Cisco | Networking Academy®
Mind Wide Open™

CCNA Preparation Tutorial

Session 1 of 3

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Technical Advocacy
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What is the CCNA Tutorial?

- 3 online consecutive sessions
- 2 sets of Practice Exams
- 4 Packet Tracer Simulation Exercises (PT 5.1)
- NOT a boot camp for CCNA certification
- NOT a replacement for instructor training
- Does not guarantee you will pass your CCNA exam

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What is the CCNA Tutorial?

- To provide an understanding of what formats and question types you should be expecting
- To provide you the first hand experience of the challenges you and your students may go through in preparing for CCNA Certification
- To help you gain the experience that you can use to help mentor your students for CCNA certification preparation
- We strongly recommend you to attempt the CCNA Certification exam within the next 30 days

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Prerequisites Checklist

- ✓ Active Cisco Networking Academy Instructor
- ✓ Willing to request the CCNA Certification Voucher (provided from Exam Fee Waiver Program)
- ✓ Prepared to take CCNA certification shortly
- ✓ Willing to report back happy results about the certification exam (optional)

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CCNA Tutorial Agenda

- Session 1: Monday (2 hours)
  Exam Question Formats, Tips for taking CCNA exam
  Legends vs. Truth, Suggested Golden Rules
  Homework after session 1:
    Practice Exam questions Set 1; PT Simulation Questions Set 1
- Session 2: Wednesday (2 hours)
  Practice Exam and PT questions Set 1; review answer with Q & A.
  Homework after session 2:
    Practice Exam questions Set 2, PT Simulation Questions Set 2
- Session 3: Friday (2 hours)
  Practice Exam and PT questions Set 2; review answer with Q & A.
  How to apply for your CCAI status.
  How to request your Exam Voucher and Register for an Exam

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Certificate of Completion

- The Team is working on a “Professional Development” document that recognizes the effort of attending these sessions
- Will be sent to all instructors that will participate and complete the 3 sessions

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Session 1

Introduction

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Agenda

- Exam Overview & Options
- Study Resources
- Exam Question Formats
- Tips for Taking the Exams
- Legends/Truths
- Time Budgeting
- Q&A

Impossible to cover all topics for CCNA in two-hour session

Session is about “how to prepare for the CCNA Exam”, not about “cover all CCNA knowledge in two hours”

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Exam Overview and Options

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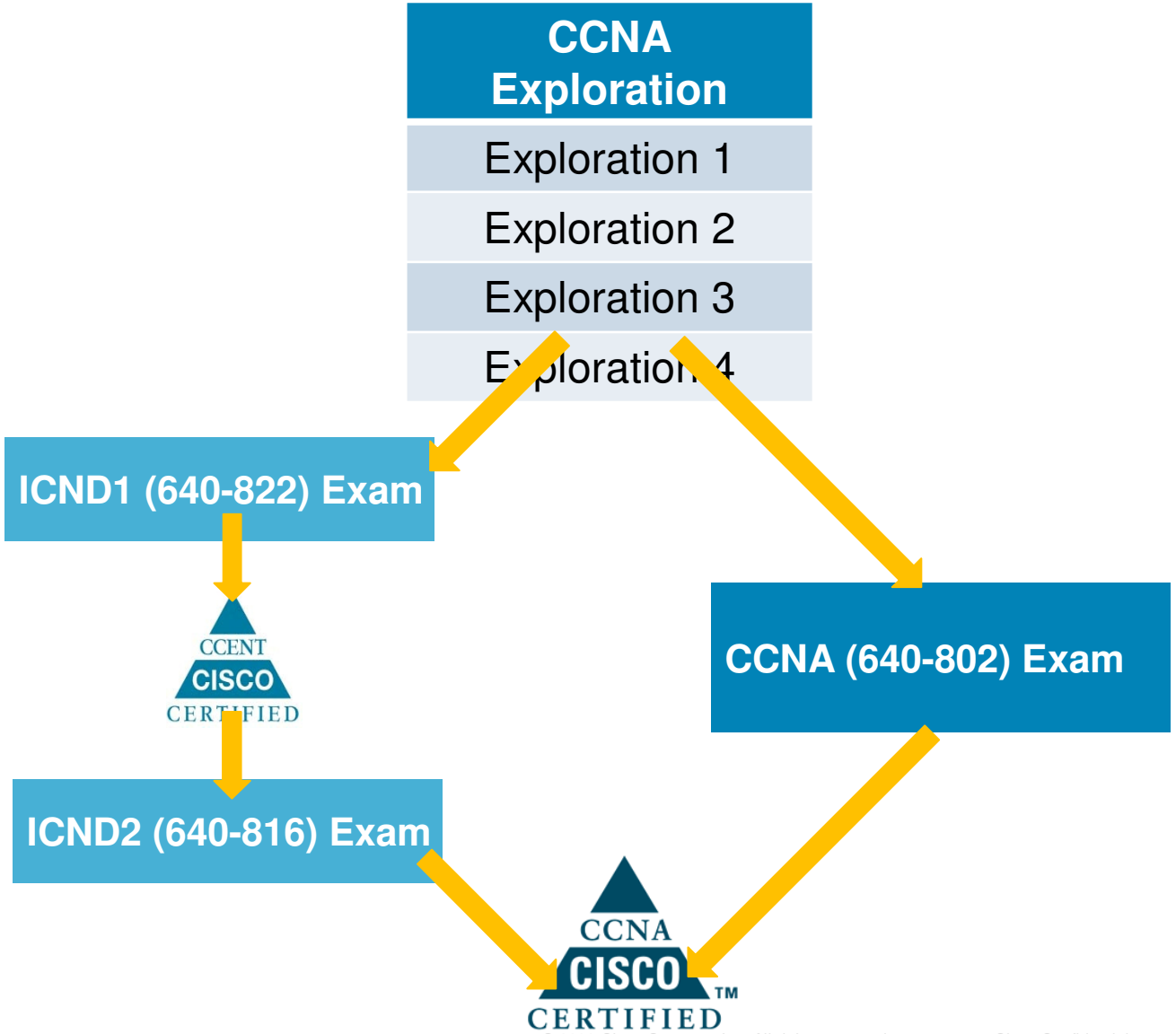
CCNA Exploration Track



