CLASS TITLE: SENIOR DATABASE ADMINISTRATOR

CHARACTERISTICS OF THE CLASS

Under direction, this class is the senior level in the series responsible for designing, installing, maintaining, and upgrading the City of Chicago's databases (development, testing, and production) by providing technical expertise in the use of database technology and is accountable for the overall performance of the database environment, and performs related duties as required

This class is assigned to the Technical Administration Information Technology Job Family which consists of positions that design, build, configure, test, deploy, upgrade, maintain and improve technology products, platforms, and solutions.

ESSENTIAL DUTIES

This class is distinguished from the entry-level by the amount of discretion exercised over technical database design, installation and maintenance projects; positions must possess a significant level of specialized technical and functional expertise beyond that expected at the entry level; require specialized knowledge, abilities and skills and experience and often exercise independent judgement in the performance of their duties. The senior level also requires intermediate competencies in the following: adaptability, analytical thinking, information seeking, information systems thinking, and systems thinking. The senior level 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 database administration projects.

- Works independently and closely with business users, analysts, and solution developers to define and resolve information flow and content issues—helping to transform business requirements into environment-specific databases

- Designs, configures, and manages databases to ensure the integrity, security, and accessibility of the organization's data

- Defines standards for physical data storage, maintenance, access, and security administration

- Approves and modifies the designs and architectures by reviewing end-user topology, security, performance, and interoperability requirements

- Analyzes, designs, and develops a roadmap and implementation plan based upon a current vs. future state in a cohesive architecture viewpoint

- Identifies the tools and components used within the infrastructure based on the enterprise toolset and defines exceptions as warranted

- Meets with project management and IT Leaders to ensure progress toward architectural alignment with project goals and requirements

- Analyzes the current technology environment to detect critical deficiencies and recommend solutions for improvement

- Coordinates architecture implementation and modification activities

- Assists in post-implementation continuous-improvement efforts to enhance performance and provide increased functionality

- Identifies organizational requirements for the resources, structures, and cultural changes necessary to support initiatives

- Monitors and analyzes performance metrics and then allocates database resources to achieve optimum database performance
- Implements and performs backup and recovery procedures for AIS IT's databases and helps develop the tools and techniques that allow end users to access data in a secure environment
- Configures database parameters and defines data repository requirements, data dictionaries, and warehousing requirements
- Designs and implements approaches to improve database performance, capacity, and scalability
- May assist in the training of Database Administrators

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 Computer Science, Information Technology/Systems, or a directly related field, plus three (3) years of work experience in database administration, design and/or support, or an equivalent combination of education, training and experience.

Licensure, Certification, or Other Qualifications

- None

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:

- *relational database structures, theories, principles and practices
- *computer systems management
- *distributed and centralized computer systems
- *database normalization concepts
- *IT systems development practices, standards, and procedures
- *computer operating systems
- *architecture design review processes
- *architecture principles and concepts
- *data modeling

- *performance tuning to design high-volume
- *data mining
- *data warehousing
- *data security
- *database design
- *database implementation
- *data access and user administration
- *storage, capacity, and performance methods
- *tuning and optimization techniques
- *change management
- *incident management
- *IT disaster recovery

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

Other knowledge as required for successful performance in the Database Administrator 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.

- ADAPTABILITY – Handles multiple projects and duties simultaneously, prioritizing as needed. Quickly resolves new challenges in a changing environment. Devises flexible approaches that are easily adopted. Listens to others' opinions and acknowledges the value of difference.

- ANALYTICAL THINKING – Collects all the relevant information and data needed to address the problem. Organizes, classifies and synthesizes the data into fundamental issues. Breaks the information into manageable components. Identifies the logical outcomes from the analyses of the data collected and identifies the options and solutions for addressing the problems analyzed.

- CUSTOMER SERVICE – Assumes responsibility for meeting customers' needs and holds self accountable for follow-up. Provides courteous, timely and professional service even in difficult situations. Instructs customers on products and services and how to apply them to their business processes. Escalates to appropriate parties as needed. Makes customers and their needs a primary focus of one's actions. Performs tasks according to quality and output standards. Takes initiative to ensure that outcomes meet internal and external customer 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.

- INFORMATION SYSTEMS THINKING – Resolves escalated problems of technical support. Identifies root causes. Sets up and integrates new and enhanced information systems. Identifies customer needs and determines the appropriate approach to ensure resolution. Solicits the input of appropriate technical experts and managers.

- SYSTEMS THINKING – Researches the critical and underlying relationships between primary business, technology and systems platforms. Devises approaches that integrate system components.

- TEAMWORK – Takes initiative to actively participate in team interactions. Treats everyone with respect. Works effectively as part of a team. Draws on the strengths of fellow team members. Does his or her share of tasks and takes on additional work, when asked, to help a colleague.

- THOROUGHNESS – Performs tasks according to quality and output standards. Takes initiative to ensure that outcomes meet internal and external customer requirements. Solicits feedback on performance of new tasks. Measures accuracy using performance metrics. Sets improvement standards to reduce errors, omissions and oversights.

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