

## **Ontario-Montclair School District**

### **CLASS SPECIFICATION**

#### **Network Engineer**

##### **GENERAL PURPOSE**

Under general direction, performs highly responsible and complex professional and technical tasks in the design, installation and maintenance of enterprise-wide local and wide area networks (LAN/WAN) and multi-platform network operating systems for the District; and performs related duties as assigned.

##### **DISTINGUISHING CHARACTERISTICS**

A Network Engineer performs advanced professional responsibilities in the planning, design and implementation of multi-platform network systems, including the development of network administration, maintenance and security policies, procedures and standards, in order to provide an efficient, stable, reliable infrastructure needed for effective operations and sharing of applications and information to a wide variety of customers and stakeholders. The incumbent is responsible for developing network and security standards and policies, researching technology alternatives and planning for expansion of network capacity to support changing District goals and operational requirements. Assignments are given in terms of broad operational or project requirements and performance is measured in terms of overall performance and results.

Network Engineer is distinguished from other Information Systems staff by the incumbent's overall responsibility for network design, development and administration.

##### **ESSENTIAL DUTIES AND RESPONSIBILITIES**

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this class. There will typically be an assigned schedule for these duties.

1. Leads, oversees and participates in the implementation, installation, upgrading, monitoring and troubleshooting of the District's physical network infrastructure, including servers, hubs, routers, switches, other device hardware, computer equipment, related peripheral equipment and multi-platform network operating systems and applications.
2. Oversees and participates in the design implementation, configuration, upgrading, testing, troubleshooting, tuning and maintenance of a variety of network services, including: exchange mail services; web and proxy servers; print and file services and VPN services.
3. Designs, plans and develops the District's network hardware and operating systems, including planning network topology, installations and changes; configures network routing and switching software.
4. Serves as network security administrator, including administering the firewall rule base; monitors network intrusions; develops, recommends, implements and enforces the District's network security policy and remote access standards and guidelines; maintains security on network and server equipment.
5. Provides advanced technical support for the District's network operating systems and applications; troubleshoots and resolves network outages and bottlenecks; provides information, technical direction and training to staff on activities required to implement projects, system hardware and software installations and upgrades, new procedures and techniques.

6. Coordinates review of the technical environment to evaluate and measure system performance and effectiveness; utilizes network management software and tools to monitor and analyze network traffic; analyzes network capacity and growth requirements and recommends network upgrades and enhancements to meet long-term District needs; develops and recommends specifications for network hardware, software and cabling upgrades and enhancements; develops and recommends cabling and connectivity standards, uses and levels.
7. Maintains and updates schematics and documentation of network structure and devices; develops and recommends network contingency and disaster recovery plans.
8. Reviews new or revised projects for conformance to established technical, system and operational standards; performs network administration duties; designs and ensures the recoverability of lost data through proper and adequate backup and data recovery methods.
9. Coordinates work with other Information Systems staff to ensure appropriate network availability to meet end user and operational computing needs.

**10. *Directs and supervises staff, as assigned.***

**OTHER DUTIES**

1. Participates in the evaluation of proposed solutions by attending demonstrations, performing technical research, providing technical input to evaluative committees and participating in the evaluation process.
2. Provides back-up support to department staff as required.

**MINIMUM QUALIFICATIONS**

**Knowledge of:**

1. Network architectures and theory and principles of local and wide area enterprise network design and integration, including topologies and protocols.
2. Principles and practices of advanced network administration.
3. Industry design and configuration standards for enterprise networks, including: hardware, network protocols and network operating systems.
4. Network management systems, including principles and practices of security management and security design.
5. Principles and practices of business and technical communications, including techniques in the development of system and user documentation.
6. Operating principles, parameters, uses, capabilities, characteristics and limitations of servers, network operating systems, PC's, mid-range computers and related equipment.
7. Standard principles, practices and methods of project management.

**Ability to:**

1. Develop conceptual frameworks and apply state-of-the-art technology to the design and management of network infrastructures.
2. Install, configure, maintain and manage the operations of complex network systems to achieve optimal technical performance and end user support.

3. Analyze and troubleshoot complex computer system and network issues, identify the reasons for network and network device problems, failures and malfunctions and develop optimal solutions.
4. Monitor network trends and anomalies and make adjustments as required.
5. Perform business and functional analyses and reach sound conclusions regarding customer requirements and efficient, cost-effective network systems and technology solutions.
6. Read, interpret and apply complex technical publications, manuals and other documentation.
7. Identify data communication and information management issues and opportunities, analyze problems and alternatives and develop sound conclusions and recommendations.
8. Prepare clear, concise and accurate program documentation, reports of work performed and other written materials.
9. Conscientiously preserve the confidentiality of all proprietary and confidential data and information residing in the District, in accordance with Departmental and District policy and state and federal law.
10. Plan, organize and complete projects efficiently and in accordance with District quality standards, while troubleshooting unexpected system problems.
11. Operate a computer and related equipment.
12. Work cooperatively with customers in a responsive, helpful, courteous and tactful manner.
13. Communicate clearly and concisely, both orally and in writing.
14. Exercise sound independent judgment within general policy guidelines.
15. Establish and maintain effective working relationships other Information Systems team members, managers, administrators, end users and others contacted in the course of work.

**Training and Experience:**

Graduation from a four-year college or university with a major in computer sciences, management information systems, computer engineering or a related field; and five years of progressively responsible experience in the analysis, design, development and administration of local and wide area network (LAN/WAN) infrastructures.

**Licenses; Certificates; Special Requirements:**

Microsoft Certified Systems Engineer (MCSE); Cisco Certified Network Administrator or the equivalents are desirable.

A valid California Class C driver's license, a good driving record and the ability to maintain insurability under the District's vehicle insurance policy.

**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 class, an employee is regularly required to sit; talk or hear, in person and by telephone; use hands repetitively to finger, handle, feel or operate computers and

other standard office equipment; and reach with hands or arms. An employee is frequently required to walk and stand and occasionally to lift up to 50 pounds.

Specific vision abilities required by this job include close vision and the ability to adjust focus.

### **Mental Demands**

While performing the duties of this class, an employee is regularly required to use oral and written communication skills; read and interpret complex data, information and documents; analyze and solve problems; observe and interpret situations; use math and mathematical reasoning; learn and apply new skills or information; perform highly detailed work on multiple, concurrent tasks; work under changing deadlines with frequent interruptions; work effectively as a team leader or member; and interact with managers, internal customers, employees, vendors, consultants and others 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.

The employee works under typical office conditions, and the noise level is moderately quiet. The employee is on call 24x7 for the resolution of systems and network problems and issues.

Board Approval: August 23, 2012