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

No: NITR/ CC/ HOD/ 2007/ 314   **Dated: 01 August 2007**

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 20st Aug 2007.

Kindly super-scribe the envelop "Quotation for Computer Server
Administration at NIT, Rourkela"

Available infrastructure:

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

- Dual Intel Xeon / Raid Controller / 8 GB RAM / 2x 72 GB HDD / 4x 1 Gbps Lan card on a rack – 4 servers (365 from IBM)

- Dual 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)

- 6TB storage on IBM fast T network based storage.

- IBM NAS Gateway.

- IBM LTO for backup 4TB uncompressed.

- SAN switch - 2nos.

- Additional hardware can be added in future depending upon the requirement

Network:

- Around 4000 network nodes in Campus

- Two L-3 core switches.

- Approx. 12 K.M of FO cabling

- Nearly 20 distribution switches and 100 edge switches (More under installation).

- Two Firewalls and additional 2 ITM devices.

- Internet connectivity of 12 Mbps from two service providers.

- All network hardware is Avaya and Extreme make. These are being maintained by Avaya Global Connect with help of two resident site engineers.

   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.

The detail infrastructure availability, scope of work, qualification and contract conditions are mentioned below:

a) List of Server Operating Systems being used

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: Two servers with SLES 9.0 OS connected to NNLS and LDAP server for authentication. Provides file server storage for nearly 2000 users. The user data is stored on storage across network (SAN). The server manages 2500GB of disk space. The servers also use NFS for file access and ftp services across the network.

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.

Windows Terminal Server (2 nos.): Window 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 sunning to connect to the file server. The servers are used for programming work for students.

Antivirus Gateway sever: 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.

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.

More than one application activities cited above can be installed on single server using virtual servers on single hardware.

b) Scope of work:

All the servers mentioned above are located in the computer centre at NIT, Rourkela. **(Scope of work does not include hardware maintenance of servers and network equipment. All these are maintained by hardware suppliers).** The detailed listing of the activities relating to the scope of work is as under

Server System Administration (The scope of work under this head includes the following)
  o 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.
  o Management of file server including user account management, creation, maintenance, policy setting. Attending to the user problems relating to these.
  o Taking regular backup of servers through LTO using Trivoli Storage Manager.
  o Installing and supporting applications/ software on Windows and Linux servers working as terminal servers.
  o Managing the licensing server to manage licenses of application.
  o Updating of server software when new versions of software are available.
  o Managing antivirus, spam and mail and communication servers.
  o Migration from existing software architecture to new software in event of NIT, procuring new software for the services.
  o Downloading and installing freeware application as per the need of the institute.
  o Responding to emergencies such as virus attacks and system crash.
  o Policy setting and fine tuning in antivirus gateway devices for mail and internet access.
  o Provide support to institute staff for conducting training to students, staffs and faculties.
  o Any other related work assigned by the institute.
  o The system administrators will be responsible for 24X7 operation of the infrastructure. At least one of the administrators should be present in computer centre during 8AM to 8PM.
  o They will work in the computer centre under the supervision of Head, Computer Centre and Prof I/C Campus Networking.
  o The company will enter into service level agreement for the purpose.
  o The firm should appoint system administrators at high level of competence and expertise.
  o Monitor internet services and contact service providers in case of service failure.
  o Call logging to companies incase of service/ software/ network failure

Support Services (The scope of work under this head includes the following)
  o Providing **24X7** manning of the centre.
  o Operate generator in event of power failure.

