

## Job Description

**JOB TITLE:** DATABASE SYSTEMS ADMINISTRATOR

**PAY GRADE:** CL 29

**LAST REVISED:** JANUARY 2012

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job. Additional or different duties from the ones set forth below may be required to address changing business needs/practices.*

### **SUMMARY DESCRIPTION**

Under administrative direction of a manager, serves as a technical expert and coordinate the development, installation, implementation, administration, development and support of the District's Enterprise Resource Planning (ERP) systems and associated database, operating systems and related software for District servers. Administers District systems, databases, application access, and systems security procedures; and coordinates assigned activities with other divisions and departments and performs a variety of tasks relative to assigned area of responsibility. The Database Administrator assumes primary technical responsibility for protecting District business data against loss or corruption due to factors such as equipment failure, unauthorized access, natural disaster and human error.

**REPRESENTATIVE DUTIES** - *The following duties are typical for this job classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.*

1. Assumes responsibility for the development, installation, implementation, administration and support of District database management operating system and related software for District servers.
2. Participates in the development and implementation of goals, objectives, policies and priorities for assigned programs; recommends and administers policies and procedures.
3. Serves as a leader for projects by coordinating and otherwise involving staff members from multiple organizational units; follows systems development life-cycle techniques, utilizes joint application development processes, employs project management techniques and is knowledgeable about specialized software packages and applications.
4. Provides technical leadership and mentoring for Analyst/Programmers and other District staff. Reviews design work including data structures, programs and documentation for adherence to performance, maintainability and security standards. Provides developer and end-user support for test systems and database development tools and procedures.
5. Participates in and facilitates planning and implementation of long range systems goals; researches and participates in the development of system requirements, and evaluation and selection of information systems.
6. Defines the scope and objectives for applications, along with constraints and system requirements; analyzes and defines current organizational functions, processes, sources and uses of information, and other data to determine application needs and requirements.

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7. Analyzes user business processes and designs applications and solutions to optimize their use of systems; documents work and information flow using organization and data flow charts and other related materials; designs and produces application design specifications and documentation on inputs, outputs, and data structures.
8. Coordinates and implements data conversions, integration, and transitions; develops user and system documentation; plans and conducts user training, including preparation of training materials.
9. Designs and implements custom applications using batch processing tools or appropriate programming languages, such as shell and kernel-level programming.
10. Reviews and evaluates District computer systems and database software; consults with District technical staff members regarding computer software requirements; reviews software release notes and installation documentation; schedules system downtime with end users and technical staff members.
11. Designs, develops and implements logical and physical database structures; defines and secures efficient connectivity relationships for host computers, desktop computers and network systems; installs, configures, tests and implements District host computer operating software.
12. Monitors system and database performance; analyzes performance statistics and modifies system/database operating parameters; restarts system/database; formulates and implements system/database tuning strategies.
13. Analyzes database requirements with District technical staff members; develops logical and physical database designs and specifications; reviews with District technical staff members and implements database designs; reviews software with District technical staff members and/or end users making modifications, as necessary; evaluates and recommends third party software for District computers.
14. Analyzes and monitors District database systems with regard to standard and local security policies; works with District staff to formulate and review District database security policies and procedures.
15. Plan for and support the processing of upgrades, patches and major releases for District's database systems and ERP applications.
16. Coordinate administration and operation of ERP systems with outside vendors and users to integrate third party software into District databases; serve as liaison between users, managers, IIT staff, consultants and vendors.
17. Manage end-user and developer accounts and maintain account security and confidential information.
18. Researches issues related to District databases, system software, and industry trends in computing technologies; functions as a technical advisor and resource to District technical staff members and provides assistance with technical questions.
19. Serves as the liaison for the database administration and systems security with other divisions and departments; negotiates and resolves sensitive and controversial issues.
20. Serves as staff on a variety of committees and/or task forces; prepares and presents staff reports and other necessary correspondence.
21. Provides responsible staff assistance to manager; conducts a variety of organizational studies, investigations, and operational studies; recommends modifications to database administration programs, policies, and procedures as appropriate.

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22. Attends and participates in professional group meetings; maintains awareness of new trends and developments in the field of database administration and security; incorporates new developments as appropriate.
23. Performs related duties as required.

**QUALIFICATIONS** - *The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.*

**Knowledge of:**

Experience in Oracle RDBMS (current releases) / Linux operating systems, PL/SQL, SQL\*Plus.  
Computer database management system concepts, methodologies, analysis and design.  
Computer system software concepts, installation, configuration and maintenance.  
Principles and practices of computer network design, installation, configuration, and maintenance.  
ERP (i.e. BANNER, etc) system and database (Oracle) concepts, data warehouse and reporting, design and programming with PL/SQL.  
UNIX operating system (commercial and open source) concepts, installation, configuration, tools and operation.  
Logical and physical database structures and relationships, including those for desktop computer and network systems.  
Desktop and server computer system architecture to component level.  
Principles, theories, methods and techniques of computers and network equipment.  
Principles and practices of program development and project administration, including object-oriented design, integrated development environments, version control systems, build tools.  
High-level general programming languages (C#, Java, Visual Basic, C/C++)  
Principles and methods of change management and change control.  
Methods and techniques of computer and database security.  
Relational database management systems (Oracle and SQL Server RDBMS), computer network topologies and the security implications of each.  
Network transport protocols and hardware.  
Database definition and manipulation languages (SQL).  
Help desk, trouble ticket and work order management methods and practices.  
Scripting languages and system configuration methods and practices.  
Project management methods and tools.  
Information Technology Service Management best practices (ITIL)  
Office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, and databases.  
Pertinent federal, state, and local laws, codes, and regulations.

**Ability to:**

Participate in the management of a comprehensive database administration program.  
Participate in the development and administration of goals, objectives, and procedures.  
Administer host computer systems and databases.  
Install, configure and troubleshoot system operating, database and application software.  
Design host computer logical and physical database structure and relationships, including those for desktop computer and network systems.  
Design and code database and system software applications using appropriate languages and tools.  
Act as project manager for implementation of software application features or subsystems.  
Translate user requirements into computer programs and systems.  
Write program and system documentation.  
Read and interpret technical manuals and other documentation.

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Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of goals.

Implement system software and data changes in accordance with security and change control policies.

**Ability to continued:**

Provide back-line support to end users, using work order tracking systems.

Interpret and apply federal, state, and local policies, laws, and regulations.

Operate office equipment including computers and supporting word processing, spreadsheet, and database applications.

Plan and organize work to meet changing priorities and deadlines.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

**Education and Experience Guidelines:** *Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

**Education/Training:**

A Bachelor's degree from an accredited college or university with major course work in computer science, information technology or a related field.

**Experience:**

Eight years of increasingly responsible database and systems administration experience.

**PHYSICAL DEMANDS AND WORKING ENVIRONMENT** - *The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.*

**Environment:** Work is performed primarily in a standard office setting.

**Physical:** Primary functions require sufficient physical ability and mobility to work in an office setting; to stand or sit for prolonged periods of time; to occasionally walk, stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight; to operate office equipment requiring repetitive hand movement and fine coordination including use of a computer keyboard; and to verbally communicate to exchange information.

**Vision:** See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

**Hearing:** Hear in the normal audio range with or without correction.

*Developed in Consultation With*

