



Cañada College ♦ College of San Mateo ♦ Skyline College

GENERIC POSITION DESCRIPTION

SENIOR DATABASE ADMINISTRATOR

A Classified Professional Position
Grade 220S – Salary Schedule 40

A. General Statement

The Senior Database Administrator performs systems analysis and programming at the highest level of complexity and technical challenge. The Senior Database Administrator is assigned responsibility for administering major systems and is expected to perform these responsibilities with limited coordination. This position may include lead responsibility for major projects of broad scope. The Senior Database Administrator also assumes full lead responsibility for all the database systems administration and for administering the Enterprise database systems or operating systems. The position functions as the primary analyst in managing the database installations, upgrades, system monitoring, and performance tuning. This position holds lead responsibility for all the database and hardware systems supporting the Enterprise applications and is expected to provide project coordination, technical leadership, and technical direction to other ITS staff in any of the database related or operating system tasks. The Database Administrator serves in a project leadership role for all Enterprise system installations or upgrades with a high level of complexity. This position also provides the principal technical leadership for vendor software evaluations, product selection, and enhancement recommendations to the technology environment. In addition, the Senior Database Administrator may train or lead other ITS staff members in the more advanced aspects of analysis, problem definition, design, development, and modification of applications systems or utilities. This position requires extensive knowledge of the District's hardware, its major applications systems and systems software, and its related data communications hardware and software. The Senior Database Administrator assists the Associate Director/Director, or the Chief Technology Officer, ITS with project definitions, cost estimates, and scheduling and serves in a project management role from a technical standpoint for all major developmental projects. The Senior Database Administrator serves as a mentor and provides technical advice and training to the other ITS programmer including design reviews on complex programs.

B. Duties & Responsibilities

The duties below are representative of the duties of the classification and are not intended to cover all of the duties performed by the incumbent(s) of any particular position. The omission of specific statements of duties does not exclude them from the position if the scope of work is similar, related, or a logical assignment to this classification.

1. Resolves technical problems on own initiative and consults with management on new project evaluations/implementations and major strategic initiatives

2. Perform project leader responsibilities as assigned; monitor and coordinate activities of the project; construct time and cost estimates; provide project reports, updates and recommendations to the Associate Director, Director, or the Chief Technology Officer, ITS.
3. Designing a low maintenance database structure , installation, configuration, upgrading, patches, and manage Oracle Server, Oracle Middleware Application Server, Oracle Grid Control and agents on all servers, third-party tools, and other related products.
4. Implemented high availability solutions: design and configure standby databases for our existing Production databases and activated for testing. Responsible for ensuring availability and performance of the databases that support the system.
5. Install, upgrade, patches, and maintenance on all Banner Modules, Application Web Exender, Applications Manager (Appworx), Hyperion, Argos, Evisions, and DegreeWorks.
6. Creates and maintains all databases required for development, testing, education and production usage.
7. Identify, recommend, and implement all new database technologies and Oracle license management.
8. Evaluate Oracle features/ releases and its tools, and third party products to ensure that the site is running the products that are most appropriate. Work in collaboration with application developers and System administrators, to ensure that any new product usage or release upgrade takes place with minimal impact.
9. Design, implement, support and maintain complete backup and recovery policies and procedures. Use RMAN to test various database recovery scenarios.
10. Implement, maintain and manage database security for all of the Oracle Databases and third party vendors' software (create and maintain users and roles, assign privileges).
11. Perform ongoing tuning and performance monitoring of the operating system, network, Oracle databases, Oracle application servers, and transaction processors to work with the database.
12. Proficient in scheduling jobs, patches, alerting for databases, hosts and also database administration through OEM grid control and Cron Job. Building a catalog of health check tasks and implementing periodic cleanup routines. Written/Modified shell scripts to monitor as needed and maintain the Oracle database and applications servers.
13. Plan growth and changes (capacity planning). Ensuring appropriate storage for the database. Managed large databases in 24/7 Production Environments. Enabling the database to work with storage devices and storage management software.
14. Interface with Oracle Corporation for technical support. Provides technical support to application development teams. The DBA is usually the point of contact for Oracle Corporation. Interfacing with any other technologies required by database applications.
15. Plan an efficient Oracle or Banner include rollout and upgrades, or a combination of the two events with a high probability of success.
16. Performs database re-organisations as required to assist performance and ensure maximum uptime of the database. Create tablespaces, tables, and users for custom applications and maintained security. And most of all.....Maintain 100% uptime!
17. Monitor database alert log files, data block corruption, segment fragmentation, contention issues (deadlocks, I/O, memory, CPU, etc.). Manage and maintain high volume transactional tables and indexes.
18. Diagnose Banner problems, access the appropriate assistance, and implement any recommended fixes. Assist technicians with user access issues, problems, and performance. Provide technical support and assistance to the technical staff for problem identification and resolution.
19. Work with the team to ensure that the associated hardware resources allocated to the databases and to ensure high availability and optimum performance. Proactively monitor the database systems to ensure secure services with minimum downtime.
20. Troubleshooting problems with web server, web listener, forms server, Apache, Jserv processes, and

