

University of Nebraska Central Administration
Job Description

General Information

Working Job Title: Network Engineer	Job Family: Information Technology	Job Family Zone: Specialist
Position Number: NEW	Department Name: CSN, Networking Services.	SAP Organization Unit Number:
Employee's Name:	Date of Last Update: 11/2015	Title of Supervisor: Network Team Lead
SAP Personnel #:	Last Updated By: HR	Name of Supervisor:

Position Summary

Responsible for the day-to-day support, operation and maintenance of wireless networking for UNCSN and UNCA to include troubleshooting problems; assisting in installation of components and design of building layouts, implementation plans and budgets; and development and support of the UNCSN/UNCA network. Develop and maintain user documentation. Provide assistance and support associated with other projects related to the UNCSN/UNCA network.

This position is a member of the University of Nebraska Computing Services Network Infrastructure Team responsible for design, management and troubleshooting of all networking components deployed across multiple sites for networks which include the University of Nebraska State-Wide Network, Network Nebraska -Educational, and the Nebraska State Telehealth Networks (NSTN).

On-call duties are required on a rotation basis and, when necessary, person holding this position could be called upon to work other days and/or hours other than normal business hours to meet any organizational needs.

Duties & Responsibilities

Indicate % of time spent and indicate with an "*" the duties & responsibilities that are essential functions of this job. Arrange this list of duties in order of importance.	% of Time	Essential Functions
<p>Primary support for work related to wireless networking at UNCSN and UNCA, answer user questions, keeping staff informed regarding changes, problems, policies and procedures as they pertain to the UNCSN and UNCA wireless network.</p> <p>Assist in the installation of wireless and wired networking components for UNCSN/UNCA; coordinate all aspects of installation to ensure smooth operation. Assist in the design, implementation plans, and budgets for installation of wireless and wired networks.</p> <p>Investigate wireless technologies and determine appropriateness for UNCSN/UNCA.</p> <p>Develop and maintain user documentation, including electronic documentation as it pertains to the wireless network.</p> <p>Assist in the development, support and documentation of UNCSN/UNCA local network and the wide area network for the University of Nebraska.</p> <p>Assist in the monitoring and management of all UNCSN/UNCA networks which includes University and Network Nebraska. This includes insertion and update of all Network assets and information into current monitoring system and asset database.</p>	75	*

Support for entire UNCSN/UNCA network for on-call support. Requires knowledge of not only the base responsibilities but also an understanding of the overall network for on-call support.		
Ongoing participation in departmental efforts for contingency planning and emergency preparedness.		
<p>Secondary support of network hardware and software is assigned to specific team members with others on the team acting as backups in the absence of the primary. Areas of specialization include the following:</p> <ul style="list-style-type: none"> • Support for University of Nebraska WAN, LAN, and Internet access. Includes making recommendations and implementing network hardware and software upgrades which make up the network infrastructure along with ongoing documentation of the status of projects, change management and technical support procedures stored in approved format using Word, PDFs, PowerPoint, Excel spreadsheets, Visio drawings, SharePoint etc.. Maintain asset database of production and spare network hardware to be used as backup equipment and requisition for upgrades as needed. Periodically determine what spare equipment should be sent to Inventory. • Support for Network management software and hardware. Includes support for network monitoring applications and devices that proactively and reactively monitor network for problems using commonly measured metrics such as response time, availability (uptime), consistency, reliability, CPU utilization, bandwidth usage, etc. • Support of current and future University of Nebraska network security systems, including, but not limited to firewalls, VPN devices or clients, IDPS (Intrusion Detection and Protection Systems, remote network access, and video surveillance and physical access of threats to remote sites. Duties include research, implementation, and testing of upgrades or new technology related to security. • Support of DNS and DHCP services with management of UNCSN and Network Nebraska IP addresses using EIP. • Support of audio and video conferencing which includes research, testing, recommendation, implementation, maintenance and problem determination of hardware and software for the University of Nebraska and Network Nebraska. 	20	*
Special projects and others duties as assigned. This includes, but is not limited to maintaining a broad knowledge of current and emerging state-of-the-art computer/network systems technologies, architectures, and products. Attending conferences or training and study technical journals to keep up with changes in technology. Attending in-house classes and workshops. Attending and participating in vendor presentations or tech talks on networking environment. Demonstrating commitment to ongoing skills enhancement through certifications.	5	

Zone Definition Factors

Nature/Complexity of Work

Design and implementation of wireless and wired network hardware and software across the State of Nebraska for multiple networks. Requires a high level of communication and coordination. The job involves knowledge of complex routing and switching solutions. Must understand IP subnetting. Must have an in depth knowledge of the Open System Interconnection model and TCP/IP. Evolving technology in an ever-changing environment adds to the complexity of the job.

