those backup applications using the NFS or CIFS connectivity, DR Rapid includes the industry's first source-side deduplication accelerators, Rapid NFS and Rapid CIFS, which can boost data ingest to as much as 29TB/hour.

ADDED LAYERS OF PROTECTION WITH SECURITY FEATURES

Data backed up must also be secure so Quest DR Series appliances have built-in Encryption at Rest, Secure Erase and FIPS 140-2 compliance features. Encryption at Rest uses industry-standard 256-bit Advanced Encryption Standard (AES) keys, which are generated by the appliance either one-time or on set intervals. The appliances also comply with the FIPS 140-2 government computer security standard for cryptographic modules. With the addition of a Secure Erase feature, the DR Series appliances now follow standards developed by the Defense Security Service (DSS) to solve the problem of permanent removal of data from disks for government or commercial enterprises.

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PROTECT LEGACY DATA AND REMOVE TAPE MANAGEMENT HEADACHES WITH VTL SUPPORT

If your requirements include protection of legacy data or data sent from NAS servers in tape format, the DR Series appliances offer Virtual Tape Library (VTL) support using NDMP, 8 or 16GB Fibre Channel or iSCSI connectivity. A single DR Series appliance can support four VTL libraries or containers. Each library/container stores backed up data on virtual LTO-4 tape drives which are further subdivided into virtual cartridges (with a limit of 10,000 cartridges per appliance). VTL containers established with NDMP, FC or iSCSI connectivity may be replicated to another DR Series appliance that has been designated as a disaster recovery site.

With the addition of Fibre Channel on the DR Series appliances, you can leverage NDMP backups and the existing optical Fibre Channel fabric to send backup workloads directly to the appliance faster than traditional copper networks. A DR appliance can support one dual-port Fibre Channel card and up to 240 VTL streams.

EDGE-TO-CORE PROTECTION WITH VIRTUAL APPLIANCE

For protection of data at remote or branch offices, the DR2000v is an attractive choice because it allows you to leverage your existing virtual infrastructure. This software solution delivers many of the same features of a physical DR Series appliance, including deduplication, compression, replication, protocol accelerators, and encryption at rest. The virtual appliance is configured in capacities of 1, 2, 4 or 12TB to run on pre-existing virtual machine servers together with the current backup application and virtual server disks for storage. DR2000v backup workloads can be replicated to another DR2000v or to a physical DR Series appliance for disaster recovery needs.

MANAGEMENT SIMPLICITY TO ENHANCE DAILY PRODUCTIVITY

With all the IT tasks you do on a daily basis, operations can become complex very quickly. Because of this, when setting up a DR appliance, the system administrator can specify individual user roles, including the protocols needed to connect to specific backup applications. The roles can be changed later on and may be viewed for the entire appliance from a single screen. To help keep track of overall system health, there are also roles for monitor and e-mail only users.

Newly-revised user interfaces allow the administrator or user to view statistics, deduplication rates and health status of the appliance. For more flexible management and monitoring when off-site mobile access to appliance dashboards is available. And in situations where there is a network of appliances (physical and virtual) the Global View feature lets you view the status of all appliances from a single screen.

FUTURE-PROOF YOUR DATA CENTER

Cost-effective deduplication and secure data storage for backup workloads with reliable recovery changes the economics of disk backups. The DR Series appliances and deduplication technology are cornerstones for the future of Quest's data protection vision.

FIND THE ANSWERS

Reduce IT complexity; eliminate inefficiencies and lower costs with Quest Support, your single source for premium 24×7 support. You gain full support coverage from our global team of industry-certified backup and recovery support engineers to maximize uptime and IT investment. You can also obtain remote installation services to configure and validate key elements and optimize operational performance.

