



# Cisco CCNP TSHOOT Exam Overview, Study and Preparation

# Agenda

- » What the exam is like.
- » Testing environment: What to expect
- » Leveraging Cisco's Resources
- » Troubleshooting Strategy
- » Top Five Areas for Study

# Facts about the TSHOOT Exam

## » TSHOOT exam:

- Troubleshooting and Maintaining Cisco IP Networks
- Exam# 300-135
- Duration: 120-minutes
- Qty of Questions: 15-25
- Majority of questions are Simulations
- Passing Score: 846/1000

# What do the questions look like?

IT Certification and Career Paths

300-135 TSHOOT

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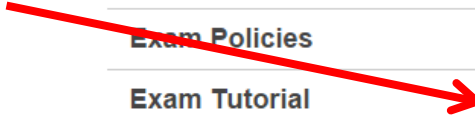
[EXAM INFORMATION](#)

[CURRENT EXAMS](#)

**300-135**

Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

Exam Number	300-135 TSHOOT
Associated Certifications	CCNP Routing and Switching
Duration	120 minutes (15-25 questions)
Available Languages	English
Register	<a href="#">Pearson VUE</a>
Exam Policies	<a href="#">Read current policies and requirements</a>
Exam Tutorial	<a href="#">Review type of exam questions</a>



# TSHOOT Simulations

Instructions

This item contains a trouble ticket covering a single network topology. You will need to troubleshoot the problem by issuing commands on the devices. To begin troubleshooting a ticket, click on the **BLUE** trouble ticket button on the right.

For each ticket, you will be required to answer the following three questions:

- Which of the following devices is the source of the problem?
- Which of the following technologies is the source of the problem?
- Which of the following is most likely to solve the problem?

Although the ticket scenarios might look similar, the devices are configured differently for each ticket. You can access a device by clicking on its button at the bottom of the screen or by clicking on its picture in any of the topology diagrams. You can open the topology diagrams by clicking on the topology buttons at the bottom of the screen. You can have multiple devices and topology diagrams open at the same time.

You can access the following devices for each trouble ticket:

- R1, R2, R3, and R4: Cisco 2600s
- R5: Cisco 3640
- DS1 and DS2: Cisco Catalyst 3560s
- AS1: Cisco Catalyst 2912XI

Exhibits

Ticket

Layer 2 Topology

IPv4 Layer 3 Topology

IPv6 Layer 3 Topology

R1

R2

R3

R4

R5

DS1

DS2

AS1

PC1

Ticket

# The testing environment

- » Sign in
- » Store all electronics
- » Admin Login to PC
- » Exam Tutorial (10-15 mins)
- » Start the exam
- » Receive your Score Report

# Finding Cisco's Resources

<https://learningnetwork.cisco.com>

1. Login →
2. Certifications →
3. Professional →
4. Routing and Switching →
5. TSHOOT Exam

# Leveraging Cisco's Resources

<https://learningnetwork.cisco.com/docs/DOC-6738>

## » TSHOOT Topology

- Provided online
- Mirrors the topology you'll see in the real exam.

## » Topic Blueprint

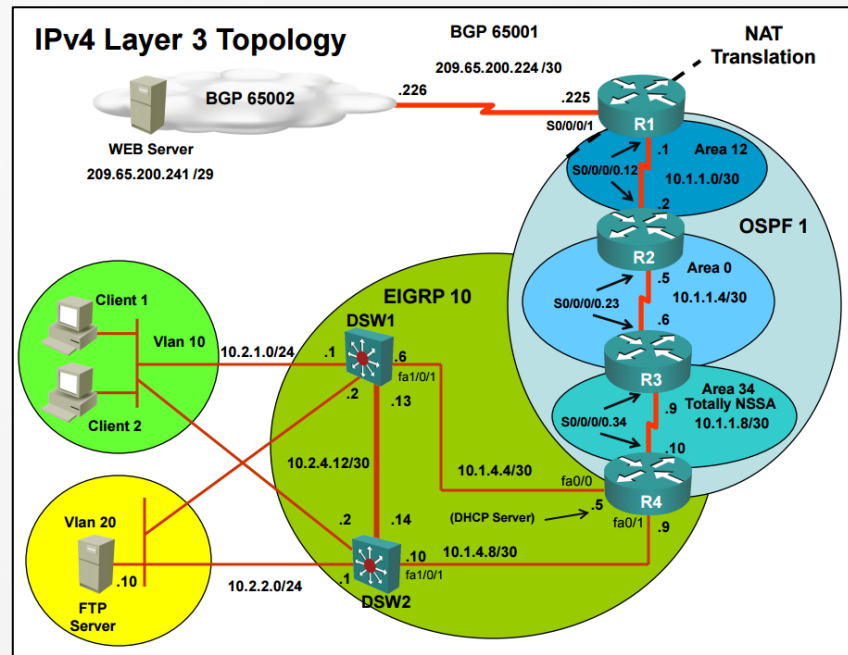
- Not all topics in blueprint will show up in Simulations
- Compare Blueprint against Topology