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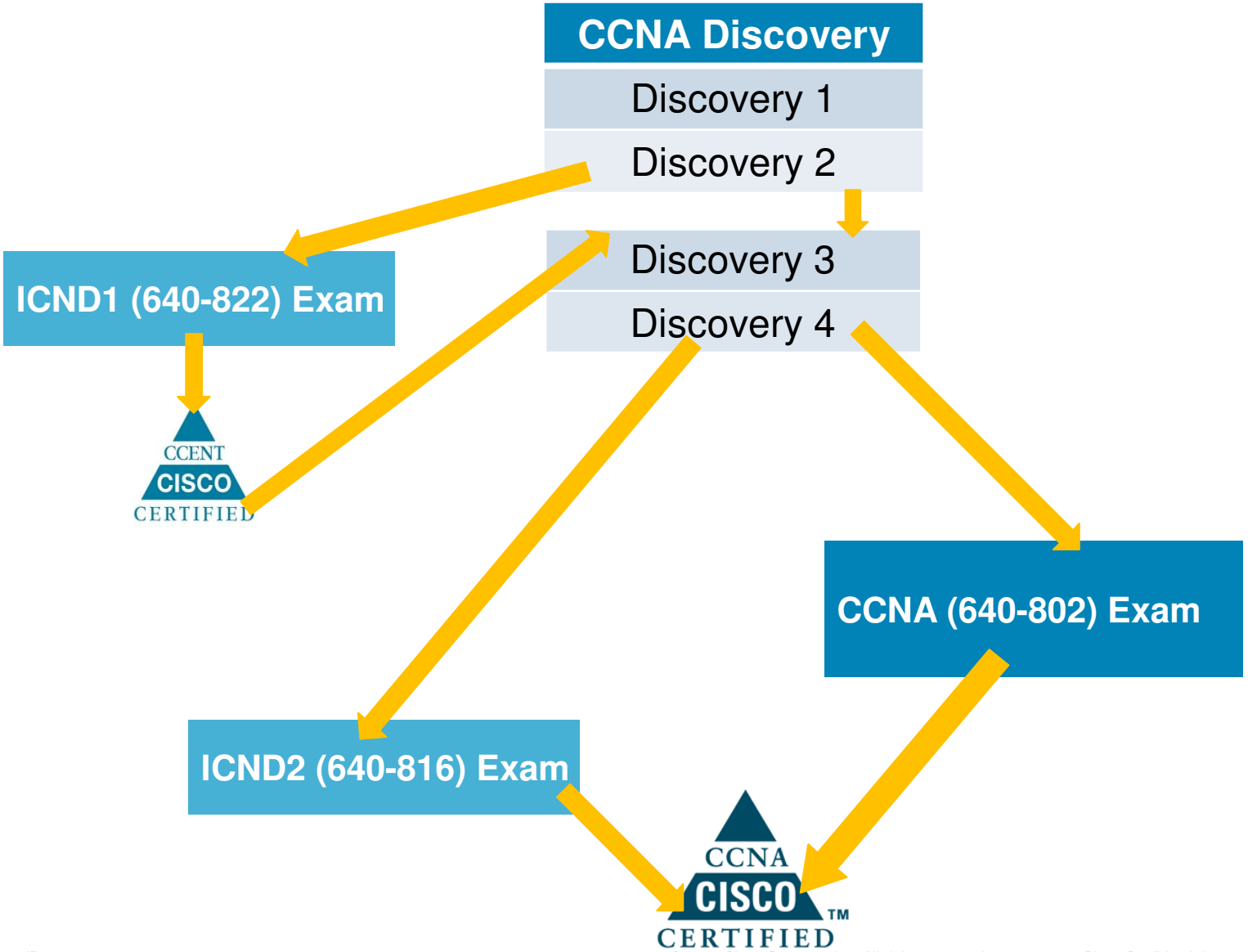
CCNA Discovery Track



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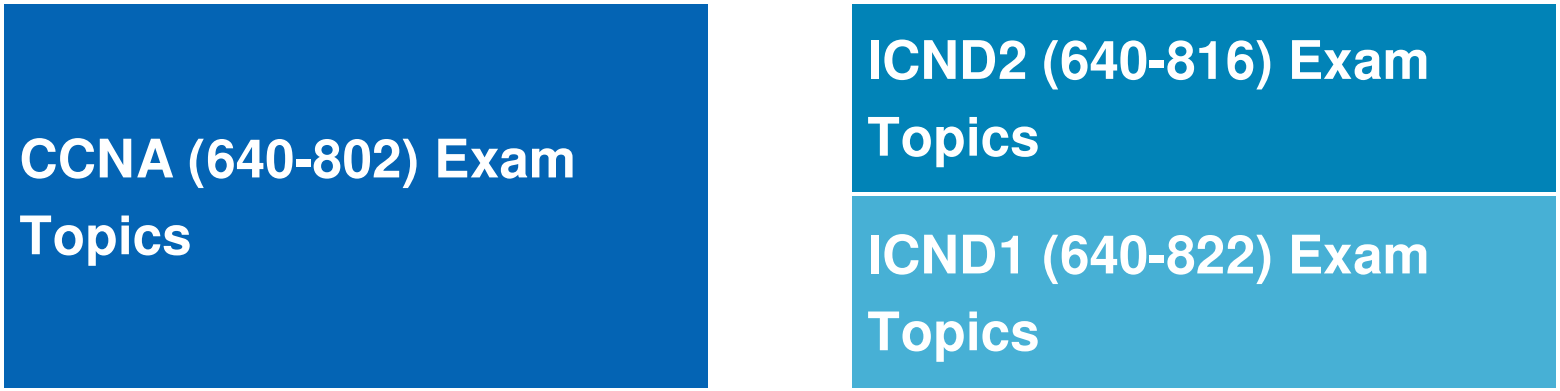
CCNA Exam (640-802)



