



NATIONAL INSTITUTE OF TECHNOLOGY,  
ROURKELA-769 008 (ORISSA)

No.NIT/RKL/CSNC/06/04

Dated: 12<sup>th</sup> May 2006

Proposals (Technical and financial) are invited from reputed firms for administering of server infrastructure at NIT, Rourkela. The details of scope of work, available infrastructure, personnel requirement are detailed below. Sealed proposal should reach the undersigned by 30<sup>th</sup> June 2006 (the closing date for receipt of proposals has been extended from 31 May 2006).

***Kindly super scribe the envelop with “Quotation for Computer System Administration at NIT, Rourkela” and address it to “Registrar, NIT Rourkela, Rourkela, ORISSA Pin- 769 008”***

### **Available infrastructure:**

Server and Storage systems } Around 15 servers with different Operating Systems and applications

- 2 Intel Xeon / Raid Controller / 8 GB RAM / 2x 72 GB HDD / 4x 1 Gbps Lan card on a rack – 4 servers (365 from IBM)
- 2 Intel Xeon / Raid 5 Controller / 2 GB RAM / 4 x 36 GB HDD / 3 Gbps LAN card on racks – 9 servers. ( x 345 from IBM)
- 1 Intel PIV / 1 GB RAM / 2 x 36 GB 4DD / Gbps LAN ( x 205 from IBM)
- Few other servers ( less than 5)
- 1TB storage on IBM fast T.
- IBM NAS Gateway.
- IBM LTO for backup 4TB uncompressed.
- SAN switch - 2nos.
- Additional hardware can be added in future depending upon the requirement

### **Network:**

***Computer Centre, National Institute of Technology, Rourkela***

- Around 1700 I/O in Campus (Additional 2000 under installation in hostels)
- Two L-3 core switches.
- Approx. 12 K.M of FO cabling
- Nearly 20 distribution switches and 70 edge switches (More under installation).
- Two Firewalls and 2 routers.
- Internet connectivity of 4Mbps and in process of enhancement to 8Mbps.

All network hardware is Avaya make. All are being maintained by Avaya Global Connect

#### **Other Hardware:**

- 100 Thin clients from VxL. Hardware maintenance by VxL.
- Nearly 5 to 10 PCs of different make to manage the network.
- A Lab with 60 PCs for students.
- 24X7 operation of the infrastructure.
- Diesel Generator power backup.

#### **Operating System on Servers: (This infrastructure will be maintained by the service provider)**

**Authentication Server:** One server running on Suse Linux Enterprise Server 9.0 (SLSE9.0) with Novell NNLS and e-Directory for centralized authentication and LDAP server.

**Mail Server:** One server with SLSE 9.0 running Netmail 5.1 (messaging solution) authenticated through NNLS and eDirectory from Novell. The server has nearly 2000 mail accounts.

**File Server:** One SLES 9.0 server connected to NNLS authentication server for authentication server. Provides file server storage for nearly 2000 users. The user data is stored on storage across network (SAN). The server manages 500GB of disk space.

**Virtual office Server:** One server with SLSE 9.0 operating system connected to NNLS authentication server. This provides a web based interface for mail, storage, discussion groups, users based bookmarks.

**Proxy Server:** The proxy server is Linux based proxy called Cyberoam from Elitecore Technologies. The user authentication for accessing the proxy server is made from the authentication server using LDAP.

Intranet portal: Win 2003 Server with SQL databases. The server runs ftp for software access in the campus. The server also provides the antivirus update distribution for the institute network.

Office Automation server: Redhat Linux 3.0 ES server with Oracle database and Java application providing integrated access to institute automation. This also houses the library catalogue running on Libsys software. Data available on this server is stored on the SAN device through fiber channel storage.

Windows Terminal Server (2 nos.): Windows 2003 AES with terminal services. Both of these Servers have LDAP authentication. When users login their authentication is redirected to the LDAP authentication server. These servers provide users with applications/ Software like MATLAB, Ms Office, Auto desk, Visual studio 'net. The server uses SAMBA storage to access the file server cited for user file storage.

Linux Terminal Server (2 nos.): These servers operate on Redhat Linux AS 3.0. The authentication is redirected to the LDAP authentication server. The server also has a NFS client running to connect to the file server. The servers are used for programming work for students.

D-space Server: – Library resource server providing storage of local publications and provides library resource archive of other International universities. It also holds the institute publications including thesis, reports etc.

License Server: Server with Windows2003 OS provides license management of software using *Flexlm*.

Antivirus Gateway server: Server with Windows 2003 server with CA secure content manager provides internet gateway protection for mail and proxy. This server also provides antivirus and pest-petrol signature distribution in the campus.

***The hardware and software can change during the period of service.***

### **Scope of work:**

Computer System Administration of servers at NIT,Rourkela. **(Scope of work does not include hardware maintenance of servers and network equipment. All these are maintained by hardware suppliers).** The service provider will provide 2 to 4 system administrators for management of servers at NIT, Rourkela. The system administrator will be paid by the company providing the service.

### **Qualification and other details for administrators:**

- The systems administrators should possess B Tech/ BE/ MCA qualification with experience in server administration.
- They should possess certification for Windows, Linux and Novell for managing the total infrastructure. They should have good skills in administration of Windows, Linux, Novell servers (OES) and NNLS from Novell.
- Their responsibility will be the following
  - Management of the proxy server including policy setting, log checking and etc.
  - Management and maintenance of the software on the servers providing internet services (mail server, intranet portal server, virtual server, dspace

- server, antivirus gateway and antivirus distribution server) in an uninterrupted manner.
- Management of file server including user account management, creation, maintenance, policy setting. Attending to the user problems relating to these.
- Taking regular backup of servers through LTO using Trivoli Storage Manager.
- Installing and support applications/ software on Windows and Linux servers working as terminal servers.
- Managing the licensing server to manage licenses of application.
- Updating of software when new forms of software are available.
- Downloading and installing freeware application as per the need NIT, Rourkela.
- Responding to emergencies such as virus attacks and system crash.
- Policy setting and fine tuning in antivirus gateway devices for mail and internet access.
- Provide support to institute staff for conducting training to students, staffs and faculties.
- Providing server administrative training to computer centre staff.
- Any other related work assigned by the institute.
- The system administrators will be responsible for 24X7 operation of the infrastructure. However at least one of them should be physically present in computer centre during 8AM to 8PM.
- They will work in the computer centre under the supervision of HOD, Computer Centre and Prof I/C Campus Networking.
- The institute will provide suitable accommodation in the institute of charge for the accommodation of the system administrators.
- In case the personnel take leave for more that 2days (the total absence from station is more than 2 days) the company must provide substitute emergency staff to take care of emergencies and routine work as may be necessary.
- The company will enter into service level agreement for the purpose.
- In case of non-performing administrators they may be replaced by the service provider at the direction of the institute.
- The firm should appoint 2 to 4 system administrators at high level of competence and expertise. Their pay and perks should be competitive with private industry and must be stated by the vendor in the proposal.
- Services for the above are required on annual basis for which payment will be made on quarterly basis
- Table cum seating space will be provided at the server room.

**In case of difficulties regarding this document following persons may be contacted:**

- **Dr.J.K. Satapathy, Chairman, Computer System and Network Committee (Phone: (0661) 2462414; 9437116780 (M))**
- **Dr S.K. Patra, Professor I/C Campus Networking; (Phone: (0661) 2462457; Fax: (0661) 2472926/2462999; 9437116780(M))**

Registrar  
NIT, Rourkela