

PALOMAR COMMUNITY COLLEGE DISTRICT

INFORMATION SERVICES NETWORK SPECIALIST

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

To lead one or more areas of specialty within an enterprise networked-infrastructure servicing the entire district, such specialties may include, but are not limited to: LAN/WAN Services, Account/Directory Services, Security Services, Telecommunication Services, Server Services, E-Mail Services, or Disaster-Recovery Services.

SUPERVISION RECEIVED AND EXERCISED

Receives direction/supervision from the Information Services Manager of Network & Technical Services. Receives functional workflow direction from Helpdesk and the Senior Network Specialists. Exercises technical and functional supervision over assigned staff as needed

ESSENTIAL FUNCTION STATEMENTS

Essential and other important responsibilities and duties may include, but are not limited to, the following:

Essential Functions:

1. Maintain a proactive approach in the monitoring and maintenance of areas of responsibilities by establishing, documenting and monitoring base-line performances, and making modifications due to performance changes.
2. Assure optimum availability of data communications through the use of state-of-the-art utilities such as SNMP monitors, data scopes, and programmable protocol analyzers.
3. Implement and monitor security standards for all enterprise network devices and data information stores, including the setup and maintenance of such equipment as routers and access lists, firewalls, intrusion detection servers, and VPNs.
4. Design, implement and maintain remote access standards to the districts resources, as well as the installation and setup of remote access devices such as modem banks, VPNs and secure tunnels.
5. Implement and monitor enterprise disaster-recovery standards, including audit requirements, legal requirements, risk analysis, and recovery strategies and the setup and maintenance of fault-tolerant hardware and data backup systems.
6. Implement and administrate enterprise e-mail standards, in addition to the integration, setup and maintenance of the e-mail system utilizing such systems as clustered server farms.

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7. Design, develop, and implement specifications for a multi-site enterprise network infrastructure, including both local area networks (LANs) and wide area networks (WANs).
8. Design, implement and monitor enterprise telecommunication standards.
9. Design, implement and administrate standards for enterprise network active directory services, utilizing user and computer policies, such as trustee rights, resource allocation, delegation, and login scripts to delegate rights to enterprise resources.
10. Develop plans and standardize methods for the installation and configuration of software on user accounts, individual computers, and the network.
11. Review and analyze technical literature and make recommendations, which include writing specifications for equipment purchases and operating procedures.
12. Support academic computer labs with the design, installation and maintenance standards for network computers, peripherals, and educational software applications including specialized systems to meet ADA requirements.
13. Maintain the network infrastructure for distance-learning technologies such as web-based on-line classes and video/audio streaming.
14. Test and assure software compatibility with the network before release to the users.
15. Research and review new technical products and make recommendations on selections of vendors.
16. Troubleshoot computer equipment, peripherals, and software problems; perform maintenance, repairs and/or software modifications.
17. Meet with users to assist them in defining program requirements and objectives, to acquire information about data sources and processing methods, and to explain software, network, and system capabilities and limitations.
18. Develop websites for the use of automation of process and procedures.
19. Assist with keeping the inventory database current.
20. Write/code computer programs for the automation of new applications or procedures.
21. Attend and participate in various staff meetings as required.
22. Perform related duties and responsibilities as required.

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QUALIFICATIONS

Knowledge of:

- Concepts and principles of network/data communications design and planning utilizing IEEE specifications and standards such as ISO/OSI, 802.2, 802.3, 802.1q, 802.1p and protocols such as TCP/IP, IPX/SPX, RIP, BGP, IGMP and Spanning Tree
- Concepts, principles and theory of disaster-recovery design and planning including audit requirements, legal requirements, risk analysis, and recovery strategies
- Concepts, principles and theory of design and operation of telecommunications systems utilizing technologies such as PBX systems and Voice over IP (VoIP)
- Concepts and principles of computers and servers
- Concepts and principles for establishing and documenting base-line performances
- Concepts and principles of enterprise operating systems, such as Microsoft, Novell, and UNIX
- Concepts and principles of network equipment, such as repeaters, switches, bridges and routers
- Concepts and principles of security equipment and software, such as firewalls, intrusion detection systems, and virus protection systems
- Operational characteristics of software applications and peripheral equipment
- Methods and techniques used in the installation and troubleshooting of software applications on individual computers and the network
- Characteristics, capabilities, and uses of telecommunications system components, including data communications lines (POTS, PSTN, T1 - OC48, SONET, ATM, etc.) and equipment, data-access arrangement equipment, input/output devices, communications processors, telecommunication software, switching networks, routers, and CSU/DSUs
- Past and present RFC standards
- Computer programming languages such as C/C++, Visual Basic, Java, and HTML
- Methods and techniques for instructing the use of computer applications and procedures
- Standards for deployment of Enterprise Business applications such as PeopleSoft

Ability to:

- Communicate clearly and concisely, both orally and in writing
- Write clear specifications, standards, and operating procedures
- Operate a variety of complex data/telecommunications diagnostic test equipment
- Analyze data/telecommunications operating problems to determine causes of malfunctioning systems
- Read, interpret and apply concepts found in complex technical publication, manuals and other documents
- Perform a variety of technical tasks in the installation and troubleshooting of computer software applications and peripheral equipment
- Provide support and respond to requests and inquiries from system users regarding telecommunications, network, and software applications
- Analyze software and hardware needs and recommend solutions
- Analyze LAN/WAN hardware needs and recommend solutions that meet or exceed the required need
- Establish and maintain effective working relationships with those contacted in the course of work
- Maintain physical condition appropriate to the performance of assigned duties and responsibilities

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Experience and Training Guidelines

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Five years of increasingly responsible experience designing, managing, and modifying computer networks infrastructures and telecommunications in supporting a large scale; multi-site data/telecommunications network infrastructure and installing/troubleshooting software applications and peripheral equipment.

Training:

B.S. in Computer Science/Information Systems or a related field; or course work leading to a B.S. or certification in an area of specialty relevant to this position; or equivalent on-the-job experience.

WORKING CONDITIONS

Environmental Conditions:

Office environment; exposure to computer screens; contact with faculty, staff, students and vendor personnel.

Physical Conditions:

Essential and marginal functions may require maintaining physical condition necessary for extensive use of computer keyboard; walking, standing, or sitting for prolonged periods of time; moderate lifting; operating computer equipment.