## » Exam Interface Demo









# TSHOOT Topology

- » Memorize it!!
- » IPv4/ v6 addresses never change from ticket-to-ticket!
- » Draw it before start-of-exam.



# TSHOOT **Blueprint**

- » Comparing the Blueprint against the Topology diagram can be very helpful.
- » Some items in Blueprint clearly won't be part of the Simulations.
- » Concentrate your time on those areas that COULD be part of the Simulations.

1.0 Network Principles	5%	<a href="#">Show Details</a> 
2.0 Layer 2 Technologies	40%	<a href="#">Show Details</a> 
3.0 Layer 3 Technologies	40%	<a href="#">Show Details</a> 
4.0 VPN Technologies	5%	<a href="#">Show Details</a> 
5.0 Infrastructure Security	5%	<a href="#">Show Details</a> 
6.0 Infrastructure Services	5%	<a href="#">Show Details</a> 

# TSHOOT Exam Demo

## » TSHOOT Practical Exam Demo

<https://learningnetwork.cisco.com/docs/DOC-6738>

TSHOOT.com Troubleshooting Tickets 0 of 4 Complete

**Instructions**

This item is a series of four trouble tickets generated against a common topology. The main screen consists of three parts: the Main scenario, the Topology tabs and the Trouble Ticket tabs. The main scenario describes TSHOOT.com's test bed. The Topology tabs allow you to display the appropriate topology. The Trouble Ticket tabs allow you to select the individual trouble tickets.

To complete this item, you must select the correct answer for each question. To begin, select the appropriate topology, then select the trouble ticket, and then answer the questions.

**Ticket Selection**

- To begin
- The ticket
- Tickets c

**Fault Isolation**

- Read the
- Open the
- Open the

**Questions**

The implementation group has been using the test bed to do a 'proof-of-concept' that requires both Client 1 and Client 2 to access the WEB Server at 209.65.200.241. After several changes to the interface status, network addressing, routing schemes, and layer 2 connectivity, a trouble ticket has been opened indicating that Client 1 cannot ping the 209.65.200.241 address.

Use IOS commands to isolate the cause of this fault and answer the following questions.

On which device is the fault condition located?

- ☐ R1
- ☐ R2
- ☐ R3
- ☐ R4
- ☐ DSW1
- ☐ ASW1

**Exhibits**

Scenario Layer 2 Topology IPv4 Layer 3 Topology

Done Abort Next Question

**CISCO**

# Simlets and Testlets

- » Questions that are NOT simulations fall into these categories:
  - Given the output of a “show” command, can you identify the cause of a problem?
  - Given the output of a “debug” command, can you identify the cause of a problem?
  - Misc questions (ROUTE/ SWITCH-type questions)
- » These types of questions may make up roughly 35-40% of total questions.

# Simulations – Working within constraints

## » Many of your IOS shortcuts will not be supported.

- No permutations of “show run” supported such as:
  - “show run | section”
  - “show run interface”

## » Screen real-estate is limited.

- Alt/Tab not supported.
- When you open a Telnet window, it will cover about 60% of your previous windows.
- Windows you open will be constrained within main exam interface window.

# Multiple issues to solve?

- » There is only one issue to find in each ticket that will be preventing your pings.
- » Once you have identified the device with the issue, don't waste any time on other devices.

