

NYSERNet Position Description

Position Title: Network Engineer

Title of Immediate Supervisor: Manager, Network Operations

Program/Department/Unit: Network Operations Center

Main Function:

Provide technical and engineering support for the NYSErNet Advanced Network Technology Program and related projects, including the NYSErNet Network.

Duties and Responsibilities:

The Network Engineer will act as a technical resource for NYSErNet and its members while serving in multiple engineering roles. Network Engineers are expected to be subject matter experts when serving in some roles, while having just a general familiarity with others. Engineers are strongly encouraged to port their expertise to their NYSErNet peers. The engineering roles and specific tasks associated with them include:

Network Engineering

- Monitor network performance, including developing and deploying network benchmarks and measurement tools, creating baselines, and assessing the effects of network changes.
- Participate in network capacity, redundancy and expansion planning.
- Oversee network software and hardware upgrades, equipment installations and other related activities.
- Provide daily technical support for all NYSErNet participants.
- Participate in the NYSErNet Engineering Work Group.
- Represent NYSErNet by participating in standards committees and working groups.
- Serve as part of an engineer on-call rotation that requires 24x7 availability for the weeks that are assigned.

Sales Engineering

- Provide technical support to Principal Investigators on specific NYSErNet proposals.
- Provide technical assistance for grant proposal writing activities in support of all NYSErNet initiatives.
- Apply technical needs assessment methodologies in support of NYSErNet Membership sales efforts.
- Define, document and diagram proposed products and services.

Implementation Engineering

- Oversee implementation and provisioning activities for new customer connections, backbone links, external network connections and PoPs.
- Manage vendor efforts throughout implementation process.
- Produce project plan to track major vendor and customer milestones and escalate when targets are not met.
- Maintain check sheets to the end that all required tasks are performed.
- Execute test plans to the satisfaction of contracts and customer expectations.

Field Engineering

- Coordinate remote hands efforts in support of NYSErNet colo facilities, PoPs, and customer sites.
- Install and maintain hardware, power facilities, and fiber plants
- Maintain inventory of all tools, equipment, connections, and hardware.
- Assist Members with installs at NYSErNet contracted facilities as well as acceptance testing.
- Trouble shoot problems in the field.

Project Engineering

- Develop and implement projects as required using MS Project.
- Provide leadership and direction for project participants.
- Produce reports and documentation as required by management.
- Deliver fully tested project products and ensure project customer satisfaction.

Systems Engineering

- Research, design, develop, implement and support Network Operations Center server infrastructure and operational tools.
- Backup IT Manager to include server and desktop selection, maintenance, upgrades and back up.
- Design web sites and other web related projects as needed.

Security Engineering

- Provide technical oversight of security related devices and applications for server infrastructure and network.
- Screen lists and security sites for current malicious activities and advisories.
- Maintain expertise in DoS interdiction and anti-hacking methodologies.
- Analyze network data flow and logs for spurious activity and identify offending hosts.
- **Other duties as assigned.**

Knowledge/Experience Requirements:

Bachelor's degree or equivalent with appropriate course work in related fields. Minimum 3-5 years of experience with network engineering and support. Experience with field engineering and equipment installation in telecommunications environments, networking protocols (TCP/IP, SNMP, BGP, multicast, IPv4, IPv6) required. Experience with a variety of network infrastructures including SONET, Gige, and optical technologies needed. Experience with Cisco ONS product line desired. High level project planning skills including MS Project expertise preferred. Must have a strong customer service orientation. Excellent written/verbal communications skills are essential.

Contacts:

Frequent contacts with member and partner research and technical staff. Continuous contact with NYSERNet staff and service providers.

Working Conditions:

Must be available for weekend work and on-call for escalated problems. Travel Required.

Physical Demands:

Normal with daily VDT use.