Western Digital.

PRODUCT BRIEF

OpenFlex™ Data24 NVMe-oF™ Storage Platform

The Performance of NVMe™ Flash in Shared Storage

Western Digital's OpenFlex™ Data24 NVMe-oF™ storage platform extends the high performance of NVMe™ flash to shared storage. It provides low-latency sharing of NVMe SSDs over a high-performance Ethernet fabric to deliver similar performance to locally attached NVMe SSDs. Unsurpassed connectivity in its class using Western Digital RapidFlex™ NVMe-oF controllers, allows up to six hosts to be attached without a switch, like a traditional JBOF.

NVMe-over-Fabrics, or NVMe-oF, is a networked storage protocol that allows storage to be disaggregated from compute to make that storage widely available to multiple applications and servers. By enabling applications to share a common pool of storage capacity, data can be easily shared between applications or needed capacity can be allocated to an application to respond to application needs.

OpenFlex Data24 NVMe-oF storage platform can also be used as a disaggregated storage resource in an open composable infrastructure environment using the Open Composable API. The platform can also be specified with just two RapidFlex adapters for simpler environments and as a direct replacement for SAS external storage. OpenFlex Data24 is built to deliver high availability and enterprise-class reliability. The entire platform, including SSDs, is backed with a 5-year limited warranty.

Features

- Up to 368TB[1] of low latency Dual Port SSDs in 2U 24-bay platform
- Bandwidth match between SSDs (Storage) and I/O (Network) – No oversubscription
- RESTful API support for simplified management
- Vertically integrated Western Digital design: NVMe SSDs, fabric adapters and platform
- Optional dual adapter configuration for direct SAS replacement
- Industry-leading 5-year limited warranty

Benefits

- Enables multiple servers to share NVMe flash storage as if it were local
- Leverages low latency fabric to fully utilize IOPS and capacity
- Provides more efficient use of large capacity SSDs at low latency
- Balances access to eliminate over-subscription and maintain NVMe performance
- Provides open composability thru mature NVMe-oF standard
- Ideal SAS replacement option (dual adapter configuration)

[1] One terabyte (TB) is equal to one trillion bytes. Actual user capacity may be less due to operating environment.

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Specifications

Hardware

- 24 Dual port high-performance SSDs
- Wide range of NVMe SSD capacity and endurance options
  - —Ultrastar® DC SN840: 1DWPD: Up to 15360 GB
  - —Ultrastar DC SN840: 3DWPD: Up to 6400 GB
- High availability with dual IOM
- 3 PCIe® x 16 slots/IOM
- Western Digital RapidFlex NVMe-oF fabric adapters
  - —Six 100GbE ports with dual IOM for maximum performance
  - —Two 100GbE ports for direct replacement of SAS external storage
- Two 100GbE ports for direct replacement of SAS external storage
- Western Digital RapidFlex NVMe-oF fabric adapters
- OpenFlex inspired composability in a mainstream 2U24
- 28" (711mm) chassis depth – fits most commonly used short depth racks (800 – 1000 mm)

Specifications	OpenFlex Data24
Form Factor	2U
Front Drive Bays	Up to 24 x U.2 NVMe SSDs
Power Supply	2x 2000W Platinum 200–240VAC, CRPS, Hot Plug
Fabric Adapter Slots	6x PCIe x16
Fabric Adapter(s)	Western Digital RapidFlex NVMe-oF Fabric Adapter
Cabling	Passive (1 – 5m) and Active Optical (5 – 50m)
Platform Management	ARM Based BMC
Rear I/O	1G-BASE-T Management Port (RJ-45)
HA Redundancy	Dual IOMs, Dual Port SSDs, Dual PSUs, Dual Rotor Hot Plug Fans
Environmental	10°C – 35°C
Chassis Dimensions (Height x Width x Depth)	8.75 × 44.80 × 71.12 cm 3.45" x 17.64" x 28" in
Weight	Maximum 31.75 kg / 70 lb
Limited Warranty	5 Years Standard

Performance

		128K Bandwidth	4K IOPS	4K QD1 Latency
6 × 100GbE	Read	71.3 GB/s	15.2M	168 µs
	Write	39.8 GB/s	6.2M	44 µs
2 × 100GbE	Read	23.83 GB/s	5.09M	175.45 µs
	Write	15.09 GB/s	3.72M	41.73 µs

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