Learn more at quest.com/products/dr-series-disk-backup-appliances

ABOUT QUEST

Quest helps our customers reduce tedious administration tasks so they can focus on the innovation necessary for their businesses to grow. Quest® solutions are scalable, affordable and simple-to-use, and they deliver unmatched efficiency and productivity. Combined with Quest's invitation to the global community to be a part of its innovation, as well as our firm commitment to ensuring customer satisfaction, Quest will continue to accelerate the delivery of the most comprehensive solutions for Azure cloud management, SaaS, security, workforce mobility and data-driven insight.

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Feature	DR4300e	DR4300	DR6300	DR2000v
Form factor	2U	2U	2U	n/a
Internal storage	Redundant OS storage on dedicated disks (inside chassis) 12 3.5" drives, Near Line SAS— hardware RAID 6 configuration (11 drives + 1 hot spare)	Redundant OS storage on dedicated disks (inside chassis) 12 3.5" drives, Near Line SAS— hardware RAID 6 configuration (11 drives + 1 hot spare)	Redundant OS storage on dedicated disks (inside chassis) 12 3.5" drives, Near Line SAS— hardware RAID 6 configuration (11 drives + 1 hot spare)	Uses storage disks resident in the server hosting the virtual appliance (VMware ESXi (5.0, 5.1 or 5.5), Microsoft Hyper-V (2008R2, 2012, 2012R2)
Protocol support	NFS, CIFS, Rapid NFS, Rapid CIFS, OST, RDA, NDMP, iSCSI	NFS, CIFS, Rapid NFS, Rapid CIFS, OST, RDA, NDMP and iSCSI	NFS, CIFS, Rapid NFS, Rapid CIFS, OST, RDA, NDMP and iSCSI	NFS, CIFS, OST, RDA
Networking	One Network Daughter Card option per node: 2 port 10GbE + 2 port 1GbE (base T or SFP+ or SFP+ w/cables); 4 port 1GbE; 4 port 10GbE (SFP+ or SFP+ w/cables) Plus one optional add-on NIC: 4 port 1GbE; 2 port 10GbE; 2 port 10GbE (base T or SFP+ or SFP+ w/cables)	One Network Daughter Card option per node: 2 port 10GbE + 2 port 1GbE (base T or SFP+ or SFP+ w/cables); 4 port 1GbE; 4 port 10GbE (SFP+ or SFP+ w/cables) Plus one optional add-on NIC: 4 port 1GbE; 2 port 10GbE; 2 port 10GbE (base T or SFP+ or SFP+ w/cables)	One Network Daughter Card option per node: 4 port 10GbE + 2 port 1GbE (base T or SFP+ or SFP+ w/cables); 4 port 1GbE; 4 port 10GbE (SFP+ or SFP+ w/cables) Plus one optional add-on NIC: 4 port 1GbE; 2 port 10GbE; 2 port 10GbE (base T or SFP+ or SFP+ w/cables)	2 x 1GbE ports
Fibre Channel Networking		Dual Port 8GB Optical Fibre Channel HBA or Dual Port 16GB Optical Fibre Channel HBA	Dual Port 8GB Optical Fibre Channel HBA or Dual Port 16GB Optical Fibre Channel HBA	
Systems management	iDRAC 8 Enterprise	iDRAC 8 Enterprise	iDRAC 8 Enterprise	n/a
Physical dimensions	2U RAC-mountable chassis; H: 8.73 cm (3.44 in.) x W: 48.2 cm (18.98 in.) x D: 75.58 cm (29.75 in.)	2U RAC-mountable chassis; H: 8.73 cm (3.44 in.) x W: 48.2 cm (18.98 in.) x D: 75.58 cm (29.75 in.)	2U RAC-mountable chassis; H: 8.73 cm (3.44 in.) x W: 48.2 cm (18.98 in.) x D: 75.58 cm (29.75 in.)	n/a
Rack weight	36.5 kg, (80.47 lb.), maximum configuration	36.5 kg (80.47 lb.), maximum configuration	36.5 kg (80.47 lb.), maximum configuration	n/a
Capacity points	4.5TB (67.5TB logical)[1] 9.0TB (135TB logical)[1]	18TB (270TB logical)[1] 36TB (540TB logical)[1]	36TB (540TB logical)[1] 72TB (1.08PB logical)[1]	Available in 4 post-RAID configurations: 1TB, 2TB, 4TB and 12TB.[2] Each DR4300 or DR4300e can support up to 32 DR2000v licenses. Each DR6300 can support up to 64 DR2000v licenses.
Expansion unit capacity[2]	One expansion shelf maximum: 18TB post RAID (270TB logical)[1]	2 shelf maximum: 18TB post RAID (270TB logical)[1] 36TB post RAID (540TB logical)[1]	4 shelf maximum: 18TB post RAID (270TB logical)[1] 36TB post RAID (540TB logical)[1] 72TB post RAID (1.08PB logical)[1]	n/a
Wattage	750 W (redundant power supply)	1100 W (redundant power supply)	1100 W (redundant power supply)	n/a
Voltage	100 VAC to 240 VAC, auto ranging, 50Hz to 60Hz, 10 A-5A	100 VAC to 240 VAC, auto ranging, 50Hz to 60Hz	100 VAC to 240 VAC, auto ranging, 50Hz to 60Hz	n/a

