

STATE OF MONTANA
JOB DESCRIPTION

Montana state government is an equal opportunity employer. The State shall, upon request, provide reasonable accommodations to otherwise qualified individuals with disabilities.

Job Title: Database Administrator Position Number: 81101, 81013, 35015 Location: Helena

Department: MDT Division and Bureau: ISD Section and Unit: Infrastructure and Applications

Job Overview:

The Database Analyst works closely with application development and network operations personnel to understand the needs of their defined database schemas, assists with fine tuning their queries and supporting their developer tool sets. The incumbent leads in analysis, design, modeling, and development, while participating in the implementation and maintenance of database solutions across a variety of technology platforms. The incumbent performs database analysis of existing applications offering recommendations for revising or adapting those applications to improve database performance; independently performs complex work assignments and problem resolution across systems and processes. The incumbent performs data analysis using existing and/or creating new logical models, physical models, and data flows; and assists developers in determining the logical database model using normalization methodologies and entity/relationship modeling. The incumbent develops and maintains the enterprise application data model and can demonstrate the impact of new strategy implementations including, where necessary, the incorporation of data models from other State agencies or vendor supplied off-the-shelf solutions. The incumbent is responsible for database patching, upgrades, monitoring, tuning, and performing backups when needed. The incumbent must have experience using ETL technologies (Talend, Fivetran, etc.) and have experience with data warehouse platforms like Snowflake.

**Essential Functions
(Major Duties or Responsibilities):**

Database Analysis (65%)

- This position is a key resource for bringing the enterprise data implications forward during database structure analysis; preferred database platform discussions for a given application; and methodology for upgrade and/or migration planning. As such, the incumbent will influence the enterprise design, integration and maintenance of enterprise databases (Oracle, SQL, Postgres and other as appropriate) to meet the business needs of MDT.
- Conduct research and make recommendations on database products, services, protocols, and standards.
- Participates in database design and optimization tasks.
- Plans the future operations and architecture of the system from the perspective of upgrading, data storage and access.
- Uses data modeling software to analyze the most appropriate ways to store, organize, use and present data in a database structure.
- Provides direction and recommendations regarding database strategy and decisions; helps define vision, identifies timelines and goals that would ensure the implementation of all approved technology initiatives.

- Participates in the exploration of options and alternatives for other data stores/databases that should be further exploited in a division-wide POC.
- Stays current on database products and their offerings including awareness of capabilities, limitations, licensing costs, releases, etc.
- Evaluates and understands all features and functions of currently installed products/releases.
- Educates and communicates with development staff on the most efficient ways to create and maintain data for application development.
- Assists in the development of policies and procedures necessary to ensure the security and integrity of enterprise databases and other data stores.
- Participates in the design and implementation of database security models.
- Coordinates security model decisions for user access levels for each segment of the database.
- Conducts preliminary assessments of user business needs, clearly defining and documenting detailed objectives of what is to be accomplished by developing and implementing new technology or information systems.
- Supports the efforts for major database release level installations and/or migrations.
- Shares features and functions knowledge with applications personnel as needed (e.g. when changes occur) ensuring changes/differences are identified.

Data Analysis (35%)

- Assists with maintaining an enterprise data architecture that articulates the principles, blueprints and standards, across the data domains of transaction, interaction and analytic, which are used in the deployment of technology solutions for MDT/ISD Customers.
- Assists with Developing and maintaining the Enterprise Data Model (EDM) to serve as both the strategic and tactical planning vehicles to manage enterprise data.
- Develops and maintains a data dictionary, standardizing data names and definitions.
- Participates in the review process for system design specifications, process models, data architecture and/or data flow diagrams.
- Works with development project teams to adopt a strong data reconciliation process concerning the replication of data that includes defining reconciliation architecture.
- Looks across multiple applications to determine options and best strategies to connect systems together to reduce data duplication.
- Works with business, ISD security, and technical staff to identify sensitive information and evaluate methods of handling such data.

Supervision

The number of employees supervised is: 0

The position number for each supervised employee is: NA

Physical and Environmental Demands:

Physical

- Ability to sit or stand in one place for a length of time

Mental

Revision Date: 10/2022

- Quickly comprehending diverse and very complex user paradigms to subsequently communicate needed IT solutions to development teams composed of members of widely varying professions and education levels. Any miscommunication can lead to higher programming and development costs and significantly longer time to complete an application.

Knowledge, Skills and Abilities (Behaviors):

KNOWLEDGE: Principles of Systems Analysis and Design including logical and physical database design and design documentation, principles of computer science, programming methods, quality assurance methods, and business process analysis. Principles of project management including work breakdown structures and detailed project plans, change management, and project tracking, and team building.

SKILLS: Reading comprehension, critical thinking, writing, active learning strategies, complex problem solving, technology design, troubleshooting, monitoring, time management, quality control management, technical and business writing.

Behaviors required to perform these duties:

Plan, Organize, Gather Information and Conduct Research

Define an end result. Set or follow a course of action to achieve it. Anticipate potential obstacles and monitor progress. Organize tasks into component parts in a rational, methodical way. Collect and use relevant information, data, and opinions.

Identify Problems

Assess situations in a logical and methodical way based on facts. Seek root causes. Recognize patterns, connections, themes, and issues. See implications and consequences of a situation or information.

Take a Reasonable, Logical Approach to Solving Problems

Develop feasible solutions based on logical assumptions and factual observation that reflect consideration for resources, constraints, organizational values and goals.

