A grayscale photograph of a woman with curly hair, seen from the side, looking down at a tablet device. She is wearing a dark, patterned top. The background is slightly blurred, showing a desk with some papers and a pen. A dark red semi-transparent overlay covers the right side of the image, where the text is located.

Cisco Certified Network Associate (CCNA v3)



Practice Labs™

Cisco Certified Network Associate (CCNA v3)



Lab Outline

The Cisco Certified Network Associate (CCNA v3) Practice-Lab will provide you with the necessary platform to gain hands on skills using real Cisco Routers and Switches.

By completing the lab tasks you will improve your practical skills in installing, managing, monitoring, and troubleshooting basic router and switch configurations; securing switches and routers; configuring layer 2 technologies such as VLANs, Trunks, EtherChannels and spanning-tree; configuring routing protocols including static and default routing, EIGRP and OSPF; configuring simple WAN links using HDLC, PPP and frame-relay; configuring IP related services such as DHCP, NTP and Syslog.

These same tasks will help you understand the objectives and competencies required by the Cisco Certified Network Associate 200-125 exam.

Outcomes

After completing this Practice Lab, students will be able to:

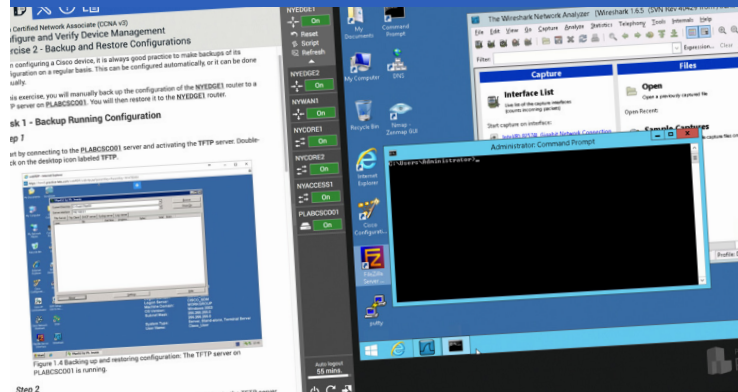
- Troubleshoot IP Connectivity
- Use subnetting to determine an IP addressing scheme
- Configure, apply and verify IPv4 and IPv6 addressing schemes
- Recognize interface configurations and cabling
- Establish network connectivity by building a basic LAN
- Understand the differences between static and dynamic routing
- Configure and verify DNS and DHCP
- Apply routing algorithms
- Manage and secure networking devices
- Configure and apply VLANs, trunking, and spanning-tree protocols

Course Code
200-125

Released
Jan 2017

Skill Level
Beginner

Duration
29 hours



Prerequisites

No prior hands-on experience is required to use or complete this Practice Lab.

Who is it For?

The Cisco Certified Network Associate (200-125) an entry level certificate is aimed at individuals wishing to enter the IT industry as network engineers, network administrators, network support technicians, help desk technicians.

Additional Info

This Practice Lab focuses on the practical aspects of the Cisco Certified Network Associate (200-125) exam objectives. It is therefore advised to refer to your own course materials to gain a deeper understanding of any theoretical aspects of the exam objectives.

