

SENIOR SYSTEMS ANALYST

DEFINITION

Under general supervision, provides highly complex analytical support in the planning, development, installation, implementation, integration, testing, and evaluation of the district's local and wide area networks; serves as a project leader on assigned local and wide area network design and development projects; researches, tests, evaluates, and recommends data communications hardware and software; installs, configures tests, and supports a variety of network components and devices; and to performs other related work as required.

CLASS CHARACTERISTICS

This is an advanced journey level position requiring specialized expertise in the principles and techniques of highly complex and technical programming, information systems, and enterprise networking. This position plans, guides, and implements the direction of the district-wide and local area networks to support student and administrative computers. Incumbent must stay abreast of new trends and innovations in the field of local and wide area networks design and development. Positions at this level may supervise and train other employees.

EXAMPLES OF DUTIES

Performs a variety of highly complex analytical duties in the planning, development, installation, implementation, integration, testing, and evaluation of the District's local and wide area network; makes recommendations regarding policies, techniques, and practices. *E*

Ensures the availability of network services; coordinates with director to determine network system requirements; studies the integrity and security of data to establish system configuration; monitors systems to control and support network traffic; devises and implements strategies for connection of independent networks through the use of routers, bridges, and gateways. *E*

Assures proper security of network systems; advises District regarding security monitoring and initial prevention; conducts problem analysis of security systems as needed; studies the integrity and security of data to establish system configuration; monitors systems. *E*

Performs system administration functions including monitoring and adding applications, users, and devices; runs server security procedures and capacity reports; applies the appropriate security schemes; monitors network security and performance; identifies unauthorized access and potential security risks; participates in projects to enhance network security operations. *E*

Participates in evaluation of hardware, software, and network protocol to determine their applicability to District network needs; evaluates new applications to determine integration with current applications and systems; coordinates the installation and maintenance of computers, data circuits, and data communication equipment; configure routers, controllers, and other devices. *E*

EXAMPLES OF DUTIES (cont.)

Investigates, analyzes, and resolves complex network-related problems; resolves compatibility problems across district networks; troubleshoots network failures, router problems, and telecommunications problems; recommends and implements changes and improvements. *E*

Serves as project leader on local and wide area network projects; analyzes user information system needs; recommends solutions and appropriate technology to meet client needs; participates in evaluations of proposed network hardware to ensure compatibility with existing systems; installs and evaluates software and hardware; develops proposals using cost/benefit analyses; controls and reports budget expenditures; designs project and resource plans and schedules; directs members of the project team; provides written reports and presentations on project status. *E*

Measures volume and performance of network traffic; identifies utilization and performance issues; designs strategies and recommendations to improve network performance. *E*

Performs technical writing duties in the development and production of system documentation and instructional and procedural manuals; reviews technical specifications for network hardware and software. *E*

Prepares specifications for bid proposals to meet project requirements for eRate, digital high school, and school modernization; contacts vendors for components, technical reference and/or services required for network expansion and maintenance; supervises and coordinates system communications; works with outside vendors to set-up services for administrative and instructional computing, i.e., OCDE, Sucaba, internet, Elibrary, Infortrac, SB 2000, email, and WWW services. *E*

Documents network installations, changes, additions, deletions, and revisions to network components, wiring, and facilities; prepares status reports as required; establishes policies and procedures for continued consistency of network maintenance. *E*

Applies scheduled and corrective maintenance managing upgrades to network equipment including servers, printers, routers, and switches; coordinates with all parties involved, outside district and school sites throughout the process. *E*

Stays abreast of new trends and innovations in the field of local and wide area networks design and development. *E*

Performs related work as required.

MINIMUM QUALIFICATIONS

Knowledge of:

1. Operations, services, and activities of local and wide area network programs;
2. Principles and practices of computer science;
3. Operational characteristics of local and wide area network systems, computer systems, applications, hardware, software, and peripheral equipment;

Knowledge of: (cont.)

4. Principles, practices, methods, and techniques used in local and wide area network design, implementation, and administration;
5. Methods and techniques of data system analysis and design;
6. Principles of supervision and training;
7. Principles and practices of project planning and management;
8. Methods and techniques of conducting cost/benefit analyses for network projects;
9. A variety of network operating systems;
10. Data communication standards, protocols, hardware, software, and network management practices;
11. Methods and techniques of evaluating network performance;
12. Principles and practices of local and wide area network security and administration;
13. Methods and techniques of developing technical manuals and instructional materials;
14. Pertinent federal, state, and local codes, laws, and regulations; and
15. Fundamentals of time management.

Ability to:

1. Coordinate complex local and wide area network design, development, and implementation of projects;
2. Perform complex systems and data analysis duties;
3. Analyze user network system requirements and provide solutions;
4. Organize, review, and evaluate the work of assigned staff;
5. Apply technical concepts to develop business solutions;
6. Research, analyze, and evaluate new service systems;
7. Design, develop, implement, and administer local and wide area network systems;
8. Install, test, and configure hardware and software applications and programs;
9. Design, configure, and test network hardware and software;
10. Troubleshoot complex hardware and software application problems;
11. Respond to requests and inquiries from system users;
12. Communicate clearly and concisely, both orally and in writing;
13. Apply current technology to solution of problems;
14. Prepare specifications for system improvements;
15. Define and develop systems testing, conversion plans, security, and control procedures;
16. Fulfill administrative reporting requirements;
17. Supervise other project personnel as required;
18. Establish general schedules and priorities for systems development projects and support services;
19. Prepare reports, both oral and written;
20. Establish and maintain effective relationships with those contacted in the course of work; and
21. Perform complex and varied tasks.

EDUCATION

Bachelor's degree from an accredited college or university with major course work in computer science, network engineering or a related field, preferably including courses in statistics, mathematics, accounting, computer sciences or equivalent. Training in systems analysis with special emphasis in project management, user relations, data gathering techniques, advanced analysis and design techniques, quantitative methods, resource management, budgeting and planning, written and oral communications, and management information systems.

EXPERIENCE

Minimum of six years work experience, four of which must have been in information systems demonstrating recent responsible experience in the design and installation of local and wide area network systems and two or more of the four years in programming or systems positions. Education and experience may be interchanged on a year-for-year basis to a maximum of two years.

WORKING CONDITIONS

Environment:

Indoor environment.

Physical Activities:

Dexterity of hands and fingers to operate computer keyboard and hand tools; sitting for extended periods of time; lifting, pushing, pulling, and carrying objects; bending at the waist; kneeling and crouching to work on peripherals and microcomputers; seeing to configure and install hardware and software read instruction manuals; lifting heavy objects weighing up to 40 pounds; hearing and speaking to exchange information.

Hazards:

Extended viewing of computer monitor.