DR Series System (Version 4.0.4)

Interoperability Guide

Contents

Introduction

This guide provides information about currently supported hardware and software versions for the DR Series system.

Other information you may need

The following table lists the documentation available for the DR Series systems. The documents listed are available at **support.quest.com/DR-Series** by selecting your specific DR Series system. For more information about DR Series system hardware, see the safety and regulatory information that shipped with your DR Series system. Warranty information may be included as a separate document.

Document	Description
DR Series System Getting Started Guide	Provides an overview of how to set up the physical DR Series system hardware and includes technical specifications.
DR Series System Owner's Manual	Provides information about applicable physical DR Series system features, troubleshooting the DR Series system, and installing or replacing the DR Series system components.
DR2000v Deployment Guide	Provides information about deploying the virtual DR Series system, DR2000v, on supported virtual platforms.
DR Series System Administrator Guide	Provides information about managing backup and replication operations using the DR Series system GUI.
DR Series System Interoperability Guide	Provides information on supported hardware and software for the DR Series systems.
DR Series System Command Line Reference Guide	Provides information about managing DR Series system data backup and replication operations using the DR Series system command line interface (CLI).
DR Series System Release Notes	Provides the latest information about new features and known issues with a specific product release.

i | **NOTE:** Always check for the latest documentation updates and release notes at **support.quest.com/dr-series**, and read the release notes first because they contain the most recently documented information about known issues with a specific product release.

Supported system drive and capacities

The DR Series system is available in the following models:

- **DR4300e core system** - Consists of preinstalled DR Series system software on a modified Dell PowerEdge R730xd appliance platform with no WAM2 card installed.

- **DR4300e standard system** - Consists of preinstalled DR Series system software on a modified Dell PowerEdge R730xd appliance platform.

- **DR4300 system** - Consists of preinstalled DR Series system software on a modified Dell PowerEdge R730xd appliance platform and offers a higher base capacity than the DR4300e.

- **DR6300 system** - Consists of preinstalled DR Series system software Dell PowerEdge R730xd appliance platform and offers a higher base capacity than the DR4300.

- **DR2000v system** - A Virtual Machine (VM) template of the DR Series system. For details on the virtual platforms supported, see the topic, "Supported Virtual Environments for DR2000v" in this document.

The DR Series system software is also supported on the following earlier models of the DR Series system:

- **DR4000 system** - Consists of preinstalled DR Series system software on a modified Dell PowerEdge R510 appliance platform.

- **DR4100 system** - Consists of preinstalled DR Series system software on a modified Dell PowerEdge R720xd appliance platform.

- **DR6000 system** - Consists of preinstalled DR Series system software on a modified Dell PowerEdge R720xd appliance platform and offers a higher level of included system hardware.

Internal system drive capacity

The following tables define the internal system drive capacity and available physical capacity in decimal and binary values for the physical DR Series hardware appliances. The capacity values listed represent the internal drive and available physical capacities that have been adjusted for the associated overhead in the DR Series system releases.

NOTE: TB and GB represent terabytes and gigabytes in decimal values, and TiB represents tebibytes in binary values. Tebibytes are a standards-based binary multiple of the byte, a unit of digital information storage.

Table 1: Drive and Available Physical Capacities for the DR4300e core, DR4300e, DR4300, DR6300

System Drive Capacity	9 Drive Capacity (12 DRV RAID6 with Hot Spare) (Decimal)	9 Drive Capacity (12 DRV RAID6 with Hot Spare) (Binary)	Total Logical Capacity at 20:1 Savings Ratios (Decimal)	Total Logical Capacity at 20:1 Savings Ratios (Binary)
1 TB (DR4300e core and DR4300e only)	4.5 TB	4.09 TiB	90 TB	81.8 TiB
1 TB (DR4300e core and DR4300e only)	9 TB	8.18 TiB	180 TB	163.6 TiB
2 TB	18 TB	16.37 TiB	260 TB	327.4 TiB
4 TB	36 TB	32.74 TiB	720 TB	654.8 TiB
6 TB (DR6300 only)	54 TB	49.11 TiB	1,080 TB	982.2 TiB
8 TB (DR6300 only)	72 TB	65.48 TiB	1,440 TB	1,309.6 TiB

Table 2: Drive and Available Physical Capacities for the DR4000, DR4100, DR6000

System Drive Capacity	9 Drive Capacity (12 DRV RAID6 with Hot Spare) (Decimal)	9 Drive Capacity (12 DRV RAID6 with Hot Spare) (Binary)	Total Logical Capacity at 20:1 Savings Ratios (Decimal)	Total Logical Capacity at 20:1 Savings Ratios (Binary)
300 GB (DR4000, DR4100 only)	2.7 TB	2.46 TiB	54 TB	49.2 TiB
600 GB (DR4000, DR4100 only)	5.4 TB	4.91 TiB	108 TB	98.2 TiB
1 TB	9 TB	8.18 TiB	180 TB	163.6 TiB

System Drive Capacity	9 Drive Capacity (12 DRV RAID6 with Hot Spare) (Decimal)	9 Drive Capacity (12 DRV RAID6 with Hot Spare) (Binary)	Total Logical Capacity at 20:1 Savings Ratios (Decimal)	Total Logical Capacity at 20:1 Savings Ratios (Binary)
2 TB	18 TB	16.37 TiB	360 TiB	327.4 TB
3 TB	27 TB	24.56 TiB	540 TB	491.2 TiB
4 TB (DR6000 only)	36 TB	32.74 TiB	720 TB	654.8 TiB

i | **NOTE:** 300 GB DR4000 and DR4100 Series systems do not support external expansion shelf enclosures.

For more information about external data storage in the expansion shelf enclosures, see the following topic, "External Drive Capacity," and the topic, "DR Series Expansion Shelf," in the *DR Series System Administrator Guide*, which you can download for your specific model of the DR Series system at support.quest.com/DR-Series.

External drive capacity

The capacity values listed in the following tables represent the additional storage capacity in the external drives available when you add the supported expansion shelf enclosures to a DR Series system appliance. Additional data storage can be added using the expansion shelf enclosures in the following capacities. For more information on the expansion shelf enclosures, see the topic "Expansion Unit Limits" in this document.

