APRIL 2019
FLSA: NON-EXEMPT
Bargaining Unit: PL
JCN: 3142

INFORMATION TECHNOLOGY ANALYST III – NETWORK DESIGN AND ADMINISTRATION

DEFINITION

Under general direction, provides lead direction, training, and performs advanced and specialized analytical duties of a professional nature in the design, engineering, enhancement, administration, and maintenance of County information technology networks and related systems, including network hardware and related applications; leads and coordinates complex network development projects and analyzes complex customer and enterprise infrastructure network and/or information security systems requirements; designs, engineers, and maintains the most complex department and enterprise infrastructure network architectures; and performs related duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from assigned supervisory or management personnel. Exercises technical and functional direction over and provides training to technical, paraprofessional, and professional staff.

CLASS CHARACTERISTICS

This is the advanced/lead-level classification in the Information Technology Analyst – Network Design and Administration class series. Incumbents in this class are responsible for performing the most difficult, complex, and/or sensitive duties related to network development and administration which include acting in an advisory role to technical and analytical staff and providing strategic input within this area of specialization. Incumbents may also coordinate complex projects that are large in size and scope, requiring coordination of multiple staff and the procurement/utilization of significant resources. Incumbents also provide technical and functional leadership over other staff on both projects and on day-to-day assignments as assigned. Performance of the work requires the use independence, initiative, and discretion within established guidelines.

This class is distinguished from the Information Technology Supervisor in that the latter performs full supervisory responsibilities.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

- Performs advanced and complex analytical duties of a professional nature in the design, engineering, enhancement, administration, and maintenance of County information technology networks and related systems, including network hardware and related applications.
- Serves as a technical expert within area of assignment, providing guidance and direction to technical, paraprofessional, and professional staff and resolving the most complex problems; participates in the development of strategic plans for network development and modification as assigned.
- Provides direction and mentoring to assigned staff; trains staff on server related duties, methods, and procedures.
- Leads and coordinates complex network development projects or project elements; participates in project strategic planning activities; plans, coordinates, and oversees project team activities; identifies deliverables and establishes schedules and timelines; identifies and allocates project resources; provides data for justification of unit budget in relation to assigned projects; maintains documentation version control; coordinates the delivery of final deliverables for review and approval.
- May provide input into selection decisions, performance evaluations, and disciplinary matters related

to assigned project teams.

- Works with colleagues and clients to identify the business process basis for network enhancements and development; oversees the development of work flow diagrams to reflect current and proposed flow of data and information; coordinates the development of initial and ongoing network design models and specifications to optimize work flows and process efficiencies.
- Leads and coordinates the design and development of new or enhanced network architectures; identifies system requirements; researches and analyzes the feasibility of hardware and software solutions; recommends the appropriate uses of department or enterprise network infrastructure technology.
- Designs, builds, tests, implements, maintains, and enhances the most complex department or enterprise network infrastructure systems over multiple platforms and technologies, ensuring that the design incorporates comprehensive security measures.
- Oversees the configuration, implementation, and troubleshooting of network components and security software, and ensures the coordination/collaboration with other information technology staff in the integration of network projects with other systems.
- Determines network needs and develops plans and proposals to meet the needs of customers.
- Researches to determine feasibility, and advises and recommends appropriate uses of network and/or security technologies.
- Models changes against hardware and software configurations to optimize the utilization of resources.
- Acts as a liaison between vendors, technical support, and departments to resolve system, network, or telecommunication problems; coordinates and implements corrective measures.
- Develops and implements comprehensive test plans to ensure that network information technology components are tested and debugged.
- Monitors and enforces security policies and procedures.
- Installs third-party network and security software/hardware/appliances; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.
- Resolves problems related to network application software, operating system, hardware, router and switches, printing, and networks.
- Provides training for County staff as assigned.
- Monitors and collects data on department and/or enterprise infrastructure network system performance.
- Determines and adjusts network performance thresholds for system resources.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Advanced principles and techniques of network architectures and methodologies.
- Advanced principles and practices related to installing, configuring, modifying, and maintaining network operating systems, network and security applications, and remote access appliances and/or software.
- Advanced logical and physical network design, implementation, testing, and maintenance.
- Advanced data communication and network concepts and principles.
- Principles and practices of project management and work flow analysis.
- Principles of providing functional direction and training.
- Principles and practices of leadership.
- Planning and implementation of network hardware/software installation/upgrades.
- Networking services such as NT, RADIUS, TACACS, DNS, and DHCP, and protocols such as RIP, OSPF. EIGRP, and BGP.
- Internet and intranet architecture and vendor offerings.
- Network security policies, techniques, and procedures.

- Network and/or security documentation, configuration, maintenance, and diagnostic procedures and techniques.
- Network, server, LAN/WAN, router and switch configuration and administration.
- Use of network diagnostic systems and tools.
- Methods and techniques of designing and coordinating information technology testing processes.
- Network forensics tools and techniques.
- Development of utility programs to enhance network performance.
- Principles and practices of technical problem solving.
- Principles, processes, and techniques of technology project management.
- Methods of long-term technology assessment and deployment.
- Industry best practices of information technology management and control.
- Restart and recovery concepts.
- Methods and techniques of conducting research.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Principles and practices of producing effective project and technical documentation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and County staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination.
- Computers and software programs (e.g., Microsoft software packages) to conduct, compile, and/or generate documentation.

Ability to

- Plan, organize, and coordinate the work of technical, paraprofessional, and professional staff.
- Provide staff leadership and work direction.
- Train others in proper and safe work procedures.
- Provide advanced, professional support to a diverse range of enterprise-wide and department-specific networks used throughout the County.
- Identify complex technology solutions for business process improvements and efficiencies.
- Recognize complex network problems, develop recommendations and solutions, and manage corrections.
- Understand complex enterprise infrastructure security systems and issues.
- Integrate department and/or enterprise networked and/or security systems.
- Enforce network security policies and procedures.
- Develop and implement network testing models.
- Evaluate, install, test, and implement new network architectures.
- Coordinate activities with vendors, clients, and staff.
- Collaborate with colleagues in developing and documenting process work flows, specifications, and models.
- Make technical oral presentations to technical and non-technical audiences.
- Use sound independent judgment within established guidelines.
- Prepare clear and concise reports, correspondence, documentation, and other written material.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.

- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:
Any combination of the required experience, education, and training that would provide the essential knowledge, skills, and abilities is qualifying.

Equivalent to a bachelor's degree from an accredited four-year college or university with major coursework in information technology, computer science, or a related field; possession of one or more approved nationally recognized industry specific technology certifications may be substituted for some or all of the education; and

EITHER

Four (4) years of professional experience providing analytical support related to the development and administration of enterprise or customized information technology networks;

OR

Two (2) years of professional experience at a level equivalent to the County's class of Information Technology Analyst II – Network Design and Administration.

Licenses and Certifications:

- Possession of, or ability to obtain and maintain, a valid California Driver's License by time of appointment and a satisfactory driving record.

PHYSICAL DEMANDS

Must possess mobility to work in an office setting; use standard office equipment, including a computer; some positions may be required to operate a motor vehicle; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. Standing in and walking between work areas is frequently required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification frequently bend, stoop, kneel, and reach to perform assigned duties, as well as push and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 25 pounds. Reasonable accommodations will be made for individuals on a case-by-case basis.

ENVIRONMENTAL CONDITIONS

Employees work in an office environment with loud to moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

WORKING CONDITIONS

Must be willing to work after hours, weekends, and holidays as needed. Must be able to pass a thorough background investigation.