UNIVERSITY OF SOUTHERN CALIFORNIA

Senior Staff Network Engineer (ITS)

Job Code: 167564

OT Eligible: **No**

Comp Approval: **8/27/2019**

JOB SUMMARY:

Leads network engineering and technical support for LAN, WAN, and network infrastructure, ensuring university network systems operate at peak efficiency with little or no downtime. Sets strategic priorities for the design, configuration, troubleshooting, and maintenance of university network equipment across multiple brands. Ensures all networking activities are aligned to industry best practices as well as ITS and university policies, processes, and procedures. Acts as a technical subject matter expert, providing training assistance and technical mentorship. Demonstrates ITS values in action.

JOB ACCOUNTABILITIES:

*E/M/NA	% TIME	
_____	_____	Leads and drives collaboration with key stakeholders within ITS and other university departments to deliver highly reliable network services. Demonstrates excellent creation and maintenance of detailed written documentation, and openly shares experiences and subject-matter expertise with co-workers through written and oral presentations. Leads timely, network-related communications to internal/external stakeholders.
_____	_____	Drives the development, implementation, and maintenance of policies, procedures, and associated training plans for network administration, operations, and disaster recovery. Leads project planning, scheduling, and the establishment of priorities. Oversees and supports custom script development, improving network efficiency and enhancing network automation.
_____	_____	Oversees effective customer engagement to resolve network issues. Provides communications expertise (e.g., asking precise questions to uncover pain points) to determine device suitability and capability for campus network connections, all in accordance with approved network and security policies.
_____	_____	Maintains currency with new and emerging technologies and approaches, leveraging the latest industry knowledge to facilitate opportunities for strategically drive innovation and continuous improvement. Establishes a team culture of continuous learning, enabling the pursuit of information on new network engineering developments, talking with vendors, reading journals and other pertinent publications, and participating in professional organizations, meetings, conferences, seminars and training courses.
_____	_____	Directs the hands-on, proactive, and reactive maintenance and troubleshooting support for network availability, reliability, and security based on best-in-class service levels. Facilitates the delivery of subject matter expertise for Tier 1 and Tier 2 service teams. Manages campus network architecture, design, implementation, and operations, ensuring alignment with ITS and university security requirements. Analyzes reported metrics, monitoring a configured, maintained Network Monitoring System that leverages existing tools and leading-edge practices. Directs day-to-day network operations (e.g., upgrading and applying patches to platform consoles, agents, and back-end components).

_____ _____ Guides team members to actively listen and participate in relevant discussions, asking pertinent questions to identify root causes of network issues. Oversees the recommendation and implementation of realistic solutions. Analyzes network data and statistics, proactively and reactively resolving network issues. Partners with industry experts and vendors to find and implement effective technology applications. Resolves complex, vendor-specific problems, and submits bug reports to vendors.

_____ _____ Aids the cultivation of an inclusive environment and a culture of trust and transparency, sharing information broadly, openly, and deliberately. Builds and maintains collaborative relationships with diverse team members, peers, and leaders. Actively embodies ITS values and behaviors (e.g., accountability, ethics, best-in-class customer service).

_____ _____ Collaborates with team members and management, implementing effective solutions to support the network engineering team's vision. Maintains currency with technology, standards, and best practices. Supports process improvement efforts within the team and across the ITS organization.

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:

Extensive experience with enterprise networking technologies, tools, and processes (e.g., routing and switching), L4-7 traffic management (e.g., load balancer), firewalls, data-center fabric, campus networks, VoIP, wireless, network admission control (NAC), virtualization, and hybrid cloud. Proficient with network operating systems (e.g., Arista EOS, Cisco IOS/XE/XR, Aruba AOS, Linux). Practical experience with L1 technologies (e.g., SMF, MMF, DWDM, Transceivers, AOC, Twinax, Fiber fan-outs). Firm understanding of other network protocols and methods (e.g., Multicast, IPv6), and expertise in addressing mechanisms (e.g., DNS, DHCP, and IPAM, using both IPv4 and IPv6). Extensive experience with L2 protocols (e.g., STP, DHCP, 802.1X, LACP, MLAG, VXLAN bridging) and L3 protocols and techniques (e.g., MP-BGP, OSPF, VXLAN routing, VRFs, VRRP, VARP, Traffic Engineering, NAT, TCP/IP). Solid understanding of TACACS/RADIUS, and

802.11a/b/g/n/ac, RF, and WLAN fundamentals. Extensive experience with firewall configuration and administration, and network traffic analysis for troubleshooting (e.g., tcpdump, Wireshark, Netflow/sFlow, iperf). Experience automating networks using programming/scripting languages (e.g., Python, Ansible, Git). Ability to lead design discussions and independently develop solutions, generate reports, create presentations, and interact with leadership. Ability to drive vendor selection, engage with vendors, manage relationships, evaluate vendor data, document test plans, and develop deployment workbooks.

Preferred Education:

Bachelor's degree

Preferred Experience:

8 years

Preferred Field of Expertise:

Bachelor's degree in computer science, computer information systems, information technology, or relevant field. CCIE certification. Experience in IT and/or network engineering. Experience with Ethernet VPN (EVPN), ClearPass, Fortinet and Aruba Wireless. In-depth knowledge of SolarWinds Orion (or other NMSs).

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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