LOS ANGELES UNIFIED SCHOOL DISTRICT
PERSONNEL COMMISSION

CLASS DESCRIPTION
CLASS CODE 3526
UNIT D

NETWORK SYSTEMS ENGINEER

DEFINITION

Audits, modifies, remedies, and maintains configuration for core District network systems and analyzes capacity usage to make projections and provide escalation support for network service issues.

TYPICAL DUTIES

- Performs incident response for core network and telecommunications systems and services by routinely auditing and reconfiguring all systems and coordinating with vendors as needed.
- Generates reports using network management and monitoring systems to identify, analyze, and remedy root cause of issues.
- Analyzes capacity usage and regularly makes projections to ensure appropriate bandwidth is established for school sites.
- Communicates and ensures version updates to school and office network systems and applies routine changes to core network applications.
- Audits and validates request fulfillment for schools and office network systems to assess if appropriate action was taken and to assess the impact of actions on other systems and devices.
- Participates in cross-functional team meetings to identify issues with service delivery and recommends solutions.
- Creates operational diagrams and workflows to identify activities and order of implementation required for resolution.
- Documents and performs all routine changes using service management tools (e.g. VitalQIP, CallManager, Clearpass,etc,) required for upgrades and configuration changes.
- Communicates any changes made and the impact of these changes at change management meetings.
- Performs acceptance testing of newly transitioned school and office systems and services to ensure compliance with configurations and standards.
- Assists higher level staff with core network and telecommunications systems upgrades and utilizes operational expertise to assist with configuration and automation projects.
- Performs research and provides technical training to lower level and other IT support staff, including written procedures and reference documentation.
- Assists with testing and developing network programmability scripts to automate interaction between network and telecommunications systems.
- Audits and creates reports of network assets using automation tools, creates alerts for network software and licensing violations, and works with other departments to enforce accuracy of network asset management.
- Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES:

A Network Systems Engineer reviews, modifies, and maintains the configuration for the District's network systems and performs capacity analysis to ensure sufficient bandwidth is established for school sites.

The Director of IT, Network Operations is responsible for the Network Operations Branch and administers, supports, and manages the District's Wide Area Network (WAN) and Local Area Network (LAN).

An IT Operations Manager provides services, processes, and standardizes procedures for an IT department within the Division of Information Technology.

WAN Specialist ll programs, configures, analyzes, and monitors advanced auxiliary WAN support equipment, and/or maintains security infrastructure and provides specialized voice, video, and security expertise to ensure reliability of the District's enterprise network.

SUPERVISION

Supervision is received from the Director of IT, Network Operations and/or designee. Work direction may be exercised over technical lower-level personnel.

CLASS QUALIFICATIONS

Knowledge of:

VoIP, QoS, SIP, video conferencing, and video streaming
LAN/WAN internetworking
Wi-Fi, Cisco and Aruba Technology
IEEE 802.x networking standards
Cisco and Aruba WLAN technologies
IP Multicasting and troubleshooting
Cisco routers and HP, Alcatel, Cisco switches
Protocols including TCP/IP, OSPF, BGP, NetBIOS, DHCP, LDP, MBGP, MPLS, NAT64, IPv6, OSPFv3, TFTP, HTTP, and IPsec
IP classes, subnets, multicasts, and NAT
Network analysis tools
LAN/WAN network design, integration, and implementation
Principles of LAN/WAN/multimedia network design, traffic engineering, network security administration, encryption technologies, software, and applications
Valcom IP solutions
ITIL service lifecycle management best practices
Basic project management concept
Valcom IP solutions
ITIL service lifecycle management and best practices.
Basic project management concept.

Ability to:

Install, configure, and provide continuous improvement recommendations for wired, wireless, and convergence services
Integrate multivendor voice services

Utilize data analytic tools to improve service quality and performance
Write or code basic or simple scripts to automate and improve processes
Work well under pressure and manage multiple projects simultaneously
Produce and maintain documentation of network implementations
Prioritize and successfully complete tasks in a timely manner
Analyze and interpret materials and problems involving rules, procedures, documentation, and related matters
Maintain effective working relationships with District personnel and representatives of manufacturers, vendors, contractors and other organizations
Communicate complex technical presentation in layman's term to non-technical personnel
Assists with the procurement process for purchasing network equipment and coordinate with technical staff involved with network services related projects.

ENTRANCE QUALIFICATIONS

Education:

Graduation from a recognized college or university with a bachelor's degree in data communications, network engineering, computer science, information systems, electrical engineering, mathematics, telecommunications management, or a related field. Qualifying experience in addition to that listed below, may be substituted for the required education on a year-to-year basis provided that the requirement of a high school diploma or equivalent is met.

Experience:

Four years of experience maintaining and supporting large-scale enterprise or service provider network infrastructures and services in the areas of LAN and WAN, Data Center Network, Internet, voice and converge services or Wired and wireless services. Two years of the aforementioned experience must have been in a position where issues were escalated to them by lower-level staff to be resolved.

Special:

A valid California Driver License.
Use of an automobile.
A minimum of one of the certifications listed below is required:
Cisco Certified Network Professional (CCNP)
Cisco Certified Voice Professional (CCVP)
Cisco advanced certifications (such as CCIE), or equivalent are preferable.

This class description is not a complete statement of essential functions, responsibilities, or requirements. Entrance requirements are representative of the minimum level of knowledge, skill, and/or abilities. To the extent permitted by law, management retains the discretion to add or change typical duties of a position at any time, as long as such addition or change is reasonably related to existing duties.

New Class
08-05-21
MCV

Reviewed
09-15-22
LKD