- From an exam day perspective …

  You may see more ICND2 than ICND1, because some ICND2 skills require ICND1 skills plus more

  Example: An ICND2-level question using VLSM may also prove ICND1-level subnetting knowledge and ICND2-level subnetting knowledge

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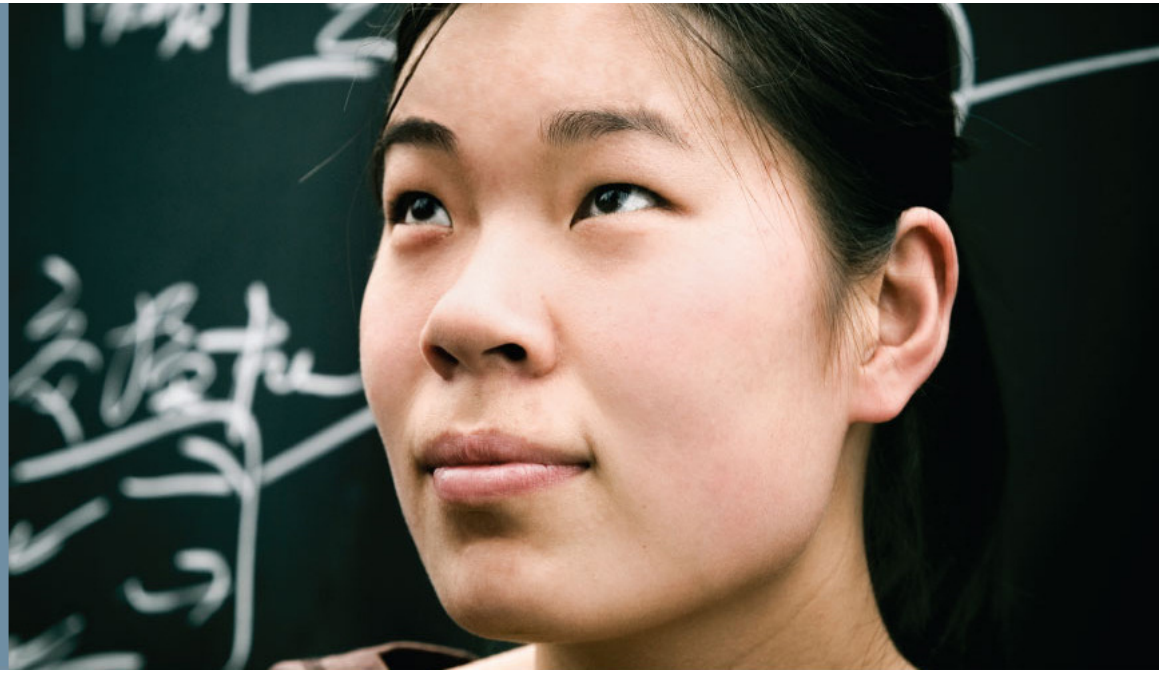
Study Resources



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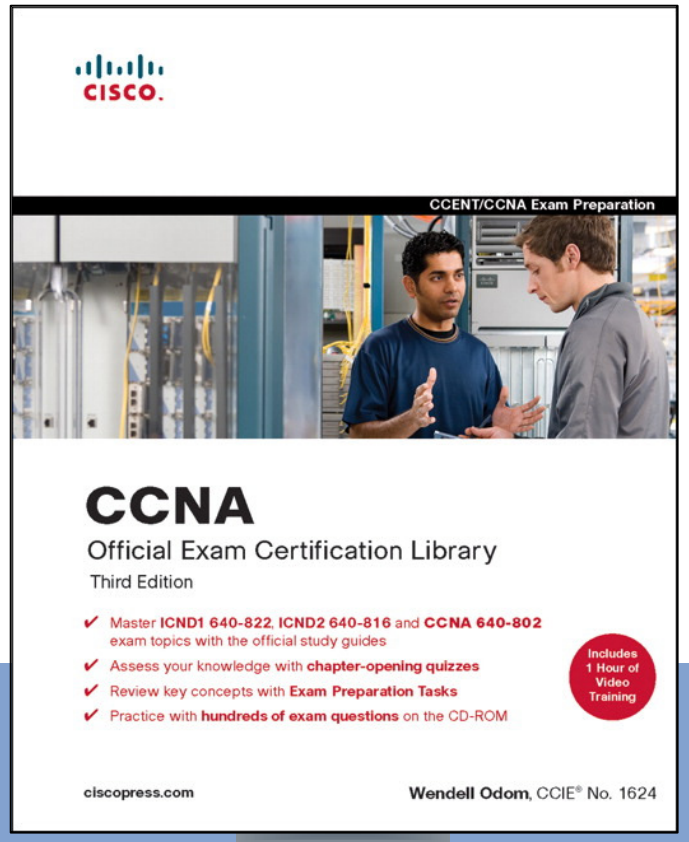
CCNA Exam: Recommended Reading



- *CCNA*

  Official Exam Certification Library (third edition)

