

**CLARKSVILLE-MONTGOMERY COUNTY SCHOOL SYSTEM
CLARKSVILLE, TENNESSEE
JOB DESCRIPTION**

Job Title: Network Security Engineer

Department: Technology

Grade: Administrator Pay Grade 502

Job Description

**Date Reviewed: November 2019
Officer**

Reports To: Chief Technology

Purpose of Job

The purpose of this job is to design, implement, and support network security solutions for the district, including but not limited to continual maintenance and management of hardware and software, analyzing and troubleshooting problems, and monitoring potential network security problems or incidents. In addition, the Security Engineer may perform a multitude of tasks to accomplish the primary goal of protecting computer systems and networks.

This position is considered Mission Essential to the District and the Technology Department, in accordance with HUM-A012. A Mission Essential Employee is critical in addressing incidents that result in an interruption of normal functionality of district technology resources for students and staff.

Essential Duties and Responsibilities

The following duties are normal for this job. These are not to be construed as exclusive or all-inclusive. Other duties may be required and assigned.

Performs due diligence of existing security solutions and analyzes physical topology, logical interconnectivity, service dependency, application flows, and security constraints.

Monitors district networks and systems for security breaches, intrusions, irregular system behavior and/or vulnerabilities.

Performs periodic scans of networks and conducts penetration testing to assess vulnerabilities and highlight potential weaknesses in the network that could be exploited by malicious attack.

Leads incident response activities and minimizes impact in the event of a security breach.

Develops strategies to respond to and recover from a security breach.

Designs, configures, implements, maintains and assesses all security platforms and their associated software.

Installs, configures, maintains, and supports UTMs, Layer 7 firewalls, and VPNs, among others.

Experience administering anti-virus software, intrusion detection, firewalls, and content-filtering.

Monitors logs for botnet and malware incidents or compromises and develops plan of action for infected machines.

Provides routine systems analysis and security audits.

Monitors network traffic and investigates problematic activity.

Coordinates and monitors log analysis.

Reviews logs and reports to ensure the effectiveness of security solutions.

Maintains intrusion notification software and automates security testing tools.

Maintains knowledge of risk assessment tools, technologies, and methods.

Develops information security plans and policies, coordinates security upgrades, and recommends security enhancements to management as needed.

Experience planning, researching, and developing security specifications, policies, standards, and procedures.

Experience designing secure networks, systems, and application architectures.

Maintains knowledge of disaster recovery tools, technologies, and methods.

Maintains knowledge of computer forensic tools, technologies, and methods.

Performs forensic investigations of user machines.

Performs email searches as requested.

Proficient understanding of endpoint security solutions.

Communicates network security issues to peers and management effectively.

Provides education and training to staff regarding information security.

Coordinates with Senior Instruction Team, Principals, and Administrators to check block categories for URL and Application policies and communicates changes and new procedures.

Maintains list of VPN users and levels of access needed.

Maintains Antivirus solution and SPAM firewall rules.

Maintains email security gateway.

Additional Job Functions

Performs other duties as required.

Minimum Training and Experience Required to Perform Essential Job Functions

- Bachelor's Degree in Computer Science, Information Technology, or related field required, with one to three years of network security experience; or any equivalent combination of education, training, and experience, which provides the requisite knowledge, skills, and abilities for this job.
- Active relevant network security, information security, and/or information protection related certification, such as CISSP, CIPT, or equivalents.
- Experience designing secure networks, systems, and application architectures.
- Valid driver's license and the ability to provide reliable transportation to deliver equipment or provide needed services to all CMCSS locations.

KNOWLEDGE OF JOB

Has considerable knowledge of the policies, procedures, and activities of the district and practices as they pertain to the performance of duties relating to the position. Has thorough knowledge of practices as necessary for the completion of daily responsibilities. Knows how to develop and administer operations and staff plans and objectives for the expedience and effectiveness of specific duties of the department. Knows how to keep abreast of any changes in policy, methods, computer operations, equipment needs, etc. as they pertain to department operations and activities. Able to effectively communicate and interact with supervisors, members of the general public, and all other groups involved in the activities of the department. Able to assemble information and make written reports and documents in a concise, clear, and effective manner. Has good organization, human relations, and technical skills. Able to use independent judgment and work with little direct supervision when necessary. Has the ability to comprehend, interpret, and apply regulations, procedures, and related information. Has comprehensive knowledge of the terminology, principles, and methods utilized within the department. Has the mathematical ability to handle required calculations. Is knowledgeable and proficient with computers. Able to read, understand and interpret financial reports and related materials.

**(ADA) MINIMUM QUALIFICATIONS OR STANDARDS
REQUIRED TO PERFORM ESSENTIAL JOB FUNCTIONS**

PHYSICAL REQUIREMENTS: Must be physically able to operate a variety of automated office machines and computer equipment which includes a mainframe computer, personal computer, printer, modem, calculator, telephone, etc. Must be able to use body members to work, move, or carry objects or materials, up to forty-five pounds. Must be able to exert up to forty-five pounds of force occasionally, and/or up to ten pounds of force frequently. Physical demand requirements are at levels for active work.

DATA CONCEPTION: Requires the ability to compare and/or judge the readily observable functional, technical, structural, or compositional characteristics (whether similar to or divergent from obvious standards) of data, people, or things.

INTERPERSONAL COMMUNICATION: Requires the ability of speaking and/or signaling people to convey or exchange administrative information. Includes giving assignments and/or directions to co-workers or assistants.

LANGUAGE ABILITY: Requires the ability to read a variety of informational documentation, directions, instructions, methods, and procedures related to the job of position. Requires the ability to understand and communicate within computer operating systems and requires an understanding of network protocols. Requires the ability to write reports with proper format, punctuation, spelling and grammar, using all parts of speech. Requires the ability to speak with and before others with poise, voice control, and confidence using correct English and a well-modulated voice.

INTELLIGENCE: Requires the ability to learn and understand complex principles and techniques; to make independent judgments in absence of supervision; to acquire knowledge of topics related to the position.

VERBAL APTITUDE: Requires the ability to record and deliver information to supervisors and officials; to explain procedures and policies; and to follow verbal and written instructions, guidelines and objectives.

NUMERICAL APTITUDE: Requires the ability to utilize mathematical formulas; add and subtract totals; multiply and divide; determine percentages; determine time and weight; and utilize statistical inference.

FORM/SPATIAL APTITUDE: Requires the ability to inspect items for proper length, width, and shape, visually with office equipment.

MOTOR COORDINATION: Requires the ability to coordinate hands and eyes while using automated office equipment.

MANUAL DEXTERITY: Requires the ability to handle a variety of items, office equipment, control knobs, switches, etc. Must have the ability to use one hand for twisting or turning motion while coordinating other hand with different activities. Must have average levels of eye/hand/foot coordination.

COLOR DISCRIMINATION: Requires the ability to differentiate colors and shades of color.

INTERPERSONAL TEMPERAMENT: Requires the ability to deal with people (i.e. staff, supervisors, general public, and officials) beyond giving and receiving instructions such as interpreting departmental policies and procedures. Must be adaptable to performing under moderate stress when confronted with an emergency related to the position.

PHYSICAL COMMUNICATION: Requires the ability to talk and/or hear: (talking - expressing or exchanging ideas by means of spoken words). (Hearing - perceiving nature of sounds by ear).

ATTENDANCE: A regular and dependable level of attendance is an essential function for this position.

The Clarksville-Montgomery County School System is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the school system may provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer. Signatures below indicate the receipt and review of this job description by the employee assigned to the job and the immediate supervisor.

Employee's Signature

Supervisor's Signature

Date

Date