



VIRGINIA BEACH CITY PUBLIC SCHOOLS CHARTING THE COURSE

SYSTEMS ENGINEER

GENERAL RESPONSIBILITIES

This multi-faceted position is responsible for designing, planning, implementing, maintaining the division's computer hardware and software, data centers, telecommunications and data networks, multimedia, and distance learning systems, and providing customer support in the use of identified systems. Work involves division-wide applications implemented in schools and administrative areas. The position frequently works independently and has considerable latitude for initiative and independent judgment.

ESSENTIAL GENERAL TASKS

(These are intended only as illustrations of the various types of work performed. The omission of specific duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.)

- Evaluate new technology and resources for future implementation in the VBCPS.
- Present and provide technical training for staff in the Department of Technology, as needed.
- Plan and supervise special projects involving team members.
- Advise clients on the necessary technology to achieve their goals.
- Must keep abreast of changing and emerging technology using professional resources to include continuing educations and in-service programs.
- Provide after-hours support for technical issues.
- Perform related work as required.

DUTIES ASSIGNED TO SPECIFIC AREAS

Specialization and proficiency are essential in at least one or both of the functional areas listed.

Infrastructure Team

Provide leadership, training, and direction to a team of network technicians and administrators responsible for the following:

- Act as first responder to infrastructure trouble-tickets including: LAN/WAN/WLAN switching, network protocols cabling, distance learning equipment, PC, server issues and telephony devices.
- Perform in-depth troubleshooting, installation and maintenance on switches, routers, servers, wireless equipment, PCs, servers, universal power supplies and telephony equipment.
- Administer enterprise monitoring software ensuring that all network systems are performing as expected
- Create documentation and maintain the enterprise repository of systems documentation.
- Assist the Systems Engineer Supervisor with overseeing the installation, maintenance and troubleshooting of:
 - Layer 2 and 3 routing/switching hardware,
 - Software and configurations
 - Server hardware
 - Video Teleconference hardware and software
 - Telephony Equipment
 - Layer 4-7 application Control
 - Internet Infrastructure
 - Network Security Systems
- Test new devices to determine viability and network implications
- Assist Systems Engineer Supervisor with:
 - Architecting LAN/WAN/WLAN solutions for new construction or modifications to existing structures using architect plans



VIRGINIA BEACH CITY PUBLIC SCHOOLS CHARTING THE COURSE

- o Evaluate and research new technologies and concepts
- Provide telecommunications network design and programming and installation support services for server, desktop applications and hardware.
- Review cabling infrastructure standards, codes, design and troubleshooting process.
- Relocate networks and servers to support routine building renovations and new construction.
- Maintain LAN / WAN maps, IP addressing, and other related documentation.
- Provide customer training as it relates to telecommunications equipment and features.
- Review proposals as to their accuracy and completeness as well as pricing to ensure compliance to the contract.
- Install, configure, and test video and audio mixers, codecs, cameras, display systems, video application servers and other associated devices.
- Provide routine monitoring of measurement and monitoring tools to insure proper systems operation and identification of failures or service degradation.
- Maintain systems configuration documentation and backup.
- Create and maintain Distance Learning (DL) network maps, IP addressing, and other related documentation.
- Perform system testing and acceptance for DL hardware, software and vendor installed copper and fiber cabling plants.
- Provide emergency repair/replacement of all associated DL devices

Engineering Team

Provide leadership and direction to team members in the following areas:

- Performing in-depth troubleshooting, installation and maintenance of data centers, active directory, GSuite, and cloud services for the division.
- Installation and configuration of servers, storage, cloud-based technology, and hyper-converged systems.
- Providing monitoring of measurement and monitoring tools to ensure proper server, server-based services operation, identification of failures, CPU utilization and network performance.
- Creating and maintaining the enterprise repository of systems documents. Including but not limited to systems maps, IP addresses, systems configuration, and other related documentation.
- Install, maintain, and troubleshoot load balancing hardware, software, and configurations.
- Performing routine installation of updates to server, peripheral and networking device firmware, as well as operating system and vendor driver patches.
- Performing emergency repair/replacement of servers, network devices, and devices described above.
- Relocation of servers to support routine building renovations and new construction.
- Researching, designing, implementing, and maintaining systems integrations with Active Directory.
- Maintaining Active Directory and other software application user accounts / groups / resources and files.
- Preparing comprehensive reports to evaluate system needs and developing procedures.
- In-depth troubleshooting, installation and maintenance of backups and their related systems.
- Provide leadership, training, and project management for the team.
- Evaluate team procedures and tasks for efficiency and develop automation when possible.

KNOWLEDGE, SKILLS AND ABILITIES

Thorough knowledge of microcomputer hardware and software to include wide area networks, network operating systems, directory integration systems (Microsoft), field systems (local area networks, operating systems, and client applications), telecommunication systems and distance learning systems. Must demonstrate an understanding of the job and can comply with administrative directive and school board policy. Must be able to present information either written and/or orally in a clear, accurate and grammatically correct manner; must be punctual in the submission of accurate reports. Must have good



VIRGINIA BEACH CITY PUBLIC SCHOOLS CHARTING THE COURSE

communication and human relation skills and be respectful of the confidential nature of information. Must have the ability to work effectively with school officials, community groups, and other staff members. Must demonstrate good work habits to include punctual and regular attendance, and efficient use of time.

EDUCATION AND EXPERIENCE

Required:

Bachelor of Science degree.

Considerable experience in related field as a computer, network, telecommunications, and/or broadcast maintenance technician.

Preferred:

Industry certifications and/or training in related field such as Network Administrator or Network Engineering.

A comparable amount of training and experience may be substituted for the minimum qualifications.

PHYSICAL REQUIREMENTS

Must have the use of sensory skills in order to effectively communicate and interact with other employees and the public using the telephone and personal contact as normally defined by the ability to see, read, talk, hear, handle or feel objects and controls. Frequent sitting, walking, bending, stooping, crouching, kneeling, grasping, fingering, repetitive motion, reaching, and driving. Occasional standing, climbing, and crawling. Work involves moderate exposure to unusual elements such as dirt, fumes, unpleasant odors, hazards such as moving vehicles, electric current, moving mechanical parts, etc. and/or loud noises. Ability to lift up to 50 pounds frequently. Requires timely and regular adherence to established work schedules. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential tasks.

SPECIAL REQUIREMENTS

Possession of a valid driver's license and reliable transportation to carry out site visits as assigned.

Regular and reliable attendance is an essential function of this position.

Specialization and proficiency in one or more of the identified specific job function areas is essential and require the following knowledge base:

Infrastructure Team

- **Required:** Expert level knowledge of networking, hardware (wired and managed wireless). Active Directory and Video Conferencing systems equipment and communications.
- **Preferred:** Cisco UC Design Specialist, or Cisco UC Support Specialist or equivalent experience.

Engineering Team

- **Required:** Expert level knowledge Windows Server, Active Directory, G Suite, and Virtualization. Proficient in networking, scripting, load balancing, and cloud services.

FLSA status: Exempt	Description: Rev. 8/10, 1/17, 7/20
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