  ISBN: 978-1-58720-183-7

- *CCNA*

  Preparation Library (7th edition)
  Second Edition

  ISBN: 978-1-58705-464-8

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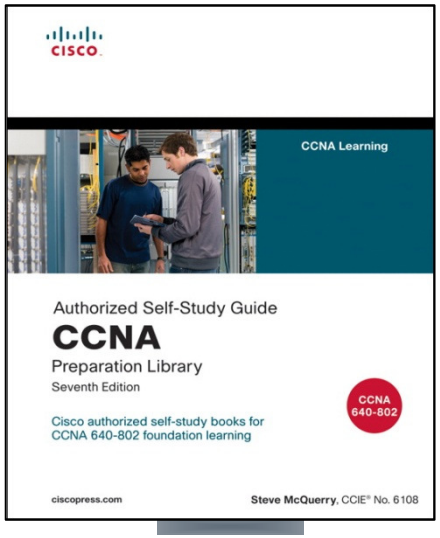
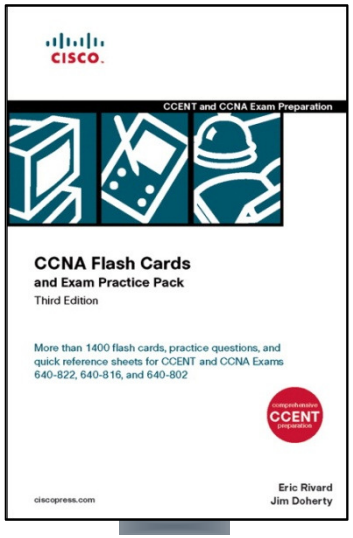
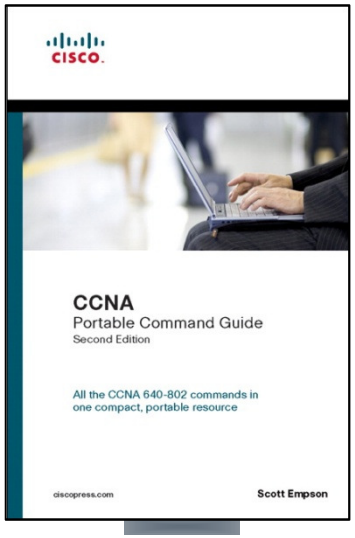
CCNA Exam: Recommended Reading







Video Learning and Lab Assistance

Foundation Learning

Test Review and Practice

Hands on Application

Available http://www.ciscopress.com

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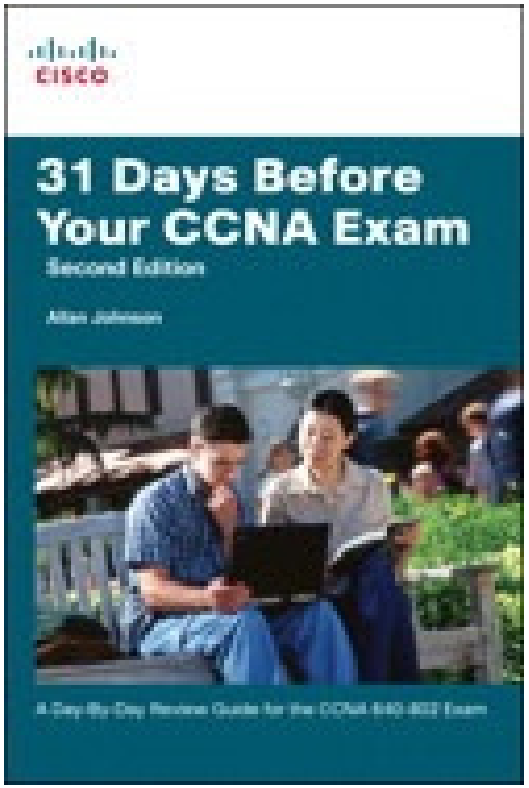
31 Days Before Your CCNA Exam

- By Allan Johnson (640-802)

ISBN -13: 978-1-58713-197-4
ISBN -10: 1-58713-197-8



CCNA Exam Checklist

Checklist for Days 31–22

Checkbox	Date	Objective
		Schedule to take the CCNA Exam at http://www.vue.com.
		Take at least one practice CCNA exam.
		Create a diagram of the layered models.
		Describe the details of sending an email from source to destination.
		Design, configure, and troubleshoot a basic switched network.
		Describe how Spanning-Tree Protocol (STP) operates.
		Design, configure, and troubleshoot a switched network that utilizes VTP, STP, and inter-VLAN routing.
		Read and review Days 31–22 in this book.

Checklist for Days 21–11

Checkbox	Date	Objective
		Take at least two practice CCNA exams.
		Design your own network requirements and then create an addressing scheme using a limited address space and your subnetting skills.
		Design, configure, and troubleshoot the DHCP service on a Cisco router.
		Describe the structure and operation of IPv6.
		Describe the various methods that a router can use to learn about and share knowledge of remote networks.
		Design, configure, and troubleshoot a three-router network to route successfully with only static and default ro
		Design, configure, and troubleshoot a three-router network with RIPv2, then EIGRP, then OSPF.
		Read and review Days 21—11 in this book.

Checklist for Days 10–5

Checkbox	Date	Objective
		Take an additional CCNA practice exam.
		Describe the basics of wireless LAN connectivity.
		Describe basic security threats and the methods used to mitigate them.
		Describe how access control lists work and the various types used by Cisco IOS Software.
		Describe how NAT improves operates.
		Design, configure, and troubleshoot a complex routed network that includes a WLAN, NAT, and ACL security.
		Read and review days 10–5 in this book

Checklist for Days 4–1

Checkbox	Date	Objective
		Describe the various WAN technologies currently covered by the CCNA exam.
		Describe how VPNs operate.
		Describe the concepts of PPP.
		Describe the concepts of Frame Relay.
		Configure the Day 1 network without using any references or the answer key.
		Attempt all elements of the CCNA Skills Challenge at the end of Day 1.
		Read and review Days 4–1 in this book.
		Visit the testing center and talk with the proctor at least two days before the exam.
		Eat a decent meal, watch a good movie, and get a good night's rest before the exam.

