

**City of San José**  
**CLASS SPECIFICATION**

**Title: Network Engineer FT/PT (1328/1329)**  
**Network Engineer C FT/PT (8555/8556)**

<b>DEPARTMENT</b>	<b>ACCOUNTABLE TO</b>	<b>FLSA STATUS</b>
Varies	Varies	Non-Exempt

### **CLASS SUMMARY**

Under general direction, Network Engineer provides professional and highly technical support to department networks, security, servers (on premise & cloud), desktops, mobile devices, and end users. Manages system performance for availability, speed, capacity, storage issues and security problems, and takes actions to ensure optimal availability and reliability. Troubleshoots and resolves routine to complex problems with network system operations and communications. Installs and configures servers, including hardware and software by creating drive arrays, installing devices, and setting up data recovery systems. Serves as a resource to technical staff and may supervise Network Technician employees. Performs related work as required.

### **DISTINGUISHING CHARACTERISTICS**

This is the journey-level class in the Network support series responsible for performing the full range of professional and technical support duties for networked systems and end users. Incumbents are expected to work independently and exercise judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit.

Network Engineer differs from Network Technician I/II/III in that incumbents of the latter class perform technical support work requiring a lesser level of skill, responsibility, and expertise, and may be supervised by incumbents of this class series. Network Engineer differs from Enterprise Information Technology Engineer I/II in that the latter requires a higher level of skill, responsibility, and expertise needed to analyze technology risks across the whole organization, oversee the City's larger technical operations and projects, and perform enterprise-level technical duties that have a Citywide impact.

### **QUALIFICATIONS**

**(These qualifications are typically required. An equivalent combination of education and experience sufficient to satisfactorily perform the duties of the job may be substituted.)**

#### **Minimum Qualifications**

##### **Education and Experience**

A Bachelor's Degree from an accredited college or university in Computer Science, Computer Engineering, MIS, or a closely related field and three (3) years of experience equivalent to performing technical work of complex difficulty to provide desktop, data security, system administration, server, or network support to end users.

##### **Acceptable Substitution**

Two (2) years of related experience may be substituted for up to two years of the education requirement.

##### **Required Licensing (such as driver's license, certifications, etc.)**

- Possession of a valid California Driver's License.
- Possess an industry certification that demonstrates expertise in the relevant information technology field, such as a Microsoft Certified Systems Administrator (MCSA) certificate for Windows Server Enterprise, Cisco Certified Network Professional (CCNP), Network Associate (CCNA) certification, Brocade Professional IP Administrator (BPIPA) certification, OR an equivalent professional, industry recognized certification acceptable to the City.

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**Other Qualifications**

**(Incumbents may be required to have different combinations of the listed qualifications, or more specific job-related qualifications depending on the position.)**

**Basic Competencies**

**(Needed at entry into the job in order to perform the essential duties.)**

- Job Expertise - Demonstrates knowledge of and experience with applicable professional/technical principles and practices, Citywide and departmental procedures/policies and federal and state rules and regulations.
- Communication Skills - Effectively conveys information and expresses thoughts and facts clearly, orally and in writing; demonstrates effective use of listening skills and displays openness to other people's ideas and thoughts.
- Computer Skills - Experienced with common business computer applications including but not limited to: MS Outlook, MS Word, MS PowerPoint, MS Access, and MS Excel.
- Teamwork & Interpersonal Skills - Develops effective relationships with co-workers and supervisors by helping others accomplish tasks and using collaboration and conflict resolution skills.
- Analytical Thinking – Approaching a problem or situation by using a logical, systematic, sequential approach.
- Collaboration - Develops networks and builds alliances; engages in cross-functional activities.
- Continuous Improvement – Actively identifies new areas for learning and regularly creates and takes advantage of learning opportunities.
- Initiative - Exhibits resourceful behaviors toward meeting job objectives; anticipates problems, is proactive, and avoids difficulties by planning ahead; displays willingness to assume extra responsibility and challenges; pursues continuing education opportunities that promotes job performance.
- Problem Solving – Approaches a situation or problem by defining the problem or issue; determines the significance of problem(s); collects information; uses logic and intuition to arrive at decisions or solutions to problems that achieve the desired outcome.
- Project Management – Ensures support for projects and implements agency goals and strategic objectives.
- Reliability - Completes quality work assignments in a timely and efficient manner; fulfills responsibilities and maintains confidentiality as appropriate.
- Supervision - Sets effective long and short-term goals based on a good understanding of management practices; establishes realistic priorities within available resources; provides motivational support; empowers others; assigns decision-making and work functions to others in an appropriate manner to maximize organizational and individual effectiveness.
- Technology Use/Management - Uses efficient and cost-effective approaches to integrate technology into the workplace and improve program effectiveness.

