Network+ Bootcamp

Varighed: 5 Days   Kursus Kode: GK3300

Beskrivelse:

Certifications provide a proven framework for mastering complex topics in IT, complete with industry-standard exams that deliver an impartial assessment of your skills. CompTIA's Network+ is the premier vendor-neutral networking certification. Our Network+ Boot Camp is designed to provide the foundation you need not only to be productive on the job but also to be successful in more specialized topics and in your pursuit of vendor-specific certifications such as CCNA, MCSE, and CNE. Earning CompTIA's Network+ certification increases your value in the marketplace, providing proof of your knowledge, skills, and ability to install, configure, and troubleshoot basic networking hardware, protocols, and services. Further, Network+ certification provides a straight path to more advanced certifications from top technology companies such as Cisco, Microsoft, Novell, Compaq, Lotus, and 3COM. Our Network+ Boot Camp points you in the right direction, allowing you to demonstrate the concepts covered on the Network+ exam in a real-world, hands-on environment. You will practice for the exam by going through Self Test Software in class, and you will reinforce your knowledge and gain essential networking skills in labs that feature networking equipment from Cisco, SMC, Juniper, and others. This course leads to Network+ certification and offers: Extensive hands-on training Network+ certification practice exams from Self Test Software Network+ exam voucher

Målgruppe:

IT personnel who need a solid foundation in networking.

Agenda:

- How to prepare for the CompTIA Network+ certification exam

- Practice exam questions using Self Test Software

- Make sense of the OSI seven-layer model

- Memory structures: bits, nibbles, bytes, and words

- Binary numbers and bit-masking

- Common building blocks of your network: cabling, hubs, switches, routers, workstations, servers, and network operating systems

- How Ethernet works

- The important networking standards

- Microsoft networking concepts including NetBIOS and SMB

- Apple networking building blocks such as AppleTalk, AppleShare, and Mac OS X

- Fundamentals of Novell Netware and associated protocols

- Compare the means by which we connect to the Internet; why you need an ISP

- How IP addressing works; the relationship between IP addresses and Ethernet addresses

- IP subnetting

- Routing tables and how routing decisions are made

- Routing protocols and how routers communicate

- TCP/IP protocols such as IP, TCP, UDP, and ICMP

- Multicasting concepts

- Where packet filters, proxy servers, and firewalls come into play

- How Network Address Translation (NAT) works

- Common troubleshooting tools like ping, arp, netstat, ifconfig, and nslookup

- How to use a protocol analyzer to capture, analyze, and monitor network traffic

- WAN protocols, technologies, and services

- Troubleshooting issues in the LAN

- How Internet mail works, how file transfer works, how the web works, etc.

Forudsætninger:

Six months of experience in the IT industry. A+ certification or similar knowledge is beneficial but not required.

Indhold:

1. Computer Science 101: Inside the Computer

- Number systems (decimal, binary, hex)
- Bits, bytes, and words
- Logical operations (AND, NOT, etc.)
- Character codes (ASCII and the like)
- Standards organizations
- Data communications concepts

2. Local Area Network Fundamentals

- Why Networks?
- Types of networks
- Network topologies
- Essential components
- Media types
- Data Link Control alternatives
- Network Operating Systems
- Network wiring

3. Ethernet

- Origins
- Standards
- Adapters
- CSMA/CD
- Addresses
- Frame size limits
- Header formats
- Speed
- Full and half duplex
- Broadcast domain
- Collision domain
- Wireless, Token Ring, FDDI, and ATM

4. Microsoft, Novell, and Apple Networking

- NetBIOS, NetBEUI, and SMB
- TCP/IP
- IPX/SPX
- AppleTalk and AppleShare
- Netware

5. Internet Protocol Address Basics

- Logical addressing
- IP address structure
- IP address classes
- Masks
- Private addressing
- Address assignment (static vs. dynamic vs. automatic)
- Datagram delivery (Local delivery vs. Indirect routing)
- Address Resolution Protocol (ARP)
- Host names and domain names

