CLASS TITLE: INFRASTRUCTURE ENGINEER

BASIC FUNCTION:

Under the direction of Director, Network Services, serves as the technical architect, engineer, designer and system administrator for datacenter and district infrastructure operations including the design, deployment and monitoring of infrastructure systems security; ensures the stability, integrity and efficiency of the systems infrastructure that supports the District's information technology (IT) environment; and performs related duties as assigned.

REPRESENTATIVE DUTIES:

ESSENTIAL DUTIES:
Plan, design, implement and support a variety of complex application and infrastructure-related projects and upgrades in server hardware and storage systems, server virtualization, network services, directory services, identity management, datacenter security, disaster-recovery services, database services and business applications.

Design and manage the district datacenter, cloud and hosted environments, daily operation of each assigned technology, ensuring the availability of datacenter services and communications.

Serve as primary architect and system administrator for the district internet service delivery including firewall and internet security services, wide area network connectivity between district locations, district local area networks, physical and virtual servers, and service delivery of district applications and resources.

Serve as primary architect and assists district IT staff in the implementation of site local area networks and wireless networks.

Evaluate, test, and install appropriate software tools to monitor system alerts, events, changes and activities that may impact performance or security; researches, troubleshoots and resolves system errors, failures and other problems; installs and tests system patches, releases, upgrades and fixes.

Identify impact of changes in systems and applications on datacenter operations; assesses and resolves complex systems engineering and administration issues; determines potential solutions to resolve and prevent service interruptions; implements and follows policies and procedures for change and incident management; documents technical problems, resolutions and processes.

Administer district firewall services, storage area network systems, Internet Protocol (IP) video and Voice Over IP (VoIP) phone and IP speaker emergency notification systems including systems integration with physical and virtual hardware resources.

Manage disaster-recovery solutions for critical district applications and core infrastructure services; monitor and maintain replication and backup systems; ensure all data is properly offloaded to physical and cloud-based locations following established procedures; restores backed up data as required.

Identifies, mitigates, troubleshoots and resolves complex system hardware, software and systems integration problems for the District; functions as last line of technical escalation for complex technical issues for the IT department.

Establish technology and architecture standards in collaboration with IT management and staff to ensure cohesive, compatible and standards based approaches to network and systems infrastructure solutions throughout the District.

Communicate with consultants and contract vendors as required; may provide project and technical guidance defining scope of project including project technical requirements, budget, schedules and critical project milestones.

Attend and participate in staff meetings and in-service activities, attend workshops, conferences and classes, which increase professional knowledge of new technologies, information systems and software.

OTHER DUTIES:
Perform related duties as assigned.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:
Principles, practices and methods of infrastructure design, administration and maintenance.
Datacenter technologies, including virtualization technologies, cloud platforms, storage, replication, backup and uninterruptible power supply.
Principles and practices of data communications design.
Principles, methods and techniques for installation, configuration, integration and operation of VoIP network systems, components, equipment, devices and software.
Principles and concepts of establishing and documenting baseline systems performance.
Principles and practices of disaster-recovery design and planning, including audit and legal requirements, risk analysis and recovery strategies.
Security technologies such as firewalls, intrusion detection and intrusion prevention.
Directory services, identity management and operating systems used by the District.
Scripting and programming languages applicable to the work.
Methods, operational characteristics and techniques used in the installation and troubleshooting of software applications and peripheral equipment.
Workflow applications.
The roles and functions of District department operations and school sites as they impact the work.

ABILITY TO:
Plan, organize, integrate and administer a broad range of technical infrastructure development, implementation and maintenance activities.
Identify infrastructure management issues and opportunities, analyze problems and alternatives and develop sound conclusions and recommendations.
Build teamwork and collaboration within the team and departments to optimize results; develop and maintain effective customer relationships with district and school site administration.
Analyze short-term and long-term business and technology needs and apply state-of-the-art technology in developing integrated, efficient and cost-effective solutions.
Develop and write specifications, standards and operating procedures.
Establish and maintain project schedules and balance responsibilities for multiple projects to ensure timely, high-quality results.
Write clear and precise technical procedures for systems operation and configuration, program documentation, operating instructions and training materials.

Communicate effectively, both orally and in writing.

Understand and follow written and oral instructions.

Operate a computer and use standard business software.

Establish and maintain effective working relationships with all those encountered in the course of work.

EDUCATION AND EXPERIENCE:

Any combination equivalent to: bachelor's degree in computer science, management or information systems, computer engineering or a closely related field, and at least five years of progressively responsible experience in the development and administration of systems and network infrastructures in an information systems environment similar in size and complexity to that of the District; Current Cisco, Aruba, CompTIA, Palo Alto, VMWare, Microsoft or Certified Information Systems Security Professional (CISSP) certifications preferred.

LICENSES AND OTHER REQUIREMENTS:

Valid California driver's license and the ability to maintain qualification for district vehicle insurance coverage.

WORKING CONDITIONS:

ENVIRONMENT:

Office environment

School sites and district offices

Demanding timelines

Subject to frequent interruptions and daily contact with staff and public

Driving a vehicle to conduct work

Weekend and after hours work on an as needed or on-call basis

PHYSICAL DEMANDS:

Hearing and speaking to exchange information and make presentations

Seeing to read a variety of materials

Dexterity of hands and fingers to operate a computer keyboard

Reaching overhead, above the shoulders and horizontally

CLEARANCES:

Criminal Justice Fingerprint/Background

Tuberculosis

Pre-placement Physical and Drug/Alcohol Screen