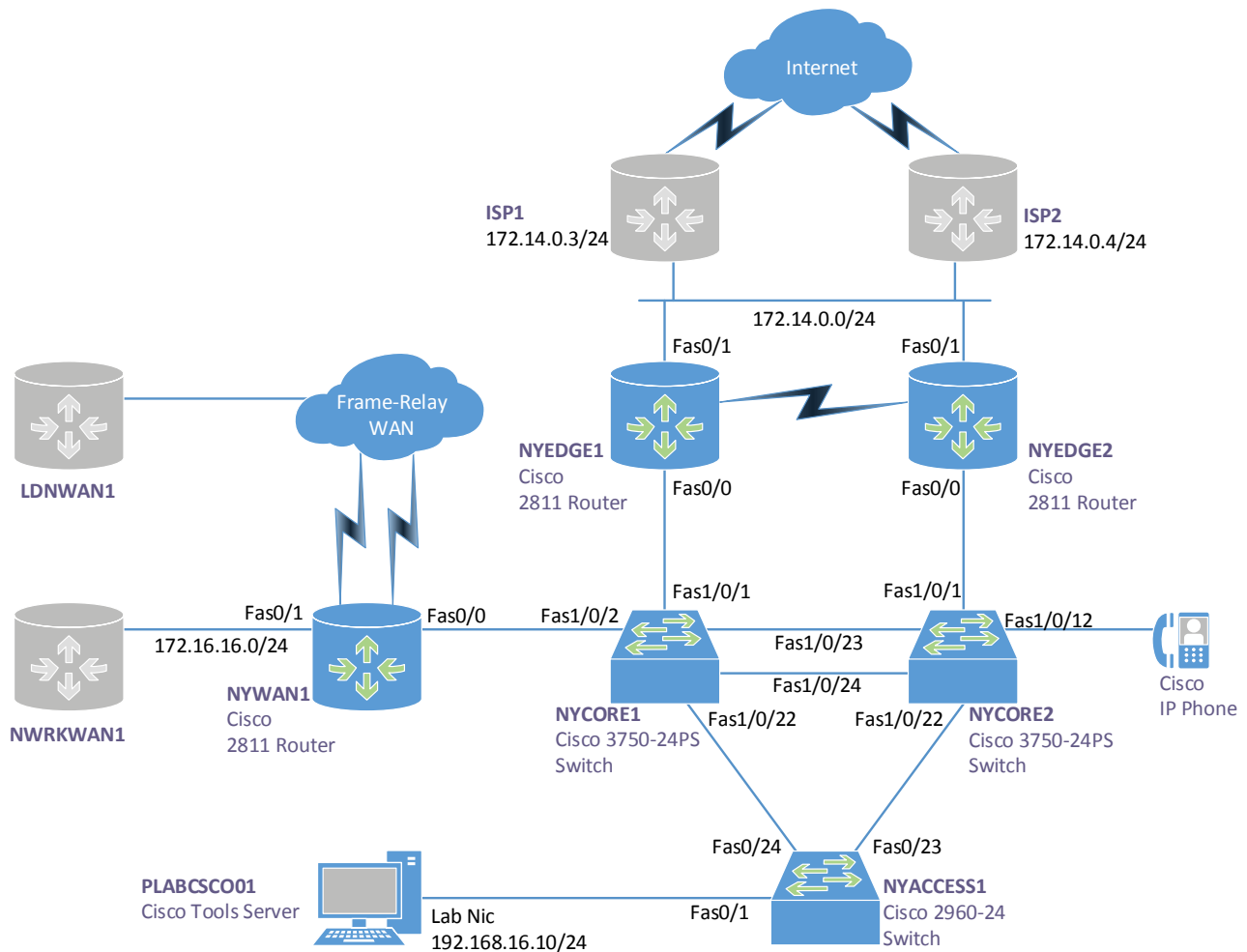
Support 9am-5pm(GMT) : +44 (0) 203 588750
E-mail: sales@practice-labs.com

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Lab Topologies

You will also have access to the following topologies:



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Modules and Exercises

Performing Initial Device Configuration

- Introduction
- Exercise 1 - Essential Switch Configuration
- Exercise 2 - Configuring Remote Access to a Switch
- Exercise 3 - Essential Router Configuration
- Summary

Troubleshooting Methodologies

- Introduction
- Exercise 1 - Examine the Recommended Troubleshooting Methodology for Networks
- Exercise 2 - Implementing Troubleshooting Methodologies
- Summary

Configure Verify and Troubleshoot IPv4 Addressing and Subnetting

- Introduction
- Exercise 1 - Perform Subnetting to Determine an Addressing Scheme
- Exercise 2 - Implement an IP Addressing Scheme
- Exercise 3 - Verifying and Troubleshooting the Implemented IP Address Scheme
- Summary

Configure Verify and Troubleshoot IPv6 Addressing

- Introduction
- Exercise 1 - Determine the IPv6 Addressing Scheme
- Exercise 2 - Implement the IPv6 Addressing Scheme
- Exercise 3 - Verifying and Troubleshooting the Implemented IP Address Scheme
- Exercise 4 - Introduction to SLAAC
- Summary

Configure and Verify Switching Concepts

- Introduction
- Exercise 1 - Examining the Functionality of the MAC Address Table
- Exercise 2 - Examining MAC Address Aging
- Exercise 3 - Frame Switching Methods and Frame Flooding
- Summary

Interface Configuration and Cabling

- Introduction
- Exercise 1 - Interface Configuration Options
- Exercise 2 - Examining Collisions and Other Types of Errors
- Exercise 3 - Cabling Issues
- Summary

Configuring and Verifying VLANs

- Introduction
- Exercise 1 - VLAN Creation and Management
- Exercise 2 - Creating a Voice VLAN
- Summary

Configure Verify and Troubleshoot Interswitch Connectivity

- Introduction
- Exercise 1 - Trunk Configuration and Dynamic Trunking Protocol - Part I
- Exercise 2 - VLAN Trunk Protocol
- Exercise 3 - Trunk Configuration and Dynamic Trunking Protocol - Part II
- Exercise 4 - Native VLAN configuration
- Summary