Problem Solving/Decision-making

The network infrastructure is managed for 24 x 7 x 365 availability through proactive administration, monitoring and analysis of network performance using monitoring tools and alerts. Requests for service, problem analysis and resolution of all production problems are documented using i-Support ticketing software and other network management tools. Position duties include submission of requests for service from appropriate vendors as needed using documented procedure for that vendor. Position requires in-depth knowledge of IP routing protocols, packet analyzer, and network monitoring tools. Troubleshooting and decisions must be done quickly in order to meet aggressive customer demands.

Strategic Impact

The success of the Network to deliver information is vital to the University of Nebraska and its customers. Errors in the work performed may result in University or Network Nebraska systems and outside University customers being detrimentally impacted and/or disabled. Errors have the potential to impact hundreds of thousands of on-line systems and end-users.

Know How

Good communication, problem solving, and the ability to learn new skills and methods enables work with customers to be productive and instills trust. Position holder is expected to follow the CSN guidelines used for performance evaluation and behavioral standards set for all Network Team members. Through efficient use of time and planning, projects or tasks are completed within specified time frame. It is also expected that there is a commitment to support the overall goals of UNCSN and work to achieve customer satisfaction through the application of total quality management principles.

Technical Know How

This positions principal experience should be with setup, configuration and operation of network related systems. General knowledge and experience with Ethernet networking concepts is expected. Must have familiarity with various wireless technologies. As a part of the team, this position should also have knowledge of BGP, OSPF, EIGRP and MPLS routing protocols used in a WAN and LAN environment. Should be able to configure and operate current hardware which includes Juniper routers and switches, Arista switches, Fortinet switches/firewalls/IDP/IDS, and the Cisco ASA. The ability to use advanced Qos techniques to shape and police network traffic is desired. Should be able to use a sniffer to decode packets and troubleshoot at all levels of the OSI model. The ability to use a wide variety of network monitoring tools such as SolarWinds, Zabbix, MRTG, Netflow, and other SNMP products is preferred, however, can be learned after hire. Software used on the job includes but is not limited to Outlook/Office 365, SharePoint, Microsoft Office (Word, Excel, and PowerPoint), TFTP, telnet, SSH, VPN client, Microsoft Windows, Adobe Acrobat and Visio.

Interactions

Must be able to work well within a team structure or independently. Must have the ability to assist customers of different skill levels. Occasional travel throughout the State may be required. Work outside normal business hours should be coordinated with team lead. Team lead is also advised of any emergency work being done on network. All scheduled maintenance or change management will be officially scheduled and appropriate notification will be sent to support personnel or anyone else affected by this change.

Supervision

This position exercises no supervision over others and receives limited in-direct Supervision* from the Network Support Team Lead. { *This is based on level of proficiency and years of service. }

Minimum Qualifications

LEVEL OF EDUCATION, YEARS & TYPE OF EXPERIENCE:

Associate's degree plus a minimum of 3 - 5 years of experience in Wireless Networking required. Ideal candidates will have the ability to configure Juniper routers and switches and Arista switches, IPS appliances, firewalls, and VPN concentrators; to use advanced Qos techniques to shape and police network traffic; the ability to use a sniffer to decode packets and troubleshoot at all levels of the OSI model; the ability to use a wide variety of network monitoring tools and knowledge of routing protocols used in a WAN and LAN environment.

Current vendor certifications are desired.

Physical Requirements

1. **General Physical Requirements** Indicate the appropriate response for an eight hour day:

	Circle the appropriate number of hours									<i>Indicate intermittent or constant</i>	
										Intermittent	Constant
Sit	0	1	2	3	4	5	6	7	8	<u>x</u>	_____
Stand	0	1	2	3	4	5	6	7	8	<u>x</u>	_____
Walk	0	1	2	3	4	5	6	7	8	<u>x</u>	_____
Drive Motor Vehicle	0	1	2	3	4	5	6	7	8	_____	_____

Explain _____
 The job could be sitting, standing, or driving motor vehicle in excess of 8 hours depending on the day.

