

**JOB DESCRIPTION**  
**San Diego County Office of Education**

**Database Administration and Engineering Manager**

**Purpose Statement**

The job of the Database Administration and Engineering Manager provides hands-on services for a full range of activities required to support large-scale enterprise databases (e.g., Oracle and SQL) supported by the Enterprise Applications unit; maintains the security and integrity of the databases; establishes technical standards; reviews and implements performance monitoring/optimization, database design, recovery strategies, and secure FTP; plans and organizes the activities of the database team and operations to ensure integrity and efficiency of technical data resources.

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**Diversity Statement:**

Because each person is born with inherent worth and dignity, and because equitable access and opportunity are essential to a just, educated society, SDCOE employee commitments include being respectful of differences and diverse perspectives, and being accountable for one's actions and the resulting impact.

**Representative Duties:**

This position description is intended to describe the general nature and level of work being performed by the employee assigned to the position. This description is not an exhaustive list of all duties, responsibilities, knowledge, skills, abilities, and working conditions associated with the position. Incumbents may be required to perform any combination of these duties.

**Essential Functions:**

- Provides Hands on Services for a full range of activities to support large-scale enterprise databases (e.g., Oracle and SQL).
- Supervises database or engineering staff and coordinates database activities, including allocating, planning, implementing resources, including design, and maintenance of cloud and physical/logical databases.
- Oversees the development of third-party applications, maintenance, enhancement of database and engineering services provided by the team to internal SDCOE departments and divisions, school districts, and external agencies.
- Manages and monitors system capacity management, considering the impact on memory, processing, and storage capacity for database performance.
- Manages or creates design specifications for systems and databases; work with Applications/BI Development teams to plan databases for support and development. Including: assessment of database with software to develop database objects, storage structures, retrieval, and reporting according to project specifications.
- Collaborates with SDCOE internal departments or external districts, and vendors to support Applications Development, Network, Applications Support, for other related data and systems.

- Implements and tests database design, functionality, and tuning for performance; design and develop back-end database interfaces to web applications; document configurations, maintain hardware and software license inventory.
- Installs system software, patches, and upgrades; performs system backups and recovery and conducts server builds; manages and oversees the installation and configuration of software of upgrades, patches, and third-party tools.
- Establishes and maintains database and engineering procedures, specification documents, and operational guidelines.
- Assesses and utilizes industry standards to ensure conformity of reliable data techniques and management; incorporate design specifications, data structure, performance, maintainability, data security, scalability of data procedures.
- Manages, plans, and conducts full range of scenario-based database recovery tests.
- Manages and coordinates database outages and performance problems.
- Researches new technologies for staying up-to-date and for the purpose of improving.
- Backup for BI Database Manager and BI database.
- Designs, Oversees, database or engineering system configurations and performs programming tasks as needed to support system configurations and implementations.
- Creates, Oversees, and utilizes SQL scripts to monitor system usage and recommends systems and/or processes to effectively manage traffic across applications servers.
- Performs personnel administrative functions for assigned personnel (e.g., hiring, counseling, training, supervising, evaluating, providing professional development opportunities, etc.) maintaining necessary staffing, enhancing productivity of staff, and ensuring necessary department/program outcomes are achieved.

### **Other Functions**

- Performs other related duties as assigned for the purpose of ensuring the efficient and effective functioning of the work unit.

### **Job Requirements: Minimum Qualifications**

#### **Knowledge and Abilities:**

##### KNOWLEDGE OF:

Database technologies, architecture, and data security;

Principles, concepts, and techniques of analyses, use cases, requirements, design specification, testing, managing projects, tasks milestones, and implementation or development lifecycle methods;

Advanced knowledge of relational database design techniques, characteristics, capabilities, operation, and control for databases;

Operating systems (Windows);

Oracle and Microsoft SQL databases and database integration tools (e.g., SQL, ETL, SSIS);

Database management software such as Oracle Enterprise Manager;

Microsoft PowerShell scripting;

SQL Server Management Studio and Server Integration Services;

Debugging methods and database management techniques;

Network, PC, and platform design;

Technical systems software, protocols and standards including SFTP; Protocols, NTFS, Data Encryption mechanisms (e.g., TDE);

Programming languages (e.g., C#);  
Applicable data privacy practices and laws;  
Application programming interfaces (APIs) and application and databases;  
Enterprise backup and recovery solutions and data replication technologies;  
Database management systems and tools, such as Microsoft SQL Server, Microsoft Data;  
Management concepts such as database clustering, log shipping, availability groups,  
performance tuning;  
Help desk support and operations – ITIL methodology;  
Professional and technical expertise in data management and engineering.

**ABILITY TO:**

Promote a human-centered culture that elevates the strengths of others creating a sense of belongingness;  
Practice cultural competency while working collaboratively with diverse groups and individuals;  
Manage, develop, and administer technical policies and procedures in a complex environment;  
Assign, train, supervise, evaluate, coach, and motivate technical staff;  
Establish and maintain effective working relationships with others;  
Analyze and evaluate complex technology and apply solutions and ability to determine decisions;  
Organize and prioritize work;  
Communicate effectively both orally and in writing;  
Attend the needs and expectations of customers;  
Collaborate with others to achieve shared goals;  
Plan and track projects timelines, budget, and achieve objectives;  
Manage, report, and execute project schedules and timelines;  
Work with multiple projects, frequent interruptions, and changing work priorities;  
Support the SDCOE and ITS in achieving its mission, vision, and strategic goals.

**Working Environment:**

**ENVIRONMENT:**

Duties are typically performed in an office setting.  
May be designated in an alternate work setting using computer-based equipment to perform duties.

**PHYSICAL ABILITIES:**

Must be able to hear and speak to exchange information; see to perform assigned duties; sit or stand for extended periods of time; possess dexterity of hands and fingers to operate computer and other office equipment; kneel, bend at the waist, and reach overhead, above the shoulders and horizontally, to retrieve and store files; lift light objects. All requirements are subject to possible modification to reasonably accommodate individuals with a disability.

**Education and Experience:**

**Education:** A Bachelor's degree in computer science, information systems or related field; and

**Experience:** Five (5) years of progressively responsible experience in database management

systems, design techniques, implementation, maintenance, integration, server management, and development; strong experience in database programming (e.g., Oracle, and/or SQL); experience working with Data Presentation tools; and Oracle Database Monitoring tools experience preferred. Including two (2) years of experience in a lead capacity; or

Equivalency: A combination of education and experience equivalent to a bachelor's degree in computer science, information systems or related field and five (5) years of progressively responsible experience in database management systems, design techniques, implementation, maintenance, integration, server management, and development; strong experience in database programming (e.g., Oracle, and/or SQL); experience working with Data Presentation tools; and Oracle Database Monitoring tools experience preferred. Including two (2) years of experience in a lead capacity.

Required Testing

N/A

Certificates, Licenses, Credentials

Valid California Driver's License

Continuing Educ./Training

N/A

Clearances

Criminal Justice Fingerprint/Background Clearance  
Physical Exam including drug screen  
Tuberculosis Clearance

FLSA Status: Exempt

Salary Grade: Classified Management, Grade 044

**Personnel Commission Approved: April 19, 2023**