Sacramento County Office of Education Job Description
Classification Title: Network Architect

DEFINITION

Under general direction, performs a variety of specialized duties in the implementation and management of Sacramento County Office of Education (SCOE) Wide Area Network (WAN), Local Area Network (LAN), and data center connectivity; provides network user support and training; performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

The Network Architect is distinguished from the Network Administrator through the assignment of primary responsibility for the overall design, planning, and strategic implementation of SCOE's network infrastructure. This classification requires advanced expertise, broader decision-making authority, and provides leadership and technical direction, whereas the Network Administrator focuses on day-to-day network maintenance, troubleshooting, and support.

DIRECTLY RESPONSIBLE TO

Appropriate Administrator

SUPERVISION OVER

Professional, technical, and clerical staff as assigned

DUTIES AND RESPONSIBILITIES

Any one position may not include all the listed duties, nor do all of the listed examples include all tasks which may be found in positions within this classification.

- Maintains and monitors all aspects of the SCOE WAN and LAN infrastructure, including design, implementation, management, troubleshooting, and documentation;
- Designs and prepares for network installations, upgrades, and emergencies;
- Manages Internet connectivity for SCOE sites, programs, and Local Education Agencies (LEAs) in the service area;
- Provides technical assistance to SCOE staff and programs related to network infrastructure;
- Responds to network outages and creates related reports;
- Provides network support to LEAs as needed;
- Designs, implements, and maintains various networking infrastructures including switches and routers, voice over IP (VoIP), wireless video surveillance, building automation, security applications, and intercom systems;
- Builds and configures Network Firewall, Content Filtering, and Domain Name Servers (DNS) infrastructures;
- Troubleshoots various aspects of SCOE's fiberoptic cables, which may include the use of an Optic Time Domain Reflectometer (OTDR) or other optical equipment;
- Maintains various datacenter infrastructures, including the Uninterruptible Power Supply (UPS), backup power generator, and computer room air conditioning;
- Manages hazardous materials (HazMat) documentation, reporting, and training associated with backup power generator; Coordinates with suppliers, vendors, and staff related to the installation and maintenance of networking infrastructure;
- Architects WAN and LAN designs;
- Evaluates, procures, and implements networking infrastructure hardware and software;
- Performs upgrades, regular maintenance, and security patches of network-related software and equipment to ensure continuous operations;
- Installs network equipment using various hand tools;
- Works with cybersecurity staff to research and resolve network-related vulnerabilities, and assists with the implementation and maintenance of security policies;
- Coordinates compliance and documentation, reviews bid responses, and evaluates vendor performance for the federal E-Rate program;

- Coordinates and facilitates county-wide networking meetings with LEA partners;
- Attends meetings, trainings, conferences, and user groups as necessary;
- Provides leadership, guidance, and training to technical staff in support of department needs;
- Selects, trains, supervises, and evaluates staff.

<u>MINIMUM QUALIFICATIONS</u>

Education, Training, and Experience
- Any combination of education, training, and experience equivalent to a bachelor's degree from a regionally accredited institution, which demonstrates the ability to perform the duties and responsibilities as described;
- Five years or more of experience performing networking-related duties;
- Advanced coursework in computer technology, network administration, or a similar field preferred;
- Experience with managing and working in a multi-site WAN/LAN environment;
- HPE/Aruba, Cisco, Juniper, Arista, Palo Alto Networks, Microsoft Network, or other network-related certifications preferred.

Knowledge of
- Advanced switch and router configuration;
- WAN and LAN best practices, including installation, maintenance, and troubleshooting of network equipment and devices;
- Technical aspects of wireless networking and network security;
- E-Rate regulations;
- Wiring standards and related specifications and protocols, including the Building Industry Consulting Service International (BICSI) standard;
- Effective supervision techniques;
- Information technology project management techniques;
- Telecommunication and network terminology;
- Network monitoring software;
- Basic Unix/Linux and Windows operating systems and scripting;
- Standard software applications and peripheral equipment, including videoconferencing platforms;
- The Open System Interconnection (OSI) Model and advanced routing technologies, including Border Gateway (BGP) and Open Shortest Path First (OSPF) protocols;
- Current industry trends and best practices related to networking infrastructure.

Skill and Ability to
- Communicate effectively both in oral and written form with individuals from diverse backgrounds;
- Explain technical concepts to non-technical customers and staff;
- Architect network infrastructure installations and changes;
- Design, research, and install network data circuits;
- Learn new hardware and software systems and adapt to changes in technology;
- Work independently with minimal direction;
- Analyze situations accurately and adopt an effective course of action;
- Prioritize, organize, and schedule work assignments and projects;
- Establish and maintain cooperative working relationships.

Other Characteristics
Willingness to travel as needed to conduct work assignments and to drive or arrange for alternative transportation for such travel. Driving will require compliance with all legal requirements, including a driver's license and insurance as appropriate.