



D8

SAN STORAGE

NEC D8 Storage

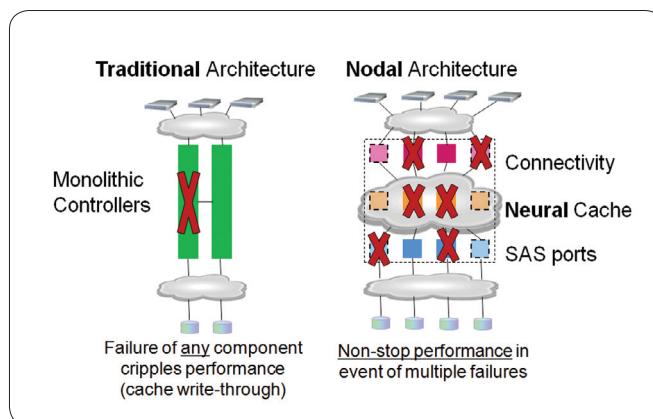
The D8 SAN Storage array brings an innovative architecture to the mid-range that provides tremendous flexibility, resiliency, and scalability. The family of D-Series arrays including D3, D3i, D4, and D8 models is used for iSCSI and Fibre Channel SANs for primary storage, high capacity secondary storage, or both in a tiered storage hierarchy.



Hot-swappable disk ports, cache, and host ports modules

The D8 has a “nodal” architecture that is built around controller nodes. Up to four nodes join to create one or more virtual arrays and provide resiliency that delivers non-stop performance despite the failure of a node (or even multiple nodes). As you add nodes the potential bandwidth, performance, and capacity also increase.

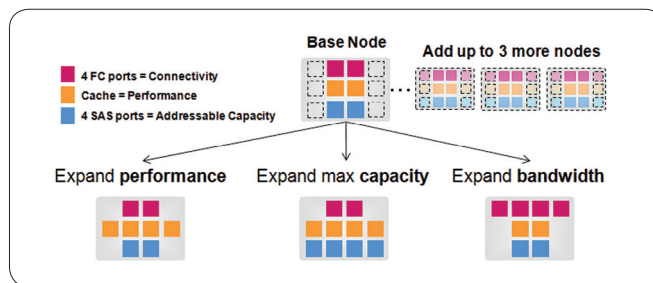
The D8 splits up the functionality of a “traditional” array controller into separate modules that are hot-swappable and fully redundant within each node. While the Fibre Channel host connections and the connections to the disk enclosures are fully redundant, the data cache and power can survive even multiple failures!



Besides having resiliency higher than traditional architectures, each node can expand online to include additional modules. As time goes by and application needs change, the array performance, bandwidth, and capacity can be adjusted for new purposes and new applications: Over 65,000 D8 system module configurations are supported, so the array can transform to meet changing needs instead of requiring the purchase and migration to a new array with different characteristics.

Benefits

Dependable	Nodal and modular redundancy superior to traditional ‘active-active’ controller architecture
Scalable	Non-disruptive growth from 3 to 1,536 drives, from 4 GB cache to 128 GB, and from 8 FC ports to 64. Data-in-place conversion from the NEC D3 to a D8
Efficient	Adjust cache, storage, and port scalability to meet changing needs



Specifications

D8 HARDWARE

Model		D8-3010	D8-3020	D8-3040
Included Controller Nodes		1 Controller Node	2 Controller Nodes	4 Controller Nodes
Host Ports	Quantity	8 – 16	8 – 32	8 – 64
	Speed	4 Gbps or 8 Gbps Fibre Channel		
Cache Memory	Capacity	8 GB – 32 GB	16 GB – 64 GB	32 GB – 128 GB
	Cache Protection	Nonvolatile flash memory		
Supported RAID Levels	SAS	1, 10, TM (Triple Mirror), 3, 3DP (3 Double Parity), 5, 50, 6		
	SATA	TM (Triple Mirror), 5, 6		
Maximum Capacity	SAS	230 TB	460 TB	921 TB
	SATA	768 TB	1.5 PB	3.0 PB
Disk Drives	SAS	300 GB, 450 GB, 600 GB rotating at 15,000 rpm		
	SATA	1 TB, 2 TB rotating at 7,200 7,200 rpm		
Number of Disk Drives		3 – 384	3 – 768	3 – 1,536
Supported Operating Systems		Microsoft® Windows Server 2003 and 2008 (x86, x64, IA64), Hyper-V, Red Hat® Enterprise Linux®, VMware®, HP-UX, Solaris™, Citrix® XenServer®		
Dimensions (WxDxH)	Controller Node	5U: 18.9" x 23.6" x 8.6" (480 x 600 x 218 mm)		
	Disk Enclosure	2U: 18.9" x 21.3" x 3.4" (480 x 540 x 86.5 mm)		
Weight	Controller Node	132.3 lbs. (60 kg) or less		
	Disk Enclosure	63.9 lbs. (29 kg) or less		
Power Requirements		AC 100 – 240V single phase 50/60Hz		

D-SERIES SOFTWARE (see software data sheet for details)

Objective	NEC Storage Software	Function
Simple operation	StorageManager (iSM)	Core storage management functionality
	ThinProvisioning	Allows over-provisioning of capacity
High Availability	PathManager	Multi-pathing for failover and load balancing
Data Protection	DynamicDataReplication (DDR)	Replication within same array
	RemoteDataReplication (RDR)	Replication between arrays - synchronous, asynchronous, & semi-synch
	RemoteDataReplication Asynchronous	Replication between arrays - asynchronous only
	RemoteDataReplication/DisasterRecovery (RDR/DR)	Multi-LUN replication consistency
	DynamicSnapVolume (DSV)	On-demand snapshots
	ReplicationControl SQL Option	Transaction-consistent protection for MS SQL Server
Performance Management	PerformanceMonitor	Performance monitoring & alerts
	PerformanceNavigator	Analysis of performance data over time
	PerformanceOptimizer	Automates performance tuning
Energy Conservation	PowerConserver	Turn off HDDs when not needed
Storage Consolidation	VirtualStoragePartitioning	Improves QoS and management control
Compliance	VolumeProtector	Prevent unauthorized modification of data

Available on the GSA Schedule

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ENVIRONMENTAL

	Maximum Watts	BTUs/Hour
Controller Node	1420 W	4845 BTU/hr
Disk Enclosure (intermix)	430 W	1467 BTU/hr
Disk Enclosure (all SATA)	370 W	1262 BTU/hr
	Operating	Storage
Temperature	41 - 104° F (5 - 40° C)	50 - 140° F (10 - 60° C)
Humidity	10 - 80%	5 - 80%

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