

MONTEREY COUNTY OFFICE OF EDUCATION

NETWORK ADMINISTRATOR

Classification: Classified

Salary Level: 48.5

DEFINITION:

The Network Administrator is a highly technical position responsible for configuring, monitoring, maintaining and managing, all core computer and data network platforms. This is the senior line of all infrastructure technology positions, responsible for designing, planning, directing and supporting the installation of all networked computer and telecommunications systems; managing access to the network and ongoing operations issues; evaluating system performance; providing support to the technology planning of school districts; providing support to financial data communications; and for the setup and maintenance of networked devices including workstations and peripherals.

SUPERVISOR:

Director of Infrastructure Services

POSITION(S) SUPERVISED:

None; however may lead, train, or participate in team work assignments.

QUALIFICATION REQUIREMENTS:

To perform a job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed in the job description are representative (not an exhaustive list) of the knowledge, skills and/or abilities required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential duties of the position.

DISTINGUISHING CHARACTERISTICS:

Positions in this classification are distinguished from the Technology Support Specialist IV by both the level of network support expertise required and the responsibilities for network and server system design and engineering. This position has primary responsibility for design of the network and security architecture. It requires system engineering and strategic infrastructure planning expertise with a focus on capacity and security management stemming from analysis of organizational needs and practices.

ESSENTIAL DUTIES:

- Establishes network specifications by conferring with users; analyzing workflow, access, information, and security requirements; designing router administration, including interface configuration and routing protocols
- Establishes network by evaluating network performance issues including availability, utilization, throughput, and latency; planning and executing the selection, installation, configuration, and testing of equipment

- Oversees the day-to-day operation of computer networks including hardware/software support, training, and special projects
- Configures, maintains, and supports networking servers in a Windows Server and multi-platform environment including Macintosh, and VMware virtual server instances
- Provides support for Ethernet connected clients using DHCP, Bootp and Static IP addressing in large Wide Area Networking (WAN) environment
- Configure switches and routers utilizing VLAN's, access lists, layer-3 functionality, VOIP, QoS, and advanced protocols such as RIPv2, EIGRP, BGP, and OSPF
- Performs advanced security configurations of Cisco and other routers, RADIUS servers, and firewalls, and monitors usage to ensure security of data and access privileges
- Assists in coordinating special projects including related wiring plans
- Assists in the development of network policies and procedures
- Installs, maintains, and troubleshoots RAID and storage area networks (SAN)
- Establishes and maintains user accounts, profiles, file sharing, access privileges and security
- Performs verification, testing, restoration, and daily server backups
- Researches, analyzes, monitors, troubleshoots and resolves server or data network problems
- Assists and provides support to the Director of Infrastructure Services, WAN/LAN, and other technology staff as requested including performing scheduled network tasks, updating anti-virus definition files, monitoring network servers, and providing internet and intranet user support and specialized training
- Upgrades network by conferring with vendors; developing, testing, evaluating, and installing enhancements
- Establishes and maintains an MS Exchange environment, providing documentation, managing anti-spam and anti-virus servers, and troubleshooting e-mail problems by reviewing mail logs, records, and network configurations
- Plans, troubleshoots, maintains and assists in the design of telecommunications systems, coordinating the ordering and installation of telecommunication and data systems equipment and cabling
- Updates job knowledge by participating in educational opportunities; reading professional publications; maintaining personal networks; participating in professional organizations

OTHER DUTIES:

The person may be assigned other duties.

