

IS Data Service Conslt/Adm

Under the general direction of the Application Development Supervisor in the Division of Administrative Services and Technology of the Department of Financial Institutions, this position provides database support for all agency database/data communications software and will provide leadership for all Agency databases. Under minimal supervision, this position provides advanced level technical expertise and support within the Application Development Section for DFI's database/data communications software. Primary duties include: technical support for all database products and related components, including linking servers, replication, archiving, performance monitoring, software installation, maintenance and tuning for all database related software; consult with applications staff on logical database design for multiple computer platforms; design and implement physical databases for multiple computer platforms; design and install maintenance and upgrades to database software on multiple computer platforms; monitor performance and make tuning recommendations and modifications to database/data communications software as necessary; estimate database growth for capacity planning on multiple computer platforms; and, problem determination and resolution for database/data communications software on multiple computer platforms.

- 45% A. Provide agency-wide database/data communications operational development, implementation and maintenance support.
- A1. Direct, establish, and maintain physical database structures to meet the data and processing requirements of applications including data access planning, security, conversion/interface planning, and data storage planning
 - A2. Lead in the problem resolution, support and diagnosis for databases and the applications using them.
 - A3. Direct, establish, and maintain conceptual and logical database designs utilizing graphical design tools to create Entity Relationship Diagrams (ERDs) which define the meanings and relationships.
 - A4. Lead and implement database normalization.
 - A5. Consult with application staff when changes or additions are needed to the production or test database/data communications definitions.
 - A6. Code and compile needed changes to software variable components.
 - A7. Lead programmer/analysts in debugging programs using the database/data communications software.
 - A8. Establish technical standards for and lead data processing staff in planning for the use of agency-wide database/data communications software backup and recovery procedures.
 - A9. Coordinate establishment and implementation of setup procedures for keeping software and applications updated.
 - A10. Develop and implement technical standards for naming conventions, procedures to ensure referential integrity, appropriate use of indexes, foreign key constraints, triggers, views, and stored procedures, and establish security procedures.
- 20% B. Tune database/data communications software products to ensure optimum utilization of computer resources.
- B1. Monitor utilization of data and make recommendations to better utilize resources for optimum performance.
 - B2. Maintain records of tuning changes made and their affect on total resource utilization.
 - B3. Monitor and adjust the performance of application databases and recommend program changes.
 - B4. Monitor database applications during project acceptance testing and identify potential performance problems.
- 20% C. Provide database/data communications consulting support.
- C1. Provide technical guidance to programmers engaged in the design, development and implementation of application systems using database/data communications software.

- C2. Train and inform the staff in the use and function of advanced on-line database/data communications support systems.
 - C3. Serve as a consultant in the review and verification of technical feasibility as well as performance impact of advanced on-line applications developed by applications.
 - C4. Assist in the development of agency-wide standards and guidelines for the effective use of database/data communications systems.
- 10% D. Provide advanced technical support maintaining very complex agency-wide database/data communications software on multi processors.
- D1. Evaluate, test, and implement database/data communications software.
 - D2. Assist with maintenance of database/data communications software packages on an ongoing basis to remain at vendor-recommended level, resolve known problems and maintain software stability.
 - D3. Use advanced knowledge of database/data communications problem determination techniques to troubleshoot software problems, gathering available problem documentation and working with the software vendor for problem resolution.
- 5% E. Participate in Employee Development Program.
- E1. Attend appropriate training courses, conferences and seminars.
 - E2. Read technical publications to maintain a high level of technical knowledge concerning data processing hardware and software with particular emphasis on database/data communications technology.
 - E3. Participate in activities of professional and technical associations to contribute to the development in the data processing industry and in various agencies of government.

KNOWLEDGE AND SKILLS

1. Knowledge of data base management system objectives, concepts, and techniques including DBMS software installation, backup and recovery procedures.
2. Oral and written communication skills.
3. Complex problem determination and resolution skills.
4. Knowledge of MS SQL Database Management System Software or Enterprise Database Management System Software.
5. Knowledge of project planning, project leadership, and management concepts and techniques.
6. Knowledge of application development procedures (system development life cycle concepts) and methodologies.
7. Knowledge of Database Modeling/Design
8. Knowledge of Data Dictionary/Repository concepts and procedures.
9. Knowledge of client/server and Internet concepts, procedures, and techniques.
10. Knowledge of Distributed Processing/Data concepts and techniques.
11. Knowledge of Windows NT and Windows 2000.
12. Knowledge of web-enabled applications.
13. Knowledge of e-commerce applications.