



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

---

**Network Engineer**

**Class Code: 1363  
Work Days: 225**

**GENERAL PURPOSE**

Engineer enterprise data, voice, and video networks; maintain a secure transfer of data to multiple locations via internal and external networks; to work with vendors, clients, carriers, and technical staff on network implementation, optimization, and ongoing management; provide high-level support and technical expertise in networking technology, LAN/WAN hardware, hubs, bridges, and routers; administer the operation of all LAN/WAN related network services according to company policies and procedures; coordinate and implement network software and hardware upgrades; troubleshoot and resolve LAN/WAN performance, connectivity, and related network problems; to administer LAN/WAN security, antivirus, and spam control measures; and to install, configure, and support voice, data, and video equipment.

**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. Monitor system performance and provide security measures, troubleshooting, and maintenance as needed.
  3. Maintain needed files and databases by adding and deleting files on the network servers and backing up files to guarantee their safety in the event of problems with the network.
  4. Analyze and resolve technical problems for established networks.
  5. Plan, test, recommend, and implement network, file server, and workstation hardware and software.
-

---

## **ESSENTIAL DUTIES AND RESPONSIBILITIES (cont.)**

6. Provide network documentation, training, and guidance to computing system clients and programmers.
7. Troubleshoot and resolve complex network production problems.
8. Develop and write procedures for installation, use, and troubleshooting of network and communications hardware and software.
9. Install, configure, and maintain all network components.
10. Install, upgrade, and configure network printing, directory structures, user access, security, software, and file services.
11. Maintain Active Directory structure.
12. Install, configure, and monitor LAN/WAN hardware.
13. Create Category 5 and 6 cables from bulk supplies.
14. Establish user profiles, user environments, directories, and security for networks being installed.
15. Establish and maintain user accounts on VoIP servers and unified messaging servers.
16. Work as a team member with other technical staff, such as systems to ensure connectivity and compatibility between systems.
17. Work with vendors to resolve complex network problems.
18. Document network problems and resolutions for future reference.
19. Answer all trouble calls/emails and enter work orders into tracking software.
20. Assist in administering and maintaining local and web-based versions of our tracking software.
21. Interact with internal clients to resolve basic help desk issues; communicates with internal clients in a professional manner maintaining confidentiality.
22. Provide responses to internal clients in a timely manner.
23. Must demonstrate attendance sufficient to complete the duties of the position as required.
24. Perform related duties similar to the above in scope and function as required.

## **QUALIFICATIONS (KNOWLEDGE, SKILL, ABILITY REQUIREMENTS)**

### **Intermediate Knowledge of:**

1. Networking and associated protocols including TCP/UDP, IEGRP, OSPF, BGP, DNS, SNMP, and other internet associated protocols, WAN protocols-SONT, OptEMan,
2. Gigaman, ATM Frame Relay, DSL, HDLC, LAN protocols Ethernet, Spanning Tree, VLAN, and HSRP.
3. IP addressing to include subnetting, route aggregation, and BGP route maps.
4. Transmission of data using IP multicast.
5. Traffic shaping, quality of service, and packet trace analysis.

---

**Intermediate Knowledge of (cont.):**

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

**Ability and Skill to:**

1. Manage multiple projects/requests.
2. Interpret and apply federal, state, and local laws, codes, and regulations.
3. Establish and maintain effective working relationships with various constituencies.
4. Prepare clear and concise correspondence, reports, and other written materials.
5. Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.
6. 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 Bachelor's degree from an accredited college or university with major course work in a computer related field and three years of experience supporting a 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.

Revised 3/2017