Table 3: External Drive Capacity and Available Physical Capacity for DR4300e, DR4300, DR6300

DR Series System Drive Capacity	Available Physical Capacity (Decimal)	Available Physical Capacity (Binary)	Total Logical Capacity @ 20:1 Savings Ratios (Decimal)	Total Logical Capacity @ 20:1 Savings Ratios (Binary)
1 TB (DR4300e only)	9 TB	8.18 TiB	180 TB	163.6 TiB
2 TB	18 TB	16.37 TiB	360 TB	327.4 TiB
4 TB (DR4300 and DR6300 only)	36 TB	32.74 TiB	720 TB	654.8 TiB
6 TB (DR6300 only)	54 TB	49.11 TiB	1,080 TB	982.2 TiB
8 TB (DR6300 only)	72 TB	65.48 TiB	1,440 TB	1,309.6 TiB

Table 4: External Drive Capacity and Available Physical Capacity for DR4000, DR4100, DR6000

DR Series System Drive	Available Physical	Available Physical	Total Logical Capacity @ 15:1 Savings Ratios	Total Logical Capacity @ 20:1 Savings Ratios

Capacity	Capacity (Decimal)	Capacity (Binary)	(Decimal)	(Binary)
1 TB	9 TB	8.18 TiB	180 TB	163.6 TiB
2 TB	18 TB	16.37 TiB	360 TB	327.4 TiB
4 TB	36 TB	32.75 TiB	792 TB	655 TiB
6 TB (DR6000 only)	54 TB	49.13 TiB	1,080 TB	982.6 TiB

Supported hardware for DR series system appliances

This section lists the hardware supported by the physical system on which the DR Series software is installed. Where applicable, firmware and driver versions are also listed.

Capacities (base unit)

Table 5: Supported drive capacities

System	Drive Capacities Supported
DR4300e core	4.5 TB, 9 TB
DR4300e	4.5 TB, 9 TB
DR4300	18 TB, 36 TB
DR6300	18 TB, 36 TB, 54 TB, 72TB
DR4000	2.7 TB, 5.4 TB, 9 TB, 18 TB, 27 TB
DR4100	2.7 TB, 5.4 TB, 9 TB, 18 TB, 27 TB
DR6000	9 TB, 18 TB, 27 TB, 36 TB

Hard drives (base unit)

Table 6: Hard drive configurations

System	Drive Slot	Drive Type	RAID Level
DR4300e core/DR4300e//DR4300/DR6300 DR4000/DR4100/DR6000	0	Hot-swappable 3.5-inch SAS drive (global hot spare for DR4000/DR4100/DR6000; dedicated hot spare for DR4300e/DR4300/DR6300)	N/A
	1–11	Eleven (11) hot-swappable 3.5-inch SAS or Nearline SAS Hard Disk Drives (HDD)	6
	12–13	Two (2) 2.5-inch SAS Hard Disk Drives (HDD)	1

> **i** | **NOTE:** Slots 12 and 13 can be located in different locations depending on the appliance model. For example, in the DR4000 system these drives are internal, while in the DR4300e core, DR4300e, DR4300, DR6300, DR4100, and DR6000 systems, these drives are hot-pluggable in the rear panel. For information on locating these drives, see the appropriate product's *DR SeriesSystems Owner's Manual*.

Hard drives (expansion unit)

> **i** | **NOTE:**The external enclosure is a Dell EMC OEM PowerVault MD1400 direct-attached storage array for the DR4300e core, DR4300e, DR4300, and DR6300. It is a Dell EMC OEM PowerVault MD1200 direct-attached storage array for DR4000, DR4100, and DR6000.

Table 7: Hard drive configuration (expansion unit)

System	Drive Slot	Drive Type	RAID Level
DR4300e core, DR4300e, DR4300, DR6300	0	Hot-swappable 3.5-inch SAS drive (global hot spare for DR4000/DR4100/DR6000; dedicated hot spare for DR4300e/DR4300/DR6300)	N/A
DR4000, DR4100, DR6000	1–11	Eleven (11) hot-swappable 3.5-inch SAS or Nearline SAS Hard Disk Drives (HDD)	6

Capacities (expansion unit)

Table 8: Hard drive capacities (expansion unit)

System	Drive Capacities Supported
DR4300e core	9 TB, 18 TB
DR4300e	9 TB, 18 TB

System	Drive Capacities Supported
DR4300	18 TB, 36 TB
DR6300	18 TB, 36 TB, 54 TB, 72 TB
DR4000	9 TB, 18 TB, 27 TB, 36 TB
DR4100	9 TB, 18 TB, 27 TB, 36 TB
DR6000	9 TB, 18 TB, 27 TB, 36 TB, 54 TB

i | **NOTE:** Requirements for adding expansion enclosures are as follows:

- Expansion unit must be greater than or equal to size of base unit
- Install the required expansion shelf license

For information about the supported external expansion enclosures, see the *DR Series System Administrator Guide*.

Expansion unit limits

i | **NOTE:** The external enclosure is a Dell PowerVault MD1400 direct-attached storage array for the DR4300e, DR4300, and DR6300 systems. The external enclosure is a Dell PowerVault MD1200 direct-attached storage array for the DR4000, DR4100, and DR6000.

Table 9: Maximum expansion units

System	Max # of Expansion Enclosures
DR4300e core	1
DR4300e	1
DR4300	2
DR6300	4
DR4000	2
DR4100	2
DR6000	4

Fibre Channel controllers

You can add a Fibre Channel (FC) card to a DR Series hardware system for FC VTL connectivity. The following table lists supported FC controllers.

i | **NOTE:** The DR Series system supports up to two (2) FC cards.

Table 10: Supported fibre channel controllers

System	Controller	Recommended Slot
DR4300, DR6300	QLOGIC 2562 DUAL PORT 8GB OPTICAL FULL HEIGHT	5 (5 and 6 are FC-supported slots, with 5 being the default)
	QLOGIC 2662 DUAL PORT 16GB OPTICAL FULL HEIGHT	5 (5 and 6 are FC-supported slots, with 5 being the default)

RAID controllers

The following table lists supported RAID controllers for the DR Series systems.

