

NETLOGIC TRAINING CENTER

Course Training

Cisco Certified Technician Supporting Cisco Routing and Switching Network Devices (RSTECH)

Course Content

This is a 3 days training course that is designed for field support engineers working with Cisco routers, switches, and operating software. This course is the authorized training for new entry network engineer support and prepare for the Cisco CCT Routing and Switching certification exam, RSTECH 640-692.

Course Objective

After completing the course the incumbent is able to

- Review networking fundamentals, including connectivity, LAN and WAN, OSI model, subnetting, and addressing
- Identify Cisco router and switch models, accessories, cabling, and interfaces
- Understand Cisco IOS Software operating modes and identify commonly found software
- Use the Cisco command line interface (CLI) to connect and service products
- Demonstrate effective field servicing and equipment replacement, including hot swap, with support of the Cisco Technical Assistance Center

Course Prerequisite

Not Required

Course Pre-Test

Not Required

Course Details

Day 1

Item	Subject	Details	Personal Lab and devices	Workgroup Lab and devices
1	Identify Cisco Equipment and Related Hardwares	<ul style="list-style-type: none"> Identify the interfaces on Cisco equipment including the Cisco Catalyst 6500, 4500, 3560, 3750 and 2975 and 2960 series switches and Cisco 2800, 2900, 3800, 3900, 7200, 7300, 7600 series integrated service routers Identify the cabling on Cisco equipment Identify Cisco products by logo marking and model number (including, but not limited to, locations on chassis, line card, module, or adapter) Identify and locate the serial number of Cisco products (including, but not limited to, locations on chassis, line card, module, or adapter) Identify and describe the commonly used components Describe the hardware memory common terms and use in Cisco routers and switches 	Theory and Lecture	
Break				
	Describe Cisco IOS Software Operation	<ul style="list-style-type: none"> Describe the different operating modes for Cisco CatOS/IOS Software Navigate between the different operating modes listed Determine the current mode of the device Copy and paste a configuration file from/to a router or switch Know how to use and interpret the basic Cisco IOS Software commands Describe where to find the configuration register parameter and how to change it Identify a configuration file from a Cisco device Perform software upgrade or downgrade using TFTP, xmodem, tftpd,nld, flash memory, memory card reader, or USB Perform password recovery on a Cisco device 	Theory and Lecture	
		<p>Lab 1</p> <ul style="list-style-type: none"> Factory reset router ISR 4321 series Factory reset switch catalyst 3560-cx series <p>Lab 2</p> <ul style="list-style-type: none"> Factory reset switch catalyst 4500 series Factory reset switch catalyst 6500 series <p>Lab 3</p> <ul style="list-style-type: none"> Verifying IOS and CatOS version Verifying mode IOS and CatOS Testing basic function of IOS Interpret IOS command Upgrade and download IOS 	<p>(Lab 1 and Lab 3)</p> <p>1 Person per 1 Device Router ISR 4321 – 1 Unit Switch 3750 – 1 Unit TFTP software Putty software</p>	<p>(Lab 2)</p> <p>1 Group per 1 Device Switch 4500 – 1 Unit Switch 6500 – 1 Unit</p>

Day 2

Item	Subject	Details	Personal Lab and devices	Workgroup Lab and devices
3	General Networking Knowledge	<ul style="list-style-type: none"> • Describe in general terms the basic functionality and key differences for the following hardware: LAN switch, router, modem, and wireless access points • Describe what an IP address and subnet is? • Differentiate between these Layer 2 technologies: Ethernet, Fast Ethernet, Gigabit Ethernet, Serial, ATM, ISDN, DSL, Optical, and etc. • Describe what FTP does • Describe what TFTP does • Describe what a CSU/DSU does (such as, loop back processes, and etc.) 	Theory and Lecture	
Break				
		<ul style="list-style-type: none"> • Describe Telco termination point (such as, demarc, and etc.) • Describe what Telnet and SSH do • Describe what ping does • Use the OSI and TCP/IP models and their associated protocols to explain how data flows in a network • Identify and correct common network problems at Layers 1 and 2 	Theory and Lecture	
		Lab 1 - Calculate IP address, subnet mask, VLSM and CIDR Lab 2 - Configure layer 2 and Layer 3 basic functions - Configure Telnet and SSH - Verifying Telnet and SSH operations - Verifying connectivity by ping and extended ping - Troubleshooting physical, duplex and speed operation	(Lab 1 and Lab 2) <u>1 Person per 1 Device</u> Router ISR 4321 – 1 Unit Switch 3750 – 1 Unit TFTP software Putty software	

Day 3

Item	Subject	Details	Personal Lab and devices	Workgroup Lab and devices
4	Service-related Knowledge	<ul style="list-style-type: none"> • Locate and use a text editor (such as, Notepad) • Locate and use Terminal Emulation • Locate and use the Window command prompt • Configure networks settings for Ethernet port on laptop (IP address, subnet mask and default gateway) and establish a connection with Ethernet ports on Cisco equipment • Make a physical connection from laptop to Cisco console port • Connect, configure, and verify operation status of a device interface 	Theory and Lecture	
Break				
		<ul style="list-style-type: none"> • Make a physical Ethernet connection from laptop to Cisco device Ethernet port using correct cable • Use a modem to connect to Cisco console port and phone line • Configure the correct DIP switch settings on the modem (or other appropriate settings) • Identify the different loop-back plugs • Identify null modem cable and application • Configure and use TFTP server (such as, TFTP d32) • Use the hardware tools needed for repair 	Theory and Lecture	
		Lab 1 - Connectivity network devices on production network - Connect client to network devices - Use network device tools such as TFTP for backup configure and upload configure - Verifying connectivity on production network	(Lab 1) <u>1 Person per 1 Device</u> Router ISR 4321 – 1 Unit Switch 3750 – 1 Unit TFTP software Putty software	

Course Post-Test

Not Required

Course Materials

Not include in this class training (but you can requested from sale team)

Course Training Devices (Per 1 persons)



Cisco ISR Router 4321



Cisco Catalyst Switch 3750

Course Training Devices (Per Workgroup)



Cisco Catalyst Switch 6500



Cisco Catalyst 4507R

