UNIVERSITY OF SOUTHERN CALIFORNIA

Senior Internet Engineer

Job Code: 165598

Grade: 00
OT Eligible: No
Comp Approval: 3/3/2014

JOB SUMMARY:

Oversees, manages, coordinates and participates in developing complex inter-campus, inter-jurisdictional projects with mission-critical implications for the Los Nettos regional network, colocation services, and other projects associated with customers external to the university. Serves as a project leader/technical expert providing project services utilizing a high level of leading edge developmental or prototypical technologies, which requires creative problem solving and technical expertise, cutting across processes, applications, disciplines and technologies. Provides technical and training assistance to less experienced internet engineers, as assigned.

JOB ACCOUNTABILITIES:

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<th>*E/M/NA</th>
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Oversees, manages, coordinates and participates in developing complex inter-campus, inter-jurisdictional technical projects for the Los Nettos regional network, including colocation services, and other projects associated with customers external to the university.

Manages highly complex projects that have high visibility and impact on Los Nettos member institutions and customers. Serves as a project leader/technical expert leading the deployment of cutting edge internet technologies, and utilizing creative problem solving methodologies and high-level technical expertise.

Has responsibility for the design, implementation and troubleshooting of highly complex DWDM, switched, and IP network infrastructure spanning multiple Los Nettos member institutions, customers, IP backbone providers, and IP peering exchanges.

Formulates and defines project scope and objectives. Determines need to change project scope and schedules. Manages project scope to ensure that changes are formalized through a documented change process.

Establishes project plans, schedules and priorities. Identifies resource requirements. Manages delivery of complex deliverables by driving projects through various stages, including project initiation, planning, execution and closure. Provides status reports of project progress for management and stakeholders, as required.

Collaborates with and provides advanced consultative services to constituents. Works closely with industry experts and vendors to provide advanced networking services, effective application of technology, and resolve complex problems.

Coordinates project teams and identifies stakeholders. Communicates regularly and effectively with stakeholders, technical staff, senior management and customers regarding project goals, objectives, deliverables, plans and status throughout the project.

Leads the evaluation of hardware and software products for compatibility, applicability, and feasibility for current use and future growth. Performs meticulous test plans and prototypes in the lab for peer review.
Has responsibility for specifying, installing, and maintaining servers to provide various services, including but not limited to domain name system (DNS), Web, database, and network monitoring and graphing.

Monitors and analyzes network performance, implements performance tuning measures, and troubleshoots highly complex and unique network problems. Develops custom tools using software, as needed.

Ensures and provides engineering and network connectivity support to external projects and customers.

Provides leadership guidance and direction to others, as needed. Reviews the work of others, as needed or requested. Provides technical and training assistance to less experienced internet engineers, as assigned. Mentors/trains peer engineers from Los Nettos community.

Oversees network documentation and maintenance of equipment. Develops network and server security best practices. Devises or modifies procedures to solve complex problems.

Stays informed of new developments, technologies and trends by reading journals and other pertinent publications, maintaining contact with vendors, and participating in professional organizations, meetings, and seminars.

Performs 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:**

Essential: ☐ No
☐ Yes 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:**

5 years

**Minimum Field of Expertise:**

Strong technical knowledge and experience with Optical networking, LAN and WAN switching, IP routing, Linux server management and administration. Knowledge of data network and telecommunications protocols including but not limited to STP, OSPF, MPLS, BGP, IPv6, SIP, multicast, DNS and DHCP. Progressively responsible experience in related field. Demonstrated strong written and oral communication skills with ability to work effectively with internal and external organizations. Strong analytical abilities and reasoning to resolve uncommon problems.
Preferred Education:

Bachelor’s degree

Preferred Experience:

7 years

Preferred Field of Expertise:

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

Skills: Other:

Analytical
Assessment/evaluation
Communication -- written and oral skills
Conceptualization and design
Consulting
Interpersonal skills
Knowledge of applicable laws/policies/principles/etc.
Lead/guidance skills
Organization
Planning
Problem identification and resolution
Project management
Research
Scheduling
Teaching/training

Skilled in:

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
Project management tools and techniques
Quality assurance/testing methods, tools and techniques
Server applications and hardware
Software design tools
Technical documentation
Troubleshooting

Skills: Machine/Equipment:

Calculator
Computer network (department or school)
Computer network (university)
Computer peripheral equipment
Fax
Personal computer
Photocopier

Supervises: Level:

Leads one or more employees performing similar work.

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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