Table 11: RAID controllers

System	RAID controllers	Max # of controllers
DR 4300e core, DR4300e, DR4300, DR6300	PERC H730P	1
	PERC H830	1
DR4000	PERC H700	1
	PERC H800	1
DR4100, DR6000	PERC H710P	1
	PERC H810	1

ℹ **NOTE:** The DR4000/DR4100 with 2.7 TB base unit does not support expansion.

USB flash drive

The USB flash drive needed for performing a system recovery is not included with the system release. The minimum size required for the DR Series Restore Manager for all DR Series systems is 4GB.

Network interface controllers

The following tables list the supported network interface controllers for the DR Series systems.

ℹ **NOTE:** The DR Series systems support one (1) built-in network daughter card (NDC) and one (1) add-on Network Interface Card (NIC).

Table 12: NIC configuration - DR4300e core, DR4300e, DR4300, DR6300

System	Controller Type	Slot
DR4300e core, DR4300e, DR4300, DR6300		
Broadcom 5720 QP 1Gb Network Daughter Card	2x1GB	Network Daughter Card
QLogic 57800 2x10Gb DA/SFP+ + 2x1Gb BT Network Daughter Card	2x10GB+2x1GB Optical	Network Daughter Card
QLogic 57800 2x10Gb DA/SFP+ + 2x1Gb BT Network Daughter Card	2x10GB+2x1GB Optical w/cables	Network Daughter Card
QLogic 57800 2x10Gb DA/SFP+ + 2x1Gb BT Network Daughter Card	2x10GB+2x1GB BaseT	Network Daughter Card
QLogic 57840S Quad Port 10Gb SFP+ Direct Attach Rack Network Daughter Card	4x10GB Optical w/cables	Network Daughter Card
QLogic 57840S Quad Port 10Gb SFP+ Direct Attach Rack Network Daughter Card	4x10GB	Network Daughter Card
Intel Ethernet I350 QP 1Gb Network Daughter Card	4x1GB	Network Daughter Card
Intel X520 DP 10Gb DA/SFP+, + I350 DP 1Gb Ethernet, Network Daughter Card	2x10GB+2x1GB Optical	Network Daughter Card
Intel X520 DP 10Gb SR/SFP+, + I350 DP 1Gb Ethernet, Network Daughter Card, with SR Optics	2x10GB+2x1GB Optical w/cables	Network Daughter Card
Intel Ethernet X540 DP 10Gb + I350 1Gb DP Network Daughter Card	2x10GB+2x1GB	Network Daughter Card
Broadcom 5719 QP 1Gb Network Interface Card, Low Profile	4x1GB	Network Interface Card
QLogic 57810 Dual Port 10Gb Base-T Low Profile Network Adapter	2x10GB	Network Interface Card
QLogic 57810 Dual Port 10Gb Direct Attach/SFP+ Low Profile Network Adapter	2x10GB BaseT	Network Interface Card
Intel Ethernet I350 QP 1Gb Server Adapter, Low Profile	4x1GB	Network Interface Card
Intel Ethernet X540 DP 10GBASE-T Server Adapter, Low Profile	2x10GB BaseT	Network Interface Card
Intel X520 DP 10Gb DA/SFP+ Server Adapter, Low Profile	2x10GB Optical	Network Interface Card
Intel X520 DP 10Gb DA/SFP+ Server Adapter, Low Profile, with SR Optics	2x10GB Optical	Network Interface Card

Table 13: NIC configuration - DR6000

System	Controller Type	Slot
DR6000		
Broadcom 5720 Quad Port 1GbE Rack NDC	4 Copper 1Gb	Network Daughter Card
Intel I350 Quad Port 1Gb BT Rack NDC	4 Copper 1Gb	Network Daughter Card
Intel Ethernet X540 2 x 10Gb BT + I350 2 x 1Gb BT NDC	2 Copper 10Gb 2 Copper 1Gb	Network Daughter Card
QLogic 57800S Quad-Port 2x10GbE SFP+ and 2x1GbE RJ-45 Rack Converged NDC	2 Copper 10Gb 2 Copper 1Gb	Network Daughter Card
QLogic 57800S Quad-Port 2x10GbE RJ–45 and 2x1GbE RJ–45 10GBASE-T Rack Converged NDC	2 Optical 10Gb 2 Copper 1Gb	Network Daughter Card
Intel X520 DP 10Gb DA/SFP+, +I350 DP 1GB Ethernet, NDC	2 Optical 10Gb 2 Copper 1Gb	Network Daughter Card
QLogic 57840S Quad-Port 4x10GbE SFP+ Rack Converged NDC	4 Optical 10Gb	Network Daughter Card
Broadcom 5720 Dual Port 1Gb network interface card, low profile	2 Copper 1Gb	Add-In Network Adapter
Intel I350 Dual Port 1Gb Stand-up Adapter, low profile	2 Copper 1Gb	Add-In Network Adapter
Broadcom 57810 DP 10Gb DA/SFP+ Converged Network Adapter, Low Profile	2 Optical 10Gb	Add-In Network Adapter
Intel X520 DP 10Gb DA/SFP+ Server Adapter, Low Profile	2 Optical 10Gb	Add-In Network Adapter
Intel X540 2x10Gb BT (10Gb)	2 Copper 10Gb	Add-In Network Adapter

Table 14: NIC configuration - DR4100

System	Controller Type	Slot
DR4100		
Broadcom 5720 Quad Port 1GbE Rack NDC	4 Copper 1Gb	Network Daughter Card

System	Controller Type	Slot
DR4100		
Intel I350 Quad Port 1Gb BT Rack NDC	4 Copper 1Gb	Network Daughter Card
Intel Ethernet X540 2 x 10Gb BT + I350 2 x 1Gb BT NDC	2 Copper 10Gb 2 Copper 1Gb	Network Daughter Card
QLogic 57800S Quad-Port 2x10GbE SFP+ and 2x1GbE RJ-45 Rack Converged NDC	2 Copper 10Gb 2 Copper 1Gb	Network Daughter Card
QLogic 57800S Quad-Port 2x10GbE RJ–45 and 2x1GbE RJ–45 10GBASE-T Rack Converged NDC	2 Optical 10Gb 2 Copper 1Gb	Network Daughter Card
Broadcom 5720 Dual Port 1Gb network interface card, low profile	2 Copper 1Gb	Add-In Network Adapter
Intel I350 Dual Port 1Gb Stand-up Adapter, low profile	2 Copper 1Gb	Add-In Network Adapter
Broadcom 57810 DP 10Gb DA/SFP+ Converged Network Adapter, Low Profile	2 Optical 10Gb	Add-In Network Adapter
Intel X520 DP 10Gb DA/SFP+ Server Adapter, low profile	2 Optical 10Gb	Add-In Network Adapter
Intel X540 2x10Gb BT (10Gb)	2 Copper 10Gb	Add-In Network Adapter