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<b>DUTY NO.</b>	<b>TYPICAL CLASS ESSENTIAL DUTIES:</b> (These duties and estimated frequency are a representative sample; position assignments may vary depending on the business needs of the department.) Duties may include, but are not limited to, the following:	<b>FREQUENCY*</b>
1.	Manages system performance for department applications availability, speed, capacity, storage issues and security problems. Changes the performance of systems to prevent operational issues by taking actions such as applying security patches, and ensuring security best practices are followed; restores lost data.	Daily/Several Times
2.	Serves as a resource to technical staff in the performance of their duties. As assigned may directly supervise technical staff. As assigned, supervises subordinates and other staff to include: prioritizing and assigning work; conducting performance evaluations; ensuring staff are trained; and making hiring, termination, and disciplinary recommendations. Evaluates training needs and workload balance for staff and prepares plan for implementation.	Daily/Several Times
3.	Troubleshoots intermediate and advanced technical issues with City technology infrastructure and business systems including, but not limited to, hardware and/or software configuration, and control systems; performs corrective actions as necessary.	Daily/Several Times
4.	Manages network traffic; supports implemented network security; prepares reports with recommendations.	Daily/Several Times
5.	Upgrades firmware and operating systems; configures software, routers, switches, and firewalls; resolves obstructions to optimal system performance.	Daily/Several Times
6.	Manages user login and permissions to data and applications on department network.	Daily/Several Times
7.	Resolves a variety of problems with department servers such as lack of storage space, network communication problems, security problems and other critical server issues. Coordinates resolution of problems.	Daily
8.	Manage department business systems and infrastructure which include administration of hardware, software configuration, firmware upgrades, network configurations, storage configurations, security patch installation, antivirus, etc.	Daily
9.	Provides equipment specifications for department systems to meet business requirements and maximize cost effectiveness; advises enterprise systems coordinators or application programmers on securing and designing server applications.	Daily
10.	Implements a preventive maintenance routine identifying weaknesses of current system to help identify critical server issues; sets up maintenance schedule.	Daily
11.	Evaluates and specifies desktop hardware.	Weekly
12.	Installs and configures printers and makes them accessible to all people within the network environment. (Sets up print queues, installs drivers, etc.)	Weekly
13.	Creates backup schedule, including type of backup performed on specific days. Creates disaster recovery plan for data and hardware. Restores servers when issues arise.	Weekly
14.	Prepares and maintains procedure manuals.	Weekly

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15.	May provide technical support for the converged network (voice over Internet protocol) and work with enterprise staff to resolve network or communication issues.	Weekly
16.	Develops and recommends design plan for department networks, including research and development of a capacity plan (number of users, applications needed, logistics, switch connectivity, routers, etc.as they pertain to infrastructure and/or business systems.	Weekly
17.	Consults with outside application vendors to ensure data integrity, custom applications, and network security practices are implemented.	Weekly
18.	Manages and maintains department Windows Active Directory infrastructure including domain controllers, active directory configuration, federation, user accounts, computer accounts, security groups, and Group Policies.	Weekly
19.	Establishes and maintains vendor purchase orders; evaluates performance and suitability with regard to the technical nature of installed systems; researches infrastructure or business solutions products.	Weekly
20.	Manages and supports department cloud hosting service; manages system backup/restore including hardware, software, business application, and data; manages data centers, MDFs, and IDFs, structured cabling system.	Weekly
21.	Develops and maintains network architecture drawings to document installed state.	Intermittent
22.	Racks/stacks servers, storage device, network equipment, and others and connect them to network.	Intermittent
23.	Performs other related duties as required.	As Required

\*Frequency defined as Daily/Several Times, Daily, Weekly, Intermittent, or As Required

### **PHYSICAL/ENVIRONMENTAL ELEMENTS**

The following is a general statement for the classification. Individual positions may have additional or different physical/environmental elements.

In an office environment, possess ability to:

- Operate, access, enter, and retrieve data using standard office equipment, including but not limited to a computer or tablet;
- Read printed materials and a computer screen;
- Communicate in person and over the telephone;
- Lift, carry, push, and pull materials and objects up to 25 pounds, or heavier weights, in all cases with the use of proper equipment;
- Move between/within work areas, including but not limited to sitting, walking, and standing on various surfaces, turning, bending, grasping, and making repetitive hand movements;
- Be exposed to moderate noise levels and controlled temperature conditions;
- Maintain professional demeanor during interactions with staff, customers, and the public.

**CLASSIFICATION HISTORY** Created 11/96, Rev. 7/97, Rev. 11/01, Rev. 6/06, Rev. 08/18; s004