EMC VNX VG2 GATEWAY

The EMC® VNX® VG2 platform extends the value of existing EMC storage array technologies. It delivers a comprehensive, consolidated solution that adds NAS storage in a centrally managed information storage system, enabling you to dynamically grow, share, and cost-effectively manage file systems with multi-protocol file access. If you are looking for an entry-level EMC IP storage solution to extend your existing storage investment, or want a low-cost, SAN-plus-NAS platform, choose the VNX VG2 Gateway product.

Specifications

ARCHITECTURE

The VG2 product supports both single and dual X-Blade configurations. X-Blade configurations can be deployed in Primary/Primary mode for performance-oriented environments or Primary/Standby for additional hardware availability protection.

Each X-Blade consists of the following:

- The latest 64 bit Intel Xeon® 5600 processor (4-core 2.40 GHz CPUs with 12 MB of Layer 3 cache)
- 6 GB Double Data Rate 3 DRAM (1066 MHz)
- Two Fibre Channel or Fibre Channel over Ethernet (FCoE) ports for storage connectivity
- Up to two Fibre Channel ports for tape connectivity
- Three available slots of UltraFlex™ technology allowing a combination of the following I/O modules:
  - Four ports 10/100/1000 BaseT
  - Two ports 10/100/1000 BaseT and 2 ports 1 Gb Ethernet Optical
  - Two ports 10 Gb Ethernet Optical
- One 10/100/1000 management port
- Instance of VNX Operating Environment for File software

Ethernet Blade Options (all X-Blades in a single VG2 system must contain the same Ethernet configuration)

- Three EMC UltraFlex slots are available for adding any mix of the following I/O modules:
  - Four ports 10/100/1000 BaseT
  - Two ports 10/100/1000 BaseT plus two ports 1 Gb Ethernet Optical
  - Two ports 10 Gb Ethernet Optical

The VG2 connects via Fibre Channel or FCoE SAN to:

- EMC Symmetrix® storage systems
- EMC VNX series storage platforms
- EMC CLARiiON® storage systems

A single X-Blade configuration can be upgraded non-disruptively to a dual X-Blade configuration.

Platform managed by one or two Control Stations

- Connection to each X-Blade via Gigabit Ethernet
- Management connection via 10/100/1000 Ethernet port
- Manages X-Blade failover
- Manages all file systems via GUI
- SNMP v1 MIB II manageability
- Secure Shell (SSH) for remote access
- HTTP server management interface
- One 500 GB SATA hard drive
- One DVD-ROM drive

VNX FILE SERVER FACILITIES

Protocols supported

- NFSv2, v3, and v4 (including NFSv4.1 with pNFS support), CIFS (SMB 1 and SMB 2), FTP, FTP Secure (FTP over SSL), and IPv6
- Network Lock Manager (NLM) v1, v3, and v4
- Common Criteria Certification: EAL 3+ Assurance Level
- Routing Information Protocol (RIP) v1–v2
- Simple Network Management Protocol (SNMP v1, v2, and v3)
- 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 VNX software facilities

- EMC Unisphere: provides a simple consolidated interface to manage both VNX, CLARiiON and EMC Celerra® platforms
- VNX Event Enabler (VEE): integration facilities with third-party vendors
  - Anti-virus: VNX integration with industry-leading, anti-virus vendors
  - Event Publishing VNX integration with industry-leading, quota-management, and auditing vendors
- EMC VNX Replicator™: replicate over IP for disaster recovery, backup and/or testing
- VNX File-Level Retention (FLR): create WORM (write once/read many) file systems with specified retention periods; supports both an Enterprise and Compliance option
- VNX Multi-Path File System (MPFS): delivers improved performance and scalability over traditional NAS

Note: Virtual Provisioning™, Deduplication, and EMC SnapSure™ licenses are bundled.

Client connectivity facilities

- File can be accessed by FTP, NFS (including pNFS), 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 Windows
- Microsoft Windows Server® 2003 Access-based Enumeration (ABE)

HIGH-AVAILABILITY FEATURES

The VG2 X-Blade enclosure

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

VNX Operating Environment for File software capabilities

- 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
- SMI-S v1.4 management API
- Ethernet Trunking
- Link aggregation
- Failsafe networking
- Network interface port failover
- X-Blade failover

Optional VMware® facilities

- VNX 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 failback making disaster recovery rapid and reliable
- Replication Manager: host-based management of array-based copies of data

Additional facilities

- PowerPath: path management
- Replication Manager: host-based management of array-based copies of data
- Cloud Tiering Appliance: transparent file-based tiering within and across platforms

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-out event alerting
- Call-in remote maintenance

Note: Optional second Control Station is supported.

VNX series / 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 Item	
Height	7 in. (17.78 cm) 4 NEMA units (U), Control Station 1U, Blade enclosure 2U, including mounting rails (fully configured with two Control Stations and one Blade enclosure having two Blades)
Width	18.92 in. (48.06 cm); mounting bars fit standard 19-inch NEMA cabinets
Depth	Chassis to rear: 24.25 in. (61.6 cm)
Weight	88.5 lb (40.13 kg): one X-Blade enclosure, two X-Blades and two Control Stations

OPERATING ENVIRONMENT

Temperature	50–104 degrees F (10–40 degrees C)
Temperature gradient	18 degrees F/hr (10 degrees C/hr)
Relative Humidity	20 percent to 80 percent (non-condensing)
Altitude	7,500 ft (2286 m) @ 104° F (40° C) max.

AC POWER AND DISSIPATION REQUIREMENTS

	VG2 with 2 X-Blades*
AC line voltage	100 to 240 V AC, 50-60 Hz, single-phase
AC line voltage tolerance	Voltage ± 10%, frequency ± 3 Hz
AC line current (operating maximum)	5.9 A maximum at 100 V AC, 3.0 A maximum at 200 V AC
Power consumption (operating maximum)	590 VA (510 W) maximum
Power factor	0.88 minimum at full load, low voltage
Heat dissipation (operating maximum)	1.84 x 10^6 J/hr, (1,700 Btu/hr) maximum
In-rush current	35 A maximum for ½ line cycle, per line cord at 240 V AC 18 A maximum for ½ line cycle, per line cord at 120 V AC
Startup surge current	22 A rms maximum for 50 ms, at any line voltage
AC protection	7.8 A fuse on each power supply, both phases
AC receptacle	IEC320-C14 appliance coupler, per power supply
Ride-through time	30 ms minimum
Current sharing	± 15% of full load, between power supplies

* Includes first control station.

CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, contact your local representative or authorized reseller—or visit us at www.EMC.com.

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