

IT INFRASTRUCTURE PROJECT NETWORK ENGINEER

DEFINITION

Provides technical expertise on projects; and leads or implements the installation and upgrading of computer, data, telecommunication, public address, closed circuit television (CCTV), cable television (CATV), intrusion alarm systems, and converged systems.

TYPICAL DUTIES

Performs moderately complex network management design integration with other system solutions to ensure an integrated system with automated network management capabilities.
Plans, forecasts, implements, and identifies resource requirements for network systems.
Conducts design reviews of IT systems.
Conducts quality assurance reviews of IT systems installations.
Assists in designing solutions aligned with established architecture to meet the requirements of customers.
Provides technical expertise on projects for voice, video, and data systems, including but not limited to LANs, and WLANs; intercommunication, public address, and intrusion alarm systems; CCTV; and converged networks.
Identifies, evaluates, and assists staff in the selection of hardware, software, and services to meet specifications and requirements.
Maintains local area network (LAN), wireless local area network (WLAN), and wide area network (WAN) installation, configuration, and ongoing field service.
Develops scope and specification requirements for bids and contracts.
Conducts site surveys and on-site assessments and prepares schematic diagrams for recommended and efficient installations.
Evaluates new products, performs network problem resolution, and assists in the development and documentation of technical standards and interface applications.
Monitors protocol compatibility, performs system tuning, and makes recommendations for improvement.
Assists in developing architectures and planning for enterprise-wide tactical and strategic requirements, systems definition, and feasibility determination within a complex system environment.
Plans, analyzes, and coordinates site equipment requirements.
Assists in developing and implementing a multi-system capacity plan.
Plans and oversees the implementation of system installations and ensures network connectivity.
May act as a Project Leader on a school site for office system installations and configurations.
Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

An IT Infrastructure Project Network Engineer provides technical expertise on projects; and leads or implements the installation or upgrades of computer, data, telecommunication, public address, CCTV, CATV, intrusion alarm systems, and converged systems for schools and offices.

An IT Infrastructure Project/Program Manager performs the same duties as a Senior IT Infrastructure Project Manager except that an IT Infrastructure Manager manages less complex projects and does not supervise other Project Managers.

A WAN Specialist II 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.

A Senior IT Electronics Communications Technician provides work direction regarding the day-to-day activities of technicians and contractors and prepares plans and specifications for new installations and alterations.

SUPERVISION

Administrative direction is received from an IT Infrastructure Project/Program Manager. Technical supervision is exercised over lower-level technical classifications and contractors.

CLASS QUALIFICATIONS

Knowledge of:

- Design principles for local area networks
- Switching and routing protocols
- Wi-Fi Technology
- Network testing tools
- IP addressing and subnet schemes
- Voice over IP routing
- Industry standard network engineering specifications
- Cisco and/or Alcatel switches and routers
- Windows and Apple servers
- Protocols such as NetBIOS, IPX, and TCP/IP
- Copper and fiber cable topologies
- Microsoft office suite and MS Project 200x

Ability to:

- Install and troubleshoot local area networks, including wireless systems
- Review and evaluate IT system designs for compliance with District and industry standards
- Configure servers, computers, and a variety of networking equipment
- Create and modify project plans utilizing Microsoft Project
- Prepare clear and concise reports and technical documentation
- Analyze and solve complex networking problems
- Formulate and express ideas clearly and effectively in writing and orally
- Set priorities and successfully complete tasks in a timely manner
- Analyze and interpret materials and problems involving rules, procedures, documentation, and related matters
- Maintain effective relationships with District personnel and representatives of manufacturers and other organizations

Special Physical Requirement:

- Ability to safely lift and carry tools and materials weighing up to 50 pounds

ENTRANCE QUALIFICATIONS

Education:

Graduation from a recognized college or university with a bachelor's degree in math, computer science, information systems, electrical engineering, or a related field. Qualifying experience in addition to that listed below may be substituted for the required education on a year-for-year basis.

Experience:

Three years of journey level experience installing, designing, configuring and/or maintaining computer data, telecommunications, or converged systems.

Special:

A valid driver's license to legally operate a motor vehicle in the State of California and use of a motor vehicle.

Cisco Certified Network Associate (CCNA) is required.

Certified Wireless Networking Professional (CWNP) Certifications: Certified Wireless Analysis Professional (CWAP), Certified Wireless Design Professional (CWDP), or Certified Wireless Security Professional (CWSP); Cisco Certified Network Professional (CCNP), HP ATP - FlexNetwork Solutions V3, Aruba Certified Mobility Expert (ACMX) or Alcatel Lucent Certified System Expert (ACSE) certifications are preferable.

BICSI Registered Cable Distribution Designer (RCDD), Avaya Certified Solution Specialist (ACSS), Cisco Certified Internetwork Expert (CCIE), or equivalent are highly preferable.

SPECIAL NOTE

Employees in this class may be required to work varying shifts.

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.

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