PALOMAR COLLEGE

Classification Title: Senior Infrastructure Systems Administrator

Department:	Network and Technical Services	**EEO6 Code:**	3
Employee Group:	Classified	**Salary Grade:**	43
Supervision Received From:	An Assigned Information Services Manager, Network and Technical Services	**Date of Origin:**	9/2016
Supervision Given:	Direction and Guidance	**Last Revision:**	9/2016

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 by individual positions.

JOB SUMMARY.

Functions as technical lead and is responsible for planning, installing, integrating, testing, monitoring and administering the operations of a major enterprise-wide technology infrastructure platform that supports the District's enterprise network and telecommunication infrastructure; performs day-to-day tasks to ensure optimal system speed, security, reliability and performance.

DISTINGUISHING CHARACTERISTICS.

The Senior Infrastructure Systems Administrator is distinguished from the Infrastructure Systems Administrator by the former's responsibility for serving as the lead administrator for a major enterprise-wide technology infrastructure and performing advanced duties in administering and integrating systems for optimal performance, while the latter class provides systems administration functions for assigned technology infrastructure systems.

ESSENTIAL AND MARGINAL FUNCTION STATEMENTS.

Essential Functions: Essential responsibilities and duties may include, but are not limited to, the following:

1. Serves as a technical lead systems administrator for assigned enterprise infrastructure platforms running a variety of operating system software in both physical and virtual environments; installs, configures, tests, integrates and administers systems, using system monitoring and management software tools; using applicable tools and utilities, monitors system performance, including systems utilization and availability; performs performance tuning to achieve optimal system speed, reliability and performance; ensures system security, disaster response and recovery processes are followed.

2. Researches, troubleshoots and resolves complex and ambiguous problems often involving a combination of hardware, operating system, internally developed and vendor application software and database structure configuration, resource conflicts and/or interoperating problems; installs and tests operating system patches, releases, upgrades and fixes; assesses system capacity issues, evaluates software and other alternatives and recommends system upgrades or replacements.

3. Performs configuration, maintenance, troubleshooting, monitoring and day-to-day administration of the District's Cisco Voice Over Internet Protocol (VOIP) Unified Communications system on an enterprise network; configures and

operates routers and switches; adds, deletes, manages and modifies subscriber accounts and maintains subsystems and tools.

4. Performs configuration, maintenance, troubleshooting, monitoring and day-to-day administration of the District's Cisco Enterprise Wired Network; plans, configures and verifies the implementation of complex enterprise switching and router solutions; verifies and configures secure enterprise local area network (LAN) and wide area network (WAN) routing solutions using a range of routing protocols; implements virtual LANs (VLANs) in the District's network; implements switch security features including port security, storm control and authentication, authorization, and accounting (AAA) services.

5. Leads and participates in the configuration, deployment, maintenance, troubleshooting, monitoring and day-to-day administration of the District's wireless network using lightweight access points and wireless LAN controllers; creates secured wireless local area network (WLAN) on the controller using appropriate authentication for encryption.

6. Leads and participates in the configuration, deployment, maintenance, troubleshooting, monitoring and day-to-day administration of the enterprise network security system using security appliances.

7. Assists database administrators with database performance issues; with guidance, makes changes to data permissions, may perform cleanup of obsolete data and supports the migration and archiving of data; may assist with backup and recovery processes; develops scripts to automate routine system maintenance tasks.

8. Serves as project lead or team member on multi-platform/network systems installations; works with administrators, users and project team members to define project scope and formulate detailed project plans; assists in evaluating and selecting vendors; facilitates the resolution of issues between technology groups; advises project members on scope of work issues and technology alternatives; participates in the development and implementation of systems and network standards and procedures.

9. May participate in the evaluation of new software and technologies to determine their functionality, interoperability, reliability, availability and supportability and expected return on investment; prepares periodic reports on new trends and opportunities.

10. Maintains up-to-date technical knowledge by attending educational workshops, reviewing professional publications, establishing personal networks and participating in professional associations.

Marginal Functions:

1. Maintains and updates various lists and prepares reports as required including SolarWinds report, internet protocol (IP) address list, network infrastructure databases, and switches and routers.

2. Attends various meetings and participates on committees as required.

3. Performs related duties and responsibilities as required.

QUALIFICATIONS.

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

Experience: Four years of systems administration experience, including configuring, coordinating and implementing releases, upgrades or changes to complex operating systems, servers and related software in a high-availability environment, at least one year of which was equivalent to experience as a systems administrator.

Education/Training: Equivalent to a bachelor's degree from an accredited college or university in management information systems, information technology, computer science or a closely related field

Preferred Qualifications:

Cisco experience.

Knowledge of:

1. Operating system architectures, characteristics, components and commands applicable to enterprise information systems and multiple platform operating systems.

2. Data storage technology principles, practices, hardware, components and software including storage area network (SAN) and network-attached storage (NAS) systems.

3. Network architecture and theory and principles of network design and integration, including topologies and protocols.

4. Principles, practices and methods of systems/network administration and maintenance, including configuration, performance tuning and diagnostic tools.

5. Principles and practices of disaster recovery.

6. Database management systems and software, including architecture, diagnostic tools, commands and utilities.

7. Tools and utilities used in monitoring and tuning systems, database and application performance.

8. Systems integration design concepts and practices.

9. Systems security and capacity planning principles, methods and practices.

10. Principles and practices of sound business communication.

11. Principles, practices, methods and techniques of project management as they apply to information technology projects.

Skill in:

1. Performing complex systems administration in a multi-platform and operating systems environment independently and with a high degree of understanding of interoperating and integration issues.

2. Establishing and maintaining project schedules and balancing responsibilities for multiple activities to ensure timely, high quality results.

3. Performing advanced systems troubleshooting and tuning to resolve complex systems management, communication and interoperating problems.

4. Communicating clearly and effectively, both orally and in writing.

5. Preparing clear, concise and accurate proposals, reports, documentation and other written materials.

6. Exercising sound, independent judgment within general policy guidelines.

7. Keeping technical skills current to meet continuing systems administration responsibilities.

8. Using tact and diplomacy when dealing with sensitive, complex and/or confidential issues and situations.

9. Maintaining sensitivity to and understanding of the diverse academic, socioeconomic, cultural, disability, gender identity, sexual orientation, and ethnic backgrounds of community college students, faculty, and staff.

10. Establishing and maintaining effective working relationships with those encountered in the course of work.

WORKING CONDITIONS.

Environmental Conditions: The employee works under typical office conditions, and the noise level is usually quiet. The employee frequently performs work in customers' offices and other locations where the noise level is normally quiet.

Some work is performed in confined spaces and on ladders or near moving mechanical equipment; may be exposed to airborne dust and particles and the risk of electrical shock.

Physical Conditions: Essential and marginal functions may require physical fitness requirements necessary to perform the job functions with or without accommodation, such as the ability to sit for prolonged periods; use hands to repetitively finger, handle and feel computers, hand tools, peripherals and standard business equipment; move or lift up to 50 pounds; near visual acuity, color vision and depth perception.

TERMS OF EMPLOYMENT.

The duration of any fully restricted funded position in this classification is dependent upon the continuation of funding.