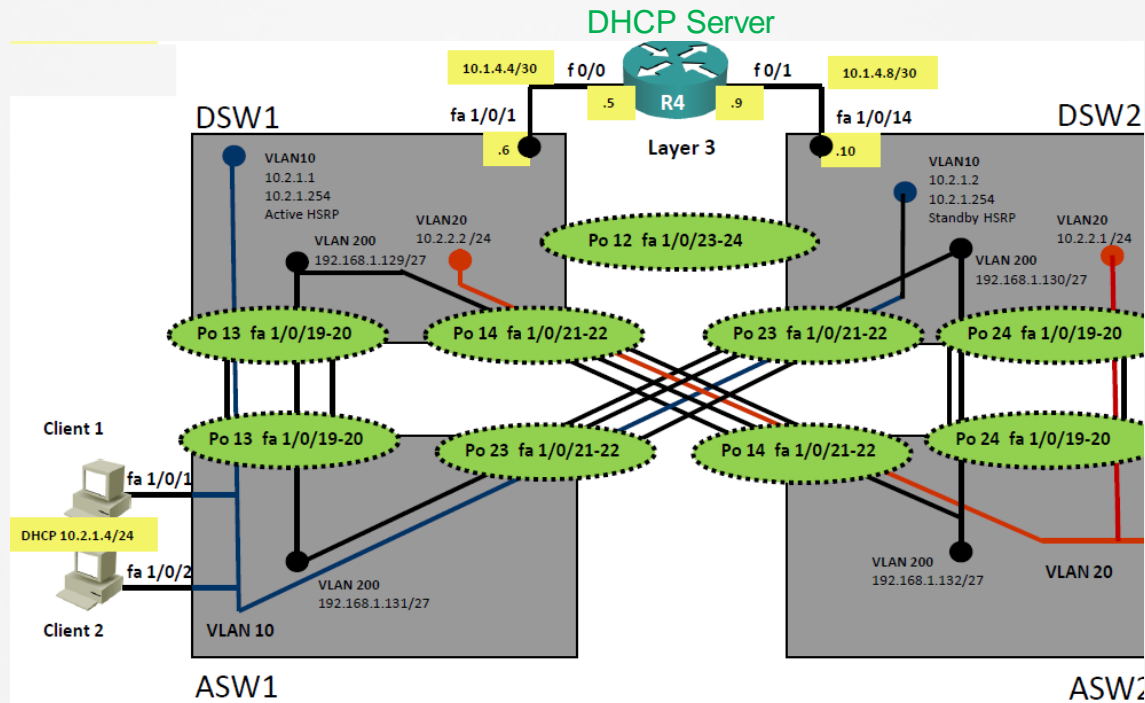
# Strategy – Finding the “Where”

- » During Simulations..the first thing you need to identify **QUICKLY** is WHERE the problem is located (on which device).
- » Cisco provides three different approaches:
  - Top-Down Approach
  - Bottom-Up Approach
  - **Divide and Conquer / Follow-the-path**

# Strategy – Finding the “Where” (IPv4)

» IPv4 problem; Does Client have an IP address?

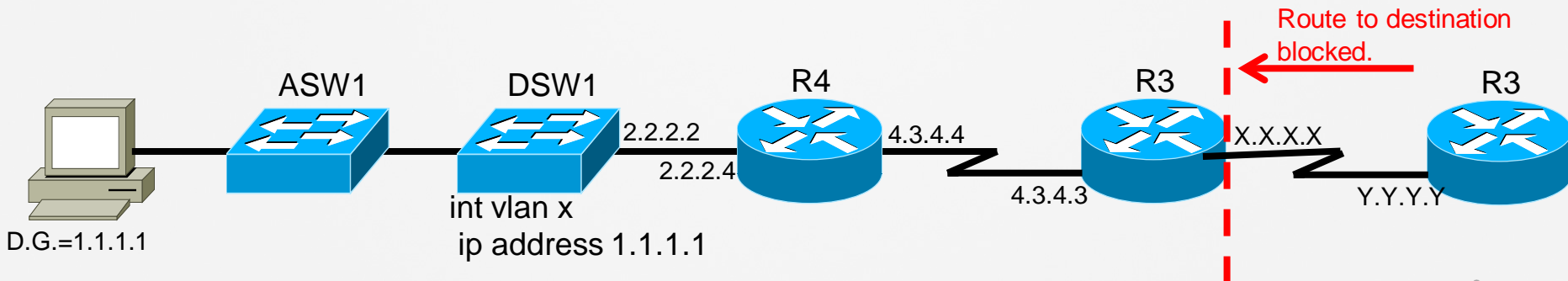
✓ If no..troubleshoot DHCP between Client and R4.





