



USC University of
Southern California

Senior Network Engineer

Job Description

JOB INFORMATION

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|--------------------------|--------------------------|
| <i>Job Code:</i> | 167564 |
| <i>Job Title:</i> | Senior Network Engineer |
| <i>FLSA Status:</i> | Exempt |
| <i>Supervisory:</i> | |
| <i>Job Family:</i> | Network Administration |
| <i>Job Family Group:</i> | Information Technology |
| <i>Management Level:</i> | 7 Individual Contributor |

JOB SUMMARY

Drives technical support for network engineering and infrastructure, ensuring systems operate at peak efficiency with little or no downtime. Sets strategic priorities for the design, configuration, troubleshooting and maintenance of network equipment across the university.

JOB QUALIFICATIONS:

Education

| <i>Req</i> | <i>Pref</i> | <i>Degree</i> | <i>Field of Study</i> | |
|------------|-------------|-------------------|------------------------------|----|
| X | | Bachelor's degree | | |
| | X | Bachelor's degree | | |
| | X | | Computer Science | Or |
| | X | | Computer Information Systems | Or |
| | X | | in related field(s) | |

Additional Education

Check here if experience may substitute for some of the above education.

Combined experience/education as substitute for minimum education

Work Experience

| <i>Req</i> | <i>Pref</i> | <i>Work Experience</i> | <i>Experience Level</i> | |
|------------|-------------|------------------------|-------------------------|--|
| X | | 5 years | | |
| | X | 8 years | | |

Additional Work Experience

Check here if education may substitute for some of the above work experience.

Combined experience/education as substitute for minimum work experience

Knowledge, Skills and Abilities

| Req | Pref | Functional Skills |
|-----|------|--|
| X | | 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, network admission control (NAC), virtualization, and hybrid cloud applications. |
| X | | Proficiency with network operating systems (e.g., Arista EOS, Cisco IOS/XE/XR, Aruba AOS, Linux). |
| X | | Demonstrated experience with L1 technologies (e.g., SMF, MMF, DWDM, Transceivers, AOC, Twinax, Fiber fan-outs). |
| X | | Demonstrated knowledge of network protocols and methods (e.g., Multicast, IPv6) and expertise in addressing mechanisms (e.g., DNS, DHCP, and IPAM, using both IPv4 and IPv6). |
| X | | 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). |
| X | | Demonstrated knowledge of TACACS/RADIUS. |
| X | | Extensive experience with firewall configuration and administration and network traffic analysis for troubleshooting (e.g., tcpdump, Wireshark, Netflow/sFlow, iperf). |
| X | | 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. |
| X | | Ability to drive vendor selection and engagement, manage relationships, evaluate vendor data, document test plans, and develop deployment workbooks |
| | X | Excellent written and oral communication skills, with demonstrated discipline recognizing and handling confidential and sensitive information. |
| | X | Experience managing support cases with external technology vendors and performing active and passive wireless site surveys. |
| | X | Proven ability to develop positive working relationships and strong rapport with team members. |
| | X | Experience in IT, network engineering, and/or wireless networks. |
| | X | Experience with Arista and HPE/Aruba switches and routers, and solid knowledge of server and virtual technologies. |

Other Job Factors

JOB ACCOUNTABILITIES

| | % Time | Essential | Marginal | N/A |
|---|--------|-----------|----------|-----|
| Drives collaboration with relevant stakeholders to deliver highly reliable network services. Creates and maintains detailed written documentation, and provides timely communications to stakeholders, technical staff, and management as required. Openly shares subject-matter expertise to help implement effective solutions to issues. | | | | |
| Drives the development, implementation, and maintenance of policies, procedures, and associated training plans for network administration, operations, and disaster recovery. Oversees and supports network automation development to improve network efficiency. Drives project planning, scheduling, and prioritization. | | | | |
| Effectively engages appropriate customers to resolve network issues. Consults with relevant stakeholders to determine device suitability and capability for campus network connections, in accordance with approved network and security policies. | | | | |
| Designs and manages network device implementation in accordance with network and security requirements. Reviews network designs and makes recommendations for improvements. Oversees on-site verification of implementations to identify or anticipate problems and implement fixes. | | | | |
| Participates in data aggregation and identification of root causes to network issues, and recommends realistic solutions. Analyzes network data and statistics to both proactively and reactively resolve network issues. Partners with industry experts and vendors to find and implement effective technology applications. Resolves complex, vendor-specific problems, and submits bug reports. | | | | |
| Stays current with new/emerging technologies and approaches, leveraging the latest industry knowledge to facilitate opportunities for innovation and continuous improvement. Creates staff development opportunities, engaging with vendors, reading journals and other pertinent publications, and participating in professional organizations, meetings, conferences, seminars, and training courses. | | | | |

JOB ACCOUNTABILITIES

| | <i>% Time</i> | <i>Essential</i> | <i>Marginal</i> | <i>N/A</i> |
|---|---------------|------------------|-----------------|------------|
| Promotes an environment that fosters inclusive relationships and creates unbiased opportunities for contributions through ideas, words, and actions that uphold principles of the USC Code of Ethics. | | | | |

Other Requirements

| <i>Essential:</i> | <i>Emergency Response/Recovery</i> | <i>Essential:</i> | <i>Mandated Reporter</i> |
|--|--|-------------------|---|
| | 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. | | A mandated reporter who in his or her professional capacity has knowledge of, or reasonably suspects a person who is under the age of 18 years, elderly, or a dependent adult has been the victim of abuse or neglect must report the suspected incident. The reporter must contact a designated agency immediately or as soon as practically possible by telephone or in writing within 36 hours. By virtue of the associated job duties, this position qualifies as a mandated reporter as required by state law and USC’s policy at: https://policy.usc.edu/mandated-reporters/ |
| <i>Campus Security Authority (CSA)</i> | | | <i>Essential:</i> |
| By virtue of the associated job duties, this position qualifies as a Campus Security Authority as required by law and USC’s policy at: https://dps.usc.edu/alerts/clery/ | | | No |

ACKNOWLEDGMENTS

The above statements reflect the essential and non-essential functions as necessary to describe the principle contents of the job. They are not intended to be a complete statement of all work requirements or duties that may be required of the position. I understand that I may be asked to perform other duties as assigned. USC reserves the right to add or change duties at any time.

The University of Southern California is an Equal Opportunity Employer. USC prohibits discrimination on any basis protected under federal, state, or local law, regulation, or ordinance or university policies. All employment decisions are based on individual qualifications and business need.

I acknowledge receipt of this job description and its associated physical requirements. I have read and understand the job description and job requirements and agree to abide by their contents. I realize that duties may be requested of me that are not specifically stated herein. I understand that I will be expected to adjust to potential fluctuations in work volume. I understand that, if I have any questions about the essential functions or expectations of my position, my supervisor and/or HR partner are available to discuss them with me.

Print Employee Name

Signature

Date

Print Manager Name

Signature

Date

This job description describes the general nature and level of work required by the position. It is not intended to be an all-inclusive list of qualifications, skills, duties, responsibilities or working conditions of the job. The job description is subject to change with or without notice, and Management reserves the right to add, modify or remove any qualification or duty. Nothing in this job description changes the existing at-will employment relationship between the university and the employee occupying the position.