

Government of India
Ministry of Railways
(Railway Board)

RBA No. 28/2005

No. 2005/AC-II(CC)/37/1

New Delhi, Dated 9/6/05.

FA&CAOs/CPOs,,
All Railways/PUs.

Sub:- Technical Specification for hardware for implementation of SDT
Application.

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Please connect Board's letter No.2004/AC-II(CC)/37/6 Ph.II dated 2/12/04 and 99/AC-II(CC)/37/5 dated 8/12/04 under which interalia suggested technical specifications for RISC-Servers and other equipments to be procured for implementation of SDT applications were sent for guidance of Railways. Railways were also directed to send the proposed technical specifications for RISC-Servers for Board's clearance. In this regard, the proposals received from Railways were considered by a Committee nominated by Board and a copy of specifications approved by the Committee is enclosed.

Kindly acknowledge receipt and ensure that specifications ibid are adhered to.

DA: As above.


(J. SRINIVAS)
Director Finance (CCA)
Railway Board

Revised specification of RISC server

1. RISC SERVERS

1.1.1. Primary Server Specifications. ~~Qty 01 / Site~~

RISC Server shall be from reputed Brands. All servers and storage proposed must be rack mountable, and must be proposed with the rack and other necessary accessories for rack mounting

- Appropriate SPEC-CINT rating to be specified.
- 64 Bit CPU with more than 1 GHZ RISC Processors (current configuration of at least 4 processors). The server shall be expandable to 8 or more CPU.
- ECC External Cache per processor 16 MB(minimum)
- Minimum 16GB @512 MB DIMMS high density ECC RAM. Must be expandable to 96 GB in the server.
- Redundant power supply with dual power input chords to the server, capable of firing it from different power sources.
- 10K RPM 2 x 73.4 GB Ultra-3 SCSI HDD internal to the system. The HDD must be configured in 1+1-mirrored configuration so that in case of failure of the System disk the second mirror copy is used and allows uninterrupted operation.
- Internal Removable media drive – min 52x CDROM or DVD ROM minimum (16x)
- Internal Removable media drive – 40/80 GB 4mm DDS-4 DAT Drive
- Qty 01 GUI Based Console comprising of 17” Flat Colour Monitor, Standard Keyboard and Standard Mouse.
- System must have the following integrated on Board Ports as part of the standard chassis:
 - Min Qty 02 Gigabit Ethernet port
 - Min Qty 02 Serial Ports & 2 USB Ports
 - Min Qty 01 Parallel Port
 - Min Qty 01 10/100 Ethernet Port
 - PS/2 Compatible Keyboard / Mouse Port Alternately USB Port for the same
 - PCI Slots Qty 06.
- Qty 04 10/100/1000 Mbps Base T NIC cards. Qty 02 populated on one PCI Planar/Bridge and Qty 02 populated on another PCI Planar/Bridge.
- Qty 02 FCAL Host bus adapters. The FCAL Host bus adapters must deliver a sustained throughput of 2GBPS to external storage array. Each of the Host Bus adapters must be populated on Separate PCI Planars.

- Qty 02 LVD SCSI Controllers for connecting to backup device i.e. external LTO Tape Library. Again each of the cards must be on separate PCI Planar.
- Qty 01 Standard Graphics Card for supporting GUI based console must be configured.
- Dedicated Service processor to aid system management and system diagnosis:
 - Configuration of the system for automatic restart.
 - Viewing history log of system events
 - Managing the system through remote dial in
 - Viewing system status logs
 - Power supply and system temperature.
 - Monitoring the individual fan speed status and speed of the fans
- The system should be configurable to its max Nos. of CPUs, memory and I/O slots.
- The model/make of the hardware and operating system offered shall have published clear road map for future expansion for at least 3-5 years
- Maintenance support should be available for minimum of 5-7 years .

1.1.2 Operating System Qty 01 / Server i.e. Qty 01 / Site

- 64 Bit UNIX Operating system, capable of running simultaneously 32 BIT and 64 Bit applications latest version.
- Unlimited User license
- UNIX 95/98 Certified, vendor must attach the certification as part of the hardware compliance bid.
- OS must support mirroring of system disk and creating OS mirror (root Mirror)
- Multithreaded Multi tasking SMP support
- C2 Level of security
- Journal File System
- All documentation on CD and standard manuals set.
- Annual maintenance shall include apart from others BUG fixes for OS, free updates and releases for trouble shooting as per industry standard.
- Support for industry standard RDBMS like Oracle, DB2 etc

1.5. RISC SERVERS (For Divisions)

Server Specifications. Qty 03 / Site

Server shall be from reputed brands. All servers and storage proposed must be rack mountable, and must be proposed with the rack and other necessary accessories for rack mounting

2 CPU minimum 1.5 GHz expandable upto 4 processors.

4 MB L2 Cache

4 GB Memory DDR-I SDRAM Registered ECC (8*512 MB DIMMS), expandable upto 16 GB

2*73GB 10K rpm Ultra 320 SCSI Disks. HDD must be configured in 1+1 mirrored configured expandable to 292 GB.

40/80 GB 4mm DDS-4 DAT Drive.

Standard bilingual keyboard and three button scroll mouse.

17" Flat CRT Monitor.

DVD-ROM,

PCI Single FC 2GB Host bus adopter (with SFS Drivers).

DVD-ROM

Ethernet Port 10/100/1000 BASE-T 2

Gigabit ethernet port – 2.

PCI Slot – 6.

Ultra SCSI Port 1 @160 MB /Sec.

Redundant power (1+1) with separate power cords 4 U rack

Optimized form factor

Six full length PCI 2.2-compliant expansion slots.

Hot-swap disk drives.

Operating System –Pre-installed with medium CD with unlimited user license

1.6 **UPS** UPS of suitable capacity with the features at Point 7 at the end of this Part for a backup of 30 minutes.