



# 300-135

Troubleshooting and Maintaining Cisco IP  
Networks

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**SUCCESS GUIDE TO CISCO CERTIFICATION**

Exam Summary – Syllabus – Questions

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## Table of Contents

<b>Introduction to 300-135 Exam on Troubleshooting and Maintaining Cisco IP Networks .....</b>	<b>2</b>
<b>    Cisco 300-135 Certification Details: .....</b>	<b>2</b>
<b>    Cisco 300-135 Exam Syllabus:.....</b>	<b>3</b>
<b>    300-135 Sample Questions: .....</b>	<b>6</b>
<b>    Answers to 300-135Exam Questions: .....</b>	<b>8</b>

# Introduction to 300-135 Exam on Troubleshooting and Maintaining Cisco IP Networks

A great way to start the Cisco Certified Network Professional Routing and Switching (TSHOOT) preparation is to begin by properly appreciating the role that syllabus and study guide play in the Cisco 300-135 certification exam. This study guide is an instrument to get you on the same page with Cisco and understand the nature of the Cisco CCNP Routing and Switching exam.

Our team of experts has composed this Cisco 300-135 exam preparation guide to provide the overview about Cisco Troubleshooting and Maintaining Cisco IP Networks exam, study material, sample questions, practice exam and ways to interpret the exam objectives to help you assess your readiness for the Cisco TSHOOT exam by identifying prerequisite areas of knowledge. We recommend you to refer the simulation questions and practice test listed in this guide to determine what type of questions will be asked and the level of difficulty that could be tested in the Cisco CCNP Routing and Switching certification exam.

## Cisco 300-135 Certification Details:

Exam Name	Troubleshooting and Maintaining Cisco IP Networks
Exam Number	300-135 TSHOOT
Exam Price	\$300 USD
Duration	120 minutes
Number of Questions	15-25
Passing Score	Variable (750-850 / 1000 Approx.)
Recommended Training	<a href="#">Troubleshooting and Maintaining Cisco IP Switched Networks v2.0 (TSHOOT)</a> <a href="#">Cisco E-Learning for CCNP TSHOOT v2.0</a> <a href="#">Cisco Learning Labs for CCNP TSHOOT v2.0</a> <a href="#">CCNA and CCNP Premium Training Package</a>
Exam Registration	PEARSON VUE
Sample Questions	<a href="#">Cisco 300-135 Sample Questions</a>
Practice Exam	<a href="#">Cisco Certified Network Professional Routing and Switching Practice Test</a>

## Cisco 300-135 Exam Syllabus:

Section	Weight	Objectives
Network Principles	5%	<p>1 Use Cisco IOS troubleshooting tools</p> <ul style="list-style-type: none"> <li>a) Debug, conditional debug</li> <li>b) Ping and trace route with extended options</li> </ul> <p>2 Apply troubleshooting methodologies</p> <ul style="list-style-type: none"> <li>a) Diagnose the root cause of networking issues (analyze symptoms, identify and describe root cause)</li> <li>b) Design and implement valid solutions</li> <li>c) Verify and monitor resolution</li> </ul>
Layer 2 Technologies	40%	<p>1 Troubleshoot switch administration</p> <ul style="list-style-type: none"> <li>a) SDM templates</li> <li>b) Managing MAC address table</li> <li>c) Troubleshoot Err-disable recovery</li> </ul> <p>2 Troubleshoot Layer 2 protocols</p> <ul style="list-style-type: none"> <li>a) CDP, LLDP</li> <li>b) UDLD</li> </ul> <p>3 Troubleshoot VLANs</p> <ul style="list-style-type: none"> <li>a) Access ports</li> <li>b) VLAN database</li> <li>c) Normal, extended VLAN, voice VLAN</li> </ul> <p>4 Troubleshoot trunking</p> <ul style="list-style-type: none"> <li>a) VTPv1, VTPv2, VTPv3, VTP pruning</li> <li>b) dot1Q</li> <li>c) Native VLAN</li> <li>d) Manual pruning</li> </ul> <p>5 Troubleshoot EtherChannels</p> <ul style="list-style-type: none"> <li>a) LACP, PAgP, manual</li> <li>b) Layer 2, Layer 3</li> <li>c) Load balancing</li> <li>d) EtherChannel misconfiguration guard</li> </ul> <p>6 Troubleshoot spanning tree</p> <ul style="list-style-type: none"> <li>a) PVST+, RPVST+, MST</li> <li>b) Switch priority, port priority, path cost, STP timers</li> <li>c) PortFast, BPDUguard, BPDUfilter</li> <li>d) Loopguard, Rootguard</li> </ul> <p>7 Troubleshoot other LAN switching technologies</p> <ul style="list-style-type: none"> <li>a) SPAN, RSPAN</li> </ul> <p>8 Troubleshoot chassis virtualization and aggregation technologies</p> <ul style="list-style-type: none"> <li>a) Stackwise</li> </ul>

