



Certified Cisco Certified Technician Routing and Switching (640-692)

Exam Description: The 640-692 RSTECH is the exam associated with Cisco Certified Technician Routing and Switching certification. The 640-692 is a 1.5 hour exam with 60-70 questions. The candidates can prepare for this exam by taking the Interconnecting Supporting Cisco Routing and Switching Network Devices v1.0 course.

Cisco Certified Technician Routing and Switching certification focuses on the skills required for onsite support and maintenance of Cisco routers, switches, and operating environments. Technicians in this area must be able to identify Cisco router and switch models, accessories, cabling, and interfaces; understand the Cisco IOS software operating modes and identify commonly found software; and be able to use the Cisco Command Line Interface (CLI) to connect and service products. Achieving Cisco Certified Technician Routing and Switching certification is considered the best foundation for supporting other Cisco devices and systems. The exam is closed book and no outside reference materials are allowed.

The following topics are general guidelines for the content likely to be included on the exam. However, other related topics may also appear on any specific delivery of the exam. In order to better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

- 27%** **1.0** **Identify Cisco Equipment and Related Hardware**
 - 1.1 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
 - 1.2 Identify the cabling on Cisco equipment
 - 1.3 Identify Cisco products by logo marking and model number (including, but not limited to, locations on chassis, line card, module, or adapter)
 - 1.4 Identify and locate the serial number of Cisco products (including, but not limited to, locations on chassis, line card, module, or adapter)
 - 1.5 Identify and describe the commonly used components
 - 1.6 Describe the hardware memory common terms and use in Cisco routers and switches

- 27%** **2.0** **Describe Cisco IOS Software Operation**
 - 2.1 Describe the different operating modes for Cisco CatOS/IOS Software
 - 2.2 Navigate between the different operating modes listed
 - 2.3 Determine the current mode of the device
 - 2.4 Copy and paste a configuration file from/to a router or switch
 - 2.5 Know how to use and interpret the basic Cisco IOS Software commands
 - 2.6 Describe where to find the configuration register parameter and how to change it
 - 2.7 Identify a configuration file from a Cisco device
 - 2.8 Perform software upgrade or downgrade using TFTP, xmodem, tftpdnld, flash memory, memory card reader, or USB
 - 2.9 Perform password recovery on a Cisco device

- 23% 3.0 General Networking Knowledge**
- 3.1 Describe in general terms the basic functionality and key differences for the following hardware: LAN switch, router, modem, and wireless access points
 - 3.2 Describe what an IP address and subnet is
 - 3.3 Differentiate between these Layer 2 technologies: Ethernet, Fast Ethernet, Gigabit Ethernet, Serial, ATM, ISDN, DSL, Optical, and etc.
 - 3.4 Describe what FTP does
 - 3.5 Describe what TFTP does
 - 3.6 Describe what a CSU/DSU does (such as, loop back processes, and etc.)
 - 3.7 Describe Telco termination point (such as, demarc, and etc.)
 - 3.8 Describe what Telnet and SSH do
 - 3.9 Describe what ping does
 - 3.10 Use the OSI and TCP/IP models and their associated protocols to explain how data flows in a network
 - 3.11 Identify and correct common network problems at Layers 1 and 2
- 23% 4.0 Service-Related Knowledge**
- 4.1 Locate and use a text editor (such as, Notepad)
 - 4.2 Locate and use Terminal Emulation
 - 4.3 Locate and use the Window command prompt
 - 4.4 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
 - 4.5 Make a physical connection from laptop to Cisco console port
 - 4.6 Connect, configure, and verify operation status of a device interface
 - 4.7 Make a physical Ethernet connection from laptop to Cisco device Ethernet port using correct cable
 - 4.8 Use a modem to connect to Cisco console port and phone line
 - 4.9 Configure the correct DIP switch settings on the modem (or other appropriate settings)
 - 4.10 Identify the different loop-back plugs
 - 4.11 Identify null modem cable and application
 - 4.12 Configure and use TFTP server (such as, TFTP d32)
 - 4.13 Use the hardware tools needed for repair