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31 Days Before Your CCNA Exam

CCNA Countdown Calendar

The lines after the countdown number allow you to add the actual calendar days for reference.

31
Network Devices, Components, and Diagrams

30
Network Models and Applications

29
Network Data Flow from End-to-End

28
Connecting Switches and Ethernet Technology

27
Network Segmentation and Switching Concepts

26
Basic Switch Configuration and Port Security

25
Verifying and Troubleshooting Basic Switch Configurations

24
Switching Technologies and VLAN Concepts

23
VLAN and Trunking Configuration and Troubleshooting

22
VTP and Inter-VLAN Routing Configuration and Troubleshooting

21
IPv4 Address Subnetting

20
Host Addressing, DHCP, and DNS

19
Basic IPv6 Concepts

18
Basic Routing Concepts

17
Connecting and Booting Routers

16
Basic Router Configuration and Verification

15
Managing Cisco IOS and Configuration Files

14
Static, Default, and RIP Routing

13
EIGRP Routing

12
OSPF Routing

11
Troubleshooting Routing

10
Wireless Standards, Components, and Security

9
Configuring and Troubleshooting Wireless Networks

8
Mitigating Security Threats and Best Practices

7
ACL Concepts and Configurations

6
Verifying and Troubleshooting ACL Implementations

5
NAT Concepts, Configuration, and Troubleshooting

4
WAN and VPN Technologies

3
PPP Configuration and Troubleshooting

2
Frame Relay Configuration and Troubleshooting

1
CCNA Skills Review and Practice

EXAM DAY
Time

Location

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Exam Question Formats

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Multiple Choice, Single Answer

- May test simple recall of pertinent facts
- May require analysis and understanding of complex scenarios
- If you click a 2nd answer, it automatically unchecks the previous answer

Which OSI model layer is concerned with routing?

Layer 1

Layer 3

Layer 5

Layer 7

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Multiple Choice, Multiple Answer

- Question states the number of right answers
- Exam engine reminds about too few, too many answers

Which cable in the campus LAN should be a crossover cable (Choose 2)?

SW1 – SW2

PC1 – SW2

AP1 – SW1

R1 – SW2

PC2 – PC3

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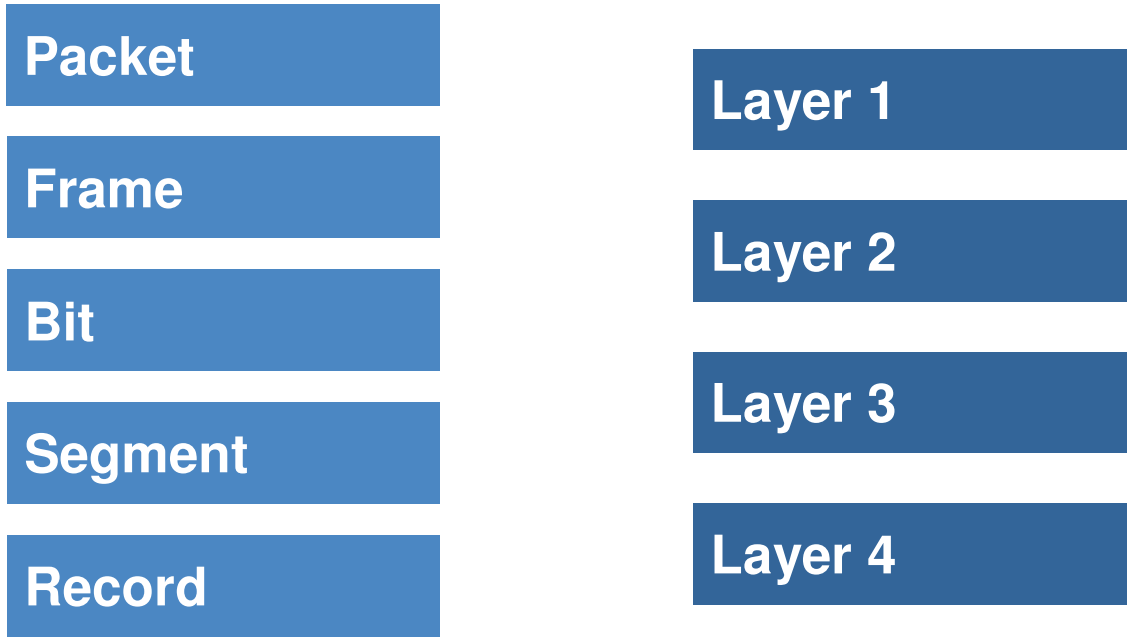
Drag-and-Drop

- List of items to be dragged on the left
- Drag to the boxes on the right

Click and drag the unit of information on the left to the OSI Layer to which it best corresponds on the right. Not all apply.