Table 15: NIC configuration - DR4000

System	Controller Type	Slot
DR4000		
Broadcom BCMS5716 LOM	2 Copper 1Gb	On Mother Board
Broadcom BCMS5709	2 Copper 1Gb	Add-In Network Adapter
Intel 10G	2 Copper 10Gb 2 Optical 10Gb	Add-In Network Adapter

ℹ **NOTE:** For Network Cards, you can have one Network Daughter Card and one Add-In Network Adapter.

Recommendations for NIC PCI Slots on DR Series systems

If you are installing a NIC card, the following table lists the recommended NIC PCI slots for DR Series systems. Quest recommends to install the NIC prior to the first power on of the DR Series system.

Table 16: NIC slot recommendations

NIC	Recommended slot
1 Gb NIC (full height)	4, 6, 5
1 Gb NIC (low profile)	2, 3, 1
10 Gb NIC (full height)	4, 6, 5
10 Gb NIC (low profile)	2, 3, 1

Network cabling

Table 17: Network cabling

Description	Broadcom SFP+ NIC Ports	Intel SFP+ NIC Ports	Dell Cust Kit SKU
Dell EMC Networking, Cable, SFP+ to SFP+, 10GbE, Copper Twinax Direct Attach Cable, 1 Meter	X	X	332-1665
Dell EMC Networking, Cable, SFP+ to SFP+, 10GbE, Copper Twinax Direct Attach Cable, 3 Meters	X	X	332-1368
Dell EMC Networking, Cable, SFP+ to SFP+, 10GbE, Copper Twinax Direct Attach Cable, 5 Meters	X	X	332-1666
SFP+, Short Range, Optical Transceiver, LC Connector, 10Gb and 1Gb compatible for Intel and Broadcom	X	X	330-8721
Cisco 10Gb SFP+ Twinax, 1m	X	X	SFP-H10GB-CU1M
Cisco 10Gb SFP+ Twinax, 3m	X	X	SFP-H10GB-CU3M
Cisco 10Gb SFP+ Twinax, 5m	X	X	SFP-H10GB-CU5M

iDRAC Enterprise

Table 18: iDRAC controllers

System	Controller
DR4300e core	iDRAC8
DR4300e	iDRAC8
DR4300	iDRAC8
DR6300	iDRAC8
DR4000	iDRAC6
DR4100	iDRAC7
DR6000	iDRAC7

Marvell WAM controller

Table 19: WAM controllers

System	Controller
DR4300e	WAM2 Plus
DR4300	WAM2 Plus
DR6300	WAM2 Plus
DR4000	WAM1 Plus
DR4100	WAM1 Plus WAM2 Plus
DR6000	WAM2 Plus

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Supported virtual environments for DR2000v

This section lists the supported virtual environments for the DR2000v system.

Available capacities and OS support

Table 20: Virtual environment by capacity

Platform	1TiB	2TiB	4TiB	12TiB	24TiB
ESXi 5.0	Yes	Yes	N/A	N/A	N/A
ESXi 5.1	Yes	Yes	N/A	N/A	N/A
ESXi 5.5[*]	Yes	Yes	Yes	Yes	N/A
ESXi 6.0	Yes	Yes	Yes	Yes	Yes
ESXi 6.5	Yes	Yes	Yes	Yes	Yes
Hyper-V 2008 R2	Yes	Yes	N/A	N/A	N/A
Hyper-V 2012 R2	Yes	Yes	Yes	Yes	N/A
Hyper-V 2012	Yes	Yes	Yes	Yes	N/A

Footnotes:

* The ESXi 5.5 version is VM hardware 10-based. This means you must use the Web client, and not the vSphere client.

> **i** | **NOTE:** Capacity for the DR Series system is technically measured in TiB, where 4TiB is equal to 4.398 TB. In the case of the 12 TiB drive, it is equal to 13.194 TB of storage capacity, and for the 24TiB drive, it is equal to 25934.3TB of storage capacity.

Resource requirements

The following table lists the minimum resource requirements for DR2000v.

Table 21: DR2000v resource requirements

Platform	Disk Capacity	Virtual Network Interface Card (At least e1000)	No. of CPUs	RAM
ESXi 5.0, 5.1	1TB, 2TB	2x1Gig	4	8GB
ESXi 5.5	1TB, 2TB, 4TB	2x1Gig	4	8GB
	12 TiB	2x1Gig	4	12GB
ESXi 6.0	1TB, 2TB, 4TB	2x1Gig	4	8GB
	12 TiB	2x1Gig	4	12GB
	24TiB	2x10Gig	4	16GB
ESXi 6.5	1TB, 2TB, 4TB	2x1Gig	4	8GB
	12TiB	2x1Gig	4	12GB
	24TiB	2x10Gig	4	16GB
Hyper-V 2008 R2	1TB, 2TB	2x1Gig	4	8GB
Hyper-V 2012 R2/2012	1TB, 2TB, 4TB	2x1Gig	4	8GB
	12TiB	2x1Gig	4	12GB

> **i** | **NOTE:** For the 24TiB capacity, ALB Network bonding is the default setting, and this setting cannot be altered.

DR2000v expansion unit limits

Expansion units and disk capacity expansion are not supported on the DR2000v.

Supported software

This section lists the supported operating systems, applications, and protocols for the DR Series system.

Supported backup software

This section lists the supported operating systems, applications, and protocols for the DR Series system.

