

Network Engineer

Issued 1/1/04

Network Engineer I	PN347	Salary Sch: IP, SG 12	EEO Code: 50	FLSA: non-exempt
Network Engineer II	PN348	Salary Sch: IP, SG 13	EEO Code: 50	FLSA: non-exempt
Network Engineer – Senior	PN349	Salary Sch: IP, SG 14	EEO Code: 50	FLSA: non-exempt
Network Engineer – Lead	PE334	Salary Sch: IP, SG 15	EEO Code: 50	FLSA: exempt
Union: P&A Union, Local 1979, UAW				

Basic Purpose:

Positions in the Network Engineer job family are responsible for the analysis, design, configuration, and coordination of the installation of communications networks including local area networks, wide area networks, and the integration of multiple networks and technologies. Incumbents work with customers and vendors to determine the optimal network design and coordinate the installation and testing with vendors and/or internal staff. Incumbents are also responsible for monitoring, tuning, and planning for University-wide networks. The focus of work is on the optimal design and installation of networks that will facilitate access and exchange of information across the University and with the community.

Essential Functions:

The functions within the job family will vary by level and specific assignment but will include the following:

- Troubleshoot network problems and install and maintain specialized network tools and software;
- Engineer, analyze, design, and install new networks and integrate them with other networks and the University wide area network;
- Monitor network performance, analyze symptoms of outages, and develop corrective actions;
- Lead projects to install and/or upgrade networks, serving as a technical liaison with vendors and customers; and
- Stay abreast of current trends in network design and provide advice and counsel to customers on implementing or enhancing networks in their area.

Comments (Level Descriptions):

The Network Engineer family has four levels:

Network Engineer I

This is the *proficiency* level where incumbents apply their expertise in routine network design assignments. They typically work as a part of a project team, focusing on subsets in network design and implementation projects. While at this level, they are expected to expand their design knowledge to include other common network technologies and platforms and to increase their proficiency in the integration of networks. Incumbents at this level may serve as second-tier support for network problem resolution to assist units across the university.

Network Engineer II

This is the *career* level where incumbents are fully qualified to work independently on a variety of network design and installation projects. They may participate on project teams for major installations or upgrades or work independently on smaller projects which typically last less than one year. They may also be responsible for coordinating project work with systems administrators and other technical staff and for providing assistance for less experienced network engineering staff. Network project assignments frequently require the integration of multiple networks, both internal and external, and interaction with functional management during all phases of project definition, design, and installation.

Senior Network Engineer

This is the *specialist* level where incumbents are fully qualified to work on major network design projects which often take more than one year to complete. They assist in the analysis, review, and evaluation of alternative approaches and may prepare documentation for functional management review for project acceptance. They may also coordinate several smaller projects, providing technical guidance to less senior network engineering staff. Their work is characterized by an understanding of both the customer and technology requirements for the network, maintaining operating efficiency, and minimizing the potential for future network problems. At this level, incumbents are the Subject Matter Expert for a major network technology and platform, providing third tier support across the University.

Lead Network Engineer

This is the *leadership* level where incumbents have broad experience and expertise in all types of network design in addition to demonstrated project management skills. They serve as the project leader on complex projects which require significant financial and staffing resources to complete and affect a wide range of University and/or external users. They are the key players in the process of assessing customer needs, evaluating alternatives, preparing cost-benefit analyses, and securing approval from management. They are also the key vendor contact and Subject Matter Expert for a network technology that is widely used in the University and provide expert advice and evaluation of alternative network designs. Incumbents at this level will typically have responsibility for project and technical leadership and work direction for several network engineers or other technical project staff.

Minimum Qualifications:

- Knowledge of the physical design of communication networks and network operations;
- Skill in engineering design and analysis techniques and practices;
- Skill in project leadership and coordination; and
- Ability to work independently to complete complex projects.

- Demonstrated capabilities in network design typically acquired through the completion of the majority of requirements for licensing or vendor certification as a network engineer or equivalent formal education;
- Demonstrated proficiency in network operations and support; and
- Proficiency in engineering techniques, practices, and principles typically gained through completion of undergraduate studies in computer science or engineering.