PHYSICAL AND MENTAL CHARACTERISTICS:

Physical, mental and emotional stamina to perform the duties and responsibilities of the position; manual dexterity sufficient to write, use the telephone and business machines; vision sufficient to read printed materials; hearing sufficient to conduct in-person and telephone conversations; speaking ability in an understandable voice with sufficient volume to be heard at normal conversational distance or on the telephone; physical mobility sufficient to move about the work environment (office and location) and drive an automobile; physical strength to lift a minimum of 40 pounds; physical stamina sufficient to sit for prolonged periods of time; mental acuity to collect and interpret data, evaluate, reason and define problems, establish facts, draw valid conclusions, make valid judgments and decisions

REQUIRED QUALIFICATIONS:

Education and Experience:

- Bachelor's degree in computer science, information engineering or other related areas
- Significant training and experience in network engineering leading to the ability to perform duties comparable to those listed herein
- Six (6) years of directly related experience which has included responsibility for engineering, installing and overseeing local and wide area networks, switching systems, email systems, and telecommunications
- Any combination of education and training equivalent to the above

KNOWLEDGE OF:

This position must meet all knowledge requirements of the Technology Support Specialist IV at an advanced level with emphasis and distinction as follows:

- Information system security principles, theory and best practices, covering access control, telecommunication and network security, cryptography, physical and operations security
- Business continuity and disaster recovery planning
- Exterior gateway protocols, such as BGP and VPN technologies, including IPsec
- Unified threat management technologies, including firewalling, intrusion prevention, and content filtering
- Advanced networking principles, theories and practices, pertaining to networking protocols, hardware and technology, including Ethernet/Fast Ethernet/Gigabit Ethernet, Cisco IOS, EIGRP, OSPF, VTP, STP, 802.11 A-N, 802.1X, RADIUS, NAT, PAT, and Microsoft Active Directory Services
- LAN, WAN, and data communication operations analysis and design
- Various types of computer hardware and peripheral equipment
- Network data communications and computer system diagnostic aids and tools and the ability to isolate and resolve hardware and software problems
- Operating systems such as Cisco IOS, UNIX/Linux, Macintosh OS, and Windows OS
- Main Distribution Frame (MDF) and Intermediate Distribution Frame (IDF)
- Directory services, including but not limited to Active Domain and LDAP
- Virtualization technologies such as VMware
- Advanced firewall, network security design and configuration
- Advanced TCP/IP design and configuration
- Open Systems Interconnection (OSI) model
- Utilization of system workflow, creation, and modification using SCCM and Casper system management tools
- Enterprise-level data backup and restoration
- Content filtering system architecture
- File management and permission administration for Windows, Macintosh and Linux OS
- VOIP system architecture and administration
- Problem analysis, troubleshooting and repair skills
- Network Monitoring Operations including familiarity with various tools and techniques
- Design and administration of email communication utilizing MS Exchange
- Mobile devices and their management on a WAN
- Wireless network design, architecture and operations
- Interconnectivity between disparate systems including data integration

- Communication standards and limitations

SKILLS AND ABILITIES TO:

- Resolve advanced issues regarding the Installation, troubleshooting and maintenance of computers, printers and other peripheral devices
- Serve as senior lead in the research and design of server-based solutions including Terminal Services, web-based application services, and other emerging technologies
- Lead quality assurance activities for all network operations
- Provide evaluation and recommendation for networked applications
- Provide leadership and support to technology support staff
- Work closely with management in long-term plans and strategies
- Instruct others in the use and care of network technology and software
- Perform advanced maintenance and troubleshooting of network hardware and software
- Communicate in English, clearly and concisely, both orally and in writing
- Demonstrate good interpersonal skills to work with students, teachers, administrators, supervisors, co-workers and vendors
- Adapt to changing technologies and learn functionality of new equipment, systems, and protocols
- Manage time effectively between multiple tasks and location, and record time utilization
- Comply with the department's customer service standards, as outlined in associated policies and procedures
- Establish and maintain effective relationships with those contacted in the course of work
- Prepare and deliver clear and concise oral instructions
- Prepare written materials in an efficient and comprehensive manner
- Multitask and perform work independently without supervision, but also determine the seriousness of a problem that warrants escalation
- Maintain trouble ticketing database

DESIRABLE QUALIFICATIONS:

- MCP/MCSE, CCNA, CCNP, and other technical certifications preferred but not required
- Experience with school system application software
- Ability to effectively communicate in Spanish

LICENSES AND CERTIFICATIONS:

Possess and appropriate California Driver's License with evidence of insurability.