



NETWORK SYSTEM ENGINEER

512

Jamestown
1607

DEPARTMENT: FMS/IRM/Information Technology

NATURE OF WORK:

Performs responsible technical work involving the effective use of microcomputers, workstations, and networks throughout County government.

Analyzes computer automation needs, designs appropriate network and computer solutions, implements both hardware and/or software solutions, maintains new and existing networks and systems, trains and assists users in such systems. Work includes installing, administering and monitoring the operation of Local and Metropolitan Area Networks and their interfaces with Wide Area Networks, and assembling, installing, and troubleshooting microcomputers, ancillary equipment, and software.

Work is performed under the general supervision of the Information Technology Administrator.

ESSENTIAL FUNCTIONS OF THE JOB:

Supports network operation and OSSI database software systems for public safety departments.

Provides feasibility and cost analysis of network automation needs. Performs network installation, administration and monitoring. Work includes installing operating systems, network cards, bridges/routers, CSUs/DSUs, ATM switches, and other network and telecommunications components. Installs network wiring when required.

Provides troubleshooting, maintenance, and backup support for the CAD, RMS, and Firehouse database using Microsoft SQL Server.

Assembles, installs, and troubleshoots microcomputers, printers, tape drives, modems and other equipment; replaces defective parts; repairs and cleans equipment and components; performs preventive maintenance when possible.

Evaluates needs of the end user for recommendations and for purchasing the proper equipment. Assists in planning larger projects involving departmental networks and upgrades.

Works with vendors to answer technical questions about the purchase of equipment and software. Works with vendors and Purchasing Office to buy equipment and software. Performs technical research using Internet or other subscription services.

Processes all incoming orders for network components, servers, microcomputers, related equipment, and software. Monitors in-house stock of spare parts and prepares orders for replacements as needed. Suggests new standards in hardware and software as appropriate.

Studies software packages; assists users in effective use and applications; answers questions from users; reprograms software as needed. Optimizes operating systems and applications for each individual microcomputer; tunes networks for best performance. Tests and evaluates new software and hardware.

Provides initial training to users on microcomputers and software. Communicates training needs to Information Center Specialist.

Designs programs to satisfy user requirements or to solve identified problems; assists users in prototyping and applications.

Practices continuous learning through individual study, classroom training, seminars and conferences.

Performs work safely in accordance with departmental safety procedures and the County Safety Program. Operates equipment safely and reports any unsafe work condition or practice to supervisor.

Performs related work as required.

JOB LOCATION AND EQUIPMENT OPERATED:

Duties are performed primarily in an office setting. Operates personal computer and other office equipment. Uses small hand tools, diagnostic hardware and software, programming software and network cable testing equipment. May be required to work outside of normal office hours.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:

Thorough knowledge of the effective use of microcomputers, related equipment, and standard software, including Microsoft Windows XP, Windows 2003, Network Monitoring and Management, word processors, spreadsheets, MS SQL Server 2000 and 2005 database management software, and communication software.

Considerable knowledge of the Internet, new developments in networks, network management and security, and of network protocols, including TCP/IP, and of network transport protocols including Ethernet and ATM, and of microcomputers, related equipment and software.

Considerable knowledge of computer programming methods and techniques.

Considerable knowledge of microcomputer and other equipment problems and components.

Ability to instruct others in the effective use of networks, microcomputers, related equipment and software.

Ability to prepare technical documentation, reports and presentations.

Ability to manage time and to keep schedules.

Ability to establish and maintain effective working relationships with users and vendors.

Ability to make decisions and recommendations in accordance with established policies and procedures.

MINIMUM QUALIFICATIONS:

Bachelors Degree in computer science or related field, supplemented by training in the installation of networks, and in the use and repair of microcomputers, and considerable experience working with servers and microcomputers, related equipment, and software; or any equivalent combination of acceptable education and experience providing the knowledge, abilities and skills cited above.

NECESSARY SPECIAL QUALIFICATIONS:

Requires successful completion of: Criminal History and Sex Offender's check. Post offer drug test. Background check.

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IDENTIFICATION OF GENERAL APTITUDES AND PHYSICAL REQUIREMENTS

Position Title Microcomputer/Network Specialist Position Number 512
 Department Financial and Management Services Division IRM/IT

The Americans with Disabilities Act requires that we identify the general aptitudes and physical requirements needed to perform the job listed above. Individuals who have the position must be able to perform all essential job functions unaided or with reasonable accommodation.

I. Mental Abilities: General learning ability. The ability to “catch on” or understand instructions and underlying principles.

- Ability to reason and make judgments
- Ability to understand and follow oral instruction
- Ability to understand and follow written instruction
- Ability to guide and/or give instructions
- Ability to make decisions in accordance with established procedures and policies
- Not essential to job function

II. Verbal Abilities: Ability to understand meanings of words and ideas associated with them and to use them effectively. To comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs. To present information or ideas clearly.