- Attend to service disruption in student labs in computer centre.
- Install operating system, software on PCs in the computer centre as and when required.
- Take service related phone calls for account login, storage issues etc and provide assistance to users in case of need.
- Work on night time also. In night time only one of these persons will be required to be on duty and NIT will provide security personnel in the night time.
- Able to check the internet connection and contact the ISP if services fail.

c) Recommended Personnel Requirement for providing services:

In order to provide the above mentioned services the service provider should depute personnel at the institute. The recommended personnel requirement and their qualification for sustaining these activities is at least 3 system administrators for server system administration at least 4 support service personnel for round the clock service management. Out of the three server system administrators one will be senior server administrator and other two will be assistant administrator. Thus there should be total of at-lest 7 personnel posted by the service provider in order to provide efficient services. The numbers mentioned are as per our estimate. Firms are permitted to quote considering higher manpower requirement if they feel necessary as per the scope of work/ service.

i. Qualification for senior system administrators:
- The senior systems administrator should preferably possess B Tech/ BE/ MCA qualification with experience in server administration.
- He/ she should possess certification for Windows, Linux and Novell for managing the total infrastructure with good skills in administration of Windows, Linux, Novell servers (OES) and NNLS from Novell.
- He should possess required managerial and leadership skills to lead the team.

ii. Qualification for assistant administrator:
- The assistant administrators should preferably possess B Tech/ BE/ MCA qualification. They can also be Diploma in Computers/ Electronics/ IT with 5 years experience in server administration.
- All administrators are expected to work at odd hours whenever the need arises in order to keep the service available.

iii. Qualification for support staff:
- The support staff should have Diploma in engineering or equivalent qualification with experience similar establishments.

General Instruction for the Companies/ service providers
- In order to attract quality manpower service providers should spend at least 75% of the bill amount in the form of salary paid to the staff posted at NIT, Rourkela. Proof in this regard should be presented in from of salary statement from bank when asked for.
- The number of personnel to be posted is a suggestive minimum requirement guideline for the work based on our experience. Service providers have the liberty to depute more manpower than mentioned above.
- The personnel posted at the institute can avail leave as per the company rules limited to 30days of leave for each person. If the period of leave is more than 7days continuous the company must provide substitute emergency staff.
- Past experience in similar work with institutions of repute will be an added advantage.
- Firms are advised to come prepared for technical discussion along with one of their probable site engineers for the work.
- Bachelor accommodation in student hostel and married accommodation in hostel will be provided to the personnel posted subjected to availability of rooms.
- Incase of non-performing administrators they may be replaced by the service provider at the direction of the institute.
- Services for the above are required on annual basis for which payment will be made on monthly basis. Bills can be raised on 15th of every month.

- o Table cum seating space will be provided at the server room.

The selection Procedure:

The selection of the service provider shall be made by a process of combined quality and cost using the following procedure.

- o The firms will submit their bids in two parts:
  - ⇒ A techno-commercial bid containing (a) the credential of the firm (b) the proposed administrative and personnel structure and (c) qualification and expertise of key personnel either existing or to be recruited.
  - ⇒ A financial bid containing the rate of payment per month to be paid be NIT for the services.
- o The techno-commercial proposal will be examined by a committee appointed by the institute. The firms will be invited to make a presentation/ interview. They must bring one of the senior level personnel to the institute for discussion.
- o The committee will assign marks to each firm our of 70 based on technical evaluation, which will be announced to the bidders before the financial bids are opened. Financial bids of firms which will be judged to be poor in performance will not be opened. Firms whose financial bids are considered unworkable in view of prevailing market condition will be rejected.
- o The financial bids of the remaining firms will be rated out of 30points against their financial bid according to the formula

$$\text{Points} = \frac{30 \times \text{lowest bid value}}{\text{Quoted bid price}}$$

- o Firm securing highest point of technical (70) + financial (30) will be awarded the contract.

For additional queries please contact:

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Important dates and Venues:

Last date for receipt of tender	20st Aug 2007
Venue for submission of tender in case of hand delivery:	Office of Computer Centre, NIT, Rourkela
Date for tender opening	20th Aug 2007
Venue for opening and evaluation of bids	Board room, NIT, Rourkela
Technical and financial evaluation	20th Aug 2007 (3PM)

Sarat Kumar Patra
HOD, Computer Centre
NIT, Rourkela

Tender document approved

Director, NIT, Rourkela
Dt. 01 August 2007