6. Internet Protocol (IP)

- IP network characteristics
- IP header format
- IP version 6

7. TCP, UDP, ICMP, and IP Address

12. Firewalls, Proxies, and Address Translation

- Firewall tools and techniques
- Proxy servers
- Address translation

13. Domain Name Services

- Concepts
- Resolver
- Domain Name Servers
- Resource records
- How DNS queries are processed
- WINS (aka NetBIOS Name Services)

14. Network Operations Practices

- Domains
- Accounts
- Passwords
- Environmental factors
- System maintenance
- Backup strategies
- Fault tolerance
- Anti-virus measures
- Change control
- SNMP (network management)

15. Network Troubleshooting

- Baselining
- Tools (hardware and software)
- Methodology and tips

16. Wide Area Networking Concepts

- WAN protocols (SLIP, HDLC, PPP, PPPoE)
- Secure protocols
- Virtual Private Networking (VPN)
- PPTP, L2TP, etc.
- Circuit switching vs. Packet switching

17. Wide Area Networking Technologies ; Services

- WAN technology overviews
- Internet services and connections (ISPs)
- WAN hardware
- WAN services (X.25, Frame Relay, SONET, etc.)
- ATM basics

Lab 1: Dump Analysis Create a text file. Learn how to dump the contents of the file and examine the ASCII character codes.

Lab 2: Number Systems Learn to use several software tools to convert numbers between the decimal, binary, and hexadecimal number systems.

Lab 6: Installing a Switch Reset the switch to the factory defaults. Using the console interface, perform an initial switch configuration. Use the switch's web interface to configure SNMP, port mirroring, and a VLAN. Examine the switching table and watch Spanning Tree in operation.

Lab 7: Installing a Router Configure your Cisco router to connect your private subnet to the classroom backbone network. Enable the RIP routing protocol.

Lab 8: Remote Control Take remote control of your neighbor's workstation using VNC.

Lab 9: Ping and ARP Examine the ARP cache on your workstation. Ping others and observe the effect on the ARP cache. Analyze the network traffic associated with a simple ping.

Lab 10: Install a Bridge Disconnect your workstation from the wired network in the classroom and bridge it wirelessly to the network.

Lab 11: Network Troubleshooting Consider the tools that are useful in network troubleshooting. Examine utilities like nslookup, ifconfig, ping, netstat, and the like. Learn which tool to use for what purpose.

Lab 12: Subnetting Exercises Perform a variety of exercises with IP addresses and masks. Identify address classes. Learn to calculate the available addresses on subnets. Learn to choose an appropriate subnet mask.

Instructor's Choice Labs

Your instructor will have a few favorite lab exercises of his or her own such as building a VPN.

Certifications

- CompTIA Network + Certification

Students followed up Network+ Boot Camp by attending these popular classes:

- CCNA® Boot Camp
- Essentials of Network Security
- RH033 Red Hat® Linux Essentials

Autoconfiguration

- User Datagram Protocol
- Transmission Control Protocol
- Internet Control Message Protocol
- RARP, BOOTP, and DHCP

8. Bridges, Switches, and Routers

- Layer 1: Hubs, Repeaters, MSAUs
- Layer 2: NICs, Switches, Bridges, Access Points
- Differences between bridging and switching
- Virtual LANs (VLANs)
- Spanning Tree
- Layer 3: Routers

9. Routing and Routing Protocols

- The routing concept
- Data Link layer independence
- Routing tables examined
- The route selection process
- Routing protocols

10. IP Subnetting

- Why subnet?
- The nature of subnets
- Routable address structures
- Role of the subnet mask
- Analyzing IP addresses
- Classless addressing

11. Routing and Routing Protocols

- Moving packets between networks
- Data Link layer independence
- Routing tables
- How routing really works
- Routing protocols
- Multicast routing

Lab 3: Easter-Egg Hunt Carefully examine the lab equipment used in the classroom. Find and identify a variety of common network building blocks like hubs, switches, routers, MAUs, cabling, etc.

Lab 4: Build a Simple Network Design and build a simple network for the classroom.

Lab 5: Student Workstation Configuration Reload a fresh copy of Windows XP Professional on your student PC (via Ghost). Attach it to the network, share your disk drive with your neighbors, and check the results.

- Microsoft 2003 MCSA Boot Camp
- Microsoft 2003 MCSE Boot Camp

Flere Informationer:

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