



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.



IBM XIV applies automated data distribution, unique caching, and other innovations to eliminate hotspots and deliver single-tier storage. The system features high-end reliability, availability and performance—all without manual tuning—while providing enterprise storage that is exceptionally low-cost, efficient, and scalable and has revolutionary ease of management. The XIV architecture can scale performance with capacity, thus enabling capacity growth without complexity.

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

Physical features per rack

Disks

- SATA disk drives
 - 7,200 RPM supported
 - Capacity: 1 TB or 2 TB
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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
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Power

- Input voltage: Nominal, 200 - 240 V ac, at 60 A or 30 A (+/- 10%)
 - Redundant power feed
 - Single-phase or three-phase power feed
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Operating Environment

- Temperature: 10 - 35° C
 - Altitude: up to 7,000 ft/2,134 m
 - Humidity: 25 - 80%, non-condensing
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Capacity and Resources (per module)

- Cache-to-disk bandwidth: 240 Gbps
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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) - 1 TB/2 TB
			FC ports	iSCSI ports	kVA (peak)	kVA (idle)	kBTU/hr 1 TB/ 2 TB			
6	72	27/55	8	0	3.4/3.1	2.9/2.8	11.7/10.6	30	9	48/96
9	108	43/87	16	4	5.0/4.5	4.2/4.0	17.0/15.4	48	15	72/144
10	120	50/102	16	4	5.5/4.9	4.7/4.4	18.9/16.9	52	16	80/160
11	132	54/111	20	6	6.1/5.4	5.2/4.7	20.8/18.3	56	17	88/176
12	144	61/125	20	6	6.7/5.8	5.7/5.1	22.8/19.7	60	18	96/192
13	156	66/134	24	6	7.2/6.2	6.2/5.5	24.7/21.2	64	19	104/208
14	168	73/149	24	6	7.8/6.6	6.7/5.9	26.6/22.6	68	20	112/224
15	180	79/161	24	6	8.4/7.1	7.2/6.2	28.5/24.1	72	21	120/240

Functional specifications

Data Protection

- Active-active with N+1 redundancy on system components
- Non-disruptive hardware and firmware upgrades
- Asynchronous and synchronous remote mirroring
- Thousands of differential snapshots—instant create, restore; writable and “snap on snap”
- Self-healing: Rapid rebuild time after disk and module failure

Features (All functionality included with system software)

- Thin provisioning with space reclamation
- Data migration
- Storage management and LDAP authentication
- Native multi-path support

Host Connectivity

- Fibre Channel rates: 1 Gbps, 2 Gbps, 4 Gbps
- iSCSI over Gigabit Ethernet
- SCSI-3 protocol for both FC and iSCSI



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