



प्रसार भारती

भारत का लोक सेवा प्रसारक

कार्यालय: अपर महानिदेशक (अभि.) (उ.क्षे.)

आकाशवाणी एवम दूरदर्शन, 2nd व 8th तल

सूचना भवन, सी.जी.ओ कॉम्प्लेक्स, लोधी रोड नई दिल्ली -110003



सत्यम् शिवम् सुन्दरम्

File No. 2/4/DDM/ProcurementofNASandEthernetswitchforDDKLucknow/2023-24

Dated: 13.03.2024

Subject: Budgetary quote for Supply of 48 TB NAS and 24 ports Ethernet switch (with SFP+ ports) for NRCS system of Doordarshan Kendra Lucknow

1. The budgetary quote with drawing of the upcoming tender is enclosed herewith to offer comments, if any by prospective bidders/firms.
2. Bidders/firms are requested to provide information about content in respect of Works and Supply along with budgetary quote.
3. Bidders/firms may please submit the above detail on or before due date by e-mail to pushpenderkaur@prasarbharati.gov.in or at following Address.

Pushpinder Kaur Hira
Assistant Engineer
Room No. 216,
O/o ADG(E-NZ), Akashwani & Doordarshan
2nd floor, CGO Complex,
Soochna Bhawan, New Delhi-110003

Budgetary Quotation for: Supply of 48 TB NAS and 24 ports Ethernet switch (with SFP+ ports) for NRCS system of Doordarshan Kendra Lucknow.

Due Date to offer Comments: 19.03.2024

This is issued with the approval of competent authority.

Encl:

1. Budgetary Quotation form of the upcoming tender is enclosed herewith to offer comments, if any by prospective bidders/firms.
2. Technical Specification & Drawing for Supply of 48 TB NAS and 24 ports Ethernet switch (with SFP+ ports) for NRCS system of Doordarshan Kendra Lucknow.

(Pushpinder Kaur Hira)
Assistant Engineer

For Additional Director General (E) (NZ)



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File No. 2/4/DDM/Procurement of NAS and Ethernet switch for DDK Lucknow/2023-24 Dated: 13.03.2024



सत्यम् शिवम् सुन्दरम्

Budgetary Quotation Form

Subject: Supply of 48 TB NAS and 24 ports Ethernet switch (with SFP+ ports) for NRCS system of Doordarshan Kendra Lucknow.

Please read carefully the terms and conditions given in the enquiry form. Last date of receipt of budgetary quote in this office: **19.03.2024**. Bill of material details are as under -

S. No.	Description	Qty.	Rate	Amount	GST%	GST Amount	Total Amount
A).	Supply of 48 TB NAS Storage Server (As per attached Technical Specifications)	2 Nos.					
B).	Supply of 24 ports Ethernet switch (with SFP+ ports) (As per attached Technical Specifications)	4 Nos.					
Total (A+B)							

Note:

- Time of execution as per permission of Engineer In-charge at DDK Lucknow.
- The bidder must be experienced in same kind of work/supply & shall submit documentary evidence with offer. The Completion certificate is to be attached, issued by any Govt Agency only.
- Work/supply has to be completed without break in service at DDK Lucknow.
- Before submitting the offer, tenderer must visit site and with prior permission of the site in-charge. Technical details will be provided by In-charge of Site/I.O.
- The firm has to produce a list all such workers along with the address proof which are to be employed on signing contract. The bidder shall issue the identity cards to all such persons to facilitate the entry in at DDK Lucknow.
- Inspection will be carried out preferably in presence of Authorized representative of the DDK Lucknow.
- Any damage or misplace in equipment will have to be provided by the firm during work /supply

1. Quantity of Material & Scope of work may increase or decrease as per actual requirement/constraints at site.

2. Please read carefully the terms and conditions given in this Quotation Form.

It is required to list the prices/rates separately for the following

a) GST No: b) PAN No.....

3. **Delivery at:** DDK Lucknow.

4. **Consignee:** DDK Lucknow.

5. **Completion Period:** Supply of material & completion of work within 45 days from the date of order.

6. **Validity:** 180days

7. **Guarantee/Warranty:**

a. The Battery Bank shall be warranted for a minimum period of Three years. For this purpose, the warranty period shall be counted from the date of completion certificate given by DDK Lucknow

b. Various defects arising/reported within the warranty period shall be rectified by repairs/replacement at site by the tenderer free of charge.

8. **Schedule of Payments:**

100% Payment will be made after satisfactory completion of SITC work /supply of material.

(Note: GST shall be paid only once against an order. Supplier will submit invoice accordingly.)

9. **Performance Security:**

- a. The firm/supplier/contractor should submit performance security deposit in the form of FDR from a schedule commercial bank valid for 38 months in favor of Chief Engineer (NZ), AIR & DD, New Delhi.
 - b. The performance security deposit shall be 05% of cost of the order/contract value.
 - c. The performance security deposit would be refundable/released if no deficiency or defect in the material is reported by the consignee during the guarantee/Warranty period.
10. **Declaration:** We declare that all the conditions as given in the Quotation form have been read by us.


