



**Orange County Department of Education
Human Resources Department
Classified Management Class Specification**

Network Architect

**Class Code: 1362
Work Days: 225**

GENERAL PURPOSE

Assess requirements for organization's data and voice networks; plan, design, and upgrade network projects; to establish and maintain version-control and viral defense systems; troubleshoot network architecture and make recommendations for system fixes and enhancements; troubleshoot and resolve LAN/WAN performance, connectivity, and related network problems; provide a point of escalation for Network Engineers; to manage security of LAN/WAN as well as host security, and internet security; manage capacity planning, disaster recovery, and performance analysis; and make recommendations for leveraging network technology.

SUPERVISION RECEIVED AND EXERCISED

1. Receives direction from higher level management staff.
2. May exercise direct supervision over professional, technical, and/or clerical staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES

This position description is intended to describe the general nature and level of work performed by an employee assigned to this position. This description is not an exhaustive list of all duties, responsibilities, knowledge, skills, abilities, and working conditions associated with this position. All requirements are subject to possible modification to reasonably accommodate individuals with a disability.

1. Recommend and assist in the implementation of goals, objectives, and strategic plan; establish schedules and methods for providing specialized services; implement policies and procedures.
 2. Provide Enterprise network technology development, design, implementation and management of the OCDE voice and data networks. To include but not limited to Microsoft Exchange cluster,
 3. Cisco Voice over IP, Cisco Unified Messaging, Emergency Responder, and Berbee paging systems.
 4. Research, recommend, implement, and review technologies for the enterprise, and test bed networks.
 5. Provide designs for high quality, reliable, and flexible infrastructure to support the enterprise IP network, including strategic planning for lifecycle considerations.
 6. Provide an adequate level of network security by employing proven technologies, industry best practices, and well defined techniques.
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ESSENTIAL DUTIES AND RESPONSIBILITIES (cont.)

7. Define and implement network monitoring and diagnostic tools to provide optimum network availability and proactive utilization statistics.
8. Design procedures and policies for management of enterprise and test bed networks.
9. Design and document new network elements in such a way that work may be carried out either by candidate or by more junior staff members.
10. Leverage Cisco routing and switching technologies to solve enterprise and local networks requirements using EIGRP, TCP/IP, VLANs, ASAs, MPLS, VoIP, and BGP.
11. Install and configure software systems that support the network infrastructure such as network monitoring systems, log monitors, DNS servers, firewalls, and IDS/IPS systems.
12. Install and configure IP based circuits and vendor data feeds.
13. Communicate issues and solutions in both verbal and written form both to peers and management.
14. Assist groups in attaching new systems to the network and ensuring that proper network configurations are implemented.
15. Research and evaluate new tools that enhance operation of the network.
16. Monitor and troubleshoot complex network errors and performance problems.
17. Establish and maintain version-control and viral defense systems.
18. Troubleshoot network architecture and make recommendations for system fixes and enhancements.
19. Remain current with the advances in network, network security, network monitoring, and problem determination technologies as well as troubleshooting techniques.
20. Maintain all documents on procedures and changes.
21. Must demonstrate attendance sufficient to complete the duties of the position as required.
22. Perform related duties similar to the above in scope and function as required.

QUALIFICATIONS (KNOWLEDGE, SKILL, ABILITY REQUIREMENTS)

Knowledge of:

1. Network design to include VoIP, routing, switching, windows clustering, and email.
2. Networking and associated protocols including TCP/UDP, IEGRP, OSPF, BGP, DNS, SNMP and other internet associated protocols, WAN protocols-SONT, OptEMan.
3. Gigaman, ATM Frame Relay, DSL, HDLC, LAN protocols Ethernet, Spanning Tree, VLAN, HSRP.
4. IP addressing to include subnetting, route aggregation, and BGP route maps.
5. Transmission of data using IP multicast.

Knowledge of (cont.):

6. Traffic shaping, quality of service, and packet trace analysis.
7. Dynamic routing protocols on large networks.
8. Installation and support of telecommunications circuits.
9. Desktop Hardware and Software (Microsoft and Apple).
10. Windows Server and Active Directory (MCSE or Equivalent Experience).
11. Current diagnostic software and tools.
12. Cisco routers, switches, VoIP and unified messaging.
13. Microsoft Exchange and SMTP.
14. Methods and Techniques of Web Filtering.
15. Security Hardware and Software (Access Control Lists, firewalls, IPS, IDS, Anti Virus, Encryption).
16. Blackberry Enterprise Server.
17. Video Conferencing.
18. Procedures, methods, and techniques of project and workflow management and organization.

Ability and Skill to:

1. Lead, assign, and review the work of assigned project staff.
2. Provide project oversight and support.
3. Manage multiple projects/requests.
4. Interpret and apply federal, state, and local laws, codes, and regulations.
5. Establish and maintain effective working relationships with various constituencies.
6. Prepare clear and concise correspondence, reports, and other written materials.
7. Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.
8. Communicate clearly and concisely, both orally and in writing, in English.

Education, Training and Experience:

A typical way of obtaining the knowledge, skills, and abilities outlined above is a Bachelor's degree from an accredited college or university with major course work in a computer related field, a Cisco Certified Network Professional, and four years of extensive experience supporting a Cisco based data and voice network.

PHYSICAL AND MENTAL DEMANDS

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands

While performing the duties of this job, employees are regularly required to bend, stoop, push, pull, grasp, squat, twist, kneel, walk, sit, and reach to access materials or equipment and complete other tasks as assigned; lift and/or move up to 50 pounds; and lift up to 75 pounds with assistance from ground, waist, chest, shoulder, and above shoulder level. The position may include occasional need to traverse uneven surfaces.

Employees in this classification are to be able to travel countywide to a variety of sites within a reasonable time frame; read written and electronic materials; communicate clearly in person, on the phone, and via email; and operate all required equipment.

Mental Demands

While performing the duties of this class, employees are regularly required to use written and oral communication skills; read and interpret information; analyze and solve problems; use mathematical reasoning; make observations; learn and apply new information or skills; perform highly detailed work; work on multiple, concurrent tasks with frequent interruptions; work under intensive deadlines and meet productivity requirements; and interact successfully with various groups of people encountered in the course of work.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Employee typically works in an office environment that is fast paced with high pressure.

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