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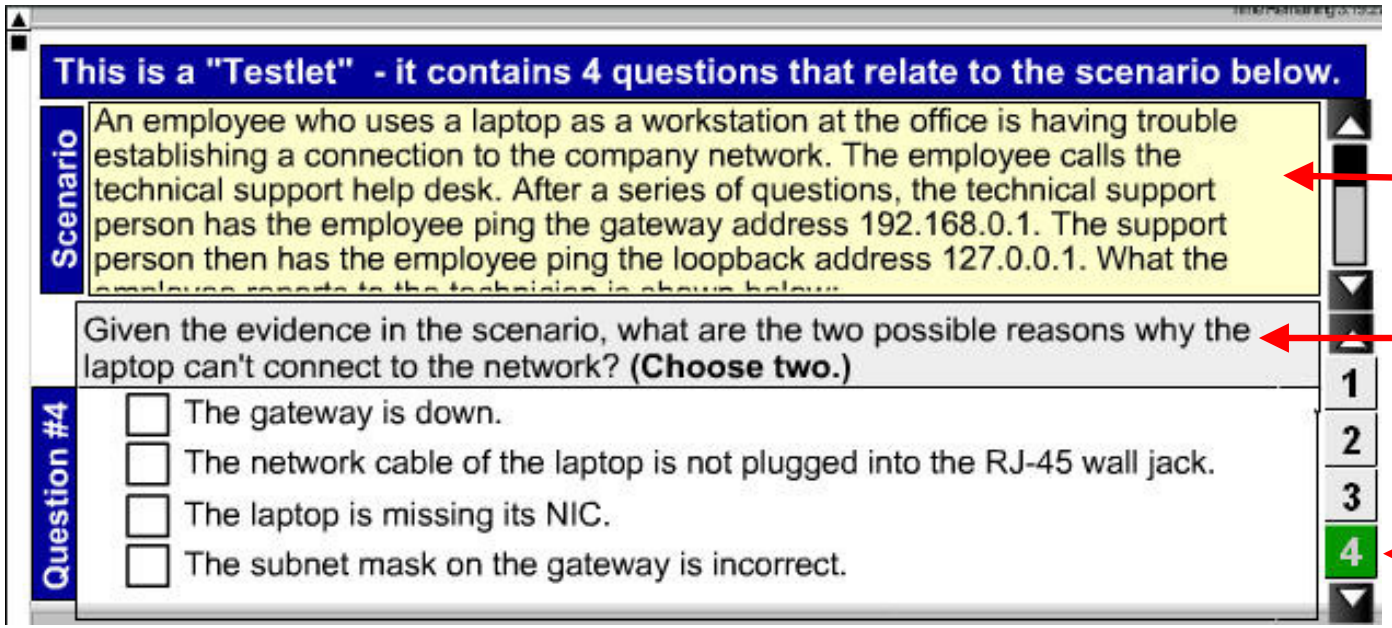
Testlet

- One general scenario
- Multiple different multiple-choice questions
- Can move around between the questions



Text of overall scenario

Text of each question here…

based on which question is clicked here

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Simulations (Sims)

- Problem Statement, with Goal
- Objective: Complete or Fix the Configuration
- Must Access and Use the CLI
- Click a PC icon to (virtually) Use an Emulator to Connect to Router/Switch
- Sims support:
  - Help (?)
  - Abbreviated commands
  - Tab key to complete commands/keywords

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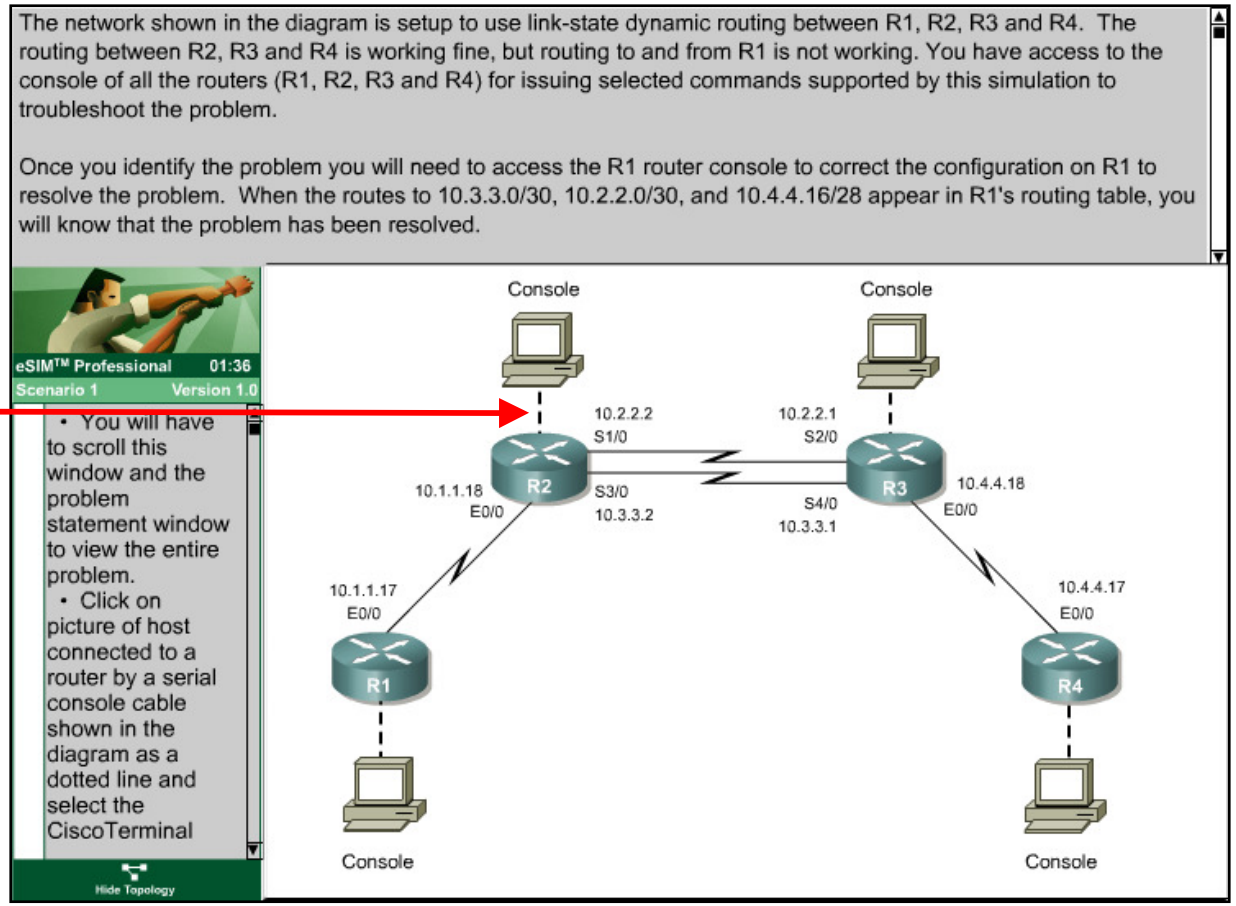
Sim Topology View

