Jurisdictional Class: Competitive
EEO Category: Technicians
Revised: 12/31/2022

NETWORK SYSTEMS ENGINEER

DISTINGUISHING FEATURES OF THE CLASS: This is a highly technical position responsible for the design, installation, adjustment, and maintenance of core infrastructure equipment and systems. The primary duties also include maintaining network security, and the incumbent serves as a subject matter expert (SME) in cyber defense. The work involves continuous evaluation of existing infrastructure equipment with attention to advancing technologies. The incumbent is responsible for ensuring the stability and integrity of in-house voice, data, communication, and wireless technologies. The incumbent performs related work as required.

TYPICAL WORK ACTIVITIES: (Illustrative Only)

Installs, adjusts, and maintains core infrastructure equipment and systems including, but not limited to, data communication equipment, storage area networks, switched IP network equipment, cyber defense and border network equipment, virtual and physical servers, network management and monitoring equipment, land-mobile radio systems, point-to-point microwave, and wireless LAN systems;

Designs, implements, and maintains systems to include call managers, PBXs, transmission equipment, VOIP, and digital and analog instruments;

Develops implementation plans for new systems, including engineering, training, and installation plans, method of procedure (MOP), bill of material, and circuit cut sheets;

Produces documentation on all related systems, such as network diagrams, operation manuals, configuration records, and technical procedures;

Responds to system outages and coordinates with support vendors to resolve problems;

Utilizes software and hardware tools to diagnose complex network and telephone problems;

Conducts routine testing of network elements, including fiber and copper cabling, layer 2 and 3 links using packet analyzer, OTDR or T-BERD;

Performs server and security audits, system backups, and recovery;

Assists in formulating policies and standards;

May attend conferences and seminars to stay up to date on latest job knowledge;

May oversee work of contractors in relation to infrastructure equipment and systems.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS: Thorough knowledge of LAN, WAN, WLAN, and WWAN network systems, including those used for voice, video, and data systems; thorough knowledge of network capacity planning, network security principles, and general network management best practices; good knowledge of applicable data privacy practices and laws; ability to design, engineer, install, update and maintain LAN and WAN networks; ability to analyze system problems and implement workable solutions; ability to effectively prioritize tasks in a high-pressure environment; strong customer service orientation; physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS: Either:

(A) Possession of Bachelor's Degree in Cyber Security, Computer Information Systems, Telecommunications, Network Engineering or closely related field **AND** two (2) years of experience in local area network (LAN)/wide area network (WAN) implementation and maintenance; **OR**

(B) Possession of Associate's Degree in Cyber Security, Computer Information Systems, Telecommunications or Network Engineering or closely related field **AND** four (4) years of experience in local area network (LAN)/wide area network (WAN) implementation and maintenance.

SPECIAL REQUIREMENT: Possession of a valid New York State driver's license at time of appointment. License must remain valid throughout appointment.

SPECIAL REQUIREMENT FOR ONEIDA COUNTY GOVERNMENT ONLY: Criminal Justice Information Systems (CJIS) Security Clearance is required for appointment and must be maintained throughout appointment.

NOTE: Degree(s) must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education. If the degree was awarded by an educational institution outside the United States and its territories, the candidate must provide independent verification of equivalency. A list of acceptable companies who provide this service can be found on the Internet at http://www.cs.ny.gov/jobseeker/degrees.cfm. Candidates will be required to pay the evaluation fee.

Adopted: 04/23/2018
Revised: 04/15/2019, 04/27/2021, 12/31/2022