



Office of Human Resources
IT Network Engineer - CI2797
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General Statement of Duties

Performs full performance professional information technology work planning and coordinating the installation and configuration of wired and wireless network system hardware and software; maintaining and repairing complex problems with system hardware and software; and modifying operating system hardware and software to increase performance and meet technical design requirements.

Distinguishing Characteristics

The Network Engineer is distinguished from the Network Administrator I, which performs entry level professional information technology (IT) work installing and configuring wired and wireless network system hardware and software; assists with the maintenance and repair of routine problems with system hardware and software.

The Network Engineer is also distinguished from the Network Administrator II, which performs standard level professional information technology work installing and configuring wired and wireless network system hardware and software; maintains and repairs routine to complex problems with system hardware and software.

Finally, the Network Engineer is distinguished from the IT System Architect, which performs full performance information technology work in the planning, designing, developing, and monitoring of information systems utilized within an agency or throughout the city. Additionally, the IT System Architect possess knowledge, skills, and abilities in highly specialized areas (such as Windows, UNIX, Telecommunications, Data Network, Network Security and/or Storage Area Network), which provides strong support for the planning, designing, and developing functions performed by the position.

Essential Duties

Plans and coordinates the setup, installation, and configuration of the operating system (including hardware and software), new software releases, and upgrades.

Monitors, tunes, diagnoses, and resolves complex operating system and bandwidth problems; monitors network performance to determine future requirements.

Troubleshoots, maintains, and repairs complex problems, typically related to system failures, with servers, hardware, operating systems, security, and data protection.

Implements and documents a backup and recovery process and leads capacity planning for a specific data system.

Plans, configures, installs, and maintains video security and video conferencing systems.

Implements, monitors, and maintains network security including firewalls, web filtering, and traffic shaping.

Plans, coordinates, and implements security measures to protect data, software, and hardware.

Develops, tests, and implements complex scripts to automate common functions or network operations.

Consults with users to identify existing system problems then evaluates and recommends various software and hardware solutions to meet user needs.

Analyzes equipment performance records to determine the need for repair or replacement. Recommends changes to improve systems and network performance, and determines hardware or software requirements related to such changes.

Participates in working with users to identify new business requirements then evaluates and recommends software and hardware solutions to meet user needs.

By position, performs lead work over subordinate employees or project management duties.

Performs other related duties as assigned.

Employees may be re-deployed to work in other capacities in their own agencies or in other City agencies to support core functions of the City during a City-wide emergency declared by the Mayor.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

Competencies

Attention to Detail – Is thorough when performing work and conscientious about attending to detail.

Decision Making – Specifies goals and obstacles to achieving those goals, generates alternatives, considers risks, and evaluates and chooses the best alternative in order to make a determination, draw conclusions, or solve a problem.

Customer Service – Interacts with customers in a friendly and professional manner, works to resolve issues quickly and effectively, and is knowledgeable about products and services.

Oral Communication - Expresses information to individuals or groups effectively; taking into account the audience and nature of the information; makes clear and convincing oral presentations; listens to others, attends to nonverbal cues and responds appropriately.

Technical Competence – Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Technical Problem Solving - Troubleshoots, diagnoses, analyzes, and identifies system malfunctions to determine the source and cause of the problem.

Technology Application – Uses machines, tools, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.

Knowledge & Skills

Knowledge of data processing hardware, monitors, operating system software, application programming and system configuration sufficient to be able to perform the duties related to the work assignment.

Knowledge of current networking and computer trends and technology.

Knowledge of database function and design sufficient to be able to implement network databases.

Knowledge of network system hardware, network operating system software, data communications equipment and user-oriented application software packages sufficient to be able to troubleshoot and solve problems.

Knowledge of data processing sufficient to be able to review program specification, design programs, and write or modify code.

Knowledge of computer network, desktop, server, and mainframe operating systems and their applications.

Knowledge of specifications, uses, and types of computer or computer related equipment.

Knowledge of electronic circuit boards, processors, chips, and computer hardware and software, including applications and programming.

Level of Supervision Exercised

By position, performs lead work.

Education Requirement

Bachelor's Degree in Computer Science, Information Systems, Business Administration, Mathematics or a related field.

