Teradata 5400H Server

MPP Server for Teradata Solutions

The Teradata 5400H Server, combined with other Teradata solution components, offers a completely integrated data warehouse solution with optimized system performance.

In today's fast-paced, ever-changing, competitive environment, your data warehouse must support higher performance, availability to guarantee response, and scalability to accommodate business growth. Only the Teradata 5400H Server meets these needs to become the most dependable, highest performing, massively parallel processing (MPP) server ever to be released in a Teradata solution.

Designed specifically for large-scale data warehousing, these servers offer a new baseline in speed and performance that surpasses all previous standards for applications scaling from 2TB to more than 2PB (petabytes). The Teradata 5400H Server features industry-leading Intel® Xeon™ 3.6GHz processors with Hyper-Threading technology and Extended Memory 64 Technology (EM64T). Hyper-Threading allows a single processor to manage data as if it were two processors by handling data instructions in parallel rather than serially. This increases system performance and efficiency. EM64T provides the capability to run 64-bit-enabled operating systems allowing Teradata 5400 Server nodes to run on current 32-bit architectures while providing future 64-bit capabilities.

This technology is matched with other Teradata value-added components, such as Teradata BYNET™ Version 3 interconnect technology, that enable the world's fastest complex strategic and tactical queries and offers true, linear performance scalability. This combination ensures the consistent dependability required to collect, store, and analyze critical business data.

Teradata 5400H Servers can adapt and change along with your business. Unparalleled in its scalability, the system accommodates future growth of your business by expanding incrementally from one to 1,024 nodes. Backed by award-winning professional services, support, and the strength of Teradata's demonstrated data warehousing expertise, the Teradata 5400H Server offers the solid foundation you need to protect your data and your investment, securing the growth needed for leadership in today's business environments.

TERADATA
Raising Intelligence

Teradata 5400H Server

System Specifications

Processors per Node

> Dual Intel Xeon 3.6GHz processors with 1MB Advanced Transfer L2 Cache, Hyper-Threading technology, and EM64T
> 800MHz Front Side Bus (FSB)

Memory per Node

> Expandable to 4GB Dual Channel DDR 333MHz DIMM Modules, Registered, ECC for Teradata Database running on UNIX SVR4 MP-RAS™ or Microsoft® Windows® Server 2003
> Expandable to 6GB Dual Channel DDR 333MHz DIMM Modules, Registered, ECC for Teradata Database running on 64-bit Linux
> Expandable to 6GB for Application Nodes (non-Teradata) running on Microsoft Windows Server 2003
> Two-way interleaving, 6.4GB/sec maximum memory bandwidth

I/O per Node

> Six PCI slots:
  - Three 64-bit/100 or 66MHz PCI-X
  - Two 64-bit/133MHz PCI-X
  - One 64-bit/100MHz PCI-X

Internal Backup Devices and Storage

> Eight media bays per node
  - Two 5.25 in. removable media bays
  - Four hot-swappable (SCA) disk bays
    - Two 73GB hard drives (standard) plus two optional drives
    - One 4mm tape 20/40GB per cabinet (standard)

MPP Interconnect – BYNET v3

> Fault tolerant interconnect via dual redundancy
> BYNET v3 enabling linear scalability up to 1,024 nodes
> Self configuring, full diagnostic capability
> 180MB per second per node bandwidth on dual redundant networks
> BYNET 64-bit PCI adapters for optimal MPP node speed

Cabinet Configuration

> One to ten processing nodes
> Server Management
> UPS, AC Distribution, Cooling Fans
> Patented Enhanced Airflow

External Data Storage

> Teradata Enterprise Storage Family
> EMC DMX Storage
> Teradata Tape Storage

Connectivity per Node

> Dual-Channel Ultra320/LVD SCSI via LSI Logic LSI53C1030 controller
> Two gigabit Ethernet connections for Server Management
> Quad Fibre Channel: 2Gb: LSI 7402XP
> Dual Fibre Channel for Tape: 2Gb: LSI 7202XP/LP
> NIC: 10/100/1000T Copper Ethernet, 1Gb Optical Ethernet
> Mainframe Connectivity
  - IBM ESCON for Teradata Database
  - IBM FICON for Teradata Database

High Availability

> Internal uninterruptible power (via hot pluggable battery backup)
> Dual AC (enables power from two different grids for maximum uptime)
> Hot Pluggable Components – fault resilient fan modules, redundant power supplies, fault tolerant interconnect

Administration WorkStation (AWS)

> Microsoft Windows 2003 console
> Provides single operational view to administer the entire MPP system with local or remote system monitoring
> Connected via redundant gigabit Ethernet LAN to system nodes
> Enables management of external disk subsystems

Operating Environment

> Teradata Database
> UNIX SVR4 MP-RAS
> Microsoft Windows Server 2003
> 64-bit Novell® SUSE® Linux

Specifications

Physical Dimensions

> Height: 77 in. (195.6 cm)
> Width: 24 in. (62.6 cm)
> Depth: 45 in. (114.3 cm)
> Weight: 1,575 lbs. (714.4 kg)
> Operating Temperature: 50°F to 104°F (10°C to 40°C)
> Voltage Range: 208/220/230/240VAC
> Frequency: 50-60Hz
> Current: 50 Amp (32 Amp 3-phase available when required)
> Power: 6000 Watts
> Dual AC: Configurable
> Compliant with U.S. and International Safety and Emissions Standards

Support Services

Global Support

> 17,000 service personnel, 1,200 service locations, 120 countries
> 24-hour x 365 days availability

Warranty Support

> 1-year remote and on-site hardware support, operating system problem resolution
> 24-hour incident reporting

Enterprise System Support

> ESS Business Critical Service
> ESS Enhanced Service
> ESS Base Service

Optional Implementation Services

> Staging Services
> Installation Services

Network and Management Services

> Full suite available

Scalability

	UNIX SVR4 MP-RAS	Microsoft Windows, Linux
Teradata 5400H MPP	1 - 1,024 Nodes	1 - 1,024 Nodes

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