Name (in capital) _____
Seal: (Signature of the Tenderer)

प्रसार भारती
Prasar Bharati
(भारत का लोक सेवा प्रसारक)
(India's Public Service Broadcaster)
दूरदर्शन केन्द्र, लखनऊ

Reference to e-office file number 190033 Note#25, regarding specification of NAS storage system, details are attached herewith in five pages.

The names of firms which are dealing with such type of equipment are as-

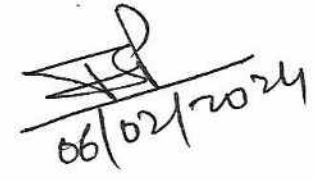
1. NETBYTES
2. Hewlett Packard Enterprises
3. DDN Storage
4. DELL EMC
5. Qnap
6. Fusionstor
7. Tyrone
8. QSAN
9. Eon Stor


(R. Naithani)

DDE


(K. K. Gupta)

DE


(V. B. Patel)

DE

NAS STORAGE BOX (Hardware Specification)**CPU:** Intel® Xeon® D-1622 4-core processor or higher**Feature:** With Floating Point Unit

Encryption Engine (AES-NI)

System Memory: 32 GB UDIMM DDR4 ECC (2 x 32GB)**Maximum Memory:** 128GB (4 x 32 GB)**Memory Slots:** 4 x Long-DIMM DDR4**Flash Memory:** 5GB (Dual Boot OS Protection)**Total Disk Bay:** 18 Nos**Drive Bay:** 12 x 3.5 inch SATA 6GB/s, 3GB/s

6 x 2.5 inch SATA 6GB/s, 3GB/s

Pre-Installed Disk: 8 x 8TB 3.5" Enterprise Class 7.2K Compatible SATA HDD

4 X 960GB SATA Enterprise SSD; Warranty: 5 Years

Drive Compatibility: 3.5-inch SATA hard disk drives

2.5-inch SATA hard disk drives

2.5-inch SATA solid state drives

HDD Feature: Hot Swappable**Cache:** SSD Cache Acceleration support

Support for 2 X M.2 NVMe SSDs

2.5 Gigabit Ethernet Port: 4 or higher**10GB Ethernet port:** 2 x 10 GBPE SFP + Smart NIC Port or higher**FC Card:** 2 X Enhanced Gen 6 dual-port 32Gbps Fibre Channel Host Bus Adapter**Token Ring computer networking standard:** Wake on LAN**USB 3.2 Gen 1 port:** Minimum 2**PCIe Slots:** Minimum 3Nos**Form factor:** Rackmount 2U size maximum**Power Supply Unit:** 2 (Redundant & Hot swappable)**Operating System:** Embedded Linux**Supported File Systems (Internal):** EXT4**Supported File Systems (External):** EXT3, EXT4, NTFS, FAT32, HFS+, and exFAT**Storage Management:** Supported RAID types: RAID 0, 1, 5, 6, 10, 50, 60, JBOD, Single

Online RAID capacity expansion; Online RAID level migration

SSD RAID Over-provisioning

SSD read-only and read-write cache

Local user access control: AFP, CIFS/SMB, FTP, and WebDAV**Synchronization:** File syncing across multiple devices with SSL secure connection**FTP:** FTP, SFTP and TFTP protocols

FTP over SSL/TLS (explicit FTPS)

FXP support

SAN Protocol Support: iSCSI (IP-SAN)

Fibre Channel (FC) SAN

LUN can be moved between iSCSI and FC

DDNS: Free host name registration (DDNS)**Virtualization:** Should have Hypervisor Support (Should Create Virtual Machine without third party tool)**Backup Functionality:** NAS to NAS (Real Time)

NAS to Cloud

Should Support TCP-BBR for efficient backup over WAN

Should Support Source side deduplication from NAS to other Source

File Server: File sharing across Windows, Mac, and Linux/UNIX

Microsoft networking (CIFS/SMB)

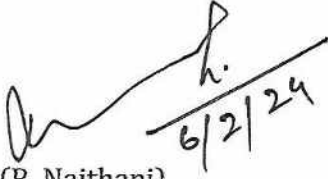
Apple networking (AFP)

NFS version 3/4 services

Windows ACL (CIFS/SMB)
Advanced folder permissions (AFP, CIFS/SMB, and FTP)
Shared folder aggregation (CIFS/SMB)

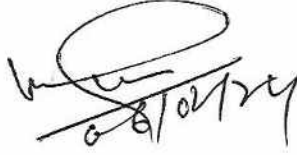
Warranty: 3 Years Standard Warranty

Storage: 48TB Usable on Raid 6 with 4 TB of SSD Caching including capability to increase up to 96TB in future.



h.
6/2/24

(R. Naithani)
DDE



08/02/24

(K. K. Gupta)
DE



08/02/2024

(V. B. Patel)
DE

➤ **Ethernet (Layer 3) Switch Specifications**

1. Should be based on Linux operating system and support IPv4/IPv6 dual protocol stack platform.
2. Should Support multiple link redundancy and network redundancy protocols such as STP/RSTP/MSTP/ERPS/LACP .
3. Should Support PTP .

