UNIVERSITY OF SOUTHERN CALIFORNIA

Network Engineer III

Job Code: 165593

OT Eligible:  No

Comp Approval:  10/19/2017

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JOB SUMMARY:

Provides network engineering and technical support for LAN, WAN, and network infrastructure to ensure that systems are operating at peak efficiency with little or no downtime. Designs, configures, troubleshoots, and maintains University network equipment across multiple brands. Ensures that industry best practices are applied with regard to the use of technology, procedures, and methodology. Provides delegation and direction to other Network Engineers. May provide technical and training assistance to less experienced network engineers.

JOB ACCOUNTABILITIES:

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<th>*E/M/NA</th>
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<td>Assists in the design and deployment of local area networks (LANs), wide area networks (WANs) and wireless networks, including servers, routers, hubs, switches, UPSs, and other hardware. Identifies, assesses and develops detailed requirements for new and existing campus networks in accordance with approved network design. Creates detailed implementation plans for project teams, including method of procedure documentation. Analyzes and resolves complex network problems.</td>
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<td>Suggests and optimizes complex network hardware, software, systems, and communication links for university, under minimal supervision. Oversees installation, configuration, maintenance and troubleshooting of campus network, network monitoring software and peripheral applications and/or devices. Performs advanced needs analysis, configuration and problem diagnosis for network devices including routers, switches, VPN servers, and firewalls.</td>
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<td>Consults with campus departments to determine appropriate network hardware and software needs. Recommends appropriate network configurations to meet users’ business needs and departmental standards.</td>
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<td>Analyzes network performance, implements performance tuning, and troubleshoots a variety of complex network problems areas, as needed. Assists other IT staff, faculty and researchers in performance tuning their applications and troubleshooting performance issues. Provides network performance statistics and reports.</td>
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<td>Analyzes, evaluates, tests and recommends new hardware, software, and communications products for network compatibility and applicability. Tests existing equipment before deployment.</td>
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<td>Works closely with industry experts and vendors to develop and deploy advanced networking services, implement effective applications of technology, and resolve complex vendor-specific problems. May entail submission of bug reports to vendors or working groups and follow-up to ensure issues are addressed.</td>
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Creates and maintains detailed documentation with content based on current technologies, architecture, related network configuration, network mapping, processes, and service records. Participates in development, implementation and maintenance of policies, procedures, and associated training plans for network administration, usage, and disaster recovery. In collaboration with other engineers, recommend, optimize or establish new procedures. Share experience and subject matter expertise with other engineers through written and oral presentations.

Helps establish operating, diagnostic, and repair procedures. Assists with network fault diagnosis as required. Participates in 24x7 on-call rotation. Follows University ITIL compliant processes during the execution of these duties.

Collaborates with team members to establish project plans, schedules and priorities. Provides recommendations and requirements to establish final project plans, schedules, and necessary resources. Identifies resource requirements. Provides timely communications to stakeholders, technical staff and management regarding project status and completion of deliverables.

Stays informed of new developments and technologies by reading journals and other pertinent publications, maintaining contact with vendors, and participating in professional organizations, meetings and seminars. Attends conferences or training courses as required.

May provide technical and training assistance to less experienced network engineers, as assigned.

Provides other related duties as assigned or requested. The university reserves the right to add or change duties at any time.

*Select E (ESSENTIAL), M (MARGINAL) or NA (NON-APPLICABLE) to denote importance of each job function to position.

**EMERGENCY RESPONSE/RECOVERY:**

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<th>Essential:</th>
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In the event of an emergency, the employee holding this position is required to "report to duty" in accordance with the university’s Emergency Operations Plan and/or the employee’s department’s emergency response and/or recovery plans. Familiarity with those plans and regular training to implement those plans is required. During or immediately following an emergency, the employee will be notified to assist in the emergency response efforts, and mobilize other staff members if needed.

**JOB QUALIFICATIONS:**

**Minimum Education:**

Bachelor's degree

Combined experience/education as substitute for minimum education

**Minimum Experience:**

3 years

**Minimum Field of Expertise:**

Strong experience and technical knowledge in the area of local and wide area networking, communications, and related hardware and software. Knowledge of data network and telecommunications protocols including but not limited to STP, OSPF, MPLS, BGP, IPV6, SIP, multicast, DNS, and DHCP. Understanding of information technology concepts for voice and data systems. Demonstrated strong oral and written communication skills. Strong
analytical abilities.

**Preferred Education:**

Master's degree

**Preferred Experience:**

5 years

**Preferred Field of Expertise:**

Bachelor's degree or higher in Computer Science or related field. Networking Engineering with certifications such as Cisco CCNP, Redhat RHCE. Ability to write, modify, maintain, and document software tools in a high-level language.

**Skills: Administrative:**

Communicate with others to gather information
Customer service
Gather data
Prioritize different projects
Research information

**Skills: Other:**

Analysis
Assessment/evaluation
Conceptualization and design
Consulting
Knowledge of applicable laws/policies/principles/etc.
Lead/guidance skills
Organization
Planning
Problem identification and resolution
Project management
Scheduling
Teaching/training

**Skills: Technology:**

Applications/systems development methodologies
Business requirements tools and techniques
Enterprise/information architecture
Incident/problem management
Mathematics
Network administration
Network communications technologies
Network design, connectivity and capacity configuration
Network security access, management and testing
Network systems/data backup, storage and recovery
Project management tools and techniques
Quality assurance/testing methods, tools and techniques
Software design tools
Technical documentation
Troubleshooting

**Skills: Machine/Equipment:**
Computer network (department or school)
Computer network (university)
Computer peripheral equipment

**Supervises: Level:**
May lead one or more employees and/or students performing similar work.

**Supervises: Nature of Work:**
Technical

**Comments:**
May provide 24/7 on-call support as needed.

**SIGNATURES:**

Employee: ___________________________ Date:________________________

Supervisor: ___________________________ Date:________________________

The above statements are intended to describe the general nature and level of work being performed. They are not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of personnel so classified.

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