Systems and Database Engineer

Class Code: 1367
Work Days: 225

GENERAL PURPOSE

Design and create specifications for systems and databases; work with Applications Support staff to develop systems and database plans; collaborate with Applications Development, Network, and Applications Support staff to assess and test hardware and software interaction; develop database objects and structures for data storage, retrieval, and reporting according to project specifications; implement and test database design, functionality, and tuning for performance; design and develop back-end database interfaces to web applications; document configurations; maintain hardware and software license inventory; install operating system software, patches, and upgrades; perform system backups and recovery; conduct server builds; and provide assistance to higher level management staff.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from higher level management staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES

This position description is intended to describe the general nature and level of work being performed by an employee assigned to this position. This description is not an exhaustive list of all duties, responsibilities, knowledge, skills, abilities, and working conditions associated with this position. All requirements are subject to possible modification to reasonably accommodate individuals with a disability.

1. Recommend and assist in the implementation of goals, objectives, and strategic plan; establish schedules and methods for providing specialized services; and implement policies and procedures.

2. Manage, plan, organize, and supervise systems and database services within the Information Technology Division.

3. Monitor system and database performance and provide security measures, troubleshooting, and maintenance as needed.

4. Evaluate existing systems to determine effectiveness and suggest changes to meet organizational requirements.

5. Maintain and upgrade all Storage Area Networks to include installation, configuration, upgrades, and performance monitoring.

6. Install and configure servers to meet functional specifications.

7. Install, configure, and provide enterprise-level support for Microsoft Exchange.

8. Provide enterprise support for all applications and Windows operating systems.

9. Maintain an enterprise-wide backup solution.

10. Perform ongoing hardware and software maintenance and upgrades.

11. Maintain database standards and naming conventions.

12. Assist in database design and management.

13. Install, research, test, and verify the proper functioning of software patches and fixes.

14. Resolve issues and restore service following system failures and outages.

15. Generate documentation for staff and training.

16. Enforce database standards and procedures.

17. Enforce security standards.

18. Demonstrate attendance sufficient to complete the duties of the position as required.

19. Perform related duties similar to the above in scope and function as required.

QUALIFICATIONS (KNOWLEDGE, SKILL, ABILITY REQUIREMENTS)

Knowledge of:

1. Database design and support.

2. Database Management Systems such as MS SQL Server databases.

3. Cloud computing technology.

4. Physical and virtual server environments.

5. Operating Systems such as Microsoft Windows.

6. Performance tuning and database troubleshooting.

7. Database replication and data partitioning techniques.

8. Query optimization, database indexes, and schema design.

9. Upgrade and patch processes.

10. Data backup and archiving solutions.

11. Storage Area Network devices.

12. Microsoft Windows Active Directory.

13. Email Messaging Solution such as Microsoft Exchange.

14. Business intelligence solutions such as Business Objects or Tableau.

15. Procedures, methods, and techniques of project and workflow management and organization.

Ability and Skill to:

1. Manage multiple competing priorities efficiently and effectively.

2. Interpret the organizational and division strategic plan and create relevant goals and plans for assigned areas.

3. Effectively adapt and adjust program services to meet changing priorities and customer-specific needs.

4. Establish and maintain effective working relationships with various constituencies.

5. Understand, interpret, and explain laws, codes, contracts, regulations, policies, and procedures.

6. Prepare clear and concise correspondence, reports, and other written materials.

7. Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.

8. Communicate clearly and concisely, both orally and in writing, in English; and present information effectively in front of both large and small groups.

9. Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.

10. Effectively adapt and adjust program services to meet changing priorities and customer-specific needs.

Education, Training, and Experience:

A typical way of obtaining the knowledge, skills, and abilities outlined above is a bachelor's degree in a computer-related field and three (3) years of recent extensive experience in the areas of software, operating systems such as Windows server solutions, systems hardware, data storage solutions, Business intelligence solutions, and databases; or an equivalent combination of training and experience.

PHYSICAL AND MENTAL DEMANDS

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class.

Physical Demands

Employees must be able to perform the essential functions of the position with or without accommodation. Employees in this classification must be able to travel countywide to a variety of sites within a reasonable time frame, read written and electronic materials, and communicate clearly with those contacted through the course of work (typically in person, on the phone, and via email); perform deskwork for extended periods, and access and operate all required equipment for job duties. The position may include occasional need to traverse uneven surfaces and may lift and/or move up to 50 pounds and lift up to 100 pounds with assistance from the ground, waist, chest, shoulder, and above shoulder level.

Mental Demands

While performing the duties of this class, employees are regularly required to use written and oral communication skills; read and interpret information; analyze and solve problems; use mathematical reasoning; make observations; learn and apply new information or skills; perform highly detailed work; work on multiple, concurrent tasks with frequent interruptions; work under intensive deadlines and meet productivity requirements; and interact successfully with various groups of people encountered in the course of work.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform essential functions.

Employee typically works in an office environment that is fast-paced with high pressure.