CLASS TITLE: SENIOR CLOUD ENGINEER

CHARACTERISTICS OF THE CLASS

Under direction, facilitates execution of the cloud/infrastructure strategy set by architecture by providing the design of a cloud-based network and IT infrastructure environment. Leads the implementation and integration of cloud technologies to support the infrastructure and service needs of the organization across business and IT functions, products, and platforms, and performs related duties as required.

The class title functions at the fully functional level delivering expertise in a range of areas, including systems design, testing and implementation of infrastructure, virtualization, cloud computing, network engineering, and systems and data flow monitoring to create the design for a new system.

This class is assigned to the City's Engineering Information Technology Job Family which consists of engineers and developers responsible for designing, building, testing, deploying, and supporting IT products and solutions.

ESSENTIAL DUTIES

This class is distinguished from the entry-level by the amount of discretion exercised over technical issues, problems and resolutions; positions must possess a significant level of specialized technical and functional expertise beyond that expected at the entry level; require highly specialized knowledge, abilities and skills and experience and often exercise independent judgement in the performance of their duties. The senior level also has greater latitude in determining work methods and assignments; greater authority over assignments and decisions required to complete the work than the lower-level classification; and works on complex cloud services.

- Researches, designs, develops, runs tests, and evaluates systems that support cloud implementation
- Plans and conducts technical tasks associated with the implementation and maintenance of enterprise-shared infrastructure
- Develops and executes cloud solution roadmaps
- Participates and plays an active role in agile team activities and is accountable for regularly producing product increments that effectively contribute to solution features and/or components
- Works with agile teams and product analysts to gather requirements and information to support plans to transition existing business functions and IT services to a cloud-based environment
- Develops time and cost estimates for cloud solutions
- Evaluates technical requirements for projects and products to determine the impact of cloud technologies on the infrastructure including equipment redundancy and capacity requirements
- Determines cloud systems specifications, input/output processes, and working parameters for hardware/software compatibility
- Creates the physical design for cloud-based solutions for infrastructure and platforms
- Coordinates with Security staff to ensure cloud solutions support the maintenance of a secure technology environment
- Aligns cloud solutions to business and IT strategies

- Plans and validates the installation, configuration, and maintenance of cloud architecture
- Troubleshoots, diagnoses, documents, and resolves escalated support problems
- Supports innovative efforts by driving creativity, acting with agility, and thinking outside current boundaries
- Evaluates services provided by vendors and recommend changes
- Participates in Agile Release Train (ART) events as required

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

- Graduation from an accredited college or university with a Bachelor's degree in IT Engineering, Computer Science, Business Management, Mathematics, Information Technology, Computer Engineering or Information Science or a directly related field plus three (3) years of work experience in systems administration, networking, database management administration, network engineering or administration, or an equivalent combination of education, training, and experience.

Licensure, Certification, or Other Qualifications

- Relevant certification is preferred
- Experience in an agile environment is strongly preferred
- Experience with Scaled Agile Framework (SAFe) framework preferred

WORKING CONDITIONS

- General office environment

EQUIPMENT

- Standard office equipment (e.g., phone, printer, copier, computers, mobile devices)
- Standard productivity suites (e.g., Microsoft Office Suite, OpenOffice, Google Workspace)

PHYSICAL REQUIREMENTS

- No specific requirements

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Considerable knowledge of:

- *practical application of engineering and technology including applying principles, techniques, procedures, hardware and tools to the design and production of various products and services
- *cloud ecosystem and leading-edge cloud emerging technologies
- *DevOps principles and ways of working
- *broad range of hardware and software products
- *approaches, tools, and techniques for anticipating, recognizing, managing, and resolving technical (hardware, software, application, or operational) problems

Moderate knowledge of:

- data center design best practices

- programming languages

- APIs, orchestration, automation, and databases

Knowledge of applicable City and department policies, procedures, rules, and regulations

Other knowledge as required for successful performance in the Cloud Engineer class

Skills

- ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making

- ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times

- CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems

- COMPLEX PROBLEM SOLVING - Identify complex problems and review related information to develop and evaluate options and implement solutions