Table 22: Supported DMAs

Data Management Application (DMA)	CIFS	NFS	RDA	OST	Rapid CIFS	Rapid NFS	NDMP VTL	iSCSI VTL	FC VTL
NetVault Backup									
11.0[*]	✔	✔	✔				✔	✔	✔
11.1[*]	✔	✔	✔				✔	✔	✔
11.2[*]	✔	✔	✔				✔	✔	✔
11.3[*]	✔	✔	✔				✔	✔	✔
11.4	✔	✔	✔				✔	✔	✔
11.4.5	✔	✔	✔				✔	✔	✔
12.0.1	✔	✔	✔				✔	✔	✔
12.1	✔	✔	✔				✔	✔	✔
12.2	✔	✔	✔				✔	✔	✔
12.3	✔	✔	✔				✔	✔	✔
12.4	✔	✔	✔				✔	✔	✔
13.0.x	✔	✔	✔				✔	✔	✔
vRanger									

Data Management Application (DMA)	CIFS	NFS	RDA	OST	Rapid CIFS	Rapid NFS	NDMP VTL	iSCSI VTL	FC VTL
6.0	✔	✔							
7.0	✔	✔							
7.1	✔	✔	✔						
7.2	✔	✔	✔						
7.3	✔	✔	✔						
7.4	✔	✔	✔						
7.6	✔	✔	✔						
7.7	✔	✔	✔						
7.8	✔	✔	✔						
AppAssure/RapidRecovery									
v4.7	✔								
v5.3 (archive mode only)	✔								
v5.4 (archive mode only)	✔								
v6.1 (Rapid Recovery/DR Series Tiering. CIFS support is in archive mode only / RDA is for Recovery Point Tiering to R3)	✔		✔						
Backup Exec									
v2010 R3	✔			✔					
v2012	✔			✔					
v2014	✔			✔				✔	
BE15	✔			✔				✔	✔
BE16**	✔			✔				✔	✔
BE20	✔			✔				✔	✔
NetBackup									
v7.0	✔	✔		✔					
v7.1	✔	✔		✔					
v7.5	✔	✔		✔			✔	✔	
v7.6	✔	✔		✔			✔	✔	
v7.7*	✔	✔		✔	✔	✔	✔	✔	✔
v8.0***	✔	✔		✔	✔	✔	✔	✔	✔
v8.1									

Data Management Application (DMA)	CIFS	NFS	RDA	OST	Rapid CIFS	Rapid NFS	NDMP VTL	iSCSI VTL	FC VTL
v8.2									
CommVault Simpana									
v8	✔	✔							
v9	✔	✔			✔	✔			
v10*	✔	✔			✔	✔	✔	✔	✔
v11*	✔	✔			✔	✔	✔	✔	✔
EMC Networker									
v7.6	✔	✔			✔	✔			
v8.0	✔	✔			✔	✔			
v8.1	✔	✔			✔	✔	✔	✔	
v8.2	✔	✔			✔	✔	✔	✔	
IBM TSM									
v6.1	✔	✔							
v6.2	✔	✔							
v6.3	✔	✔			✔	✔			
v6.4	✔	✔			✔	✔			
v7.1	✔	✔			✔	✔		✔	
Oracle RMAN									
v11g	✔	✔			✔	✔			
v12c	✔	✔			✔	✔			
CA ArcServe									
v16	✔	✔							
v16.5	✔	✔							
Veeam									
v6.0	✔								
v6.1	✔								
v7.0	✔								
v7.5	✔								
v8.0	✔								
v9.0	✔	✔							
v9.5	✔	✔			✔			✔	✔

Data Management Application (DMA)	CIFS	NFS	RDA	OST	Rapid CIFS	Rapid NFS	NDMP VTL	iSCSI VTL	FC VTL
HP Data Protector									
v7	✔								
v8	✔								
v9	✔	✔							
Bridgehead									
v3.2	✔	✔							
Atempo TimeNavigator									
v4.3	✔	✔							
Amanda									
Enterprise v3.3.5		✔							
Microsoft Data Protection Manager (DPM)*									
DPM SC 2012R2								✔	
DPM SC 2012 SP1								✔	
DPM SC 2012								✔	
DPM SC 2010								✔	
Native OS or third-party utilities and commands that support file copy features**									
Unix									
dd		✔				✔			
cp		✔				✔			
cpio		✔				✔			
tar		✔				✔			
pax		✔				✔			
dump		✔				✔			
rsync		✔				✔			
Windows									
cp	✔				✔				
scopy	✔				✔				
xcopy	✔				✔				
robocopy	✔				✔				
Windows Explorer drag and drop	✔				✔				
Footnotes									

Data Management Application (DMA)	CIFS	NFS	RDA	OST	Rapid CIFS	Rapid NFS	NDMP VTL	iSCSI VTL	FC VTL

* For NetVault Backup v11.0 and v11.1, NetBackup v7.7 and v8.0, and CommVault Simpana v10 and v11 with NDMP: For NetApp C mode filers SVM-Scoped NDMP, backup is not supported. You need to use Node-Scoped NDMP backup.

The DR Rapid Air Gap solution has been implemented with NetVault 11.4.5 in DR Series system release 4.0.3.

Support for multi-initiators with NetVault 11.4.5 has been added for FC VTL in DR Series version 4.0.3.

** Requires DR Series system release 4.0.0274.0a or later for BE16 and NetBackup 8.0 support. With DR Series system release 4.0.3 it is possible to configure OST and VTL devices as Quest type. For Netbackup 8.0 to work with these devices, a mapping file needs to be installed. Contact Quest support for more details. Starting with BE 20, Quest OST and VTL devices are supported.

*** For Microsoft DPM: Only tape media of size 800 GB (LTO4) is supported. No other tape size should be used for backups. Refer to the Microsoft DPM best practices guide titled, *Setting Up the DR Series System as a VTL Backup Target on Microsoft Data Protection Manager*, on **support.quest.com/DR-Series** for more detailed information and for recommended tape and library drivers for iSCSI VTL.

**** Deduplication savings are based on the data backed up and the frequency of base and incremental backups.

> **i** **NOTE:** Supported Windows and Unix operating systems for the supported backup software versions can include:
>
> - Windows (2003, 2008, 2012, 2012 R2, 2016; 32-bit and 64-bit systems)
> - Unix (Linux RHEL 5.x, RHEL 6.x, RHEL 7.x, SUSE 10, SUSE 11, AIX 7.1, Solaris 10 x86; 32-bit and 64-bit systems)

Supported operating systems for iSCSI initiators

The following table lists the supported operating systems that are compatible with iSCSI VTL in the DR Series system.

Table 23: Supported OS - iSCI initiators

Operating System	Version				
Windows	2008	2008 R2	2012	2012 R2	2016
	✔	✔	✔	✔	✔
RHEL	6.0	7.0			
	✔	✔			
CentOS	6.6				
	✔				

Supported operating systems for FC initiators

The following table lists the supported operating systems that are compatible with Fibre Channel (FC) VTL in the DR Series system.

Table 24: Supported OS - fibre channel initiators

Operating System	Version				
Windows	2008	2008 R2	2012	2012 R2	2016
	✔	✔	✔	✔	✔
RHEL	6.0	7.0			
	✔	✔			
CentOS	6.6				
	✔				

Supported NAS Filers for NDMP

The following table lists the NAS filers supported with NDMP VTL in the latest version of the DR Series system. The DR Series system VTL is supported in a three-way NDMP configuration only.

Table 25: Supported NAS filers - NDMP

NAS Filer	Version	
Dell FluidFS	V3	V4
	✔	✔
NetApp	ONTAP 8.x 7–Mode	ONTAP 8.x C-Mode ONTAP 9.x C-Mode
	✔	✔
EMC	VNX OE 7.x and 8.0.x	Isilon OneFS 7.0.x
	✔	✔
SUN NAS	2011	
	✔	

Supported NAS filers for FC

The following table lists the NAS filers supported with Fibre Channel (FC) VTL in the latest version of the DR Series system.

Table 26: Supported NAS filers - fibre channel

NAS Filer	Version	
	ONTAP 8.x 7–Mode	ONTAP 8.x C-Mode* ONTAP 9.x C-Mode**
NetApp	✔	✔

Footnotes:

* For NetApp C mode filers SVM-Scoped NDMP backup is not supported. You have to use Node-Scoped NDMP backup.

** Supported with the NetVault Backup 11.4 data management application (DMA) exclusively. Other DMAs are planned for future releases.

Network file protocols and backup client operating systems

The following information lists the supported system network protocols and the corresponding supported client operating systems.

Table 27: Supported network protocols

Protocol	Versions	Backup Client OS
CIFS	SMB 1.0 SMB2_01 (for DR Series system release 4.0)	Windows 2003 and later (32- and 64-bit). **i NOTE:** MS-DOS-compatible 8.3 file names (short file names), CIFS protocol feature is not supported by the DR Series system.
NFS	V3 over TCP	Unix (Linux RHEL 5.x, RHEL 6.x, RHEL 7.x, SUSE 10, SUSE 11, AIX 7.1, Solaris 10 x86; 32-bit and 64-bit systems)

Supported Web browsers

This section lists the minimum supported web browsers for use with the DR Series system.

Table 28: Supported web browsers

Software	Versions
Mozilla Firefox	43 or later
Microsoft Internet Explorer	11.0
Google Chrome	48 or later

DR2000v platform limits

DR2000v (1 TB, 2 TB, and 4TB capacities)

This section lists the supported hypervisor platform limits for the basic DR2000v system (system capacities of 1 TB, 2 TB, and 4 TB).

Table 29: Supported hypervisor platforms -1 TB, 2TB, 4TB DR2000v

Hypervisor Platform Feature	Limit
Max containers	8
Max storage groups	4
Max files	1 million
Max NFS clients	8
Max CIFS clients	8
Max parallel streams	64
Maximum Rapid CIFS connections	8
Maximum Rapid NFS connections	8
Max RDA open images	8
Max OST connections	16
Max RDA connections	16
Max RDA streams	16
Maximum replications per system	8:1

DR2000v (12 TiB and 24TiB capacity)

This section lists the supported hypervisor platform limits for the DR2000v system (12 TiB and 24 TiB).

Table 30: Supported hypervisor platforms -12 TiB, 24 TiB, DR2000v

Hypervisor Platform Feature	Limit
Max containers	8
Max storage groups	4
Max files	64 million
Max NFS clients	8

Hypervisor Platform Feature	Limit
Max CIFS clients	8
Max parallel streams	64
Maximum Rapid CIFS connections	8
Maximum Rapid NFS connections	8
Max RDA open images	16
Max OST connections	16
Max RDA connections	24
Max RDA streams	16
Maximum replications per system	8:1

DR2000v licensing

The DR2000v uses a standalone license.

i | **NOTE:** The DR2000v 30-day trial version does not require a license to be installed on a DR Series hardware system for operation.

DR2000v licensing limits for registered DR Series hardware systems

DR4000, DR4100, DR4300e, and DR4300 support up to 32 DR2000v licenses; and, DR6000 and DR6300 support up to 64 DR2000v licenses. DR2000v licenses cannot be expanded.

A virtual hypervisor server is required for licenses to be loaded, and the DR2000v uses the disks resident in that hypervisor server.

i | **NOTE:** When a DR Series hardware appliance is used as a license server for a DR2000v, it can also be used as a replication target or backup target.

DR2000v hyperscale licensing

VM Hyperscale licenses are deployed on the DR Series system appliance to support and maintain multiple virtual DR2000v appliances that are licensed by a single hardware-based DR Series system. A single DR Series hardware system can support up to 3,000 virtual machines.

i | **NOTE:** Hyperscale systems can also be used as a regular operating DR Series system.

For more information on Hyperscale licenses contact Quest support.

DR4300e core supported system limits

This section lists the supported configuration limits for the DR4300e core system.

Table 31: Supported configuration limits - DR4300e core

Feature	System Limit
Maximum files	32 million (DR without expansion shelf) 150 million (DR with expansion shelf)
Maximum storage groups	4
Maximum containers	32
Maximum number of files replicated per container at a time	32
Maximum CIFS connections	32
Maximum NFS connections	32
Maximum OST connections	256
Maximum Rapid CIFS connections	32
Maximum Rapid NFS connections	32
Maximum RDS connections	256
Maximum RDS streams	256
Maximum NDMP sessions	4
Maximum iSCSI sessions	4
Maximum replications per system	32:1
	i **NOTE:** Up to 32 DR Series systems can write to separate, individual containers on a single, target DR4300e core system.

