IBM XIV Storage System

Storage Reinvented

Overview

The IBM XIV Storage System is a ground-breaking, high-end disk system, designed to support business requirements for a highly available information infrastructure. Built from a grid of standard Intel®/Linux® components, it is connected in an any-to-any topology by means of massively paralleled, non-blocking Gigabit Ethernet (GbE).

IBM XIV applies automated data distribution, unique caching and other innovations to eliminate hotspots and deliver single-tier storage featuring high-end performance, reliability, availability and scalability, at exceptionally low Total Cost of Ownership (TCO). The XIV architecture can scale performance with capacity - no manual tuning required - thus enabling capacity growth without complexity.

IBM XIV comes in easily scalable partial-to-full racks configured with either 1 TB or 2 TB disk drives and including full functional capabilities from the smallest configuration to the largest.

Physical features per rack

Disks

- Very High Density Slower Rotation (VHDSR) disk drives
- 7,200 revolutions per minute (rpm) supported
- Capacity: 1 TB or 2 TB

Physical Specifications

- Dimensions: Height: 78.4 in/199.1 cm; Width: 23.6 in/60 cm; Depth: 45 in/114.2 cm
- Maximum weight: 1,949 lb/884 kg
- Clearance: Front: 47 in/120 cm; Rear: 39.4 in/100 cm

Power

- Input voltage: Nominal, 200-240 VAC, at 60A or 30A (+/- 10 percent)
- Redundant power feed
- Single-phase power feed

Operating Environment

- Temperature: 10-35°C
- Altitude: up to 7,000 ft/2,134 m
- Humidity: 25-80 percent, non-condensing

Capacity and Resources (per module)

- Cache-to-disk bandwidth: 240 Gigabits per second (Gbps)

IBM XIV Configurations

# Modules	# Disks	Usable capacity* 1 TB/2 TB	Connectivity		Power usage 1 TB/2 TB			Internal (grid) switching (GBps)	# CPUs		Memory (GB)
			Fibre Channel (FC) ports	SCSI over IP (iSCSI) ports	kVA (peak)	kVA (idle)	kBTU		Single	Dual**	
Six	72	27/55	Eight	0	3.4/3.1	2.9/2.8	11.0	30	Six	Nine	48
Nine	108	43/87	16	Four	5.0/4.5	4.2/4.0	16.4	48	Nine	15	72
Ten	120	50/102	16	Four	5.5/4.9	4.7/4.4	17.8	52	Ten	16	80
11	132	54/111	20	Six	6.1/5.4	5.2/4.7	19.3	56	11	17	88
12	144	61/125	20	Six	6.7/5.8	5.7/5.1	20.7	60	12	18	96
13	156	66/134	24	Six	7.2/6.2	6.2/5.5	22.2	64	13	19	104
14	168	73/149	24	Six	7.8/6.6	6.7/5.9	23.6	68	14	20	112
15	180	79/161	24	Six	8.4/7.1	7.2/6.2	25.1	72	15	21	120

* Usable capacity after factoring in disk space used by mirroring for redundancy, spares and metadata

** Feature code 1101 provides interface modules containing dual CPUs

Functional specifications

Data Protection

- Active-active with N+1 redundancy on system components
- Non-disruptive hardware and firmware upgrades
- Asynchronous and synchronous remote mirroring
- Up to 16,000 differential snapshots – Instant create, restore. Writable and 'snap on snap'
- Self-healing: Rapid rebuild time after disk and module failure

Features (fully bundled with system)

- Thin provisioning
- Data migration
- Storage management and Lightweight Directory Access Protocol (LDAP) authentication
- Native multi-path support

Host Connectivity

- FC rates: 1 Gbps, 2 Gbps, 4 Gbps
- iSCSI over GbE
- SCSI-3 protocol for both FC and iSCSI

For more information

To learn more about the IBM XIV Storage System, contact your IBM representative or IBM Business Partner, or visit: www.xivstorage.com

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