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Feature	DR4300e	DR4300	DR6300	DR2000v
Heat dissipation	2891 BTU/hr. (maximum) (750 W PSU)	4100 BTU/hr. maximum (1100 W PSU)	4100 BTU/hr. maximum (1100 W PSU)	n/a
Regulatory model	E31S Series	E31S Series	E31S Series	n/a
Maximum throughput	21TB/hr. with Rapid protocols[4]	22TB/hr. with Rapid protocols[4]	29TB/hr. with Rapid protocols[4]	1.4TB/hr. with RDA or OST[5]
Backup software certifications	Dell AppAssure 5.x (Archive Repository Support only), NetVault Backup, vRanger; CommVault Simpana; Veritas Backup Exec and NetBackup; ARCserve; EMC Networker; Microsoft Data Protection Manager; Veeam; IBM TSM; Oracle RMAN; HP Data Protector; Bridgehead; Amanda, Atempo Time Navigator	Dell AppAssure 5.x (Archive Repository Support only), NetVault Backup, vRanger; CommVault Simpana; Veritas Backup Exec and NetBackup; ARCserve; EMC Networker; Microsoft Data Protection Manager; Veeam; IBM TSM; Oracle RMAN; HP Data Protector; Bridgehead; Amanda, Atempo Time Navigator	Dell AppAssure 5.x (Archive Repository Support only), NetVault Backup, vRanger; CommVault Simpana; Veritas Backup Exec and NetBackup; ARCserve; EMC Networker; Microsoft Data Protection Manager; Veeam; IBM TSM; Oracle RMAN; HP Data Protector; Bridgehead; Amanda, Atempo Time Navigator	Dell AppAssure 5.x (Archive Repository Support only), NetVault Backup, vRanger; CommVault Simpana; Veritas Backup Exec and NetBackup; ARCserve; EMC Networker; Microsoft Data Protection Manager; Veeam; IBM TSM; Oracle RMAN; HP Data Protector; Bridgehead; Amanda, Atempo Time Navigator

[1]All capacity values are calculated using Base 10 (i.e., 1TB = 1,000,000,000,000 bytes). Logical capacity based on overall deduplication ratio average of 15:1.
[2]Resource requirements: 4 virtual CPU cores, 8GB RAM, 200GB in addition to VM capacity.
[3]Expansion unit must be greater than or equal to size of base unit and requires installation of the required expansion shelf license.
[4]Expected performances when using RDA, Rapid NFS or Rapid CIFS, 10GbE and multiple backup or client server connections.
[5]Throughput achieved for DR2000v using 4 clients x 2 streams.8 Expected performance when using RDA, Rapid NFS or Rapid CIFS, 10GbE and multiple backup or client server connections.

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