

Networking III

Networking III is a one-credit course designed to provide students with skills needed to perform routing and switching in an enterprise network. Students configure a switch with virtual local area networks (VLANs) and inter-switch communication. Students perform troubleshooting using a structured methodology. The prerequisite for this course is Networking II.

Career and technical student organizations are integral, cocurricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

Advanced Networking

Students will:

1. Develop a classful or classless addressing scheme.
2. Calculate the most efficient use of address space for a network.
3. Create access lists to permit or deny specific traffic on an enterprise network.
4. Analyze effects of access lists on network devices and traffic patterns to determine relevant access.
5. Construct a network for an approved network design.
6. Utilize local area network (LAN), wide area network (WAN), and VLAN troubleshooting using a structural methodology and the Open System Interconnection (OSI) model.

Network Design

7. Analyze LAN technologies to design a network.
8. Identify applications and traffic found on an enterprise network.
9. Design a switching scheme with VLAN and inter-switch communication.
10. Organize routing protocols to design a network.
11. Evaluate WAN technologies for a network design.
12. Utilize research results to analyze enterprise networking for anticipated changes.
13. Develop an addressing plan for a network design to provide adaptability, manageability, and scalability.

Career Opportunities

14. Determine career and entrepreneurial opportunities, responsibilities, and educational and credentialing requirements in enterprise networks.