➤ **Should have perfect safety mechanism as below:**

1. Support ACL security filtering mechanism, which can provide security control functions based on MAC, IP, L4 port
2. Support ARP attack automatic protection and user blocking functions.
3. Support DHCP attack automatic protection based on Mac Address and user blocking functions.
4. Support DDOS and virus attack protection.
5. Support DHCP-snooping/IP-source-Guard/802.1X and other security features.
6. Support remote loop detection function.
7. Support remote user authentication based on TACACS+, Radius, and Local user authentication.

➤ **Should have powerful QoS capabilities as below:**

1. Support port speed and flow speed limit function.
2. Support classification based on service flow and QoS flow control function.
3. Support queue scheduling algorithms such as SP/WRR/SP+WRR.
4. Support port-based and service flow-based mirroring functions.

➤ **Should have rich routing protocol as below:**

1. Support static route.
2. Support dynamic route such as RIP, OSPF.

➤ **Should have simple and easy-to-use network management function as below:**

1. Support CLI based on RS232 serial port, Telnet and SSHv2.
2. Support WEB-based configure operation management; support SNMP V1/V2/V3.
3. Support remote upgrade or equipment through FTP and TFTP.

➤ **Hardware specifications:**

Must have 24 ports (10/100/1000M Base-T) and 4 SFP Ports (1000MBase-XSFP/10GE SFP+)

Exchange capacity: 128Gbps

Packet forwarding rate: 96Mpps

MAC: 16K

Route: 512

Multicast: 1K

Memory: Not less than 256MB

Storage: Not less than 16MB

Software specifications:

➤ **VLAN**

1. Support 4K VLAN.
2. Support VLAN based on port, MAC and protocol.
3. Support dual Tag VLAN, port-based static Q in Q and selective Q in Q.

➤ **MAC**

1. 16 K Mac address.
2. Support static MAC address setting.
3. Support black hole MAC address filtering.
4. Support port MAC address limit.

➤ **Ring Network protocol**

1. Support STP/RSTP/MSTP.
2. Support ERPSE the renting network protection protocol.
3. Support Loop back-detection port loop back detection.

➤ **Port control**

1. Support two-way band width control.
2. Support port storm suppression.
3. Support 9K Jumbo ultra-long frame forwarding Port aggregation.
4. Support static link aggregation Support dynamic LACP.
5. Each aggregation group support maximum 8 ports.

➤ **Mirroring**

1. Support port mirroring.
2. Support stream mirroring ACL.
3. Support standard and extended ACL.
4. Support ACL policy based on time period..
5. Provide flow classification and flow definition based on IP header information such as source/destination MAC address, VLAN, 802.1p, ToS, DSCP, source/destination IP address, L4 port number, protocol type, etc.

➤ QoS

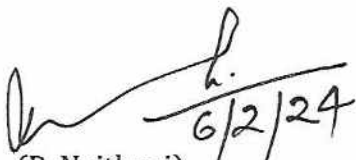
1. Support flow rate limiting function based on custom business flow.
2. Supports mirroring and redirection functions based on custom business flows.
3. Support priority marking based on customer vice flow.
4. Support 802.1P, DSCP priority Remark capability.
5. Support port-based priority scheduling function.
6. Support queue scheduling algorithms such as SP/WRR/SP+WRR.


➤ Safety

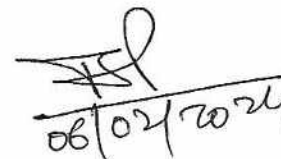
1. Support user hierarchical management and password protection.
2. Support IEEE 802.1X authentication.
3. Support Radius & TACACS+authentication.
4. Support MAC address learning limit.
5. Support black hole MAC function.
6. Support port isolation.
7. Support broadcast message rate suppression.
8. Support IP Source Guard.
9. Support ARP flood suppression and ARP spoofing protection.
10. Support DOS attack and virus attack protection.

➤ Layer3

1. Support ARP learning and aging.
2. Support static route.
3. Support dynamic route RIP/OSPF.
4. Support VRRP System management.
5. CLI, Telnet, WEB, SNMP V1/V2/V3, SSH2.0
6. Support FTP, TFTP file upload and download.
7. Support SNTP.
8. Support system work log.
9. Support LLDP neighbored vice disco very protocol.
10. Support 802.3ah Ethernet OAM.
11. Support RF C3164 Syslog.
12. Support Ping and Trace route.


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