databases. Perform general technical trouble shooting and give consultation to development teams.

21. Write, test, implement, modify and maintain a variety of complex computer programs using the District's information systems, third party vendors' software and database designs; study existing programs and make necessary program coding modifications; identify and correct program logic errors.
22. Write and revise technical manuals and conduct training sessions in proper operating procedures for use of software.
23. Maintain accurate and comprehensive documentation for all customizations and general installation procedures/logs.
24. Maintain a broad knowledge of state-of-the-art technology, equipment, and/or systems. Keep abreast of technical developments and information systems trends by self-study and participation in courses, seminars and conferences.
25. Transfer knowledge to coworkers through development of procedures and documentation of the environments as related to Oracle/Banner Software and its supporting products.
26. Perform other job-related duties and projects as assigned.

C. Requirements

1. Bachelor's degree from an accredited institution in computer information science or a closely related field (Master's degree preferred)
2. At least five years of increasingly responsible work experience with the Oracle relational database management system and related toolset in the areas of database analysis, design and programming, tuning for performance, and providing technical assistance to staff
3. Proven analytical and problem solving skills
4. Ability to effectively multi-task and complete assignments in a timely manner
5. Requires excellent writing skills to document project plans, procedures, policies, and to communicate with staff
6. Ability to discuss technical issues to non-technical staff in a manner that is clearly understood
7. Demonstrated skill in establishing and maintaining effective working relationships, and communicate respectfully and professionally with people at all levels in the organization who are diverse in their cultures, language groups and abilities
8. Previous experience directing the work of others
9. Possession of a valid California Driver's license (or the ability to obtain one) and the ability to easily travel within the county

D. Physical/Other Requirements

This classification requires Sitting or standing for prolonged periods of time, dexterity of hands and fingers to operate a computer keyboard, touch screen and mouse, use of hand tools such as screw drivers, pliers, etc., the ability to lift equipment up to 40 pounds, crawl on the floor, work under desks and in tight places, and work on ladders. This position requires oral and written communication, data analysis, attention to details, ability to adapt to rapidly changing situations, close work with others as part of a team, patience, tact, exposure to various temperatures, memory for detailed information and manual dexterity in order to perform the essential functions.

E. Knowledge, Skills & Abilities

1. Knowledge of advanced principles, practices and techniques of web-based computer system analysis, design and applications programming
2. Knowledge of advanced database design concepts, computer hardware systems, operating systems including UNIX and Windows servers, and software applications and programming languages used to develop and implement application systems
3. Expert knowledge of Oracle relational database management system and its toolset

4. Experience with PL/SQL and dynamically generated HTML
5. Ability to maintain various interfaces for 3rd party applications that connect to Oracle databases
6. Knowledge of the Ellucian Banner™ products including application interfaces to 3rd party applications is highly desirable
7. Ability to establish and maintain cooperative and effective working relationships with others
8. Ability to analyze situations accurately and create an effective course of action

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