

نام دوره : متخصص فنی سخت افزار شبکه

CompTIA: Network+

مشخصات دوره	تعداد ساعت : ۴۰	پیش نیاز : ندارد	تعداد ترم : ۱
مخاطبین دوره	کلیه علاقه مندان به مباحث شبکه - مدیران و متخصصین شبکه		
شرح دوره	یکی از بهترین مدارک علمی شبکه است که می تواند اصول علمی و عملی منطبق با نیاز های روز را در اختیار علاقه مندان به این حرفه قرار دهد. در این راستا کمپانی کامپتیا مدرک Network+ یا تکنسین شبکه را معرفی نموده و در آن به بررسی مفاهیم اولیه شبکه ؛ پروتکل ها و لایه ها می پردازد .		
آنچه در این دوره می آموزیم:	مدل لایه ای OSI ارتباطات کابلی شبکه سخت افزار شبکه عیب یابی شبکه پروتکل TCP/ IP فایروال و پروکسی سیستم عامل های شبکه امنیت در شبکه		
ترم های دوره	CompTIA Network + N10-005		

1.0 Networking Concepts

- 1.1 Compare the layers of the OSI and TCP/IP models.
- 1.2 Classify how applications, devices, and protocols relate to the OSI model layers.
- 1.3 Explain the purpose and properties of IP addressing.
- 1.4 Explain the purpose and properties of routing and switching.
- 1.5 Identify common TCP and UDP default ports.
- 1.6 Explain the function of common networking protocols.
- 1.7 Summarize DNS concepts and its components.
- 1.8 Given a scenario, implement the following network troubleshooting methodology:
- 1.9 Identify virtual network components.

2.0 Network Installation and Configuration

- 2.1 Given a scenario, install and configure routers and switches.
- 2.2 Given a scenario, install and configure a wireless network
- 2.3 Explain the purpose and properties of DHCP.
- 2.4 Given a scenario, troubleshoot common wireless problems.
- 2.5 Given a scenario, troubleshoot common router and switch problems.
- 2.6 Given a set of requirements, plan and implement a basic SOHO network.

3.0 Network Media and Topologies

- 3.1 Categorize standard media types and associated properties.
- 3.2 Categorize standard connector types based on network media.
- 3.3 Compare and contrast different wireless standards.
- 3.4 Categorize WAN technology types and properties.
- 3.5 Describe different network topologies.
- 3.6 Given a scenario, troubleshoot common physical connectivity problems.
- 3.7 Compare and contrast different LAN technologies.
- 3.8 Identify components of wiring distribution.

4.0 Network Management

- 4.1 Explain the purpose and features of various network appliances.
- 4.2 Given a scenario, use appropriate hardware tools to troubleshoot connectivity issues.
- 4.3 Given a scenario, use appropriate software tools to troubleshoot connectivity issues.
- 4.4 Given a scenario, use the appropriate network monitoring resource to analyze traffic.
- 4.5 Describe the purpose of configuration management documentation.
- 4.6 Explain different methods and rationales for network performance optimization.

5.0 Network Security

- 5.1 Given a scenario, implement appropriate wireless security measures.
- 5.2 Explain the methods of network access security.
- 5.3 Explain methods of user authentication.
- 5.4 Explain common threats, vulnerabilities, and mitigation techniques.
- 5.5 Given a scenario, install and configure a basic firewall.
- 5.6 Categorize different types of network security appliances and methods.