1. Speaking/Talking:

- Answering telephone, radio, or switchboard
- Communicating with County officials
- Communicating with general public
- Communicating with vendors
- Communicating with supervisors and/or with other employees
- Communicating with others _____
- _____
- Not essential to job function

2. Hearing/Listening:

- Ability to distinguish between different tones
- For communication with County officials, public, vendors, supervisors and/or other employees
- Not essential to job function

3. Reading: (ability to read and understand text)

- Essential to job function
- Not essential to job function

III. Numerical: Ability to perform arithmetic operations quickly and accurately.

- Ability to mentally perform accurate two digit calculations
- Ability to perform accurate calculations aided
by a calculator, adding machine or measurement device
- Not essential to job function

IV. Spatial Abilities: Ability to comprehend forms in space and understand relationships of plane and solid objects. May be used in such tasks as blue print reading and in solving geometry problems. Frequently described as the ability to “visualize” objects of two or three dimensions, or to think visually of geometric forms.

- Essential function
- Not essential function

V. Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and quickly.

1. Manual Dexterity: Ability to move the hands easily and skillfully. To work with the hands in placing and turning motions.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use telephone | <input checked="" type="checkbox"/> Manipulate computer keyboard and mouse |
| <input type="checkbox"/> Use switchboard | <input type="checkbox"/> Use postage machine |
| <input checked="" type="checkbox"/> Use radio/console | <input checked="" type="checkbox"/> Use hand tools |
| <input checked="" type="checkbox"/> Use a calculator | <input checked="" type="checkbox"/> Use power tools |
| <input checked="" type="checkbox"/> Use a copy machine | <input checked="" type="checkbox"/> Other: Cell Phone |
| <input checked="" type="checkbox"/> Use a fax machine | <input type="checkbox"/> Not essential to job function |

2. Finger Dexterity: Ability to move the fingers and manipulate small objects with the fingers rapidly or accurately. For example: electrical wiring.

- Essential to job function
- Not essential to job function

Explain:

VI. Physical Demands:

1. Strength: The quality, state or property of being strong. The power to withstand strain, force or stress.

Please check (✓) in appropriate boxes below.

Ability to manipulate materials and/or equipment (lbs)							Frequency of Manipulation		
	5-	5-10	10-15	15-25	25-50	50+	Occasionally	Frequently	Continuously
Lift					✓			✓	
Push/Pull						✓		✓	
Hold/Carry					✓			✓	

Manipulation done from: ground to waist waist level waist to shoulder above shoulder
(Check all that apply)

Not essential to job function: Lift Push/Pull Hold/Carry (Check all that apply)

2. Climbing: To move up or mount by using the hands or feet.

- | <u>Ladders</u> | <u>Stairways</u> | <u>Steps</u> |
|---|--|--|
| <input checked="" type="checkbox"/> Step stool | <input checked="" type="checkbox"/> 1 flight | <input type="checkbox"/> 1-2 |
| <input checked="" type="checkbox"/> 8' to 10' step ladder | <input type="checkbox"/> 2 flights | <input type="checkbox"/> 2-3 |
| <input type="checkbox"/> Extension ladder | <input type="checkbox"/> 3 or more flights | <input checked="" type="checkbox"/> 4 or more steps |
| <input type="checkbox"/> Other _____ | <input type="checkbox"/> Other _____ | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Not essential to job function | <input type="checkbox"/> Not essential to job function | <input type="checkbox"/> Not essential to job function |

3. Ability to Stand, Sit, Walk, and Run:

Please check (✓) in appropriate boxes below.

	Duration (hours/day)						Occasionally	Frequently	Continuously
	0-1	1-3	3-5	5-7	7-9	9+			
Stand	✓						✓		
Sit			✓					✓	
Walk	✓						✓		
Run									

If walking or running, over what type of terrain? flat rough both

Not essential to job function: Stand Sit Walk Run (Check all that apply)

4. Stopping, Kneeling, Crouching, and/or Crawling:

To bend forward or down from the middle of the waist or the middle of the back, to bend downwards, to lower oneself and/or to move freely on hands and knees.

Daily Amounts

- 0-5x 5-20x 20-50x 50+x
 Other _____ Not essential to job function

5. Reaching, Handling, Fingering, and/or Feeling:

To stretch out, extend, or put forth a bodily part. To touch or grasp something, by extending or stretching. To touch, lift, hold or operate with the hands.

Daily Amounts

- 0-5x 5-20x 20-50x 50+x
 Other _____ Not essential to job function

6. Seeing: To perceive or comprehend by the sense of sight.

- Essential to job function: These characteristics are necessary (Check all that apply)
- Peripheral vision
- Night vision
- Focus (distinctness or clarity)
- Color perception (discriminate between colors)
- Depth perception (determine distance relationship between objects)
- Not essential to job function

VII. Driving: The ability to transfer or convey in a vehicle.

Transmission	Standard	Automatic	Multi-Gears
Car	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medium Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Truck w/Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy Bus Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not essential to job function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (list) _____			

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