



## CLASS TITLE | NETWORK ENGINEER II

PAY GRADE: IS-40 | [www.cityoftulsa.org/pay](http://www.cityoftulsa.org/pay)

Effective Date: 04/29/2026

CLASS CODE: 2683

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**PURPOSE OF THE CLASSIFICATION:** Under general 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 performs 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 logical and physical structure
- Assists in projects to develop or improve services over the network
- Monitors, analyzes and optimizes network traffic flow
- Evaluates, recommends, implements and maintains network management, monitoring, and troubleshooting applications
- Maintains compliance with internal business processes including configuration and change management
- Researches, implements, and maintains network security according to standards and best practices
- 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 Systems and City 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: Must meet the following criteria or an equivalent combination of training and experience per Personnel Policies and Procedures, Section 100:

- (a) Graduation from an accredited college or university with a Bachelor of Technology in Information Technologies or related field; **and,**
- (b) Four (4) years' experience in data communications

### Knowledge, Abilities and Skills:

Knowledge of:

- Networking/fiber management standards, protocols and best practices



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- Transmission Control Protocol/Internet Protocol
- Open Shortest Path First (OSPF)
- Virtual Redundant Routing Protocol (VRRP)
- Border Gateway Protocol (BGP)
- Virtual Local Area Networks (VLAN's)
- Multiprotocol Label Switching (MPLS)
- Domain Name System (DNS)
- Dynamic Host Configuration Protocol (DHCP)
- Simple Network Management Protocol (SNMP)
- Netflow and sFlow
- Wireless communications, including IEEE 802.11 Wireless LAN protocol
- Supervisory Control and Data Acquisition (SCADA)
- IEEE 802.1x
- Port-based Network Access Control (PNAC)
- RADIUS
- Access Control Lists (ACL's)
- Cisco ACI

Ability to:

- Troubleshoot and analyze fundamental systems/infrastructure applications/issues
- Communicate verbally and in writing with all levels of customers
- Document advanced technical information in a concise and understandable format
- Perform basic scripting

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:

1. Possession of a valid Oklahoma class "D" Driver license; **and,**
2. Possession of Cisco Certified Network Associate certificate (CCNA) *preferred*

**WORKING ENVIRONMENT:** Working environment is primarily indoors and occasionally outdoors and in inclement weather. May be exposed to the following: hazardous materials, animal waste/dead animals, flammable liquids, radiation, traffic, cramped work areas, excessive dust, weather/temperature extremes, trench excavations, underground gas/electric/petroleum/fiber optic lines, rough terrains, cutting/chipping/grinding, hazardous/toxic atmospheres, sewage, damp/wet surfaces, snow/ice covered surfaces, animal bites, insect bites, poisonous plants, overhead power lines, toxic fumes/vapors/odors, confined



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spaces, compressed gases, high noise areas. Standby and on-call after-hour support is required.

**EEO Code: E-02**

**Group: Clerical and Administrative**

**Series: Data Processing and Information Services**