DEFINITION
Under the direction of the Manager of Technical Services, installs and maintains minicomputer operating systems (such as UNIX, AIX and LINUX) and performs senior level network administration activities; monitors performance and tuning of system parameters; finds solutions to server hardware and software problems; designs and writes programs as necessary; maintains system and user security; designs and tests connections between different computer systems; works with vendors on patches and upgrades; provides technical advice and training; recommends new software and hardware.

DISTINGUISHING CHARACTERISTICS:
The Systems Administrator is responsible for the technical design, planning, implementation, and the highest level of performance tuning and recovery procedures for mission critical enterprise minicomputer systems and serving as a technical expert in the area of systems administration for complex operating systems. The Systems Administrator position works with systems programmers and database administrators to complete his or her duties.

EXAMPLES OF DUTIES:

1. Performs system administration activities; coordinates and manages the installation, and configuration of host servers; ensures network connectivity and security; installs and tests application and operating system upgrades.

2. Provides technical support and problem resolution related to networks, servers, desktop connectivity, database management software, operating systems, and ERP application software.

3. Implements system and user security; administers access to systems and data utilizing approved Information Technology security policies, procedures and standards; maintains and monitors database stability.

4. Designs, tests and implements system and database back up and recovery procedures; maintains tape libraries; develops system documentation and configurations.

5. Participates in computer audits and performs testing for disaster recovery processes, ensuring a secure processing environment that protects the integrity and availability of information.

6. Monitors and tunes system software and third party software products; tests software systems to insure proper functioning; provides statistical reporting; coordinates with development staff to solve operating problems.

7. Maintains and documents operating systems and related software; monitors the effects of users and transactions on system and database performance; adjust factors to improve performance.

8. Installs security patches and responds to security incidents. Maintains security system; controls the issue of passwords; creates user profiles; deletes users.

9. Designs, installs, and tests connections between computer systems with different operating systems and applications software; determines objectives of computer connections.

10. Configures systems to communicate with each other; runs programs to test connections; establishes connections with computers in other departments and external agencies.
11. Recommends acquisition of software and hardware; assists in the selection, evaluation, and testing of new computer hardware and software.

12. Perform related duties as assigned.

**DESIRABLE QUALIFICATIONS**

**Knowledge:**
- Extensive knowledge of computer programming languages, such as, C, Java, SQL and specific control languages.
- Considerable knowledge of principles and practices of data processing using minicomputers.
- Considerable knowledge of TCP/IP and networking.
- System design, development, implementation, and user support principles and practices.
- Working knowledge of performance management and capacity planning.
- Working knowledge of computer back up and restore procedures under UNIX, AIX or LINUX.
- Working knowledge of English syntax and language mechanics.
- Working knowledge of principles of training and communications.

**Skills and Abilities:**
- Ability to analyze problems and take corrective action in a professional manner.
- Ability to develop standards for the operation of system hardware and software.
- Ability to work independently and set priorities.
- Ability to coordinate functions and activities between IT department and end user departments.
- Ability to utilize effective oral and written communications skills.
- Ability to establish and maintain effective work relationships with those contacted in the performance of required duties.

**Training and Experience:**
- Any combination of experience and education that would demonstrate possession of required knowledge and abilities. A typical way to obtain the knowledge and abilities would be: Four years of data processing experience, including three years in UNIX, AIX or LINUX systems administration or three years in database administration in a UNIX environment. A Bachelor’s degree from an accredited college or university in computer science, engineering, statistics or related field.