Prioritizing, Multi-tasking, Balancing Multiple Projects

Recognize or establish the relative importance of multiple issues, tasks, and opportunities to maximize the productivity of the organization.

Quality, Accuracy, Attention to Detail

Achieve excellent work results by attending to details. Demonstrate an appropriate level of precision to complete projects successfully and to execute job responsibilities in a timely manner.

Results Oriented

Achieve goals and bring projects to completion. Investigate, calculate, and proceed through a project or task to bring about a conclusion. Persist and stay focused when faced with a series of challenging or uncertain situations. Demonstrate a concern for working well or for competing against a standard of excellence.

Personal Accountability and Ownership

Accepts individual responsibilities for all actions taken; Reliable – honors commitments; is self-motivated yet is able to take direction from supervisor or senior team members.

Listening

Give full attention to and make a conscious effort to hear other's ideas, concerns, questions, and issues with interest, empathy, and objectivity. Paraphrase and ask questions to ensure understanding of the message when required.

Responsiveness, Follow up

Assumes responsibility for and delivers on commitments to the customer. Initiates contacts to clarify issues or problems in a timely manner. Keeps the customer up-to-date about projects.

Understanding, Sensitivity, Trust Building

Interact openly and honestly. Encourage others to express viewpoints. Listen and respect different viewpoints. Address misunderstandings directly with those involved. Maintain confidences. Demonstrate an awareness of nonverbal as well as verbal communication. Elicit trust from others by showing honesty, reliability, and integrity.

Speaking Effectively

Express and present thoughts and ideas clearly, succinctly, and in an understandable manner individually and in a group. Adjust language, delivery, or terminology to meet the needs of the audience. This competency includes any type of verbal communication such as giving presentations, providing training, giving testimony, speaking in person or by phone.

Writing Effectively

Express and present information and ideas in writing which is clear, succinct, and understandable. Adjust the language, writing style, and terminology used to meet the need and level of understanding of the reader. Utilize knowledge of the structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar. (This competency includes any type of formal or informal written communication: i.e. letters, reports, studies, presentations, articles, rules, policies, procedures, and manuals.)

Influence and Persuasion

Transfers thought into productive action. Creates successful outcomes by sharing knowledge and information within the work unit and across organizational lines. This includes mentoring others, building relationships key to success by establishing trust, credibility and rapport with key players and customers. These employees use awareness of the organization (i.e. structure, centers of authority, decision making roles) and knowledge of the different roles and power positions within the organization to positively affect results.

Team Building

Stays focused to achieve results. Actively participates and respects the ideas of others. Looks for alternative ways to work with others that will create better results and working relationships. Motivates team members with diverse goals to collaborate and cooperate to achieve success.

Change Agent

Engages others in order to develop innovative solutions. Introduces new ways of thinking and behaving. Introduces new technology and tools. Encourages innovation and implements nontraditional ideas. Creates and implements new concepts, models, theories and relationships to address work in new ways; motivated others to seek best practices.

Initiative

Focuses efforts and energy on successful attaining organizational goals and objectives. This includes making difficult decisions and persisting even when confronted by obstacles or adversity and may involve questioning status quo assumptions. Assume accountability for decisions, actions and results, follow through on issues to completion, point out problems and ask questions others may have overlooked or been reluctant to acknowledge. Requires an understanding of organizational relationships, identification of decision makers and the relationship of positions within the agency.

Judgement/Decisiveness

Commits to a sensible, logical and effective action after considering alternative actions and their consequences on the resources, constraints and values of an organization. Makes decisions that reflect professional conviction and accountability in a timely fashion. Makes valid assumptions when information is unclear or lacking.

Leadership

Shares information, feedback and knowledge (two-way communication) with key persons inside and outside of the organization to ensure successful project outcomes and/or improvement. Includes training, teaching and coaching others. Actively steps into a leadership role.

Minimum Qualifications (Education and Experience):

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to a Bachelor's Degree in Computer Science, Database Administration, or a closely related field such as Information Systems Design.

This position requires a minimum of 6 years of related experience. The experience must include 1-3 years each of Project Management, team or project leadership and database schema development. Expertise in SQL (Standard Query Language), with working knowledge of the Oracle RDBMS, SQL, and Postgres and their associated tools.

Alternative Qualifications: AS in Computer Science, Database Administration or Information Systems Design or a BA/BS in a non-related field plus 8 years of database management experience OR AS degree in non-related field plus 10 years of database management experience OR 12 years of database management

experience. The experience also needs to include 1 – 3 years each of Project Management, team or project leadership, and database schema development. Additionally, 3 to 5 years of experience with MDT applications is strongly preferred.

Special Requirements:

- Fingerprint check
- Background check
- 035 Union Code
- Valid driver's license
- Other; Describe
- Safety Responsibilities

The specific statements shown in each section of this description are not intended to be all inclusive. They represent typical elements and criteria considered necessary to perform the job successfully.

Signatures

My signature below indicates the statements in the job description are accurate and complete.

Immediate Supervisor	Title	Date
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Administrative Review	Title	Date
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My signature below indicates that I have read this job description.

Employee	Title	Date
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Human Resources Review

Job Code Title: Database Administrator Job Code Number: C1E023 Level 1

My signature below indicates that Human Resources has reviewed this job description for completeness and has made the following determinations:

- FLSA Exempt
- FLSA Non-Exempt
- Telework Available
- Telework Not Available
- Classification Complete
- Organizational Chart attached

Human Resources:

Signature

Title

Date