

NETWORK ADMINISTRATOR

DISTINGUISHING FEATURES OF THE CLASS:

This is a highly technical position which provides telecommunication network management and support, integrating services such as GIS, ERP, internet, e-mail, e-commerce, intranet, and various web/browser applications across a variety of client/server platforms. The incumbent works on a wide array of systems and is responsible for the interfacing of operating systems and physical hardware within the county network and between neighboring agencies communicating with the county. A person in this position is responsible for the integration, programming and maintenance of the network subsystems throughout the county infrastructure. In addition, the incumbent will assist in the investigation of new industry developments such as software alternatives, system productivity tools, design and programming methodologies, documentation approaches along with making recommendations for critical network design changes for current and projected departmental uses. This position will be responsible for the management of bandwidth and security over both the LAN and WAN connections to support VOIP convergence and OSPF redundancy over a dark fiber backbone. Network strategies for both infrastructure migrations and upgrades must be developed and communicated along with backup and recovery design and testing procedures performed on a semi-annual basis offsite. The work is performed under the general direction of a higher level employee with a wide leeway in conducting project assignments and evaluations. Supervision is not a normal function of this position.

TYPICAL WORK ACTIVITIES:

The following is indicative of the level and types of activities performed by incumbents in this title. It is not meant to be all inclusive and does not preclude a supervisor from assigning activities not listed which could reasonably be expected to be performed by an employee in this title.

1. Monitors all LAN/WAN connectivity between county user sites, analyzes use and problems, resolves issues;
2. Reports fiber and cables outages to the appropriate server provider and coordinates repairs;
3. Protects network resources from outside threats, recommends security devices and features, tests new devices;
4. Configures supplier products for network integration; programs new switches, firewalls, VPN devices, controllers and appliances for VLANs, QOS, OSPF and security support; installs appropriate software updates and firmware patches as required;
5. Assists in the research of new products and technology within the county infrastructure, tests new products for compatibility and integration with existing county hardware;
6. Assists with server maintenance by providing support for critical devices and applications, provides support for remote vendor accessibility;
7. Designs network solutions for data and voice communications for dark fiber and ISP attached county sites;
8. Assists with disaster recovery protocols for the county network infrastructure;
9. Provides remote access for sites and users, implements, maintains and supports communication links for the 911 backup center terminals;
10. Maintains current schematics for all network infrastructure connections within the county and to outside agencies;
11. Provides support for IP telephone convergence, analyzes network outages and latency, troubleshoots VOIP issues, and verifies operational status of links and ports;
12. Provides communications and support for the county help desk, provides technical support to the PC group and other departmental personnel;
13. Provides integration services and support for shared services offerings to outside agencies requiring network assistance.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of various computer platforms, operating systems and software products sufficient to monitor, analyze, design and upgrade a complex multi-platform computer infrastructure and associated networks;

Knowledge of converged VOIP networks sufficient to install, oversee, analyze, manage, design, troubleshoot and

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FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES: *(cont'd)*

integrate voice on Cisco products;
Knowledge of various fiber types, their design limitations and their optic transceiver requirements;
Knowledge of various security and recovery principals, practices, technologies and products sufficient to develop and maintain a secure network infrastructure;
Skill in the use basic networking tools and apps to indentify failing hardware/connection links and protocol issues;
Skill to terminate SM / MMF fiber optics using LC mechanical connections;
Ability to coordinate infrastructure changes between the state, local governments and other counties;
Ability to identify, analyze, research, develop and implement solutions for complex networking problems;
Ability to exercise independent initiative and good judgment;
Ability to establish and maintain effective working relationships with staff, county employees, consultants, vendors and representatives of outside agencies;
Ability to configure multiple Cisco platforms and interconnect non-Cisco equipment within the network;
Ability to design and extend an existing routed network consisting of both LAN/WAN sites;
Ability to help design and implement Cisco high-speed wireless access points for integrated wireless communications;
Ability to help establish security protocols for wireless authentication;
Ability to work with ISPs and telecommunication vendors for establishing both wired and wireless secured network extensions for public safety;
Personal characteristics necessary to perform the duties of the position;
Physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS:

- EITHER: (A) Master's degree in Computer Science, Information Systems, Technology Management or a closely related field and two (2) years of recent full-time work experience in an Enterprise, public or educational environment which primarily involved systems network design, implementation, management and support in a LAN/WAN setting;
- OR: (B) Bachelor's degree in Computer Science, Information Systems, Technology Management or a closely related field and three (3) years of full-time work experience in an Enterprise, public or educational environment which primarily involved systems network design, implementation, management and support in a LAN/WAN setting;
- OR: (C) Associate's degree in Computer Science, Information Systems, Technology Management or a closely related field and five (5) years of recent full-time work experience in an Enterprise, public or educational environment which primarily involved systems network design, implementation and support in a LAN/WAN setting;
- OR: (D) An equivalent combination of education, training and experience between the limits of (A) and (C) above.

NOTE: Recent work experience is defined as work occurring within the ten (10) years immediately prior to the date of application. Work experience in home/consumer PC networking will NOT be considered as qualifying experience.

NOTE: Your degree or college credit must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education.

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SPECIAL REQUIREMENT:

Possession of a valid Driver License to operate a motor vehicle in New York State at time of application and to maintain the position.

ADOPTED: 2/10/2017

REVISED: 10/28/22