2. THIS POSITION REQUIRES:

	Occasionally (less than 2 hrs daily)	Between 2 - 5 hrs daily	Over 5 hrs daily
Squatting	<u>Yes</u>	_____	_____
Bending	<u>Yes</u>	_____	_____
Kneeling	<u>Yes</u>	_____	_____
Reaching	_____	_____	_____
➤ Overhead	<u>Yes</u>	_____	_____
➤ Forward	<u>Yes</u>	_____	_____
➤ Low	<u>Yes</u>	_____	_____
Twisting	<u>Yes</u>	_____	_____
Crawling	<u>Yes</u>	_____	_____
Climbing	<u>Yes</u>	_____	_____
➤ Ladder	<u>Yes</u>	_____	_____
➤ Stairs	<u>Yes</u>	_____	_____
➤ Other	_____	_____	_____
Walking on rough ground	_____	_____	_____
Exposure to changes of temperature/humidity	<u>Yes</u>	_____	_____
Exposure to dust/fumes/gases/chemicals	<u>Yes</u>	_____	_____
Being near moving machinery	_____	_____	_____
Working from heights	<u>Yes</u>	_____	_____

3. THIS POSITION REQUIRES EMPLOYEE TO:

Indicate letter in appropriate Space:	LIFT=L	CARRY=C	PUSH=P	PULL-PL
	Less than 2 hrs daily	Up to 2 hrs daily	Between 2-5 hrs daily	Over 5 hrs daily
11 - 24 lbs	<u>Yes LPCPL</u>	_____	_____	_____
25 - 49 lbs	<u>Yes LPCPL</u>	_____	_____	_____
50 - 74 lbs	<u>Yes LPCPL</u>	_____	_____	_____
75 - 100 lbs	<u>Yes LPCPL</u>	_____	_____	_____
* Over 100 lbs	_____	_____	_____	_____

* If the position requires the employee to handle over 50 lbs - please explain

Some routers and switches are over 50 lbs. They need to be installed in cabinets or racks.

4. POSITION REQUIRES USE OF HANDS OR SPECIAL TOOLS/EQUIPMENT FOR:

	RIGHT	LEFT	BOTH
Keyboarding	_____	_____	<u>Yes</u>
Filing	_____	_____	_____

Other Explain: _____
 Operation of a computer mouse. Working with Networking equipment, Switches, Routers, Cabling, etc.

Job Family Zone Questionnaire

In Each Section, please select one answer that best describes your job:

Knowledge Skills and Abilities:

_____ Requires the ability to understand and apply basic job skills, knowledge of several work routines and the ability to apply such routines with minimal interpretation. May possess knowledge of other, related work activities within own functional area. May require the operation of routine equipment/tools. [1]

_____ Requires the ability to understand, interpret, apply and communicate information within a specialization and the ability to apply limited analysis in the completion of general functional procedures. May possess knowledge of work activities outside functional area. May require the operation of moderately complex equipment/tools. [2]

 X_____ Requires the ability to utilize advanced information within a specialization. Within specialization, possesses the ability to assess/ analyze situations and make adjustments to achieve desired objectives. Possesses knowledge of work activities outside functional area. May require the operation of complex equipment/tools. [3A]

_____ Requires the ability to apply, integrate and communicate extensive theoretical information within a recognized professional field. Facilitates and/ or establishes the achievement of functional area objectives. Requires knowledge of all related functional areas. May require the operation of highly complex equipment/tools. [3B]

_____ Integrates extensive theories and techniques within related or diverse disciplines to achieve results and/ or establish overall strategic directions. Requires wide-ranging administrative and/or specialized knowledge. May require the operation of highly complex equipment/tools. [4]

Problem Solving/Decision-making:

_____ Decisions/problem resolutions are repetitive and simple and typically guided by standard operating policies and procedures/practices exist. Tasks are clear and specific to a single discipline. [1]

_____ Decisions/problem resolutions require gathering/reviewing information from several sources. Simple analysis of facts determines course of action to be taken within the limits of standard operating policies and procedures/practices. Tasks are varied and may cross several disciplines. [2A]

