

**SANTA CRUZ COUNTY OFFICE OF EDUCATION**  
**DIRECTOR, TECHNOLOGY – INFRASTRUCTURE**

**DEFINITION**

Under the direction of the Associate Superintendent of Educational Services, plan, coordinate, organize, control and direct the vision, design, acquisition, implementation, configuration, operation, maintenance and support of all aspects of the county office's computing, networking and communications technology infrastructure. Coordinate, plan and direct projects, resources, personnel, budgets and systems to meet County Office technology needs; direct Technology Department technical staff. Provide technology leadership and guidance to districts and County Office divisions.

**SUPERVISION EXERCISED**

Supervise and evaluate the performance of assigned personnel.

**EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES**

Envision and shape the County Office's overall strategic technology infrastructure plan, including network, computing and communications architecture, disaster recovery planning, service offerings to districts and regional alliances with other COE's and partners.

Research, determine, define, and propose changes and upgrades to network, computing, communications and storage infrastructure, operating systems, and applications to ensure continuous operations, desired performance, security and service.

Project and assure adequate technology resources to meet County Office technology needs; design, develop and implement projects and systems; estimate time, personnel and resource requirements for projects; coordinate purchasing activities as appropriate; calculate and prepare cost estimates.

Develop and administer assigned budgets; direct the forecast of and recommend funds for staffing, equipment, materials and supplies. Monitor and approve expenditures.

Interview and select employees; develop employee schedules; establish job expectations; evaluate performance.

Evaluate, select, design and implement core technologies including backbone networks, storage area networks, virtualization platforms, cloud technologies, wireless systems and data center infrastructure.

Understand, analyze and address the multiple aspects of security in a complex technology infrastructure environment. Ensure data integrity and network security through measures including firewalls, virus protection, intrusion monitoring, backups and replication, etc.

Design and implement comprehensive disaster recovery planning that addresses multiple failure scenarios, targeted recovery times and recovery points, off-site backup and replication and continuity of business objectives.

**EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES**

Provide a recurring forum for districts' technology leaders to meet and share their technology challenges and opportunities. Offer leadership and planning guidance for county-wide educational networking.

Participate in regional and state level technology leadership and planning committees and organizations; function as technical and administrative liaison for the COE to the CENIC/K12-HSN backbone network provider.

Provide technical leadership and coordination with educators and administrators to help ensure the educational technology, curricular and instructional aspects of technology are well supported.

Actively engage with other divisional and departmental leaders to insure a high level of coordination, expectation and satisfaction with technology initiatives and support.

Perform complex systems administration on a wide variety of technologies including routers, switches, firewalls, storage arrays, virtualization systems, Windows and L/Unix operating systems, wireless systems and VoIP call managers.

Provide design, acquisition, configuration and installation guidance for a variety of media, room and presentation systems including interactive whiteboards, video-conferencing systems, projector and sound systems, emergency notification and alert, and teleconferencing systems.

Manage the members of the technology support team. Provide guidance and leadership, direction, facilitation and evaluation to create and maintain a highly effective, well-functioning and collaborative technology support organization.

Prepare and maintain documentation, including drawings, spreadsheets, narrative, etc. that illustrates and describes the network and systems' design, topology, physical and logical layout, naming and addressing specifics, maintenance contacts and contracts, etc. essential to the understanding, maintenance and continuity of the county office's technology infrastructure.

Institute and maintain those platforms and systems necessary to proactively monitor record and alert on the current and historical performance and availability of critical network, computing and communications resources.

Develop and maintain an active awareness of new and emerging trends in technology. Facilitate the understanding, adoption and integration of new technology platforms and solutions that further the educational and administrative mission of the County Office.

**JOB RELATED AND ESSENTIAL QUALIFICATIONS**

**Knowledge of:**

The theory, principles, practices and methods associated with administration of a full-service Technology Department.

The principles and practices of personnel management including supervision, training and performance evaluation.

**Knowledge of (continued):**

In depth theory and practice of local, metropolitan and wide area networks and networking/routing protocols, including architecture, design, acquisition, implementation, performance monitoring and analysis, maintenance and troubleshooting.

Complex network administration in a primarily Cisco environment.

VMware administration and troubleshooting, Microsoft Windows Domain administration including DNS, DHCP, Active Directory, terminal services, IIS, Group Policy, Printing, and Exchange technologies.

Storage Area Network design, implementation and component administration including EMC VNX, NetApp FAS, Cisco MDS and fiber channel technologies.

Voice over IP system design, implementation and component administration including Cisco Call Manager, PRI and SIP trunking and Exchange voicemail integration.

Disaster Recovery and Continuity of Business principals and best practices.

The theory and practice of data, computer and network security in a complex environment.

Data center principles and practices including cooling, power distribution and security.

Physical layer wiring concepts and practice including structured design, cabling categories, Ethernet principals, fiber optics and cabling testing and verification.

Principals of computer design, data communications and basic electronics.

**Skill and Ability to:**

Communicate effectively both orally and in writing with a large variety of stakeholders, including county office, district and external individuals and organizations.

Understand the critical role of networking and communications to the educational mission of the county office, as well as administrative computing needs, and effectively apply this understanding to the design and implementation of the network infrastructure serving these communities.

Develop and administer a departmental budget.

Provide leadership and direction to department staff in a manner that encourages high morale, team cooperation, creative problem solving, positive motivation and efficiency.

Work collaboratively with other teams to design process, data and technical solutions that involve network access, computing and communications resources, technology support and employee technology life-cycle management.

Effectively manage and administer a technology department with multiple priorities, challenging workloads and highly skilled team members.

**Skill and Ability to (continued):**

Design, architect and implement complex computer networks and associated Information Technology infrastructure including virtualized servers and desktops, wireless systems, SAN's, LAN's, Metro-Ethernet, WAN's, data center environments, security systems and physical plant.

Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations.

Maintain a highly available network, computing and communications environment that delivers essential, reliable services with minimal or non-existent downtime.

Quickly and effectively learn and perform systems administration on a large variety of systems including Microsoft servers, Linux/Unix servers, wireless systems, email systems, various network appliances and components, storage arrays and VoIP communications systems.

Establish, communicate and realize department goals and objectives consistent with County Office mission, goals and objectives.

**EDUCATION AND EXPERIENCE**

*Any combination of experience and training that would likely provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the knowledge, skills, and abilities would be:*

**Education:**

Completion of four years of college with a Science degree and a Master's degree in a discipline related to the assigned area or equivalent. Additional technical experience of a similar nature may be substituted on a year-for-year basis for the Master's degree.

**Experience:**

Six years of increasingly responsible experience managing large networking, computing and communications installations, including at least two years of supervisory experience.

**License or Certificate:**

Possession of, or the ability to obtain, a valid California Driver's License.

**SPECIAL REQUIREMENTS**

*The physical demands described here 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 functions. Essential duties require the following physical skills and work environment:*

Ability to work in a standard office environment with some ability to sit, crouch, stoop, squat, crawl, lift a 55 pound box of computer paper, and travel to different sites and locations.

**Approval Date:** June 19, 2012