

State of Michigan
Civil Service Commission
Capitol Commons Center, P.O. Box 30002
Lansing, MI 48909

Federal privacy laws and/or state confidentiality requirements protect a portion of this information.

POSITION DESCRIPTION

This form is to be completed by the person that occupies the position being described and reviewed by the supervisor and appointing authority to ensure its accuracy. It is important that each of the parties sign and date the form. If the position is vacant, the supervisor and appointing authority should complete the form.

This form will serve as the official classification document of record for this position. Please take the time to complete this form as accurately as you can since the information in this form is used to determine the proper classification of the position. **THE SUPERVISOR AND/OR APPOINTING AUTHORITY SHOULD COMPLETE THIS PAGE.**

2. Employee's Name (Last, First, M.I.)	8. Department/Agency Technology, Management & Budget
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission) Agency Services MDOC & MSP
4. Civil Service Classification of Position Information Technology Programmer Analyst 12	10. Division Agency Services MSP
5. Working Title of Position (What the agency titles the position) Senior Database Administrator	11. Section Operations and Customer Support
6. Name and Classification of Direct Supervisor LAKSHMI ALAHARI; IT MANAGER 14	12. Unit Database Administration Support
7. Name and Classification of Next Higher-Level Supervisor RAMESH DEVARAM, STATE ADMINISTRATIVE MANAGER 15	13. Work Location (City and Address)/Hours of Work 8:00 am – 5:00 pm Monday – Friday (may vary) 7150 Harris Dr., Dimondale

14. General Summary of Function/Purpose of Position

As a Senior Database Administrator, the employee performs a complete range of information system database analyst assignments including, but not limited to, designing, developing, testing, and implementing database systems for Michigan State Police (MSP). This individual will be looked upon to provide technical support to other team members and evaluate new database solutions and technologies. Provide maintenance, support, and assistance to specialist DBAs with installation and configuration of clustered database failover, database replication, and database backup solutions.

This position is responsible to create and support MSP applications with a focus on Database administration and support. Technologies utilized include scripting languages, reporting tools, Oracle Database and Oracle Tools, MS SQL Server and other database platforms and supporting tools. Database Security: ensure that appropriate environment and database management system security setting are in place to prevent unauthorized access, loss, or damage to data.

15. Please describe your assigned duties, percent of time spent performing each duty, and explain what is done to complete each duty.

List your duties in the order of importance, from most important to least important. The total percentage of all duties performed must equal 100 percent.

Duty 1

General Summary of Duty 1 **% of Time** 60%

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.

Individual tasks related to the duty.

- 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 includes 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 involves 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.

Duty 2

General Summary of Duty 2 % of Time 25%

Database Storage and Capacity Planning: monitor current space usage and contention. Do capacity planning for future expansions of current application data and new application needs.

Individual tasks related to the duty.

- Calculate disk space requirement for existing and/or new installations and growth of complex databases (i.e. multiple databases, multiple servers).
- Research, analyze, and determine appropriate changes to RDMBS parameters to support future application and database needs.
- Measure current capacity, gauging the growth of capacity over time, and factoring in the anticipated capacity requirements to determine whether the existing infrastructure can sustain the anticipated workload.

Duty 3

General Summary of Duty 3 % of Time 15%

Database Installation and Configuration: install, configure, and upgrade the database software and security patches.

Individual tasks related to the duty.

- Install and test patch updates for major installation, migrations, and upgrades.
- Quickly communicate with database software vendors to resolve any installation bugs or issues.
- Document all installation procedures and issues.
- Recommend the procurement of new memory, CPUs, and servers when necessary.
- Other duties as assigned.

Duty 4

General Summary of Duty 4 **% of Time** _____

Individual tasks related to the duty.

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16. Describe the types of decisions you make independently in your position and tell who and/or what is affected by those decisions. Use additional sheets, if necessary.

Implementation decisions related to performing database changes – division/department-wide impact.
Database tuning/optimization decisions based on database performance analysis – department-wide impact.
Production database administration operations and support questions – department-wide impact.

17. Describe the types of decisions that require your supervisor's review.

Determine priority of projects.
Purchase of software/hardware.
Commitment of time schedule.
Must approve requests for training or conference attendance.
Design and development and/or maintenance strategy.

18. What kind of physical effort do you use in your position? What environmental conditions are you physically exposed to in your position? Indicate the amount of time and intensity of each activity and condition. Refer to instructions on page 2.

