

# University of Virginia

## Job Summary

<b>Job Code:</b>	<b>Job Title:</b>	Network Engineer IV
<b>UVA Survey Code:</b>	<b>UVA Survey Code Title:</b>	
<b>Pay Band:</b>	<b>Career Path:</b>	Network Engineering
<b>FLSA Status:</b>	<b>Management or Individual Contributor:</b>	Individual Contributor

**Position Summary:** Describe below the primary purpose and function of this job.

Provide functional and empirical analysis related to the planning, design, installation and implementation of the University core network infrastructure supporting University wide applications and systems and Internet connectivity. Monitor and manage network performance; resolve complex network problems. Anticipate and mitigate potential attacks through network or other connections to ensure the security of the University network and connected systems. Work with end users, departments and vendors to resolve network capacity, hardware/software and security issues.

**Key Roles & Responsibilities:** List up to 6 key roles and responsibilities of this job.

1. Research, analyze, design, configure, test, install and support the University core network routing, switching, monitoring and management hardware and software; support and maintain LAN, WAN and metro networks.
2. Perform highly complex network modeling, analysis, and capacity planning. Design and implement systems to scale and provide fault tolerance. Provide network communications site planning and management.
3. Research and recommend network technologies, hardware and software to support secure high speed delivery of voice, data and video traffic across all areas of the University for wired and wireless devices. Specify technical standards and participate in procurement evaluations.
4. Consult with upper management, departments and peer engineers. Research, plan, coordinate, and implement network security measures in accordance with best practices and University policy. Provide hardware and software to secure mission critical systems and to provide secure access. .
5. Maintain network monitoring, management and access software for wired and wireless networks. Adapt and modify existing software or develop software to meet specific needs. Test and evaluate hardware and software to determine efficiency, reliability, and compatibility with existing system, and make purchase recommendations.
6. Troubleshoot complex network and Internet connectivity problems. Monitor network and performance to ensure network availability to all system users and perform necessary maintenance to support network availability. Work with end users, departments and vendors to resolve network hardware/software issues.

**Expertise:** Describe the requirement for knowledge and expertise about the subject area as well as how various parts of the University work together to achieve objectives. Explain the degree of understanding required of the industry and university environment.

As a senior staff member, incumbent is required to have an advanced understanding of his/her discipline including all required certifications as well as an advanced understanding of the business environment of a large university system. Incumbent must demonstrate an in-depth understanding of the University system, its policies, and its operating procedures. Incumbent must have demonstrated project management skills and the ability to work within a matrixed environment if necessary. Incumbent is expected to maintain currency of knowledge with respect to relevant state-of-the-art technology, equipment, and/or systems.

Incumbent should have thorough knowledge of computer engineering; network architecture; network hardware, monitoring and management software; network protocols; network services and network security methodologies. Incumbents should also have the ability to design and coordinate the installation of high-speed data network switching, routing and security equipment; determine, troubleshoot and resolve complex network problems; a variety of system scripting and programming languages; program software to monitor, manage and integrate solutions to monitor and manage a complex high-speed network supporting data, voice and video.

**Problem Solving:** Describe the nature and complexity of the problems this position encounters on a recurring basis. Include information regarding the level of innovation required, if any, and include mention of environmental factors that may add to the complexity of resolving issues.

Incumbent will address complex problems and will use experience and judgment in creating solutions. Incumbent seeks assistance when significant deviations are proposed, or when unprecedented problems arise. Incumbent develops approaches to problem-solving and anticipates/mitigates potential issues.

# University of Virginia

## Job Summary

**Nature & Area of Impact:** To what degree does this job affect the University (i.e., through interactions with faculty or students, making decisions, defining or setting strategy, etc.)? What is the breadth of the impact that this job has, either positive or negative (i.e., affects own team, department, function, business unit, entire university, etc.)?

Impact is felt within the team/department for which the incumbent works and within multiple, coordinating departments. Work quality, decision-making and long-term project management can affect the productivity of students, faculty and/or staff. Impact of errors is substantial and usually university-wide though mostly short-lived.

**Interactions / Interpersonal Skills:** Describe the nature and level of interactions this job has with others, both internally and externally. Explain any specific interpersonal skills necessary to successfully perform this role (i.e., negotiation skills, represents business at external events or to governmental bodies, etc.).

Interactions are with fellow team members and coordinating team members, but the incumbent will also have interactions with assigned student, faculty, or staff clients. Incumbent works with and may manage external vendors and service providers. Incumbent should possess superior verbal and written communication skills to convey technical guidance and information to users and to provide excellent customer service. Incumbent will train and provide guidance to more junior staff members and provide management with input into performance evaluations. Incumbent may provide guidance to management on critical technology issues. Incumbent is recognized as a technical authority within the University.

### Distinguishing Characteristics

This is the senior or lead level for the discipline. Incumbent possesses all requirements and skills for Level 3 and has achieved proficiency in the typical tasks assigned to Level 3.

- **Skills:** Distinguished from Level 3 skills in that the Level 4 incumbent has fully developed and regularly applies his/her advanced technical skills.
- **Level of Work:** Distinguished from Level 3 work by highly complex and strategically significant activities. Assignments at Level 4 are usually long-term and the incumbent has significant latitude to devise the approach and method to performing the assignment.
- **Supervision:** Distinguished from Level 3 by the complexity and duration of assignments. Level 4 assignments are typically multi-faceted, may be cross-discipline and require significant coordination and planning by the incumbent. Level 4 incumbents regularly perform long-term and non-routine assignments with only general supervisory intervention. Also distinguished from Level 3 in that the incumbent serves as a resource to Level 1, 2 and 3 incumbents on complex problems. Level 4 incumbents will often train Level 1, 2 and 3 incumbents on work processes and policies and assist management with developing their technical skills. Level 4 has input into hiring decisions and staff performance assessments, but does not directly supervise.
- **Interactions:** Distinguished from Level 3 in that the Level 4 incumbent regularly works beyond his/her own team and often externally. The Level 4 incumbent regularly works with related teams, client groups, management and vendors and interactions may include influencing others.
- **Focus:** Distinguished from Level 3 in that the Level 4 incumbent regularly works toward specific team goals and client goals, and assists in establishing department processes and standards.

**Job Requirements And Qualifications:** Indicate the minimum and preferred education and experience for this job and any licenses and certifications required.

<b>Minimum Education:</b>	Bachelor's degree or equivalent experience in Computer Science, MIS, Computer Engineering or related disciplines.	<b>Preferred Education:</b>	Master's degree in Computer Science, MIS, Computer Engineering or related discipline.
<b>Minimum Experience:</b>	5-7 years	<b>Preferred Experience:</b>	7-10 years

**Required Licenses/Certifications:**