SKAGIT 911 JOB DESCRIPTION

NETWORK ENGINEER

Reports To: TECHNICAL SERVICES MANAGER

Adopted: 9/11/24

CLASSIFICATION / COMPENSATION

The Network Engineer is a FLSA exempt, non-represented position. See Skagit 911's Earnings and Benefits Statement for non-represented, salaried employees' benefit details.

SUMMARY

Under the supervision of the Technical Services Manager the Network Engineer designs, builds, and maintains data communication networks, including local area networks (LANs), wide area networks (WANs), intranets, extranets, VPN, and other data communication systems for Skagit 911, a Public Safety Answering Point. The role involves a thorough understanding of emergency communications network requirements, planning and designing new systems, and maintaining and upgrading existing infrastructure. The ideal candidate possesses strong technical skills, problem-solving abilities, and a keen eye for detail and shares responsibility for maintaining all other information systems within the organization. In addition to network systems, this position is also the primary support position for all storage area network systems, virtual environments including VMWare and Citrix, and all network hardware systems. This position is subject to after-hours (weekends, nights, holidays) call-out duties for urgent technical support requests and after-hours emergency responses for critical system problems.

ESSENTIAL FUNCTIONS

1. Network Design and Implementation

- Evaluate plans, engineers, implement and oversee aspects of network (wired and wireless) and security operations connecting servers and desktop machines including but not limited to firewalls, routers, switches, and other network devices and tools.
- Engineers and implements solutions to meet agency needs within the policies of the organization and the legislative dictates regarding the public safety and public health information retained within organization servers that communicate over the network.
- Oversees, documents, reconfigures and updates technical systems to accommodate growth and change consistent with agency needs.
- Analyzes and recommends hardware and software repairs, upgrades, installation and maintenance.
- Develop and implement network security measures, including firewalls, intrusion detection systems, and access controls.

2. Network Maintenance and Troubleshooting

- Monitor network performance and ensure system availability and reliability.
- Primary responsibility for troubleshooting, resolving, and coordinating services assuring continued Internet connectivity for the organization.
- Diagnose, troubleshoot, and resolve hardware, software, and other network problems.
- Perform regular system updates, patches, and security backups to safeguard data integrity.

3. Collaboration and Communication

- Work closely with other IT team members, partner agencies, and vendors to ensure seamless network operations.
- Collaborate with other departments to understand their networking needs and provide appropriate solutions.
- Provide technical guidance and support to non-technical staff and stakeholders.

4. Documentation and Reporting

- Document network configurations, changes, and procedures.
- Prepare and maintain network diagrams, charts, and technical specifications.
- Generate reports on network performance, usage, security issues, and any other reports as needed.

5. Project Management

- Lead and manage network-related projects, including planning, budgeting, scheduling, and execution.
- Coordinate with vendors and external partners for hardware and software procurement, installation, and maintenance.

6. Research and Development

- Stay updated with the latest industry trends, technologies, and best practices especially, regarding network security and function.
- Evaluate and recommend new technologies or upgrades to enhance network performance and security.

Other work and/or projects as assigned.

KNOWLEDGE, SKILLS, and ABILITIES

Knowledge:

- Local, wide area, and wireless data communications networks and the ability to troubleshoot these networks, including all network hardware and appliances (routers, switches, firewalls, hubs, wiring, etc.), with an emphasis on Cisco routing, switching, and security technologies.
- Operating systems and architecture, and the ability to troubleshoot these operating systems within an environment of multiple operating systems and hardware platforms.
- Security hardware, software, and operating procedures as it relates to LANs, WANs, servers and applications.
- Database architecture and operations, as they relate to operating systems, networking, and security.
- System administration as it relates to security, performance tuning, resource control, and utilization.
- Public Safety computer systems.
- Multi-protocol Label Switching (MPLS).

Skill Level:

- Strong attention to detail, ensuring accuracy and consistency in network configurations and documentation.
- Excellent written and verbal communication skills to explain technical concepts to non-technical audiences.
- Strong project management skills, including the ability to manage multiple projects simultaneously.
- Excellent interpersonal skills for establishing and maintaining effective working relationships with employees, agency customers, vendors, and the public.

- Excellent customer service skills required including a positive customer service orientation, with both internal and external contacts.
- Advanced skills in the utilization of personal computer tools, such as word processing, spreadsheets, and presentation software.

Ability to:

- Analyze complex network issues and design effective solutions.
- Work effectively in a team environment and collaborate with colleagues across different departments.
- Work around, and with, confidential information, and exercise proper discretion in its dissemination, following policy, and State and Federal law.
- Establish and maintain effective working relationships with other employees, customers, and vendors.
- Communicate effectively both orally and in writing.
- Work with minimal supervision.
- Understand and follow oral and written directions.
- Analyze technical problems and describe their solutions both graphically and logically.
- Work within scheduling constraints.
- Respond to after-hours emergencies for critical system problems.
- Participate in shared after-hours on-call duties.
- Maintain authorization requirements for accessing and working with criminal justice information systems and other forms of secure information.

EDUCATION AND EXPERIENCE

Education:

A combination of education and related experience sufficient to provide the requisite knowledge, skills and abilities.

- Bachelor's degree in Computer Science, Information Technology, or a related field. Or any satisfactory combination of experience and training, including military experience, which demonstrates the knowledge, skills, and abilities to successfully perform the job.
- Relevant certifications: Cisco Certified Network Professional (CCNP), Cisco Certified Network Associate (CCNA), and CompTIA Network+ are preferred.

Experience:

Minimum of five (5) years of experience in network architecture, design, and management.

Technical Skills:

- Proficiency in network hardware (routers, switches, etc.), protocols (TCP/IP, BGP, OSPF, MPLS, etc.), and operating systems (Windows, Linux, etc.).
- Experience with network security measures and tools (firewalls, VPNs, encryption)
- Knowledge of cloud computing and virtualization technologies (e.g., AWS, Azure, VMware).

Work Environment

Work is performed in an emergency Public Safety Telecommunicator environment located within an emergency communications center setting.

Physical Demands

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 accommodation(s) may be made to enable individuals with disabilities to perform essential functions.

- Work is often performed indoors in noisy temperature-controlled environments and requires the ability to quickly adjust to changing priorities and demands.
- Work may be performed outdoors in inclement weather including freezing temperatures, heavy rain, high wind, snow and ice, and high temperatures.
- While performing the duties of this job, the employee is frequently required to sit or stand for long periods of time and use a keyboard, telephone, radio, and other electronic equipment.
- The job duties require an employee to frequently move or lift heavy objects to 75 lbs. or more (with assistance from other staff or tools).
- Work is often performed on ladders at heights of up to 20 feet.
- Work may require the use of personnel protective equipment such as fall protection, N95 particulate mask, safety glasses, and gloves.
- Travel by various modes of private and commercial transportation may be required.
- Attendance and participation at evening meetings may be required.

OTHER REQUIREMENTS

Must be able to pass a pre-employment background check including driving record.

A valid Washington State driver's license is required.

Notice: *The above job profile does not include all essential and nonessential duties of this job. Individuals may perform other duties as assigned including work in other functional areas to cover absences or relief, to equalize peak work periods, or otherwise to balance the workload as needed.*