- TIME MANAGEMENT - Manage one's own time or the time of others

- COORDINATION WITH OTHERS - Adjust actions in relation to others' actions

- JUDGEMENT AND DECISION MAKING - Consider the relative costs and benefits of potential actions to choose the most appropriate one

- SYSTEMS ANALYSIS - Determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences

- SPEAK - Communicate information and ideas in speaking so others will understand

- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing

- WRITE - Communicate information and ideas in writing so others will understand

- CONCENTRATE - Concentrate on a task over a period of time without being distracted

- RECOGNIZE PROBLEMS - Tell when something is wrong or is likely to go wrong

- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense

- COME UP WITH IDEAS - Come up with a number of ideas about a topic

- MAKE SENSE OF INFORMATION - Quickly make sense of, combine, and organize information into meaningful patterns

- REACH CONCLUSIONS - Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

Additional Competency Requirements

- COMMUNICATION FOR RESULTS – Writes, speaks and presents effectively. Explains the immediate context of the situation, asks questions with follow-ups and solicits advice prior to taking action. Develops presentations to influence others by using graphics, visuals or slides

that display information clearly. Listens and asks questions to understand other people's viewpoints.

- GROWTH MINDSET – Takes ownership of personal growth. Identifies knowledge gaps. Asks questions of subject matter experts and seeks help when needed. Keeps abreast of information, developments and best practices within a field of expertise (e.g., by reading, interacting with others or attending learning events).

- INITIATIVE – Volunteers to undertake tasks that stretch his or her capability. Identifies who can provide support and procures their input. Identifies problems and acts to prevent and solve them.

- OWNERSHIP AND COMMITMENT – Volunteers to undertake tasks that stretch his or her capability. Checks the scope of responsibilities of self and others. Monitors day-to-day performance and takes corrective action when needed to ensure desired performance is achieved. Identifies problems and acts to prevent and solve them. Identifies who can provide support and procures their input.

- NETWORK TECHNOLOGY KNOWLEDGE – Utilizes a range of tools and techniques for setting up and reconfiguring data and voice communications networks to meet changing business needs. Draws and presents detailed diagrams to explain the needs of the organization and implementation plans to peers, vendors and contractors. Offers advice and assistance on local problems escalated to second tier.

- ANALYTICAL THINKING – Undertakes a process of information and data collection and analysis for integration purposes. Identifies and makes sets of information and determines their relationships. Makes logical deductions from data. Identifies a solution for resolving the problem.

- CUSTOMER PARTNERSHIP – In response to requests for new types of assistance, refers representatives of the customer to the appropriate IT contact. Gathers information about customers' business and technology products and services. Solicits customer recommendations for improved day-to-day functionality and translates simpler recommendations into technical business requirements.

- INFORMATION SEEKING – Utilizes a variety of information and data sources pertaining to organizational and professional trends. Checks the source for omission and accuracy. Identifies the sources that are appropriate for specific types of information. Checks for bias and omission. Seeks out the appropriate people to approach for guidance either formally or informally depending on the type of issue. Links information in a lateral as well as linear manner. Finds hidden data. Relates and manipulates data from various sources to create a fuller picture. Investigates and uncovers root causes of a problem or issue.

- OUTCOME DRIVEN – Establishes specific performance standards and measures for own work. Assesses performance against metrics, deadlines and quality. Ensures that personal performance meets the standards and expectations of internal and external customers, as well as the organization.

- PROCESS ORIENTATION – Shares process steps with others. Helps others understand existing processes, how they work and their overall importance to the organization. Shares process information and makes informal recommendations on how to improve processes and overall job execution.

- SYSTEMS THINKING – Creates, explores and implements a strategy for supporting current business needs. Tracks and reviews trend data. Creates components for potential scenarios. Compares and contrasts ways of achieving a prescribed strategy.

- THOROUGHNESS – Demonstrates operational agility. Uses organizational systems that result in multiple critical activities being identified and completed on time. Renegotiates priorities as

necessary. Puts systems in place and uses them to monitor and detect errors and problems. Tests and inspects outputs, and applies quality checks prior to work submission.

Other competencies as required for successful performance in the lower-level series.

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.

City of Chicago
Department of Human Resources
March, 2023