_____ Decisions/problem resolutions require interpretation, discretion and judgment based on precedent or standard operating policies and procedures. Tasks are diversified and may require some creativity in dealing with unprecedented activities. [2B]

 X_____ Decisions/problem resolutions require synthesis/analysis in the use of theories and accepted principles. Programs/projects are governed by broad objectives, policies and/or theories. Requires the use of creativity in dealing with unprecedented activities. [3]

_____ Decisions/problem resolutions require analysis and evaluation of major issues and courses of action impacting the overall direction of the functional area(s). Applies broad concepts and experience in making important decisions. May develop recommendations influencing long-term policies related to major organizational plans. [4]

Interactions:

_____ Regular contact involves receiving and/or referring inquiries as well as giving or obtaining routine information relating to work being done. Requires the use of common business courtesy. [1]

_____ Regular contact that involves giving or obtaining information as well as occasionally exchanging advice and opinions. Requires the use of common business courtesy, tact, discretion and some persuasion to maintain cooperative associations. [2]

 X_____ Regular contact that involves exchanging advice and opinions. As well as occasionally conveying conceptual ideas of a critical and/or long-range nature. Requires the use of judgment, timing, and persuasion to gain cooperation in the face of differences of opinion or controversy. [3]

_____ Regular contact with major Programs/Teams or individuals. Overriding job requirement involves conveying conceptual ideas regarding matters of critical and long-range nature. Significant requirement for diplomacy, timing, and persuasion to gain concurrence or cooperation on operational issues in the face of significant differences of opinion or controversy. [4]

Supervision Received:

_____ Supervised by procedures or by supervisor through periodic monitoring of progress and performance. May have latitude to determine sequence of own work tasks to meet clearly established schedules. [1]

____ Supervision by procedures or by supervisor through periodic monitoring of progress and performance. Determines sequence of own work tasks to meet established objectives. [2A]

____ General direction by supervisor by checking on completed tasks. Establishes own work schedule to achieve program objectives. Makes recommendations to superior regarding efficient functioning of program. [2B]

Responsible for conducting specialized assignments or developing programs under only general direction and guidance. [3]

____ Extensive latitude to work independently in matters that have a broad effect on overall policies, programs and/or areas of specialization. [4]

Supervision Exercised:

May provide incidental guidance to others. [1]

____ Provides functional supervision that is usually limited to assigning/reviewing work or may serve as work team leader. [2A]

____ Serves as work team leader. Distributes, schedules, and monitors the progress or work tasks of the program or project. May be involved in the recommendation of personnel actions to manager. [2B]

____ Supervises the work of a project or program that may include hiring, discipline, transfers, promotions, or salary changes within a functional area. May integrate work of two or more programs or one major function/or project. [3]

____ Establishes performance standards for designated programs and/or areas of specialization. Directs staff to include hiring, discipline, transfers, promotions, and salary changes. [4]

Impact:

____ Actions and decisions in this job are limited to the scope of the job, which primarily affect the immediate work group, but occasionally may extend beyond the immediate work group. Errors reflect unfavorably on the individual and may have an adverse impact on the functional area. [1]

____ Actions and decisions in this job have an impact which affects the immediate work group and also extends beyond the immediate functional area. Errors reflect unfavorably on the individual and the functional area. [2]

Actions and decisions in this job have discernible impact to the short-term performance of the Program/Team and exerts some impact to its long-term success. Errors reflect unfavorably on the individual, the functional area, overall business operations and potentially other functional areas. [3A]

____ Actions and decisions in this job have significant impact to the short-term performance of the Program/Team and exert an impact to its long-term success. The job exerts a considerable impact on decisions and final results typically affecting either an entire functional area or a major university activity; and may have unique accountability for financial and program or project objectives. Errors effect business operations, services and other individuals which may require special interventions to correct. [3B]

____ Actions and decisions in this job exert broad and continuing impact on the future of one or more functional areas. The job exerts a major impact on decisions and final results affecting a major university activity; and/or has accountability for financial and program/project objectives and overall successes. Errors significantly interrupt business operations, services and potentially both internal and external constituents. [4]

Summary:	Zone Assignment= Specialist	
Authorization:	Name:	Date:
Human Resources		
Supervisor:		
Administrator:		