

CLASS TITLE: SYSTEMS ENGINEER II – NETWORK SERVICES

PURPOSE OF THE CLASSIFICATION: Under direction is responsible for evaluating, testing, recommending, implementing and maintaining data communications hardware for a large Metropolitan Area Network, assists in administering management and utility applications for the network and conduit systems, analyzing and optimizing network traffic flow and detecting, isolating and correcting network errors and outages and other related assigned duties.

ESSENTIAL TASKS:

- Installs, configures and maintains layer-2 and 3 network switches, related components and operating systems
- Designs building and campus networks, including the logical and physical structure
- Assists in projects to develop or improve services over the network
- Monitors, analyzes and optimizes network traffic flow
- Evaluates, tests, recommends, implements and maintains network management, monitoring, and troubleshooting applications
- Maintains compliance with internal business processes, including configuration and change management
- Evaluates, tests and recommends new networking technologies
- Researches, evaluates, recommends, implements and maintains network security according to standards and best practices
- Manages projects as assigned in accordance with established processes as outlined by the Project Management Organization (PMO)
- Assists the Service Desk in troubleshooting and resolving communications issues
- Documents configurations, processes and procedures for network operations
- Maintains City Fiber inside and outside plant
- Assists with managing City's downtown "Conduit System"
- Oversees contract work performed on Conduit System and City's Fiber
- Creates network performance reports on schedule and/or request
- Must report to work on a regular and timely basis

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential tasks.

QUALIFICATIONS

Training and Experience: Graduation from an accredited college or university with a bachelor's degree in data communications, telecommunications, industrial engineering, mathematics, statistics or other related fields, including or supplemented by coursework in data communications and computer sciences; and four (4) years of experience in data communications; or an equivalent combination of training and experience per Personnel Policies and Procedures, Section 128.

Knowledge, Abilities, and Skills: Considerable knowledge of networking/fiber management standards, protocols and best practices, including Transmission Control Protocol/Internet Protocol (TCP/IP), Open Shortest Path First (OSPF), Virtual Redundant Routing Protocol (VRRP), Border Gateway Protocol (BGP), Ethernet, Virtual Local Area Networks (VLAN's), Multiprotocol Label Switching (MPLS), Domain Name System (DNS) Dynamic Configuration Host Protocol (DHCP), Simple Network Management Protocol (SNMP), sFlow and wireless communications, including IEEE 802.11 Wireless LAN protocol, IEEE 802.15 Wireless Personal Area Network (WPAN), Bluetooth and point-to-point wireless methods, Voice over Internet Protocol (VoIP), Supervisory Control and Data Acquisition (SCADA) and streaming media, information security, including encryption, Virtual Private Network (VPN), IEEE 802.1x, Port-based Network Access Control (PNAC) RADIUS, firewalls, Access Control Lists (ACL's), network access control systems and intrusion prevention/detection systems; knowledge of Right of Way ordinances, installation standards for aerial fiber and best practices for buried fiber installation, knowledge of conduit systems, configurations, diagrams and regulations, National Institute of Standards and Technology (NIST) Special Publications 800 series and Requests for Comments (RFC's), business processes for information technology, including

Information Technology Infrastructure Library (ITIL) and Control Objectives for Information and related Technology (COBIT). Ability to perform analysis of operating and/or data communications systems from technical feasibility aspects; ability to work independently and to recognize, analyze and solve complex problems; ability and willingness to train junior members of the network services team; demonstrated ability in writing reports for different audiences on network and IT topics, some project management, including planning, work breakdown structure, setting milestones and status reporting; ability to exercise excellent customer service, interpersonal skills and problem resolution meeting customer expectations; and the ability to understand and influence the behavior of others within the organization, customers or the public in order to achieve job objectives and cause action or understanding.

Physical Requirements: Physical requirements include arm and hand dexterity enough to use a keyboard and telephone; frequent lifting up to 20 pounds; occasional lifting and carrying up to 60 pounds; occasional pushing and pulling up to 60 pounds; may be subject to sitting, walking, standing, reaching, bending, kneeling, crawling, handling, feeling, climbing, smelling, and twisting; and vision, speech, and hearing sufficient to perform the essential tasks.

Licenses and Certificates: Brocade IP, Avaya, Hewlett-Packard, Juniper, Cisco, Alcatel or Extreme certification preferred; CompTIA Network+ or other manufacturer certification acceptable; Certified Information System Security Professional (CISSP) or Global Information Assurance Certification (GIAC) preferred; and possession of an appropriate network certification for the Manufacturer of the City's Core and Edge equipment must be obtained within one year from date of employment.

WORKING ENVIRONMENT: Working environment is both indoors and outdoors, mostly in a climate-controlled environment; and on call after hour support is required.

Class code: 3009
EEO Code: E-02
Pay Code: IS-40

Group: Clerical and Administrative
Series: Data Processing and Information Services

Effective Date: August 29, 2011