# Strategy – Finding the “Where” (IPv4)

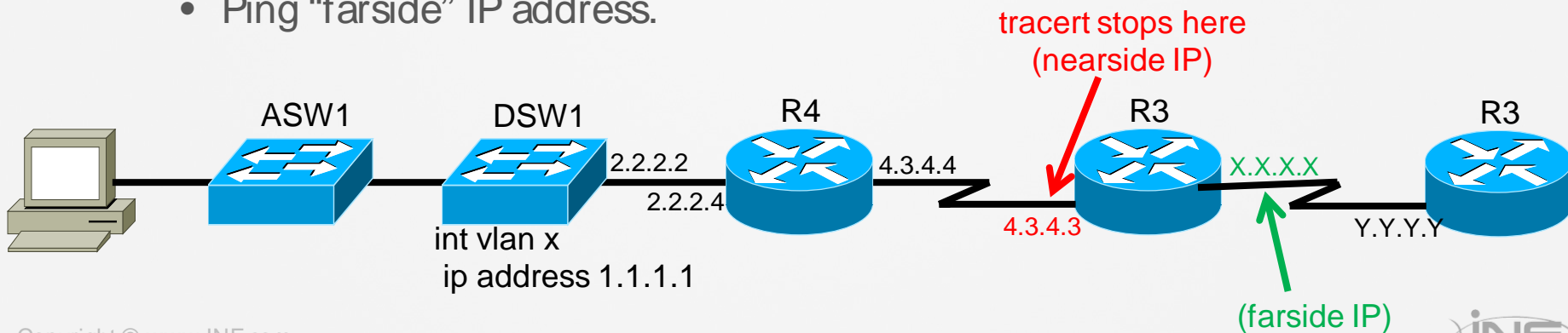
- » If Client does have IP info, start with “tracert” from Client-1 PC to stated destination in Ticket (probably WEB Server).
  - If traceroute stops at Client’s Default-Gateway, most likely an IP Routing Problem somewhere in the topology.
  - Start with routing device closest to PC and check routing tables.



# Strategy – Finding the “Where” (IPv4)

» If “tracert” from Client-1 PC to stated destination in Ticket makes it any further than Default Gateway, probably NOT an IP Routing Problem.

- Identify last IP address that responded. This will be the “nearside” IP of that device.
- Ping “farside” IP address.



# Strategy – Finding the “Where” (IPv6)

- » If IPv6 problem, start by viewing IPv6 Routing Table on device that can't ping.
  - No IPv6 route to destination? Troubleshoot IPv6 routing.
    - Begin with destination..does a Connected route exist?
    - Move hop-by-hop (from destination back to source) until you discover the first router that is missing the IPv6 route.
    - Now you've found your “Where”.
  - IPv6 route to destination DOES exist? Proceed with troubleshooting possible security restrictions with IPv6 pings.

# Strategy – Finding the “What” (no ip on client)

- » If no IP information on Client your task is to identify:
  - Is the problem a connectivity problem?
  - Is the problem DHCP-related?
- » Start with possible L3 connectivity problems, easier to diagnose.
- » If L3 is okay, verify DHCP Configuration on Server.