DR4300e supported system limits

This section lists the supported configuration limits for the DR4300e system.

Table 32: Supported configuration limites - DR4300e

Feature	System Limit
Maximum files	32 million (DR without expansion shelf) 150 million (DR with expansion shelf)
Maximum storage groups	4
Maximum containers	32
Maximum number of files replicated per container at a time	32

Feature	System Limit
Maximum CIFS connections	32
Maximum NFS connections	32
Maximum OST connections	256
Maximum Rapid CIFS connections	32
Maximum Rapid NFS connections	32
Maximum RDS connections	256
Maximum RDS streams	256
Maximum NDMP sessions	4
Maximum iSCSI sessions	4
Maximum replications per system	32:1

i **NOTE:** Up to 32 DR Series systems can write to separate, individual containers on a single, target DR4300e system.

DR4300 supported system limits

This section lists the supported configuration limits for the DR4300 system.

Table 33: Supported configuration limits - DR4300

Feature	System Limit
Maximum files	128 million (DR without expansion shelf) 250 million (DR with one or two expansion shelves)
Maximum storage groups	8
Maximum containers	64
Maximum number of files replicated per container at a time	64
Maximum CIFS connections	64
Maximum NFS connections	64
Maximum OST connections	256
Maximum Rapid CIFS connections	64
Maximum Rapid NFS connections	64
Maximum RDS connections	256
Maximum RDS streams	256
Maximum NDMP sessions	4
Maximum iSCSI sessions	4

Feature	System Limit
Maximum FC sessions	4
Maximum FC-VTL backup streams	240
Maximum replications per system	64:1 **i NOTE:** Up to 64 DR Series systems can write to separate, individual containers on a single, target DR4300 system.

DR6300 supported system limits

This section lists the supported configuration limits for the DR6300 system.

Table 34: Supported configuration limits - DR6300

Feature	System Limit
Maximum files	128 million (DR with 2 TB, 3 TB, 4 TB, 6TB, and 8TB drives without expansion shelf) 250 million (DR with 2 TB, 3 TB, 4 TB, 6TB, and 8TB drives with at least one expansion shelf)
Maximum storage groups	8
Maximum containers	128
Maximum number of files replicated per container at a time	64
Maximum CIFS connections	128
Maximum NFS connections	128
Maximum OST connections	256
Maximum Rapid CIFS connections	128
Maximum Rapid NFS connections	128
Maximum RDS connections	512
Maximum RDS streams	512
Maximum NDMP sessions	4
Maximum iSCSI sessions	4
Maximum FC sessions	4
Maximum FC-VTL backup streams	240
Maximum replications per system	128:1 **i NOTE:** Up to 128 DR Series systems can write to separate, individual containers on a single, target DR6300 system.

DR4000 and DR4100 supported system limits

This section lists the supported configuration limits for the basic DR4000 and DR4100 system.

Table 35: Supported configuration limits - DR4000, DR4100

Feature	System Limit
Maximum Files	32 million (DR with 300 GB, 600 GB, and 1 TB drives without expansion shelf)
	128 million (DR with 2 TB and 3 TB drives without expansion shelf)
	150 million (DR with 300 GB, 600 GB, and 1 TB internal drives with at least one expansion shelf)
	256 million (DR with 2 TB, 3 TB, and 4TB drives with at least one expansion shelf)
Maximum storage groups	4
Maximum containers	32
Maximum number of files replicated per container at a time	32
Maximum CIFS connections	32
Maximum NFS connections	32
Maximum OST connections	256
Maximum Rapid CIFS connections	32
Maximum Rapid NFS connections	32
Maximum RDS connections	256
Maximum RDS streams	256
Maximum NDMP sessions	4
Maximum iSCSI sessions	4
Maximum replications per system	32:1
	ℹ NOTE: Up to 32 DR Series systems can write to separate, individual containers on a single, target DR4000/DR4100 system.

DR6000 supported system limits

This section lists the supported configuration limits for the basic DR6000 system.

Table 36: Supported configuration limits - DR6000

Feature	System Limit
Maximum Files	32 million (DR with 300 GB, 600 GB, and 1 TB drives without expansion shelf)
	128 million (DR with 2 TB, 3 TB, 4 TB drives without expansion shelf)
	150 million (DR with 300 GB, 600 GB, and 1 TB internal drives with at least one expansion shelf)
	256 million (DR with 2 TB, 3 TB and 4 TB drives with at least one expansion shelf)
Maximum storage groups	4
Maximum containers	64
Maximum number of files replicated per container at a time	64
Maximum CIFS connections	64
Maximum NFS connections	64
Maximum Rapid CIFS connections	64
Maximum Rapid NFS connections	64
Maximum OST connections	256
Maximum RDS connections	512
Maximum RDS streams	512
Maximum NDMP sessions	4
Maximum iSCSI sessions	4
Maximum replications per system	64:1

i | **NOTE:** Up to 64 DR Series systems can write to separate, individual containers on a single, target DR6000 system.

Supported DR Rapid software and components

All DR Series systems support DR Rapid. The supported DR Rapid software or components include:

- The type of media server installation (Linux or Windows)

- The DR Rapid plug-in component

- The supported DR Rapid protocol releases

- The Data Management Applications (DMAs)

NOTE: When the DR Series system software is updated, you might be required to update this plug-in on your clients manually. The plug-in is available for download from support.quest.com/dr-series by selecting your specific DR model and then navigating to **Software Downloads**. For the latest upgrade information, see the *DR Series System Release Notes*.