Experience Requirement

Three (3) years of professional Information Technology experience installing, maintaining, and/or modifying network operating systems to include both software and hardware.

Education & Experience Equivalency

One (1) year of the appropriate type and level of experience may be substituted for each required year of post-high school education.

Additional appropriate education may be substituted for the minimum experience requirements.

Licensure & Certification

By position, requires a valid Driver's License at the time of application.

By position, must obtain Criminal Justice Information Services (CJIS) clearance within the probationary period.

Licenses and certifications must be kept current as a condition of employment.

Working Environment

Potential exposure to cold weather conditions (indoor/outdoor).

Potential exposure to dust.

Potential exposure to hazards from electrical/mechanical/power equipment.

Potential exposure to pesticides or fertilizers.

Potential exposure to risk of blood-borne diseases.

Potential exposure to temperature changes: variations in temperature from hot to cold.

Potential exposure to unpleasant elements (accidents, injuries, and illnesses).

Handles absentee replacement on short notice.

Noise: sufficient noise to cause distraction.

Occasional pressure due to multiple calls and inquiries.

Personal Safety: aware of surroundings, people, and events.

Pressure due to multiple calls and inquiries.

Subject to electrical and radiant energy hazards.

Subject to injury from moving parts or equipment.

Subject to long, irregular hours.

Subject to many interruptions.
 Subject to pressure for multiple calls, inquiries, and interruptions.
 Works in confined, uncomfortable or awkward locations.

Level of Physical Demand

1-Sedentary (0-10 lbs.)

Physical Demands

(Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs.):

Agility: Ability to move quickly and easily.
 Balancing: Maintaining equilibrium.
 Carrying: Transporting or moving an object.
 Color vision: Ability to distinguish and identify different colors.
 Crawling: Moving about in a low or crouched position.
 Crouching: Positioning body downward and forward.
 Depth Perception: Ability to judge distances and space relationships.
 Eye/Hand/Foot Coordination: Performing work through using two or more body parts or other devices.
 Feeling: Perceiving attributes of objects by means of skin receptors, communication, or otherwise.
 Field of Vision: Ability to sharply detect or perceive objects peripherally.
 Fine Dexterity: Sufficient coordination to operate a vehicle and manipulate objects.
 Fingering: Picking and pinching, through use of fingers or otherwise.
 Handling: Seizing, holding, grasping, through use of hands, fingers, or other means.
 Hearing/Talking: Perceiving and comprehending the nature and direction of sounds/ability to communicate ideas.
 Hearing: Perceiving and comprehending the nature and direction of sounds.
 Kneeling: Assuming a lowered position.
 Lifting: Moving objects weighing no more than 10 pounds from one level to another.
 Neck Flexion: Perceiving objects located above or below.
 Oral Comprehension: Ability to discern the meaning of oral speech.
 Pulling: Exerting force upon an object so that it is moving to the person.
 Pushing: Exerting force upon an object so that it moves away from the person.
 Reaching: Extending the hands and arms or other device in any direction.
 Repetitive motions: Making frequent or continuous movements.
 Sitting: Remaining in a stationary position.
 Standing: Remaining in a stationary position.
 Stooping: Positioning oneself low to the ground.
 Talking: Communicating ideas or exchanging information.
 Vision Far Acuity: Ability to perceive or detect objects clearly at 20 feet or more.
 Vision Near Acuity: Ability to perceive or detect objects at 20 inches or less.
 Vision: Ability to perceive animal behavior, comprehend signs, and detect color.
 Walking: Ability to move or traverse from one location to another.
 Written Comprehension: Ability to discern the meaning of written words.

Background Check Requirement

Criminal Check
 Education Check
 Employment Verification
 By position, Motor Vehicle Record
 By position, must obtain Criminal Justice Information Services (CJIS) clearance within the probationary period.

Assessment Requirement

None

Probation Period

Six (6) months.

Class Detail

Pay Grade: EX-12

FLSA Code: Y

Established Date: 9/21/2018

Established By: LS

Revised Date: 7/30/2023

Revised By: AM

Class History: 7/30/2023 – Revised licensure & certification and background checks.