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; 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 escalation for Network Engineers; manage security of LAN/WAN as well as host security, and internet security; manage capacity planning, disaster recovery, and performance analysis; make recommendations for leveraging network technology; and provide assistance to higher level management staff.

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 being 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; stablish schedules and methods for providing specialized services; and implement policies and procedures.

2. Provide Enterprise network technology development, design, implementation, and management of the OCDE voice and data networks.

3. Cisco Voice over IP, Cisco Unified Messaging, Emergency Responder, and telephone paging systems.

4. Research, recommend, implement, and review technologies for the enterprise and testbed 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.

7. Define and implement network monitoring and diagnostic tools to provide optimum network availability and proactive utilization statistics.

8. Design procedures and policies for the management of enterprise and testbed networks.

9. Design and document new network elements in such a way that work may be carried out either by candidates or by more junior staff members.

10. Monitor and support non-network related data center infrastructure equipment and hardware.

11. Support, maintain, and collaborate in Data Center Disaster recovery designs and operations.

12. Leverage Cisco routing and switching technologies to solve enterprise and local network requirements using EIGRP, OSPF, TCP/IP, VLANs, ASAs, MPLS, VoIP, and BGP.

13. Select, train, plan the work of, supervise, and evaluate staff; provide coaching to employees; collaborate on goal development; set clear expectations; provide constructive feedback; assist in improvement as needed; and check in regularly for understanding.

14. Install and configure software systems that support the network infrastructure, such as network monitoring systems, log monitors, DNS servers, firewalls, and IDS/IPS systems.

15. Install and configure IP-based circuits and vendor data feeds.

16. Communicate issues and solutions in both verbal and written forms to peers and management.

17. Assist groups in attaching new systems to the network and ensuring that proper network configurations are implemented.

18. Research and evaluate new tools that enhance the operation of the network.

19. Monitor and troubleshoot complex network errors and performance problems.

20. Monitor and maintain security on networks and servers on network monitoring and log monitoring systems.

21. Establish and maintain version control and viral defense systems.

22. Troubleshoot network architecture and make recommendations for system fixes and enhancements.

23. Remain current with advances in network, network security, network monitoring, problem determination technologies, and troubleshooting techniques.

24. Maintain all documents and procedures and changes.

25. Demonstrate attendance sufficient to complete the duties of the position as required.

26. Perform related duties similar to the above in scope and function as required.

QUALIFICATIONS (KNOWLEDGE, SKILL, ABILITY REQUIREMENTS)

Knowledge of:

1. Network design, including VoIP, routing, switching, windows clustering, and email.

2. Principles of effective supervision, leadership, training, coaching, and performance evaluation.

3. Networking and associated protocols including TCP/UDP, IEGRP, OSPF, BGP, DNS, SNMP, and other internet-associated protocols, WAN protocols-SONT, OptEMan.

4. Gigman, ATM Frame Relay, DSL, HDLC, LAN protocols Ethernet, Spanning Tree, VLAN, HSRP.

5. IP addressing to include subnetting, route aggregation, and BGP route maps.

6. Transmission of data using IP multicast.

7. Traffic shaping, quality of service, and packet trace analysis.

8. Dynamic routing protocols on large networks.

9. Installation and support of telecommunications circuits.

10. Desktop Hardware and Software (Microsoft and Apple).

11. Windows Server and Active Directory (MCSE or Equivalent Experience).

12. Current diagnostic software and tools.

13. Cisco routers, switches, VoIP, and unified messaging.

14. Microsoft Exchange and SMTP.

15. Methods and Techniques of Web Filtering.

16. Security Hardware and Software (Access Control Lists, firewalls, IPS, IDS, Anti-Virus, Encryption).

17. Video Conferencing.

18. Procedures, methods, and techniques of project and workflow management and organization.

Ability and Skill to:

1. Provide project oversight and support.

2. Manage multiple projects/requests.

3. Interpret and apply federal, state, and local laws, codes, and regulations.

4. Establish and maintain effective working relationships with various constituencies.

5. Prepare clear and concise correspondence, reports, and other written materials.

6. Interpret the organizational and division strategic plan and create relevant goals and plans for assigned areas of responsibility.

7. Effectively adapt and adjust program services to meet changing priorities and customer-specific needs.

8. Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.

9. 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 in a computer-related field, a Cisco Certified Network Professional, and five (5) years of experience supporting a Cisco based data and voice network; or an equivalent combination of training and experience.

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.

Physical Demands

Employees must be able to perform the essential functions of the position with or without accommodation. Employees in this classification must be able to travel countywide to a variety of sites within a reasonable time frame, read written and electronic materials, and communicate clearly with those contacted through the course of work (typically in person, on the phone, and via email); perform deskwork for extended periods; and access and operate all required equipment for job duties. Employees in this classification often lift, carry, push, and pull heavy objects. The position may include the need to traverse uneven surfaces and may lift and/or move up to 50 pounds and lift up to 100 pounds with assistance.

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 essential functions.

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