ASHEVILLE, NORTH CAROLINA

Classification Specification

Infrastructure Engineer
Job Code: 2625
FLSA: Exempt

Purpose of Classification:

The purpose of this classification is to design, build, deploy, and maintain the City's information technology infrastructure, including networking and server management for both on-premises and cloud infrastructure.

Distinguishing Characteristics:

This is a single level classification.

Essential Functions:

The following duties are normal for this position. The omission of specific statements of the duties does not exclude them from the classification if the work is similar, related, or a logical assignment for this classification. Other duties may be required and assigned.

Designs network and server infrastructure systems: develops architecture and integration strategies; designs monitoring, capacity planning, and modeling; conducts site survey and workflow analysis to better utilize departmental resources; works with users to plan appropriate locations for network and server components; determines facility modifications necessary to appropriately locate components; prepares user site plans for installations; and develops, applies and implements processes for promoting all infrastructure components from the development environment to the environments of testing, demonstrating, and generating.

Installs, maintains, and repairs network and server infrastructure: utilizes current City technologies and a variety of procedures, protocols, and wireless communication bridges; utilizes the internet and downloads files, software patches and updates to correct file servers and nodes; assembles network hardware; establishes port connections for new equipment to network as needed; and installs and maintains network and server connections.

Leads transition from on-premises infrastructure to cloud-based infrastructure: writes code to support moving resources to the cloud; prioritizes moving on-premises systems to cloud platforms and co-location facilities; and implements industry best practices for cloud computing to maximize business value, security, performance and availability.

Monitors network and server infrastructure performance and service levels: collects, analyzes and manages performance and capacity data; analyzes system use; identifies trends to prevent system disruptions and downtime; provides reports on average, peak, and guideline values for performance elements to track resource use; determines necessary changes to hardware and/or software resources to enhance overall system operations; and makes appropriate recommendations.

Maintains system infrastructure: configures networks, storage, cloud, and server monitoring; ensures early detection of maintenance needs and errors; installs and maintains firewalls; develops and/or installs data retrieval system; installs and updates security programs to prevent unauthorized access to privileged data and information; performs regular backup processes and testing; and monitors and tests disaster recovery procedures and protocols.

Troubleshoots end-user problems: responds to requests for assistance; performs troubleshooting analysis of networks, servers, and associated systems; resolves and documents network problems; escalates problem to vendors or other personnel as appropriate; ensures continual operations of customers' networks and equipment; and utilizes diagnostic tools and other resources as appropriate.

Participates in related activities in support of department operations: conducts technical reviews of statements of work and requests for proposals, etc.; makes recommendations and provides advice regarding contract awards; coordinates with vendors, as needed; makes recommendations and requests regarding budget allocations for network and server infrastructure; and creates resource materials and documentation.

Maintains an awareness of new applications, technologies, technical methods, trends, and advances in the profession: reviews professional publications, technical manuals, and websites to increase knowledge of infrastructure operations and design tools and standards; and attends conferences, workshops, and training sessions as appropriate.

Communicates with City officials, supervisor, other City employees, vendors, the public, outside agencies and organizations, and other individuals as needed to coordinate work activities, review status of work, exchange information, or resolve problems.

Processes a variety of documentation associated with department/division operations, within designated timeframes and per established procedures: receives, reviews, prepares, completes, processes, forwards or retains as appropriate various forms, reports, correspondence, diagnostic reports, security alerts, statements of work, quotes, work orders, budget requests, billing statements, project charters, requests for proposal, system technical documentation, and security and infrastructure performance logs, and other documentation; compiles data for further processing or for use in preparation of department reports; and maintains computerized and/or hardcopy records.

Operates a personal computer to enter, retrieve, review or modify data, utilizing word processing, spreadsheet, database, presentation, Internet, e-mail, or other software; and operates general office or other equipment as necessary to complete essential functions.

Operates and maintains a variety of equipment and tools to complete work activities, such as network test appliances, servers and virtual machines, optical fiber test and locate tools, telecommunications test equipment, or other equipment and tools as needed.

Additional Functions:

Performs other related duties as required.

Minimum Qualifications:

Bachelor's Degree in Information Systems, Network Technology, Computer Engineering, or a related field required; supplemented by three years of experience in network and server implementation and maintenance, including cloud networks, programming, or closely related field; or any equivalent combination of education, training, and experience which provides the requisite knowledge, skills, and abilities for this job.

Specific License or Certification Required: None.

Specific Knowledge, Skills, or Abilities: Must be able to demonstrate proficiency in performance of the essential functions and learn, comprehend, and apply all City or departmental policies, practices, and procedures necessary to function effectively in the position.

Performance Aptitudes:

Data Utilization: Requires the ability to evaluate, audit, deduce, and/or assess data using established criteria. Includes exercising discretion in determining actual or probable consequences and in referencing such evaluation to identify and select alternatives.

Human Interaction: Requires the ability to work with and apply principles of persuasion and/or influence over others to coordinate programs or activities of a project, and resolve typical problems associated with the responsibilities of the job.

Equipment, Machinery, Tools, and Materials Utilization: Requires the ability to overhaul, restore, renovate, construct, and/or rebuild equipment, machinery, or objects, requiring adherence to prescribed standards and specifications. Requires the ability to operate and control the actions of the same equipment, machinery, and/or objects.

Verbal Aptitude: Requires the ability to utilize a wide variety of reference, descriptive, advisory and/or design data and information.

Mathematical Aptitude: Requires the ability to perform addition, subtraction, multiplication and division; ability to calculate decimals and percentages; may include ability to perform mathematical operations with fractions; may include ability to compute discount, interest, and ratios; may include ability to calculate surface areas, volumes, weights, and measures.

Functional Reasoning: Requires the ability to apply principles of influence systems, such as motivation, incentive, and leadership, and to exercise independent judgment to apply facts and principles for developing approaches and techniques to resolve problems.

Situational Reasoning: Requires the ability to exercise judgment, decisiveness and creativity in situations involving the evaluation of information against sensory, judgmental, or subjective criteria, as opposed to that which is clearly measurable or verifiable.

ADA Compliance:

Physical Ability: Tasks require the ability to exert light physical effort in sedentary to light work, but which may involve some lifting, carrying, pushing and/or pulling of objects and materials of light weight (5-10 pounds). Tasks

may involve extended periods of time at a keyboard or workstation.

Sensory Requirements: Some tasks require the ability to perceive and discriminate colors or shades of colors, sounds, and visual cues or signals. Some tasks require the ability to communicate orally.

Environmental Factors: Essential functions are regularly performed without exposure to adverse environmental conditions.

The City of Asheville is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the City will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer.