

KERN COUNTY SUPERINTENDENT OF SCHOOLS
REVISIONS APPROVED FEBRUARY 2018
RANGE: 57.5
CLASSIFIED
CODE: NONE

NETWORK SYSTEMS ENGINEER III

DEFINITION

Under the general direction of the Executive Director of Technology or designee, the Network Systems Engineer III is responsible for undertaking broad and complex assignments in support of highly sophisticated, multi-platform network systems.

The Network Systems Engineer III will provide engineering support toward the installation and administration of Servers, Local Area Network Systems, and Wide Area Networking for school districts and agencies in the client base.

EXAMPLES OF DUTIES

Provide planning and network design strategies, and will provide engineering for the maintenance of Internet Services and Administrative Networks in the Kern County Superintendent of Schools Office;

provide planning and solutions for providing technology services for K-12 information access to the Internet;

install, monitor, and maintain servers using Linux, Windows, and other operating systems;

install, monitor and maintain virtualized systems utilizing VMware hypervisors;

will work with Network Operations team to document and manage these systems;

Linux systems will include services such as DNS, DHCP, Firewall, HTTP/HTTPS, SMTP and other TCP/IP services; Network Monitors, MySQL servers and other systems.

The Network Systems Engineer III will also provide support to KCSOS departments relative to their technology needs;

maintain and expand the Internet Services Platform that provides Internet services to most of the districts in Kern County and has redundant connections in excess of 1000 megabits per second and supports the full-range of Internet services;

design, implement and support Internetworking using Cisco routers and switches with network communications structured by copper, fiber optic, and wireless systems.

The Network Systems Engineer III may be responsible for any or all of the following activities of similarly related jobs: responsible for Linux, Windows, VMware systems installations and operations;

responsible for router installations and operations, including IP address and subnet mask assignments and programming of the routers, firewalls, and other related equipment on the network;

responsible for monitoring and diagnosing problems related to the local-area and wide-area network using network testing tools such as tcpdump, iptraf, iftop, and wireshark and management tools such as Zenoss and Observium;

will support office and school district's utilization of technology and the Internet for business and educational purposes;

will support network operating systems such as, Novell, Windows Server, and Linux;

The Network Systems Engineer III will support Linux, Windows, and Macintosh system interconnectivity on the network as well as smart devices such as iPads, tablets, and Android devices;

assist in the planning, installation, and support of network devices such as scanners and printers;

work with data processing personnel on HP 3000 data communications maintenance and solutions;

support the maintenance and functionality of data communications equipment on the ethernet backbone;

shall also provide strategies to support the technology planning and installation needs of K-12 school districts.

QUALIFICATIONS

Knowledge of:

Network technology in local-area and wide-area networks;

Ethernet (10/100/1000mbps/10gbps), fiber optic, and wireless technologies;

routers, switches, fiber-channel, Fiber Channel over Ethernet (FCOE), Cisco IOS, CatOS, NXOS, and IOS-XR;

traditional Ethernet technologies such as spanning tree, RIP, OSPF, EIGRP as well as newer Data Center Bridging (DCB) technologies;

virtualization techniques, hypervisors, and SAN storage systems (VMWare preferred);

the Linux operating system and distributions highly desirable;

Windows Server knowledge highly desirable with knowledge of Windows Domains and Active Directory/LDAP administration;

OSI layers 1, 2, and 3 planning, design, configuration, and troubleshooting with detailed knowledge of IPv4 networking required;

must possess knowledge of and willingness to stay abreast of trends, innovations and practices in both microcomputer and networking technology, including hardware and software.

Ability to:

Communicate effectively in public, in conference, and in written materials;

must possess excellent writing and oral communications skills, and demonstrate experience in preparing and presenting network administration training sessions to lay and professional audiences;

must be innovative in the networking and microcomputing field;

exhibit an energetic and vital personality;

must have excellent organizational skills and the ability to function in a highly complex environment;

must be able to analyze, troubleshoot, and apply critical thinking skills in high-pressure situations;

Experience:

Must have at least five (5) years of progressively responsible experience with local and wide area networks;
must understand and have at least (3) three years of experience with routers, enterprise-level switches, and wireless technology; Cisco equipment desirable;
must be well versed with IP addressing and subnet-masking procedures;
must have the ability to configure, troubleshoot, and maintain IPv4 networks;
must be very skilled with Linux systems and have at least two (2) years of experience;
must have at least two (2) years of design and operating experience with Windows Server;
must have at least two (2) years of experience with virtualized server environments and SAN storage;
must have a systems management or MIS background;
SNMP network management knowledge highly desirable;
must have project management experience;
minimal supervisory experience of project personnel desirable.

Education:

The Network Systems Engineer III must be a graduate of a four year college or university, with a bachelor's degree in business administration or computer science highly desirable;

an equivalent experience in an applied setting regarding the above technology can be substituted for the college degree.

Conditions of employment:

Some positions may require proof of privately owned automobile insurance and possession of a valid California Motor Vehicle operator's license which must be maintained for the duration of the assignment.

Fingerprint clearance by both the Federal Bureau of Investigation and the California Department of Justice is a condition of appointment after all other required job conditions have been met.

Must present verification of completion of Child Abuse Mandated Reporter training or obtain verification within six (6) weeks of hire and annually thereafter, as required by the California Child Abuse and Neglect Reporting Act.

This position has a probationary period of six months or 130 days, whichever is longer.

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