JOB TITLE: Systems Administrator

PAY GRADE: CL 29

LAST REVISED: July 2025

*Job Descriptions/Class Specifications are intended to present a descriptive list of the range of duties performed by employees in the job and are **not** intended to reflect all duties performed within the job.*

Sierra College has a strong commitment to the achievement of equity and inclusion among its faculty, staff, and students and values the rich, diverse backgrounds that make up the campus community. A strong candidate for this position must have the understanding and ability to successfully support individuals with varying backgrounds. This includes persons with disabilities, various gender identities and sexual orientations, as well as individuals from historically underrepresented communities and other groups. Our District is committed to providing strategies for success and proactive student-centered practices and policies focused on eliminating equity gaps to ensure the District provides an inclusive educational and employment environment focused on strategies for success and equitable outcomes for all.

SUMMARY DESCRIPTION

Under general supervision from assigned manager, ensures continuous function of District host servers, shared application servers, networks, and web, intranet, and portal servers; coordinates and performs administration of servers and operating systems, including security management, email, structured query language, enterprise resource planning, portal and resource tier, learning management systems, intranet content management, and shared asset and document management systems; evaluates system performance; and adjusts system configuration parameters for hardware and software compatibility.

REPRESENTATIVE DUTIES

The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

1. Designs and implements systems to facilitate the migration from on-site to cloud-based systems; utilizes cloud-based tools to accelerate migration, visibility, and reduce costs; recommends and implements commercial and open-source tools that support cloud-based strategies.

2. Monitors system performance of network, web, enterprise resource planning, enterprise portal, email, content management, and database systems performance; analyzes performance statistics; configures systems or database operating parameters; maintains data files and system directories; monitors system configuration; monitors and evaluates network traffic, bandwidth, and throughput; analyzes and participates in planning network requirements for capacity, security, and performance.

3. Designs and implements systems that allow for development, testing, staging, and production environments to enable Information Technology Services (ITS) and other staff a safe working environment that does not negatively impact production reliability, including, but not limited to, building and maintaining source code repositories and tools to automate the provisioning and management of various environments.

4. Designs custom scripts using command-line shell and scripting language to perform large-scale data, user account modifications, server configurations, and maintenance tasks.

5. Plans, researches, installs, configures, tests, and monitors operating system software for District physical and virtual machine servers and networks; installs and maintains application software upgrades and releases; monitors utilization of licensed software for compliance with software agreements; cancels software license contracts or agreements when no longer utilized or needed; installs, configures, tests, and administers multi-server third-party applications, including content management and intranet asset and document management systems.

6. Migrates applications and data from one operating system environment to another; installs, integrates, and tunes server systems and databases; implements data conversions and transitions to new systems.

7. Receives and resolves District staff and student service desk tickets; documents tickets and forwards work orders to ITS staff; develops and documents procedures to assist service desk and other staff in operating systems; creates usage rules for programming and applications support staff.

8. Monitors, manages, and maintains District Cloud Authentication, Directory Services, Single Sign-On (SSO), computer, network, and storage infrastructure.

9. Serves as a point of contact to coordinate between organizational units for server and network support; participates in troubleshooting complex network problems, including, but not limited to, content management system access, internet access, email administration, account provisioning, authentication and access, and role-based domain account migration.

10. Designs, implements, and administers access security and permissions for use of District systems; establishes and enforces District server access rules, standards, and protocols; authorizes server user roles and account access privileges; audits, maintains, and repairs accounts, passwords, and permissions.

11. Builds, installs, configures, tests, and administers multi-server Microsoft and third-party applications, including content management and intranet asset and document management systems.

12. Analyzes, modifies, tests, and debugs existing database structures, systems, and programs; identifies problems and makes modifications to systems and individual programs; analyzes and resolves problems with database applications by consultation with users; formulates and implements systems and database tuning strategies; monitors disk space availability by removing, relocating, or adjusting files to optimize space; administers roles and privileged access security to database tables, including adding and deleting user and controlling database login passwords.

13. Schedules system maintenance downtime with end users and technical staff for hardware and software upgrades, changeovers, and backups; determines the type and frequency of backups for systems and database files; designs, writes, and tests backup and recovery procedures; reviews backup procedures with department staff members; oversees and performs backups.

14. Reviews and provides feedback for proposed changes for potential impact to overall system reliability, security, and impact to operations workflow.

15. Administers and monitors the District's network devices, including Virtual Local Area Networks (VLANs), access points, firewall, core and aggregate switches, and routers; configures and corrects system, directory structures, security parameters, and maintains network address assignments.

16. Administers the District's content management, portal, and web/application servers, including backup, search engines, logs, and documentation; monitors website and portal presence and positioning of key information for access to directories, databases, and search engines.

