**Senior Oracle Database Administrator**

**General Summary of Function/Purpose of Position:**

As a senior Database & Services Administrator, the employee performs a complete range of information system database analyst assignments including, but not limited to, designing, developing, testing, and implementing database and related systems services for production, test, and development environments for LARA applications. A senior Database Administrator plans, coordinates, and implements a full range of professional database & services administration functions for LARA as part of the database services team. Provides analytical and technical support and leadership around specialized software for database systems, developing database structures for applications, and related services such as job scheduling/automation & print/document management. Assists clients and agency staff, application development teams, data architects, and business data stewards. This position is also responsible for the support and maintenance of numerous databases and services. Responsible for the design, installation, and implementation of physical and virtual databases. Proactively monitor, write complex scripts, do performance tuning, and troubleshooting for an environment that requires a higher support level. This position will assist technical staff in researching about patches/upgrades, identification/troubleshooting, and resolution of database issues, and work with database security & compression tools. It is also responsible for assisting the planning, design, and implementation of security measures/tools which safeguard access to database files and data elements.

**Top Skills (required):**

- Oracle Database Administration (19c or higher)

- RAC (required)

- OEM

- Perform Patching and Updates

- Vulnerability Remediation

**Desired Skillset:**

1. OEM - setting up alerts, metric extensions, and other capabilities we can leverage
2. Data masking - Utilizing OEM or other solutions
3. Experience with RAC and zero downtime patching
4. Experience with patching - GIRU, DBRU, OJVM, JRE
5. Ability to follow directions and communicate effectively
6. MS Outlook (ability to schedule MS TEAMs meetings, calendaring of implementations, etc.)
7. Documentation of processes and procedures (read, comprehend, create)
8. Linux, vi, MobaXterm (preferred)
9. Performance tuning, partitioning, advanced compression
10. TOAD and SQL Developer; other tools
11. Azure DevOps (preferred) or other ticketing system(s)
12. Vulnerability Remediation (Tenable experience preferred)
13. Ability to meet deadlines under tight time constraints

**Duties of the position:**

**As a senior level information technology programmer/analyst, uses advanced principles and procedures of systems design methodology, structured systems design, and automated data processing techniques for new and existing complex computer applications.**

• Research, draft and recommend database standards and policies. • Coordinate with vendor support to address technical issues that could not be resolved in-house. • Participate in the planning process to match emerging technologies with future business needs. • Establish standards and guidelines for database space allocation based on best practices and implementation considerations based on business requirements. • Calculate disk space requirements for existing and/or new installations and growth based on changing business requirements. • Measure and/or forecast current capacity, gauge the growth of capacity over time, and factor in the anticipated capacity requirements to determine whether the existing infrastructure can sustain the anticipated workload. • Research, analyze, and determine appropriate changes to DBMS parameters to support future application and database needs. • Research, analyze, and determine appropriate hardware changes to support future application and database needs. Report recommendations to appropriate DBA specialist and/or technical services. • Review results of database integrity checks. Resolve identified issues. • Design appropriate strategy to reorganize database objects to release unused space or repair fragmentation. • Install database management software in any environment • Install database patches and service packs in any environment. • Provide maintenance, support, and assistance to specialist DBAs with installation and configuration of clustered database failover, database replication solutions, and database backup solutions. • Review, install, analyze, and implement security patches to be applied to remain Payment Cared Industry (PCI) compliant, vendor compliant, and Michigan Cyber Security compliant. • Designs the security model based on set standards. Create database user accounts and schemas in production environments based on defined and approved forms and procedures. • Define/design roles and profiles. • Recommend standard password security policies. • Implement data encryption. • Design, configure, and initiate auditing with appropriate options as needed. • Create and deploy new database in development and test environments. • Ensures and validates the integrity and quality of the scripts to be promoted to any of the environments. • Provide guidance to systems analysts, based on documented standards, in creating and modifying application specific database objects. • Perform Data Export/Import/Load and data transformations between databases in production environments. • Perform production data file transfers between different systems, across state agencies, federal government, vendors, etc. • Analyze and resolve database space utilization in production environments. Analyze and resolve issues with database integrity in development, test, and production environments. • Design and implement database backup solutions based on the business needs which include configuration, testing, implementation, modification, automation and monitoring of the backup and recovery solution as needed; troubleshoot and resolve more complex backup issues. Work with the Enterprise Backup and Recovery (EBUR) team to design and implement backup policy using available technology. • Perform database restorations and point in time recovery to avoid data loss and meet service levels objectives. • Perform troubleshooting of performance issues and provide required solution. • Analyze databases for optimal performance and investigate poorly performing SQL statements and offending database sessions. Perform database performance tuning by identifying index candidates, updating database statistics, using appropriate optimization techniques, optimizer hints and other methods. Document tuning procedures. • Perform thorough analysis and investigation to resolve locking conflicts. (For example: Locking conflicts can be shared or exclusive. Shared involve multiple users accessing the data or table at the same time. Exclusive is when only one user or process can access the data at a time. Locking conflicts can also be at different levels and an incorrect resolution can cause corruption or loss of data.) • Analyze and resolve issues related to undo/redo/transaction log configuration and sizing in development, test, and production environments. • Analyze and resolve server generated and threshold-based alerts. Perform resolution for the alert causes and provide recommendations for setting up appropriate alert thresholds. • Implement defined initialization parameters, database instance memory structures and physical data layout for optimal performances. • Monitor database jobs and scheduled processes, perform troubleshooting and provide resolution for any issues with jobs/processes as necessary. • Document solution and provide root cause analysis. • Agrees to follow all policy, standards, and procedures of DTMB.

**Database Storage and Capacity Planning: Monitor current space usage and contention. Perform capacity planning for future expansions of current application data and new applications needs.**

• Calculate disk space requirements for existing and/or new installations and growth of complex databases (i.e., multiple databases, multiple servers). • Recommend the procurement of new memory, CPUs, and servers when necessary. • Research, analyze, and determine appropriate changes to RDBMS parameters to support future applications and database needs. • Measuring current capacity, gauging the growth of capacity over time, and factoring in the anticipated capacity requirements to determine wither the existing infrastructure can sustain the anticipated workload.

**Database Security: Ensure that appropriate environment and database management system security settings are in place to prevent unauthorized access, loss, or damage to data.**

• Authorize the establishment of database user accounts. • Monitor, audit, and/or define roles. • Monitor, audit, and/or define profiles. • Ensure standard password security policies are followed

**Database Installation/Configuration: Install, configure, and upgrade the database software and security patches.**

• Install database management software in any environment. • Install database patches and service packs in any environment. • Provide maintenance, support, and assistance to specialist DBAs with installation and configuration of clustered database failover. • Provide maintenance, support, and assistance to specialist DBAs with installation and configuration of database replication solutions. • Install and test patch updates for major installation, migrations, and upgrades. • Communicate with database software vendors and DTMB technical staff to resolve any installation bugs or issues, satisfactorily and in a timely manner. • Document all installation procedures and issues. • Work with DTMB support staff on software issues that are relevant to database problems with the department. • Other duties as assigned.

**This position functions as a senior database & services administrator. In this capacity, the database administrator:**

1. Provides technical assistance to management in database server design and in database hardware/software standards.

2. Provides technical assistance for database problems to network support staff, customer support staff, systems development staff, and all client staff.

3. Responsible for overseeing the deployment and installation of database systems, maintenance, and resolving database server networking problems (with vendors, if necessary).

4. Responsible for providing technical support when problems cannot be resolved by the client help desk and systems development staff. Occasional overtime may be required