Problem Statement

Dashed Line Implies to Click this PC to reach R2's CLI



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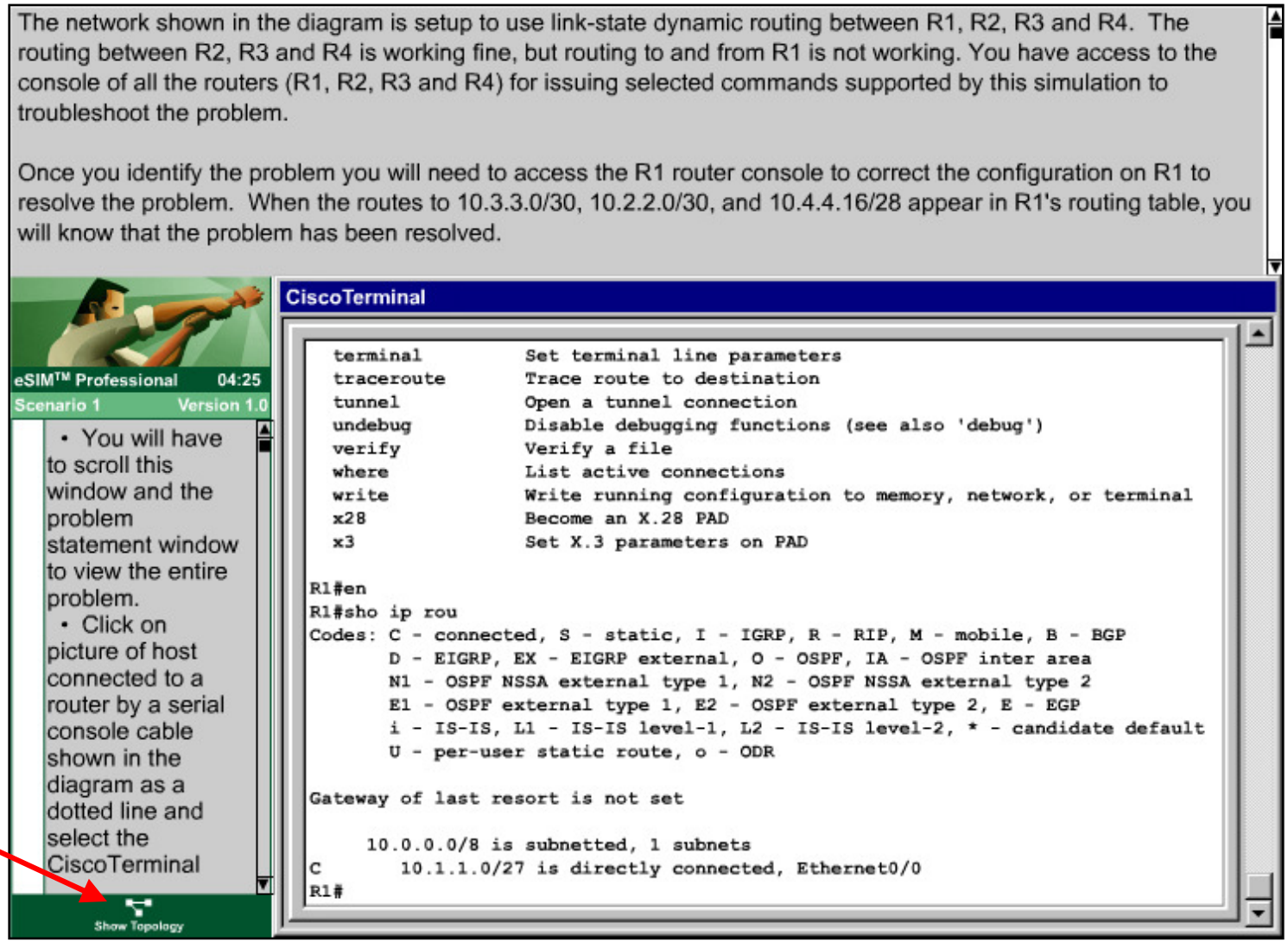
Sim With CLI Visible



Toggle Between CLI View and Topology View Here

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Simlet

- Like testlet, with multiple different MC questions
- Like sim, uses simulator
- Objective is to answer MC questions
- Typically, no configuration required

