

EMC Celerra NS-G8 Gateway



EMC[®] Celerra[®] NS-G8 Gateway platforms can be integral elements of a comprehensive information lifecycle management strategy—a strategy that helps your enterprise attain the maximum value from its information, at the lowest TCO. Reach new heights of availability, scalability, and flexibility with the Celerra NS-G8 Gateway enterprise-class IP platform.

Specifications

Architecture

The Celerra NS-G8 Gateway system supports flexible X-Blade configurations, from 2 to 8 blades. X-Blade configurations are deployed in N+M Primary/Standby mode with N active blades and M pooled failover blades for flexible hardware availability protection (i.e., X-Blade failover).

Each X-Blade consists of the following:

- Dual Quad Core 2.3 GHz Intel[®] Xeon[®] CPUs
- 4 GB Double Data Rate RAM (333 MHz)
- Two 4 Gb/s or 8 Gb/s* Fibre Channel ports for storage connectivity
- Two 4 Gb/s or 8 Gb/s* Fibre Channel ports for tape connectivity
- One 10/100/1000 management port
- Instance of DART File Server software

Ethernet Blade Options (all X-Blades in a single NS-G8 system must contain the same Ethernet configuration):

- Option 1: Eight 10/100/1000 BaseT ports
- Option 2*: Four 10/100/1000 BaseT ports plus one 10 Gigabit Ethernet Optical
- Option 3: Sixteen 10/100/1000 BaseT ports
- Option 4: Four 10/100/1000 BaseT ports plus four 1 Gigabit Ethernet Optical
- Option 5: Eight 10/100/1000 BaseT ports plus eight 1 Gigabit Ethernet Optical
- Option 6: Two 10 Gigabit Ethernet Optical
- Option 7: Four 10 Gigabit Ethernet Optical
- Option 8: Two 10 Gigabit Ethernet plus eight 10/100/1000 BaseT ports
- Option 9: Two 10 Gigabit Ethernet Optical plus four 10/100/1000 BaseT ports plus four 1 Gigabit Ethernet Optical

*Option 2 is only offered with 4 Gb/s Fibre Channel ports for storage array connectivity and tape connectivity.

The Celerra NS-G8 connects via Fibre Channel SAN to:

- EMC Symmetrix[®] storage systems
- EMC CLARiiON[®] storage systems
- Tape transport for direct backup-to-tape (NDMP)

X-Blades can be added non-disruptively up to an eight X-Blade configuration.

Performance scales linearly up to a maximum of seven active blades.

Platform managed by one or two Control Stations.

- Connection to each X-Blade via Gigabit Ethernet
- Manages X-Blade failover
- Manages all file systems via GUI
- SNMP MIB II manageability
- Secure Shell (SSH) for remote access
- HTTP server management interface
- Dual USB, 250 GB drive, DVD drive



DART File Server Facilities

Protocols Supported

- NFSv2, v3, and v4, CIFS (SMB 1 and SMB 2), FTP, FTP Secure, iSCSI, Fibre Channel
- Network Lock Manager (NLM) v1, v3, v4
- Routing Information Protocol (RIP) v1-v2
- Simple Network Management Protocol (SNMP)
- Network Data Management Protocol (NDMP) v1-v4
- Address Resolution Protocol (ARP)
- Internet Control Message Protocol (ICMP)
- Network Time Protocol (NTP) client
- Simple Network Time Protocol (SNTP)
- Kerberos Authentication
- Lightweight Directory Access Protocol (LDAP)

Optional DART Software Facilities

- Celerra Event Enabler (CEE): Integration facilities with third-party vendors
 - Celerra Anti-virus: Celerra integration with industry-leading, anti-virus vendors
 - Celerra Event Publishing Agent: Celerra integration with industry-leading, quota-management vendors
- EMC Celerra Replicator™: Replicate over IP for disaster recovery, backup, and/or testing
- Celerra Manager Advanced Edition: Extended management and monitoring of multiple Celerra systems
- Celerra File-Level Retention (FLR): Create WORM (write once/read many) file systems with specified retention periods
 - Celerra File-Level Retention—Enterprise
 - Celerra File-Level Retention—Compliance
- Celerra Multi-Path File System (MPFS): Delivers improved performance and scalability over traditional NAS

Note: Celerra Manager-Basic, Virtual Provisioning, Deduplication, and EMC SnapSure™ are bundled.

Client Connectivity Facilities

- File access by FTP, NFS, CIFS, and MPFS
- Block access by native array connectivity (iSCSI and FC)
- Virtual Data Movers for Microsoft® Windows® clients
- Ethernet Trunking
- Link aggregation (IEEE 802.3ad)
- Virtual LAN (IEEE 802.1q)
- UNIX archive utilities (tar/cpio)
- Network Status Monitor (NSM) v1
- Portmapper v2
- Network Information Service (NIS) client
- Supports Microsoft DFS as leaf node or root server
- Native Windows 2000/2003/2008 support
- NT LAN Manager (NTLM)
- LDAP signing for Microsoft Windows Server
- Microsoft Windows Server 2003 Access-based Enumeration (ABE)

High-Availability Features

NS-G8 X-Blade Enclosure

- Redundant power supplies for X-Blades and Control Stations
- Hot-swappable power and cooling
- Internal environmental status monitoring

DART Software Capabilities

- Celerra Manager: Web-based configuration and management
- Automated Volume Management (AVM): File system provisioning
- Virtual provisioning: Allows for logical sizing and physical provisioning
- SnapSure: Creates read-only or read-write, point-in-time logical snaps
- Monitoring: At-a-glance system status and performance statistics
- Data deduplication: File-based deduplication and compression
- FileMover API: Open API for automated, transparent data movement between tiers of storage
- Ethernet Trunking
- Link aggregation
- Failsafe networking
- Network interface port failover
- N to M X-Blade failover