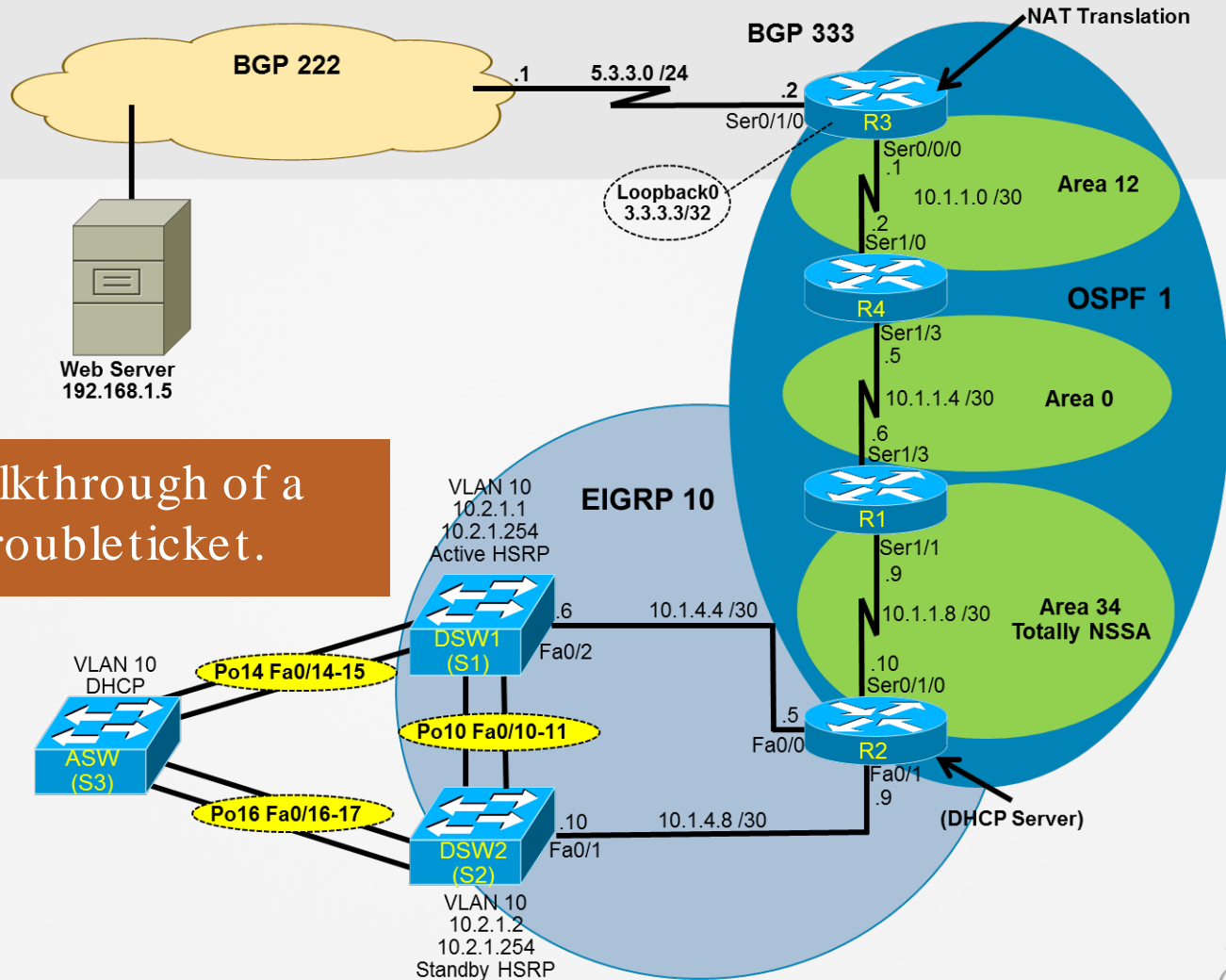
# Strategy – Finding the “What” (no ip on client)

- » L3 and DHCP Server okay? Time for L2 Troubleshooting.
- » Think about all of the layer-2 requirements that would be needed for PC-1 to reach "interface vlan 10" of DSW1 (*DHCP Relay Agent*).
  - ✓ Are all physical interfaces up?
  - ✓ VLANs (do they exist?)
  - ✓ VLAN Trunks (do they exist? Correctly configured?)
  - ✓ Security (DHCP Snooping? Port Security?)
  - ✓ Identify (via Spanning-Tree) the path that would be taken for PC1 to reach DSW1.
  - ✓ Check for any missing/misconfigurations along that path.

# Technologies for Concentration

» Ensure you are very strong in the following technologies:

1. Routing Protocol peering procedures (IGP and EGP)
  - a) IPv4 Routing Protocols
  - b) IPv6 Routing Protocols
2. Route Redistribution
3. Interpreting Access-Lists
4. Layer-2 Configuration Problems that could lead to disconnectivity.
5. Switching Security Features



Let's do a walkthrough of a TSHOOT troubleticket.

# Any Questions?