Configure Verify and Troubleshoot Inter-VLAN Routing

- Introduction
- Exercise 1 - Configuring Inter-VLAN Routing using a Router on a Stick Topology
- Exercise 2 - Configuring inter-VLAN routing using Switched Virtual Interfaces
- Summary

Compare Static and Dynamic Routing

- Introduction
- Exercise 1 - Static Routing
- Exercise 2 - Dynamic Routing
- Exercise 3 - Compare Static and Dynamic Routing
- Summary

Configure and Verify DHCP and DNS

- Introduction
- Exercise 1 - Configure DNS on a Router
- Exercise 2 - Configure and Verify DHCP
- Summary

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Configure and Verify Standard Access Lists

- Introduction
- Exercise 1 - Configuring Standard and Extended Access Lists
- Exercise 2 - Configuring Named Access Lists
- Exercise 3 - Configuring Access-Lists to Restrict Remote Access
- Summary

Configure and Verify NAT

- Introduction
- Exercise 1 - Configuring Static and Dynamic NAT
- Exercise 2 - Configuring PAT for an ISP Connection
- Summary

Configure and Verify Device Management

- Introduction
- Exercise 1 - Configuring Device Monitoring
- Exercise 2 - Backup and Restore Configurations
- Exercise 3 - Configuring and Understanding CDP and LLDP
- Summary

Device Maintenance Procedures

- Introduction
- Exercise 1 - Managing IOS Files and Procedures
- Exercise 2 - Password Recovery
- Summary

Configure Verify and Troubleshoot Spanning Tree Protocols

- Introduction
- Exercise 1 - Spanning Tree Protocol
- Exercise 2 - STP and Ports
- Exercise 3 - Rapid Per VLAN Spanning Tree Plus
- Summary

Configure Verify and Troubleshoot STP Related Features

- Introduction
- Exercise 1 - Configuring Edge Ports
- Exercise 2 - Configuring BPDU Guard
- Summary

Configure Verify and Troubleshoot EtherChannel

- Introduction
- Exercise 1 - Configuring Static EtherChannel
- Exercise 2 - Configuring PAgP and LACP
- Exercise 3 - Configuring Layer 3 EtherChannel
- Summary

Configure and Verify RIPv2 for IPv4

- Introduction
- Exercise 1 - Configuring RIP v2
- Exercise 2 - Configuring Additional Parameters of RIP v2
- Summary

Configure Verify and Troubleshoot Single Area OSPFv2 for IPv4

- Introduction
- Exercise 1 - Configuring OSPF
- Exercise 2 - Additional OSPF Configuration Options
- Summary

Configure Verify and Troubleshoot Multi Area OSPFv2 for IPv4

- Introduction
- Exercise 1 - Configuring Multi Area OSPF
- Exercise 2 - Configuring Area 2
- Exercise 3 - DRs, BDRs and Route Cost
- Summary

Configure Verify and Troubleshoot Single Area OSPFv3 for IPv6

- Introduction
- Exercise 1 - Configuring OSPF
- Exercise 2 - Additional OSPFv6 Configuration Options
- Summary

Configure Verify and Troubleshoot Multi Area OSPFv3 for IPv6

- Introduction
- Exercise 1 - Configuring Multi Area OSPFv3
- Exercise 2 - DRs, BDRs and Route Cost in OSPFv3
- Summary

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Configure and Verify EIGRP for IPv4

- Introduction
- Exercise 1 - Configuring EIGRP
- Exercise 2 - Load Balancing
- Exercise 3 - Additional EIGRP Configuration Options
- Summary

Configure and Verify EIGRP for IPv6

- Introduction
- Exercise 1 - Configuring EIGRP for IPv6
- Exercise 2 - Additional EIGRP for IPv6 Configuration Options
- Summary

Configure and Verify PPP on WAN Interfaces

- Introduction
- Exercise 1 - Configuring a Point-to-Point Link
- Exercise 2 - Configuring a Point-to-Point Link using PPP
- Summary

Configure and Verify PPPoE Client Side Interfaces

- Introduction
- Exercise 1 - Configure Client Side PPPoE
- Summary

Troubleshoot Network Connectivity Issues using ICMP Echo-Based IP SLA

- Introduction
- Exercise 1 - Configuring ICMP IP SLA
- Exercise 2 - Modifying an ICMP IP SLA Operation
- Summary

Cisco IOS Troubleshooting Tools

- Introduction
- Exercise 1 - Ping and Extended Ping
- Exercise 2 - Traceroute
- Summary