CLASS TITLE: IT ENGINEER

CHARACTERISTICS OF THE CLASS

Under direction, functions as a technical expert in the design, implementation and maintenance of cloud-based servers and systems; and performs related duties as required

ESSENTIAL DUTIES

- Manages, designs, plans, and monitors cloud-based solutions and services

- Gathers business and technical requirements to understand processes and determines project feasibility, deliverables, scope, timeline, reporting, and impact of moving internal applications or servers to the cloud

- Reviews existing systems and new technologies to assess how they will integrate within the overall architecture framework

- Develops and maintains documentation of procedures, standards, and technical requirements related to area(s) of development

- Serves as a technical advisor in the evaluation and procurement of cloud services and applications

- Designs solutions for infrastructure architecture to establish a secure online environment

- Enhances user experience with scalable solutions to ensure information is accessible, reliable and responsive to user demands

- Creates and implements a recovery plan to prevent data loss

- Ensures continuous integration and continuous delivery between development and operations

- Works with other stakeholders (i.e., programmers, application support, consultants, etc.) to understand potential issues and maintenance of cloud environment

- Maintains cloud environment/applications/systems by performing account setup and modifications

- Stays abreast of current events and activities and participates in seminars, webinars, and other activities for professional development purposes

- Represents the department at various meetings and conferences and assists with special analytics projects as requested

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

- Seven (7) years of experience architecting and developing software for scalable, distributed systems, **OR**

- Graduation from an accredited college with an Associate's degree, plus five (5) years of experience architecting and developing software for scalable, distributed systems, **OR**

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- Graduation from an accredited college or university with a Bachelor's degree, plus three (3) years of experience architecting and developing software for scalable, distributed systems, **OR**
- Graduation from an accredited college or university with a Master's degree, plus two (2) years of experience architecting and developing software for scalable, distributed systems

Licensure, Certification, or Other Qualifications

- Preference may be given to applicants who hold applicable professional licenses or certifications relative to the specific responsibilities of the position.

WORKING CONDITIONS

- General office environment

EQUIPMENT

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer, scanner)
- Client/server computers
- Micro and minicomputers

PHYSICAL REQUIREMENTS

- No specific requirements

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Comprehensive knowledge of:

- applicable computer software packages
- *cloud computing platforms such as Azure, AWS
- *service models such as SaaS, Iaas, PaaS
- *IT architecture and design methodologies
- *IT concepts, principles, methods, and practices in the assigned specialty area
- *requirement analysis principles and methods
- *systems testing and evaluation principles, methods, and tools
- *methods, practices, and procedures for analyzing and resolving computer-related problems
- *methods and techniques of analysis and design
- new and emerging information technologies and/or industry trends

Moderate knowledge of:

- *technical documentation methods and procedures
- Software Development Life Cycle (SDLC)
- programming or scripting languages such as Java, Ruby, Python
- Microsoft Office application suite, including Excel, PowerPoint, Word

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

Skills

- *ANALYTICAL THINKING – Analyze information and using logic to address work or job issues and problems

- *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

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

- *PROGRAMMING – Write computer programs for various purposes

- QUALITY CONTROL ANALYSIS – Conduct tests and inspections of products, services, or processes to evaluate quality or performance

- *SYSTEMS EVALUATION — Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system

- *TECHNOLOGY DESIGN – Generate or adapt equipment and technology to serve user needs

Abilities

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

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

- DEDUCTIVE REASONING — The ability to apply general rules to specific problems to produce answers that make sense

- PROBLEM SENSITIVITY — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem

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

- REASON MATHEMATICALLY – Choose the right mathematical methods or formulas to solve a problem

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

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

Other Work Requirements

- ADAPTABILITY – Able to adapt to different environments and roles while remaining alert and ready to take intelligent action in the event of a security crisis or situation

- DEPENDABILITY – Demonstrate reliability, responsibility, and dependability and fulfill obligations

- ATTENTION TO DETAIL – Pay careful attention to detail and thoroughness in completing work tasks
- INITIATIVE – Demonstrate willingness to take on job challenges

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
April, 2021; May, 2025