Section	Weight	Objectives
Layer 3 Technologies	40%	<p>1 Troubleshoot IPv4 addressing and subnetting</p> <ul style="list-style-type: none"> <li>a) Address types (Unicast, broadcast, multicast, and VLSM)</li> <li>b) ARP</li> <li>c) DHCP relay and server</li> <li>d) DHCP protocol operations</li> </ul> <p>2 Troubleshoot IPv6 addressing and subnetting</p> <ul style="list-style-type: none"> <li>a) Unicast</li> <li>b) EUI-64</li> <li>c) ND, RS/RA</li> <li>d) Autoconfig (SLAAC)</li> <li>e) DHCP relay and server</li> <li>f) DHCP protocol operations</li> </ul> <p>3 Troubleshoot static routing</p> <p>4 Troubleshoot default routing</p> <p>5 Troubleshoot administrative distance</p> <p>6 Troubleshoot passive interfaces</p> <p>7 Troubleshoot VRF lite</p> <p>8 Troubleshoot filtering with any protocol</p> <p>9 Troubleshoot between any routing protocols or routing sources</p> <p>10 Troubleshoot manual and autosummarization with any routing protocol</p> <p>11 Troubleshoot policy-based routing</p> <p>12 Troubleshoot suboptimal routing</p> <p>13 Troubleshoot loop prevention mechanisms</p> <ul style="list-style-type: none"> <li>a) Route tagging, filtering</li> <li>b) Split-horizon</li> <li>c) Route poisoning</li> </ul> <p>14 Troubleshoot RIPv2</p> <p>15 Troubleshoot EIGRP neighbor relationship and authentication</p> <p>16 Troubleshoot loop free path selection</p> <ul style="list-style-type: none"> <li>a) RD, FD, FC, successor, feasible successor</li> </ul> <p>17 Troubleshoot EIGPR operations</p>

Section	Weight	Objectives
		a) Stuck in active  18 Troubleshoot EIGRP stubs  19 Troubleshoot EIGRP load balancing a) Equal cost b) Unequal cost  20 Troubleshoot EIGRP metrics  21 Troubleshoot EIGRP for IPv6  22 Troubleshoot OSPF neighbor relationship and authentication  23 Troubleshoot network types, area types, and router types a) Point-to-point, multipoint, broadcast, nonbroadcast b) LSA types, area type: backbone, normal, transit, stub, NSSA, totally stub c) Internal router, backbone router, ABR, ASBR d) Virtual link  24 Troubleshoot OSPF path preference  25 Troubleshoot OSPF operations  26 Troubleshoot OSPF for IPv6  27 Troubleshoot BGP peer relationships and authentication a) Peer group b) Active, passive c) States and timers  28 Troubleshoot eBGP a) eBGP b) 4-byte AS number c) Private AS
VPN Technologies	5%	1 Troubleshoot GRE
Infrastructure Security	5%	1 Troubleshoot IOS AAA using local database  2 Troubleshoot device access control a) Lines (VTY, AUX, console) b) Management plane protection c) Password encryption  3 Troubleshoot router security features a) IPv4 access control lists (standard, extended, time-based) b) IPv6 traffic filter c) Unicast reverse path forwarding