17. May provide onboarding support, general work training, guidance, supervision assistance, and directs activities of students or temporary employees.

18. Performs related duties that support the overall objective of the position.

QUALIFICATIONS

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

- Concepts, installation, configuration, tools, operation, and maintenance used for onsite and cloud-based computer and database system software and security, computers and network equipment, virtual computing architecture, cloud-based systems and networks, Linux operating and email systems, project management, clustering and high availability, domain name and mail servers, digital certificates and their applications within servers, change management and change control, and data warehouse and business intelligence.

- Current trends in system and network administration and security.

- Advanced shell script programming, including bash, Perl, and Python and general programming languages, including C#, Java, Visual Basic, and C/C++.

- Microsoft Windows network operating systems, including installation, configuration of a directory services environment, maintenance, upgrading, troubleshooting, and scripting.

- Database design techniques and host computer logical and physical database structures and relationships, including those for networked computer systems.

- Cost, security, performance, and availability tradeoffs.
- Software development lifecycle concepts, including requirements gathering, development, testing, promotion to production, and end-of-life.
- Single sign-on and lightweight directory, access protocols, including Kerberos, Security Assertion Markup Language (SAML), and modern authentication protocols.
- Web server platforms and Content Management Systems, including, but not limited to, proprietary, open source, Apache, Nginx, Microsoft Internet Information Services (IIS), and Amazon Web Services (AWS), and Oracle OCI.
- Standard query language and other relational database management systems.
- Federal, state, and local laws, codes, and regulations regarding support of District technology systems, networks, and software, including, but not limited to, the Family Educational Rights and Privacy Act (FERPA) and the Americans with Disabilities Act (ADA).
- Basic mathematical concepts.
- Basic research methods and techniques.
- English usage, grammar, spelling, punctuation, and vocabulary, including proofreading and formatting techniques.

Ability to:

- Perform technical and operational duties to support onsite and cloud-based database, operating, and computer equipment, systems, and software, including analysis, design, coding, provisioning, configuration, maintenance, troubleshooting, and operation.
- Administer and provide support to technical staff regarding shared application server systems, email, Enterprise Resource Planning (ERP) systems, portal and resource tier, Learning Management System (LMS), intranet content management, and shared asset and document management servers.
- Identify and implement critical maintenance fixes to isolate and correct malfunctions, including operating system and application problems; develop and execute disaster recovery plans; establish data security standards and procedures.
- Follow logical progressions of program systems.
- Write program and system documentation.
- Read and interpret technical manuals and other documentation.
- Adapt to changing technologies and learn functionality of new equipment and systems.
- Plan and organize work to meet schedules and changing deadlines.
- Perform basic record keeping functions.
- Utilize office procedures, methods, and equipment, including computers, technology, and applicable software applications sufficiently to perform the duties of the classification, including the District's Banner Enterprise Resource Planning (ERP) system and intermediate to advanced skills with Microsoft Office Suite and related software.
- Maintain confidentiality of information.
- Perform arithmetic calculations of average difficulty.
- Follow oral and written directions.
- Communicate clearly and concisely, both orally and in writing.
- Provide onboarding support, general work training, guidance, supervision assistance, and direct activities of students or temporary employees.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Coordinate with staff and others to minimize delays or interruptions to District activities.
- Respond to emergencies.
- Work independently and collaboratively.
- Apply District policies and procedures.

EDUCATION AND EXPERIENCE GUIDELINES

Any combination of education and experience that demonstrates the required above knowledge and abilities is qualifying. Examples of ways to obtain the above knowledge and abilities could include, but are not limited to, the following:

Education/Training

- Four years of college from an accredited college or university with major course work in mathematics, data systems, computer science, or a related field, supplemented by specialized training in applications programming, enterprise systems management or systems analysis.
- Applicable industry certifications may substitute for some education.

Experience

- Four years of increasingly responsible experience installing and maintaining operating systems and shared network application software in an environment using multiple database management systems.

License/Certificate - *Possession of, or ability to obtain within a reasonable timeframe, each of the following:*

- Valid California Driver's License.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

Environment: Work is performed primarily in a standard office setting; may travel from site to site. Position may be required to work evenings, nights, and weekends.

Physical: Primary functions require sufficient physical ability and mobility to work in an office setting; to stand or sit for prolonged periods of time; to occasionally walk, stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight; to operate office equipment requiring repetitive hand movement and fine coordination, including use of a computer keyboard; and to verbally communicate to exchange information.

Vision: See in the normal visual range with or without correction.

Hearing: Hear in the normal audio range with or without correction.

Board Approved: July 15, 2025