Optional VMware Facilities

- Celerra Plug-in for VMware®: For provisioning, management, cloning, and deduplication
- EMC PowerPath®/VE: Path management for iSCSI and Fibre Channel
- Site Recovery Manager (SRM): Managing failover and fallback making disaster recovery rapid and reliable
- Replication Manager: Host-based management of array-based copies of data

Additional Facilities

- Celerra Fully Automated Storage Tiering (FAST): Automated, policy-based file tiering within cabinet, between cabinets, or to purpose-built storage
- PowerPath: Path management
- Replication Manager: Host-based management of array-based copies of data
- EMC Rainfinity® File Management Appliance (FMA and FMA/VE): File virtualization for transparent data mobility

Control Station

- Administration and management
- X-Blade installation and configuration
- X-Blade failover
- Monitor diagnostics
- Configuring network interfaces
- Creating and exporting file systems
- File-system consistency checks
- Extending file systems
- Auto-call event alerting
- Call-in remote maintenance

Note: Optional second Control Station is supported.

CLARiiON Storage

- Disk scrubbing
- Mirrored write cache with de-stage AC power loss
- Redundant hot-swap power, bus structures, and I/O subsystems
- Online global hot-spare disks
- PowerPath failover for Windows and UNIX hosts

Symmetrix Storage

- Automatic cache and disk scrubbing
- Mirrored write cache and battery backup for AC power loss ride through
- Auto-call remote monitoring
- Redundant hot-swap power, bus structures, and I/O subsystems
- Online global hot-spare disks
- PowerPath failover for Windows and UNIX hosts

Dimensions (approximate)

| Measurement | NS-G8—4-X-Blade System | NS-G8—6-X-Blade System | NS-G8—8-X-Blade System |
|-------------|---|---|---|
| Height | 15.75 in (40.0 cm), 9 NEMA units (U), including mounting rails | 22.75 in (57.8 cm), 13 NEMA units (U), including mounting rails | 29.75 in (75.6 cm), 17 NEMA units (U), including mounting rails |
| Width | 18.92 in (48.06 cm); mounting bars fit standard 19-in NEMA cabinets | 18.92 in (48.06 cm); mounting bars fit standard 19-in NEMA cabinets | 18.92 in (48.06 cm); mounting bars fit standard 19-in NEMA cabinets |
| Depth | Chassis to rear: 31.58 in (80.21 cm) | Chassis to rear: 31.58 in (80.21 cm) | Chassis to rear: 31.58 in (80.21 cm) |
| Weight | 228 lbs (104 kg) | 333 lbs (151 kg) | 438 lbs (199 kg) |

Operating Environment

| | |
|------------------------------|--|
| Temperature: | 50–104 degrees F (10–40 degrees C) |
| Temperature Gradient: | 18 degrees F/hr (10 degrees C/hr) |
| Relative Humidity: | 20% to 80% (non-condensing) |
| Altitude: | 7,500 ft. (2,286.4 m) @ 104 degrees F (40 degrees C) max. 10,000 ft. (3,048 m) @ 98.6 degrees F (37 degrees C) max. |

AC Power and Dissipation

Requirements are approximate. For exact power requirements, consult the EMC power calculator at <http://powercalculator.EMC.com>.

| Requirement | NS-G8—4-X-Blade System | NS-G8—6-X-Blade System | NS-G8—8-X-Blade System |
|-----------------------|---|---|---|
| AC Line Voltage | 180 to 240 VAC \pm 10%, single-phase, 47 to 63 Hz | 180 to 240 VAC \pm 10%, single-phase, 47 to 63 Hz | 180 to 240 VAC \pm 10%, single-phase, 47 to 63 Hz |
| AC Line Current | 8.4 A at 200 VAC | 12.3 A at 200 VAC | 16.1 A at 200 VAC |
| Power Consumption | 1,680 VA (1,600 W) max. | 2,450 VA (2,350 W) max. | 3,230 VA (3,100 W) max. |
| Power Factor | 0.95 min. at full load, low voltage | 0.95 min. at full load, low voltage | 0.95 min. at full load, low voltage |
| Heat Dissipation | 5.76 x 106 J/hr (5,500 BTU/hr) max. | 8.45 x 106 J/hr (8,100 BTU/hr) max. | 1.11 x 107 J/hr (10,600 BTU/hr) max. |
| In-rush Current | 105 A max. for ½ line cycle, per power supply at 240 VAC | 145 A max. for ½ line cycle, per power supply at 240 VAC | 185 A max. for ½ line cycle, per power supply at 240 VAC |
| Startup Surge Current | 28 A pk (19.8 A rms) max. for 100 ms, at any line voltage | 42 A pk (29.7 A rms) max. for 100 ms, at any line voltage | 56 A pk (39.6 A rms) max. for 100 ms, at any line voltage |
| AC Protection | 20 A fuse on each power supply, both phases | 20 A fuse on each power supply, both phases | 20 A fuse on each power supply, both phases |
| AC Inlet Type | IEC320-C14 appliance coupler, per power supply | IEC320-C14 appliance coupler, per power supply | IEC320-C14 appliance coupler, per power supply |
| Ride-through Time | 30 ms min. | 30 ms min. | 30 ms min. |
| Current Sharing | \pm 10% of full load, between power supplies | \pm 10% of full load, between power supplies | \pm 10% of full load, between power supplies |



EMC Corporation
Hopkinton
Massachusetts
01748-9103
1-508-435-1000
In North America 1-866-464-7381
www.EMC.com