RDA with OST Software or Component	Description
Media Server	
Linux installations	Uses a Linux OST plug-in and the Red Hat Package Manager (RPM) installer
Windows installations	Uses a Windows OST plug-in and the Microsoft (MSI) installer
RDA with OST Plug-in Component Supported Releases	
Linux-based (64-bit)	Red Hat Enterprise Linux (RHEL) • Version 5.x • Version 6.x • Version 7.x SUSE • Version 10 • Version 11
Windows-based **Backup Exec** 64-bit/32-bit **NetBackup** 64-bit/32-bit (Windows 2003) 64-bit only (Windows 2008 and 2008 R2)	• Windows 2003 SP2 • Windows 2008 • Windows 2008 R2 • Windows 2012 • Windows 2012 R2

RDA with NetVault Backup and RDA with vRanger Plug-In Component	Supported Releases
Linux-based X86 (32/64-bit)	Red Hat Enterprise Linux (RHEL) • Version 5.x • Version 6.x • Version 7.x
Linux-based IA (64-bit)	• Red Hat Enterprise Linux (RHEL) 4.x
Windows X86 (32/64-bit)	• Windows 2003 SP2 • Windows 2008 • Windows 2008 R2 • Windows 2012

RDA with NetVault Backup and RDA with vRanger Plug-In Component	Supported Releases
	• Windows 2012 R2
Solaris (for NetVault Backup 11.0)	• Solaris version 10
	• x86_64
	• x86_32
	• Sparc 64–bit
	• Solaris version 11
	• x86_64
	• Sparc 64–bit

RDA with OST Protocol	Supported Releases
Symantec OpenStorage	Symantec
	• Version 9
	• Version 10
Protocols	Supported DMAs
	i **NOTE:** DR Series system licensing is all-inclusive for using OST. No additional licensing is required to use OST or the optimized duplication capability. The DR Rapid OST plug-in that is installed on a supported Linux or Windows media server platform is a free download. However, if you are using Veritas/Symantec backup applications, you may be required to purchase additional licenses to enable OST. Refer to your documentation.
RDA with OST	Net Backup
	• Version 7.1 (Windows 2003, 32-bit)
	• Version 7.1 (Windows 2008 R2, 64-bit)
	• Version 7.5 (Windows 2008, 32-bit)
	• Version 7.5 (Windows 2008 R2, 64-bit)
	• Version 7.5 (Windows 2012, 64-bit)
	• Version 7.1 (RHEL 5.x)
	• Version 7.5 (SLES11 SP2, 64-bit)
	• Version 7.6 (Windows 2012, 64-bit)
	• Version 7.6.1 (SLES11 SP2, 64-bit)
	• Version 7.6.1 (Windows 2008 R2, 64-bit)

RDA with OST Protocol	Supported Releases
	• Version 7.6.1 (RHEL 6) • Version 7.7 (RHEL 6, RHEL7, Windows 2008R2, Windows 2012R2) • Version 8.0 (Windows 2016) Backup Exec (64-bit/32-bit) • Version 2010 R3 (Windows 2008 R2) • Version 2010 R3 SP3 (Windows 2012) • Version 2012 (Windows 2008 R2) • Version 2012 SP2 (Windows 2012) • Version 2014 (Windows 2012 R2) • BE15 (Windows 2012 R2) • BE16 (Windows 2016) • BE20 (Windows 2016)
RDA with NetVault Backup	• NetVault Backup 11.0 • NetVault Backup 11.1 • NetVault Backup 11.2 • NetVault Backup 11.3 • NetVault Backup 11.4 • NetVault Backup 11.4.5
RDA with vRanger	• vRanger 7.1 • vRanger 7.2 • vRanger 7.3 • vRanger 7.4 • vRanger 7.6

NetVault plug-in compatibility

The following plug-ins are compatible and can be upgraded:

- NetVault Backup 11.0 (3.2 plug-in built in)
- NetVault Backup 11.1 (3.2 plug-in built in)
- NetVault Backup 11.2 (3.2 plug-in built in)
- NetVault Backup 11.3 (3.2 plug-in built in)
- NetVault Backup 11.4 (4.0 plug-in built in)
- NetVault Backup 11.4.5 (4.0.3 plug-in built in)

- NetVault Backup 12.x (4.0.3 plug-in built in)

- NetVault 13.0 (4.0.3 plug-in built in)

- NetVault 13.0.1 (4.0.3 plug-in built in)

- NetVault 13.0.2 (4.0.4 plug-in built in)

i | **NOTE:** These NetVault Backup versions also work when the default plugin is replaced with the 4.0 plugin (using the standalone plugin installer on the NetVault Backup client), **except for Windows Pure64 bit installation**, which requires version 11.3.

vRanger plug-in compatibility

The RDA for vRanger 7.1, 7.2, 7.3, ad 7.4 uses the 3.2 plug-in. vRanger 7.6.4 uses the 4.0.3 plugin. These versions are compatible with the DR Series system version 4.0.3.

Rapid CIFS and Rapid NFS

The minimum host requirements for Rapid CIFS/Rapid NFS are listed in the following table.

Table 37: Minimum host requirements

Host Component	Minimum Requirement
RAM	2 GB
CPU Cores	4
Cumulative CPU Power	4 GHz

i | **NOTE:** Rapid CIFS cannot be installed on a Domain Controller.

Table 38: Media server requirements

Rapid CIFS Software or Component	Description
Media Server	
Windows installations	Uses a Windows Rapid CIFS plug-in and the Microsoft (MSI) installer

Table 39: Rapid CIFS requirements

Rapid CIFS Plug-In Component	Supported Releases
Windows-based (64-bit)	- Windows 2008 - Windows 2008 R2 - Windows 2012 - Windows 2012 R2 - Windows 2016

Rapid CIFS Plug-In Component	Supported Releases
Protocols	**Supported DMAs**
Rapid CIFS	CommVault
	EMC Networker
	Tivoli Storage Manager
	RMAN
	NetBackup
	Veeam

Table 40: Rapid NFS media server requirements

Rapid NFS Software or Component	Description
Media Server	
Linux installations	Uses a Linux Rapid NFS plug-in and the Linux installer

Table 41: Rapid NFS component and protocol requirements

Rapid NFS Plug-In Component	Supported Releases
Linux-based X86 (64-bit)	Red Hat Enterprise Linux (RHEL) ● Version 5.x ● Version 6.x ● Version 7.x SUSE ● Version 11 Oracle ● Oracle Linux Version 7.0
Protocols	**Supported DMAs**
Rapid NFS	CommVault
	EMC Networker
	Tivoli Storage Manager
	RMAN
	NetBackup

About us

We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation™.

Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece — you — to the community, to the new Quest.

Contacting Quest

For sales or other inquiries, visit www.quest.com/contact.

Technical support resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product