Section	Weight	Objectives
Infrastructure Services	5%	<p>1 Troubleshoot device management</p> <p>a) Console and VTY</p> <p>b) Telnet, HTTP, HTTPS, SSH, SCP</p> <p>c) (T) FTP</p> <p>2 Troubleshoot SNMP</p> <p>a) v2</p> <p>b) v3</p> <p>3 Troubleshoot logging</p> <p>a) Local logging, syslog, debugs, conditional debugs</p> <p>b) Timestamps</p> <p>4 Troubleshoot Network Time Protocol(NTP)</p> <p>a) NTP master, client, version 3, version 4</p> <p>b) NTP authentication</p> <p>5 Troubleshoot IPv4 and IPv6 DHCP</p> <p>a) DHCP client, IOS DHCP server, DHCP relay</p> <p>b) DHCP options (describe)</p> <p>6 Troubleshoot IPv4 Network Address Translation (NAT)</p> <p>a) Static NAT, Dynamic NAT, PAT</p> <p>7 Troubleshoot SLA architecture</p> <p>8 Troubleshoot tracking objects</p> <p>a) Tracking objects</p> <p>b) Tracking different entities (for example, interfaces, IPSLA results)</p>

## 300-135 Sample Questions:

### 01. What are the primary goals of collecting information?

(Choose two.)

- a) Eliminate potential causes.
- b) Identify indicators pointing to the underlying cause of the problem.
- c) Form a hypothesis for the most likely cause of the problem.
- d) Find evidence that can be used to eliminate potential cause.

### 02. What troubleshooting step should be performed after a problem has been reported and clearly defined?

- a) Eliminate potential causes.
- b) Propose hypothesis.
- c) Gather information.
- d) Analyze gathered information.

**03. How is the ping traffic processed on a Cisco IOS router, when pinging from a remote host to any of the router's local interfaces is performed?**

- a) fast-switched
- b) process-switched
- c) CEF-switched
- d) none of the above

**04. SW1 and SW2 switches have the portfast feature enabled globally. Their Ethernet 0/1 ports are configured as access ports. In the future, they will be used to interconnect the switches and both will be configured as trunk ports. What will be their portfast status then?**

- a) They will lose portfast status once they are connected and start sending BPDUs.
- b) They will lose portfast status the moment they are converted to trunk.
- c) They will keep their port status until the BPDU Guard or BPDU Filter features are configured.

**05. Which two statements correctly describe the OSPF passive interface?**

(Choose two.)

- a) Passive interfaces do not send routing updates.
- b) Passive interfaces do not accept routing updates.
- c) It is configured using the ip ospf passive-interface interface configuration command.
- d) When you configure OSPF, every interface is passive by default.

**06. How can you prevent the forming of an EIGRP adjacency on a specific segment while still including the interface address in the EIGRP routing updates?**

- a) by issuing the proper no networknetwork [mask] command
- b) by issuing the no auto-summary command
- c) by issuing the passive-interface ethernet slot/number command
- d) by issuing the passive-interface default command

**07. Which statement best describes GRE protocol?**

- a) GRE adds the new IP header, encapsulates the original IP packet, and adds the GRE header at the end of the IP packet.
- b) GRE adds the new IP header, inserts the GRE header, and encapsulates the original IP packet.
- c) GRE uses the original IP header and adds the GRE header at the end of the packet.
- d) GRE uses the original IP header and inserts the GRE header between the IP header and payload.

**08. Which of the following port security violation modes will disable the port if violation occurs?**

- a) restrict
- b) protect
- c) shutdown
- d) all of the above



**09. Which statement correctly describes the protect violation mode?**

- a) The interface is error-disabled when a security violation occurs.
- b) A security violation sends a trap to the network management station.
- c) It drops packets with unknown source addresses until you remove a sufficient number of secure MAC addresses to drop below the maximum value.
- d) The interface clears all dynamic MAC-addresses when a security violation occurs.

**10. What is the correct syntax used to apply an access list to the line vty?**

- a) ip access-group
- b) access-group
- c) ip access-class
- d) access-class

**Answers to 300-135Exam Questions:**

Question: 01 Answer: b, d	Question: 02 Answer: c	Question: 03 Answer: b	Question: 04 Answer: b	Question: 05 Answer: a, c
Question: 06 Answer: c	Question: 07 Answer: b	Question: 08 Answer: c	Question: 09 Answer: c	Question: 10 Answer: d

Note: If you find any typo or data entry error in these sample questions, we request you to update us by commenting on this page or write an email on [feedback@nwexam.com](mailto:feedback@nwexam.com)