



Job Description

JOB TITLE: SYSTEMS ADMINISTRATOR

PAY GRADE: CL 28

LAST REVISED: JANUARY 2012

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job. Additional or different duties from the ones set forth below may be required to address changing business needs/practices.*

SUMMARY DESCRIPTION

Ensures continuous functioning of District host, shared application servers, wired and wireless networks, and web, intranet and portal servers; coordinates and performs ongoing administration of servers and operating systems that includes security management, email, structured query language, enterprise resource planning, portal and resource tier, learning management system, intranet content management, and shared asset and document management systems; evaluates system performance, adjusts system configuration parameters for hardware and software compatibility; and performs a variety of tasks relative to the assigned area of responsibility.

REPRESENTATIVE DUTIES - *The following duties are typical for this job 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. Plans, researches, installs, configures, tests, and monitors operating system software for District-wide physical and virtual machine servers and wired network and wireless networks; installs and maintains application software upgrades and releases.
2. Monitors system performance of wired and wireless networks, web, enterprise resource planning, enterprise portal, multiple email, content management and database systems performance, analyzes performance statistics, and configures systems or database operating parameters; maintains data files and monitors system configuration.
3. Designs, implements, and administers access security and permissions for use of District-wide systems; establishes and enforces District server access rules, standards and protocols.
4. 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.
5. Schedules system maintenance downtime with end users and technical staff members to facilitate hardware and software upgrades, changeovers, and backups.
6. Formulates and implements systems and database tuning strategies; monitors disk space availability, removing, relocating, or adjusting files to optimize space.
7. Migrates applications and data from one operating system environment to another; installs, integrates and tunes server systems and databases; implements data conversions and transitions from old to new systems; maintains application software.
8. Designs custom scripts using command-line shell and scripting language to perform large-scale data and user account modifications.
9. Develops and documents procedures to assist help desk and other staff in operating systems; creates

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rules for use by programming and applications support staff.

10. Receives and resolves staff, faculty, and student user help desk calls; documents calls, forwarding work order requests to the other IIT staff.
11. Serves as a point of coordination among organizational units for server and network support; participates in troubleshooting to resolve complex wired and wireless network problems, including content management system access, internet access, email forwarding, account provisioning, and authentication and access, and role-based domain account migration.
12. Maintains up-to-date knowledge of trends in system and network administration, IT security, and assimilating and disseminating technical information to staff members.
13. Administers the District's wired and wireless network servers including VLANs, access points, firewall, core and aggregate switches, and routers; configures and corrects system, directory structures, security parameters, and maintains network address assignments.
14. Builds and maintains proxy servers, domain controllers and name servers, file servers, portal tier and resource tier servers, database servers, content management and email server arrays; creates mail delivery processes.
15. Monitors wired and wireless network traffic and implements approaches that optimize network performance and security; evaluates wired and wireless network bandwidth and throughput; maintains system directories and files.
16. Authorizes server user roles and account access privileges and maintains and repairs accounts, passwords, and permissions.
17. Analyzes and participates in planning wired and wireless network requirements in areas such as capacity, security, and performance.
18. 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.
19. Administers roles and privileged access security to database tables including adding and deleting users, and controlling database login passwords.
20. 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.
21. Coordinates and participates in scripting and programming of website features and applications, including those for processing transactions.
22. Installs, configures, tests, and administers multi-server third party applications, including content management and intranet asset and document management systems
23. May train and provide work direction to assigned student workers and temporary help as assigned.
24. May require travel between sites compensated per diem based on district mileage reimbursement policy. May require on-call and weekend duties.
25. Performs related duties as required.



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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:

Advanced Linux operating system, including installation, maintenance, troubleshooting, shell programming and C programming.
Current Windows network operating systems including installation, maintenance, upgrading, troubleshooting and scripting.
Host computer database management system concepts, methodologies, analysis, and design.
Database design techniques and host computer logical and physical database structures and relationships, including those for networked personal computer systems.
Single sign-on and lightweight director access protocols, including Kerberos, CAS and SPNEGO and authentication protocols.
Computer network design, installation, configuration, and maintenance procedures and practices, protocols, equipment, specifications, design, and integration.
Computer security concepts and methodologies.
Domain name servers and mail servers.
Standard query language and other relational database management systems.
Language and writing skill to read, understand, and prepare system documentation and instructions.
Math skills to record sums, fractions, and statistical data.
Interpersonal skill to convey technical concepts to others and to facilitate problem solving with individuals and small groups.

Ability to:

Administer shared application server systems, email, enterprise resource planning, portal and resource tier, learning management system, intranet content management, and shared asset and document management servers.
Install, configure, and troubleshoot system, enterprise resource planning database, content management and application software.
Apply various system administration and general software packages/applications for accessing and administering enterprise databases and to utilize network utilities for sending and receiving electronic mail.
Create scripts to support enterprise database, portal, learning management, content management, document management and library access management systems.
Design logical and physical personal computer, server, and network systems.
Work independently and collaboratively, follow logical progressions of program systems and think logically, creatively, and in abstract terms.
Adapt to changing technologies and learn functionality of new equipment and systems.
Analyze and resolve technical problems under extreme time pressure.
Orient, train, and familiarize other technical staff members with network, portal, email, learning management, content management and document management systems.
Read and interpret technical manuals and other documentation.
Communicate clearly and concisely, both orally and in writing.
Establish and maintain effective working relationships with those contacted in the course of work.

Education and Experience Guidelines: *Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

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Education/Training:

Bachelor's degree 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.

Experience:

Four years of increasingly responsible experience installing and maintaining operating systems shared network application software in an environment using relational multiple database management systems. Industry certifications or experience may substitute for some higher education.

License or Certificate:

Possession of a 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.

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.

Developed In Consultation With

