

GUILFORD COUNTY SCHOOLS JOB DESCRIPTION

JOB TITLE: COMMUNICATIONS ENGINEER DATA PROCESSING DEPARTMENT

GENERAL STATEMENT OF JOB

Under occasional supervision, performs specialized technical work in the area of design, installation, implementation and maintenance of the data communications environment for the Technology Services Department. The Department is responsible for all wide area network (WAN) equipment, telecommunications lines and Internet/network access in school and office locations. Other major responsibilities include various district communication systems such as voice/phone applications, network-based security systems, access control, audio-visual solutions, wireless access and required infrastructure. Employee is responsible for installing the components of various network-based systems, performing connectivity activities associated with computer systems and communication devices/files, managing access, diagnosing hardware and software problems, monitoring and evaluating system performance, and performing all aspects of network administration. Employee is involved with reviewing and participating in technology projects, including the evaluation and selection of hardware and software components. Work also involves providing operational support and training for employees in the use of technology. Employee must exercise considerable tact and courtesy in frequent contact with school officials, fellow employees and subordinates. Employee reports to the appropriate supervisor.

SPECIFIC DUTIES AND RESPONSIBILITIES

Operates a work-order tracking system (Help Desk) to receive and clear daily work requests.

Plans for, designs, installs, and manages district communication systems such as voice/phone applications, network-based security systems, access control, audio-visual solutions, wireless access and required infrastructure.

Installs, configures and maintains individual servers, networking equipment, application software, end devices and other required components for district systems.

Reviews data communication needs and requests for school and central office sites, determines scope of project and appropriateness, reviews users needs, responds to request and schedules implementation if approved.

Assembles communication equipment according to schematic diagrams and written instructions.

Troubleshoots hardware and software problems in all data communication installations; determines cause of error or stoppage and applies corrective action to provide enhancement and/or correct problem; makes appropriate service calls.

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Monitors and evaluates existing usage of data communication installations and modifies the appropriate parameters for optimum performance.

Perform daily network administration tasks such as creating user ids, maintaining groups, managing security and backups.

Performs various data connectivity functions in the wide area network environment; transfers data files and records between computer systems and other communication devices/files.

Implements and manages Internet connections, E-mail systems, firewall protection and filtering systems for the wide area network.

Performs various operational support duties; starts and stops various devices; saves and restores configurations.

Reviews technology projects, assists with selection of networking components and other communication equipment; ensures software compatibility and hardware connectivity; determines appropriate network protocols for multi-platform integration; determines scope of work assists with purchasing required components.

Designs, recommends modifications and works with staff and contractors to install necessary infrastructure to support access to networks.

Provides technical advice and problem determination support for end users; establishes training for personnel.

Monitors new projects to ensure proper function of communication system and that timelines for installation are met.

Assists with establishing and enforcing policies, procedures and guidelines for hardware, software and user support.

Develops and manages system security and recovery procedures for all aspects of the wide area network and investigates all incidents and issues of intrusion.

Maintains written documentation on all configurations, operating procedures and addressing of installations.

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Participates in long and short range technology planning.

Makes recommendations to supervisor regarding upgrades and replacement of communications related equipment.

Trains technical staff at the system and building level.

Maintains software license agreements and inventory of equipment and components as required.

Lifts, carries and moves communications equipment as required.

Must be available outside of normal working hours which may include research, technical assistance, maintenance, emergencies, and meetings.

ADDITIONAL JOB FUNCTIONS

Will possess telephone for 24-hour on call service support.

Performs other related work as required.

MINIMUM TRAINING AND EXPERIENCE

Associate's degree in computer related field supplemented by specialized coursework in the area of communications, and 1 to 2 years of experience developing technical expertise; or any equivalent combination of training and experience which provides the required skills, knowledge, and abilities. Coursework or certification with Microsoft, Cisco, Nortel or BiCSi preferred.

SPECIAL REQUIREMENTS

Possession of a valid driver's license issued by the State of North Carolina.

MINIMUM QUALIFICATIONS OR STANDARDS REQUIRED TO PERFORM ESSENTIAL JOB FUNCTIONS

Physical Requirements: Must be physically able to operate a variety of equipment and tools including computers, scanners, computer software, computer hardware, etc. Must be able to exert up to 30 pounds of force occasionally and/or up to 5 pounds of force frequently, and/or a negligible amount of force constantly to move objects. Physical demand requirements are in excess of those

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for Medium Work

Data Conception: Requires the ability to compare and/or judge the readily observable, functional, structural or composite characteristics (whether similar or divergent from obvious standards) of data, people or things.

Interpersonal Communication: Requires the ability to speak and/or signal people to convey or exchange information. Includes receiving instructions, assignments or directions from superiors.

Language Ability: Requires the ability to read a variety of correspondences, technical manuals, trade journals, etc. Requires the ability to prepare reports, forms, system documentation, etc. using prescribed formats and conforming to all rules of punctuation, grammar, diction, and style. Requires the ability to speak to people with poise, voice control and confidence.

Intelligence: Requires the ability to apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions; to interpret an extensive variety of technical instructions in mathematical or diagrammatic form; and to deal with several abstract and concrete variables.

Verbal Aptitude: Requires the ability to record and deliver information, to explain procedures, to give oral and written instructions. Must be able to communicate effectively and efficiently in a variety of technical or professional languages including computer terminology.

Numerical Aptitude: Requires the ability to utilize mathematical formulas; to add and subtract; multiply and divide; utilize decimals and percentages.

Form/Spatial Aptitude: Requires the ability to inspect items for proper length, width and shape.

Motor Coordination: Requires the ability to coordinate hands and eyes rapidly and accurately in using computer equipment.

Manual Dexterity: Requires the ability to handle a variety of items such as computer equipment. Must have minimal levels of eye/hand/foot coordination.

Color Discrimination: Requires the ability to differentiate between colors and shades of color.

Interpersonal Temperament: Requires the ability to deal with people beyond giving and receiving instructions. Must be adaptable to performing under stress and when confronted with persons acting

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under stress.

Physical Communication: Requires the ability to talk and hear: (Talking: expressing or exchanging ideas by means of spoken words. Hearing: perceiving nature of sounds by ear.)
Must be able to communicate via telephone.

KNOWLEDGE, SKILLS AND ABILITIES

Considerable knowledge of DOS and common computer operating systems.

Considerable knowledge of computer hardware, local area networking and common software applications.

Considerable knowledge of networking equipment and other communication hardware, capabilities and limitations, service requirements and associated costs.

Considerable knowledge of cabling infrastructure and electronic components required for networking.

Considerable knowledge of the current literature, trends and developments in the fields of networking and communications.

General knowledge of multi-platform computer architecture and communication protocols.

General knowledge of appropriate diagnostic tools and utilities.

Some knowledge of hardware connectivity in the AS/400 environment.

Considerable knowledge of the school system's Long-Range Technology Plan, development methodology and development standards.

Ability to install and setup software packages that meet the needs of the system.

Ability to perform general operations support functions for the data communications environment.

Ability to configure network servers, install networking software and setup required electronic equipment.

Ability to systematically determine the source of problems in a data communications environment

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and to take appropriate action.

Ability to perform all aspects of network administration.

Ability to evaluate requests for changes and/or updates to the communications network.

Ability to evaluate software applications and to make recommendations for improvement.

Ability to maintain complete and accurate records.

Ability to establish and maintain effective working relationships as necessitated by work assignments.

DISCLAIMER

The preceding job description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties, responsibilities, and qualifications required of employees to this job.