



DATE	September 2020
JOB CODE	
FLSA	EXEMPT
EEO	

JOB TITLE: Senior Network Engineer
DEPARTMENT/DIVISION: Information Systems
REPORTS TO: Infrastructure Manager

SUMMARY: Responsible for the overall design, installation, and management of the City’s wide area network, local network, as well as top tier troubleshooting for IS systems. Design, document and implement the City’s business continuity plan. Also responsible for participating in project activities, consulting with IS and business leaders, and offering training and guidance to team members.

ESSENTIAL JOB FUNCTIONS:

- May serve as a lead to lower level staff, which includes prioritizing and assigning work; training staff on work methods and procedures; and/or, performing other related activities.
- Keep management abreast of infrastructure operational status and activities through periodic verbal and written status reports.
- Coordinate with customers and Department management in a methodical and professional manner to gather business requirements to enhance existing City infrastructure.
- Provide technical leadership for establishing the best possible options for designing and deriving the best solutions based on sound analytical judgment, team input and the customers’ best interest.
- Participates in the management of ongoing projects through business meetings, briefings with Department management, and document creation, maintenance, and preparation.
- Overseeing, designing, and implementing new network solutions and/or improving the efficiency of current networks.
- Oversight of installation, configuration, and support of network equipment including routers, proxy servers, switches, WAN accelerators, DNS and DHCP.
- Procuring network equipment and managing subcontractors involved with network installation.
- Overseeing and configuring firewalls, routing and switching to maximize network efficiency and security.
- Maximizing network performance through ongoing monitoring and troubleshooting.
- Coordinating scheduled upgrades and investigating faults in the network.
- Design and implementation of new solutions and improve the resilience of the modern surroundings.
- Oversight of disaster recovery operations and record backups when required.
- Serve as a technical expert for top tier support of complex infrastructure hardware and application issues.
- Manage system growth through effective capacity planning and timely recommendations for upgrades.

- Create and maintain documentation of enterprise infrastructure topology and system configurations.
- Maintain compliance with external regulatory controls, such as the Texas Department of Information Resources.
- Participates in a variety of special projects in support of departmental operations, which may include performing special studies; providing guidance and recommendations to departments to ensure organizational sustainability and maximize organizational efficiency, effectiveness, and performance; recommending cost-conscious decisions and actions; and/or, performing other related activities.
- Performs other duties as assigned, which may involve irregular work hours, including evenings and weekends.

KNOWLEDGE, SKILLS, AND ABILITIES:

- Extensive technical knowledge of current network technologies, standards, protocols, and hardware, including CLI configuration and management of Cisco 9300 and 9500 switches.
- Experience in managing Cisco DNA Center.
- Experience in working on Palo Alto firewalls.
- Experience in radio network technology, including Radwin software/radios preferred.
- Advanced knowledge in the processes and tools used in monitoring a complex IT environment
- Advanced knowledge in designing, improving, and implementing highly complex systems
- Advanced knowledge of networking protocols (e.g., IPSEC, HSRP, BGP, OSPF, 802.11, QoS)
- Advanced knowledge of the OSI or TCP/IP model with focus on layers 1 - 3.
- Knowledge of iSCSI, Fibre Channel, and SAN.
- Knowledge of SCADA and Operational Technology Systems preferred.
- Knowledge of process improvement principles and practices
- Knowledge of networking technologies and protocols, as well as network management and event logging tools
- Knowledge of disaster and business recovery practices
- Knowledge of government operations and processes preferred.
- Skilled in fiber optic cable maintenance.
- Skilled in designing secure networks, systems, and applications architecture
- Skilled in evaluating quality and reviewing final work products
- Skilled in analyzing security processes
- Skilled in assessing cost efficiency and effectiveness of municipal operations
- Skilled in tracking service call and installations
- Skilled in identifying and solving problems
- Skilled in documenting service outages and resolutions
- Skilled in working independently or part of a team in delivering excellent customer service
- Skilled in reading and interpreting technical documents

- Skilled in applying independent judgment, personal discretion, and resourcefulness in interpreting and applying guidelines
- Skilled in reading, interpreting, applying, authoring and explaining rules, regulations, policies, and procedures
- Skilled in preparing clear and concise reports
- Skilled in gathering and analyzing information and making recommendations based on findings and in support of organizational goals
- Skilled in operating a computer and related software applications
- Skilled in communicating effectively with a variety of individuals
- Ability to communicate with users to define system requirements and resolve problems
- Ability to analyze technical problems and develop workable solutions

MINIMUM QUALIFICATIONS:

- Bachelor's Degree in Information Technology, Computer Science or related area of study or equivalent work experience.
- 5 years' progressive experience in designing, configuring, administering, maintaining and a complex network environment, including LAN, WAN, and SD-WAN environments
- Hold one or more of the following certifications (or substantially similar) or ability to obtain within one year of employment:
 - Cisco Certified Internetwork Expert
 - Cisco Certified Network Professional
 - Cisco Certified Network Associate
 - CompTIA Network+
- Must qualify for and maintain compliance with Criminal Justice Information Systems access requirements
- Must possess or be able to obtain and maintain a valid Texas driver's license

PREFERENCES:

- 5-7 years' experience designing, configuring, administering, maintaining and a complex network environment
- Hold two or more of the following certifications (or substantially similar);
 - Cisco Certified Internetwork Expert
 - Cisco Certified Network Professional
 - Cisco Certified Network Associate
 - CompTIA Network+

WORKING CONDITIONS:

- Frequent reaching, sitting, talking, seeing, hearing, and manual dexterity
- Occasional climbing, balancing, stooping, kneeling, and crouching
- Sedentary office and outdoors work environments
- Occasional lifting and carrying up to 50 pounds
- Work may be performed in a data-center environment, involving loud noise and temperature irregularity
- Work both indoors and outdoors and are exposed to cold and hot temperatures, constant noise, fume/odor hazards, road hazards, heights, and mechanical and electrical hazards.

CONDITIONS OF EMPLOYMENT:

- Must pass pre-employment drug test.
- Must pass criminal history check.
- Must pass motor vehicle records check.
- Must pass a practical skills evaluation.