

NETWORK SENIOR ANALYST

DEFINITION

Under general direction, leads and performs highly complex professional information technology duties related to network design, development, installation, analysis, testing, implementation, documentation and maintenance; plans and coordinates complex cross functional network-related projects; facilitates complex network interfaces with data communications and database systems; assists users with the most complex questions regarding network operations and procedures; serves as a lead worker over subordinate professional, technical and other staff; and performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is the advanced professional level class within the Yosemite Community College District (YCCD). Incumbents in this class lead and perform highly complex professional analytical duties related to network design and infrastructure support. Incumbents utilize advanced professional knowledge of information technology to make decisions and complete assignments and typically serve as lead workers within their assigned unit.

This class may be distinguished from the lower-level class of Network Analyst because the latter is the journey-level class where incumbents perform moderately complex professional duties related to designing, implementing and supporting the District's information systems network infrastructure, and because incumbents at the Network Analyst level are not typically assigned full lead worker duties and do not manage the most complex network development projects.

SUPERVISION RECEIVED AND EXERCISED

Incumbents in this class work under the general direction of a manager or senior manager, working from broad policies and towards general objectives. Incumbents refer specific matters to a supervisor only when interpretation or clarification of organizational policies is necessary.

Incumbents do not directly supervise other full-time employees, though they may serve as lead workers by assigning, directing and monitoring the work of subordinate professional and technical staff on a regular, project and assignment basis.

ESSENTIAL DUTIES

- Provides advanced professional support duties related to the design, implementation, maintenance and monitoring of the District's network infrastructure.

- Identifies, plans and proposes needed network expansions; plans and oversees the installation and maintenance of support devices that include, but are not limited to hardware firewalls, routers, switches, concentrators, and DNS/DHCP servers.
- Optimizes the network to maximize reliability while minimizing support costs.
- Plans and coordinates complex network development projects; determines project goals and objectives; identifies staffing, materials and equipment needs; estimates costs and timeframes; provides leadership to support staff; maintains communication with project principals.
- Plans and coordinates complex activities related to the evaluation, selection, and acquisition of new network hardware and software solutions; confers with vendors and/or other agencies as needed; researches options and analyzes costs/benefits of implementation; analyzes integration issues; determines communications requirements for new equipment installation; prepares reports and recommendations for management regarding the purchase of hardware, software and peripherals.
- Implements, follows and enforces approved security procedures.
- Develops and recommends procedures, structures and contracts for support and maintenance of equipment.
- Provides ongoing assessment of security risks; plans, recommends and implements proactive measures to maintain the integrity of the network.
- Troubleshoots complex network problems and provides fast and effective resolutions.
- Assesses institutional needs and new technologies to provide complex analyses and solutions for District network needs.
- Evaluates and recommends equipment, tools, and utilities to improve the quality of support for network services.
- Prepares and presents proposals and reports for management and committees.
- Ensures clear communication of networking goals and objectives with other information technology team members.
- Installs and configures computer hardware, software, programs and applications; tests and troubleshoots to ensure functional operation.
- Monitors servers and network equipment for response time, problem prevention, performance and resource utilization; implements actions to overcome complex result deviations.
- Plans, develops and prepares technical standards, operational procedures and system performance objectives.
- Coordinates large-scale implementation of new network processes, upgrades and equipment rollouts; plans and implements District-wide network upgrade strategies and procedures; troubleshoots and resolves conversion and implementation problems.
- Performs technical administrative duties; attends meetings; serves on committees and task forces; independently responds to various inquiries and correspondence; prepares information and data requested for administrative review; maintains information system documentation; prepares reports, files, correspondence and other documents.
- Serves as a lead worker by assigning, directing and monitoring the work of subordinate professional and technical staff on a regular, project and assignment basis.
- Performs other related duties as assigned.

TYPICAL WORKING CONDITIONS

- Work is generally performed in a standard office environment that includes prolonged exposure to computer screens.

MINIMUM QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The knowledge and ability requirements are representative of essential duties. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions of the position.

Knowledge of:

- Advanced network principles, protocols, concepts, practices, and terminologies at an expert level.
- Hands on applications of the following areas; TCP/IP, Gigabit/Fast Ethernet Switches, IOS, LAN, VLAN, WAN, HSRP, OSPF, H.323, SNMP, 802.1X and 802.11x, Wi-Fi, PIX Firewall, Cisco VPN, T1, DS3, FDDI, RADIUS, TACACS+, Network intrusion detection/prevention, Traffic Analysis, packet tracing, security implementation, network design, network performance analysis, troubleshooting and analyzing network packets using various networking tools.
- Advanced and complex Cisco networking devices.
- Advanced OS architectures pertaining to Unix, Linux, Macintosh and Microsoft Server systems, and their administration aspects.
- Advanced methods, techniques, and procedures of modern computer and computer programming design, development and implementation.

Ability to:

- Design and implement complex network systems using provided documentation and on the job effort.
- Prepare complex flow charts and documentation pertaining to design steps and logic with accuracy and attention to detail.
- Coordinate complex information technology projects, including vendor management and procurement.
- Analyze complex user needs and problems, and develop clear and logical solutions.
- Prepare documentation and operating procedures in a clear and concise manner.
- Communicate effectively, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of the work.

Licenses and Certificates:

- Depending upon assignment, a valid license to drive in California may be required.
- Depending upon assignment, valid registration as a Cisco Certified Network Analyst (CCNA) (or equivalent) may be required.

Physical and Mental Standards:

- **Mobility:** ability to sit for long periods, and move about an office; ability to occasionally stand, bend, crawl and work in tight spaces; ability to frequently reach above and below desk level.
- **Dexterity:** fine manipulation sufficient to operate a computer keyboard, make wiring connections, handle individual papers, write and take notes.
- **Lifting:** frequent lifting of papers, files, equipment and material weighing up to 25 pounds; occasional lifting of items up to 50 pounds.
- **Visual Requirements:** close vision sufficient to read files, documents, and computer screens and do close-up work; ability to adjust focus frequently.
- **Hearing/Talking:** ability to hear normal speech, speak and hear on the telephone, and speak in person.
- **Emotional/Psychological Factors:** ability to make decisions and concentrate; frequent contact with others including some public contact; frequent deadlines and time-limited assignments.

Education and Experience:

Any combination of education, experience and/or training that would likely provide the above-required knowledge, skills and abilities is qualifying. Typical background patterns that would provide the knowledge, skills and abilities are:

Either Pattern I

- Experience: Three years equivalent to a Network Analyst at YCCD.

OR Pattern II

- Education: Possession of a bachelor's degree from an accredited college or university, with major course work in computer science or a closely related field.
- Experience: Four years performing professional information technology duties emphasizing network design, development, installation, analysis, testing, implementation, documentation and maintenance.

Special Requirements:

- None

Class Adopted: 03/01/09

Class Amended: 07/01/23