Use of personal computer using keyboard and mouse to perform trouble shooting, create and edit technical materials, communications with staff and clients, and reports. A minimum effort may be required to walk or drive to other locations. Majority of work is performed sitting at an ergonomic prepared workstation suitable for a personal computer or attending meetings in standard conference room settings. This position is subject to stress and pressure to resolve problems quickly and effectively.

19. List the names and classification titles of classified employees whom you immediately supervise or oversee on a full-time, on-going basis. (If more than 10, list only classification titles and the number of employees in each classification.)

<u>NAME</u>	<u>CLASS TITLE</u>	<u>NAME</u>	<u>CLASS TITLE</u>

20. My responsibility for the above-listed employees includes the following (check as many as apply):

☐ Complete and sign service ratings.	☐ Assign work.
☐ Provide formal written counseling.	☐ Approve work.
☐ Approve leave requests.	☐ Review work.
☐ Approve time and attendance.	☐ Provide guidance on work methods.
☐ Orally reprimand.	☐ Train employees in the work.

21. *I certify that the above answers are my own and are accurate and complete.*

Signature

Date

NOTE: Make a copy of this form for your records.

TO BE COMPLETED BY DIRECT SUPERVISOR

22. Do you agree with the responses from the employee for Items 1 through 20? If not, which items do you disagree with and why?
Management Prepared

23. What are the essential duties of this position?

- Provide Oracle and MSSQL Server DBA expertise to MSP and/or other agencies.
- Orchestrate the integration of database administration into MSP's mission, goals, and objectives.
- Ensure the integrity, efficiency, and performance of the assigned production databases.
- Must be able to communicate with other analysts, project managers, and with the user, both listening and lending professional advice. This position must work well in a team focused environment.

Critical Job Role: Database Administration

Competencies: Customer Focus, Technical and Professional Knowledge and Skills, Communication, Decision Making, Building Strategic Working Relationships, Planning and Organizing Work, Innovation, and Initiating Action.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

Duties and responsibilities have not changed. Leveraging present Senior Standards.

25. What is the function of the work area and how does this position fit into that function?

The work area is charged with providing a quality, enterprise-wide data repository which integrates with other state and federal agencies. To provide all database administration services and develop standards for the Oracle and MSSQL Server .

This position works cooperatively with other in the work area to establish and maintain a secure environment that provides the resources and controls needed by information systems analysts, programmers, and end-users. The work of the Database Administrator contributes to the effective operation of all systems that run on an Oracle and MSSQL Server database. The incumbent's expertise and guidance in the use of Oracle and MSSQL Server options ensures optimal performance, functionality, security, and data integrity of the department's production applications.

26. In your opinion, what are the minimum education and experience qualifications needed to perform the essential functions of this position.

EDUCATION:

Bachelor's degree with not less than 21 semester (32 term) hours in computer sciences, data processing, computer information systems, data communication, networking, systems analysis, computer programming, or mathematics.

EXPERIENCE:

Three years of professional experience equivalent to an Information Technology Programmer/Analyst 11.

Note: Equivalent combinations of education and experience that provide the required knowledge, skills and abilities will be evaluated on an individual basis.

KNOWLEDGE, SKILLS, AND ABILITIES:

- Knowledge in Oracle databases including installation, configuration, and administration, PL/SQL coding, database security standards, and database performance tuning.
- Knowledge in SQL Server database, and Microsoft tools.
- Knowledge in Microsoft Access and VBA code
- Knowledge in Tenable would be desirable and beneficial.
- Knowledge in Crystal Reports would be desirable and beneficial.
- Knowledge in design, development, implementation, and documentation of data systems.
- Knowledge of project and change management tools.
- Ability to organize and coordinate tasks for project teams.
- Ability to communicate and relate technical terminology to team members and client.
- Ability to learn and apply complex queries and table structures.
- Interpersonal skills and exceptional written communication

CERTIFICATES, LICENSES, REGISTRATIONS:

Duties may involve the use of a personal vehicle.

NOTE: Civil Service approval of this position does not constitute agreement with or acceptance of the desirable qualifications for this position.

27. I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Supervisor's Signature

Date

TO BE FILLED OUT BY APPOINTING AUTHORITY

28. Indicate any exceptions or additions to the statements of the employee(s) or supervisor.

29. *I certify that the entries on these pages are accurate and complete.*

Appointing Authority's Signature

Date