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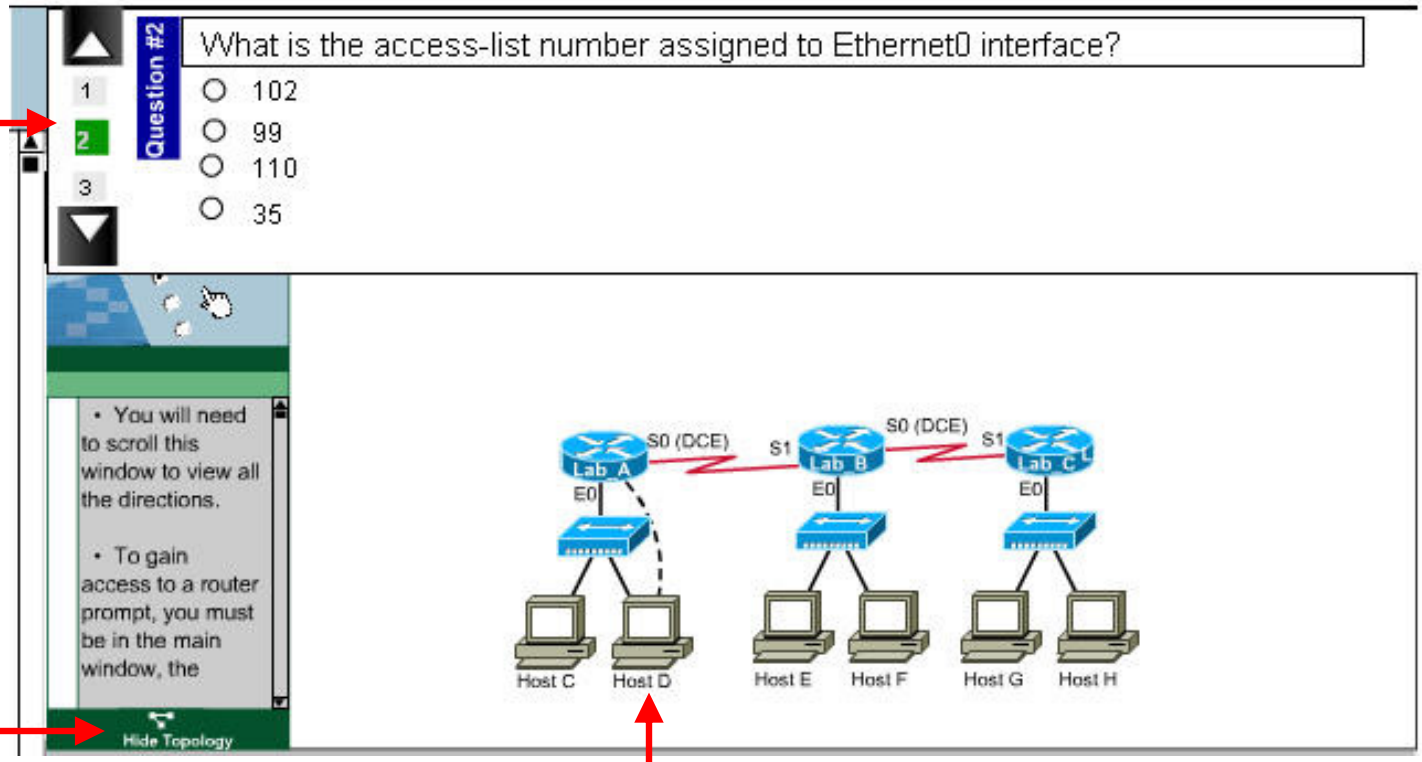
Simlet

Select Question Here

Toggle Between CLI View and Topology View Here



Dashed Line between Host D and router Lab A implies to Click Host D icon to reach Lab A's CLI

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Exam Taking Tips

Subtitle

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Tips: Multiple Choice Questions

- Look for the “best” answer; some answers may be good, but not “best”, so read all the answers
- Look for subtleties, for example:

  “Packet” implies layer 3, typically IP packet, routing, etc

  “RIP Version 2” implies classless routing protocol and implies both VLSM support and 2s formula (instead of 2s – 2 formula) for the number of subnets
- If you need to guess:

  Rule out as many answers as possible

  Your first impression is usually the better answer to guess

  There is no penalty for guessing

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Tips: Testlets

- Answer all questions—exam software will remind you before letting you move on
- You can move between questions in a single testlet
  - If confused by testlet question 1, look at question 2
  - When reading question X, go ahead and click answer(s), even if you are unsure, so you'll remember your first impressions
- Same general suggestions as MC questions

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Tips: Sims

- Sim questions are always answered by configuring something!
- The Exam Engine grades the running config, not the startup config
- Before exam day …

  Practice as much as you can (real gear, simulators, sample tests, read every configuration in books, repeat labs while in class, etc.)

  Use multiple sources for practice/review of configurations
- Exam day …

  Do what you can—partial credit!!!

  Start with “show running-config”

  There are no style points!

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Tips: Simlets

- Simlet questions—no need to change the config!
- You may not have visibility to the running config!
- Before exam day …
  - Stop and do "show" commands after each step—this emulates the status in Simlet questions
  - Use resources that emphasize and explain show command output
  - Use multiple sources for guidance in your hands-on practice
- Exam day …
  - Guess if you don't know! (no penalty)
  - If unsure, click your best guess now, to remember your first impressions
  - Read all questions, then use sim (personal preference)

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Router Simulation: Legends vs. Truth

1. **Legend**: You lose points if you use help "?"

   Truth: No penalty!

2. **Legend**: You have to save your configs even if the simulation does not specifically request saving

   Truth: Grading based on running-config

3. **Legend**: You lose points if you enter too many commands

   Truth: No penalty!

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Router Simulation: Legends vs. Truth (Cont.)

4. **Legend**: If you miss one little thing, you get 0 points on that Sim question

   Truth: Partial credit is given, so do as much as you can

5. **Legend**: You will fail the exam if you miss even one simulation question

   Truth: You can miss all available points on a sim question and still pass the exam

6. **Legend**: You should spend most of your time working on the simulations

   Truth: Sims do have greater weighting than one MC question, but do not spend most of your time — Recommendation 5 to 8 minutes

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Other Legends and Truths

1. **Legend**: The test is adaptive, e.g., if you miss a RIP question, you'll get more RIP questions

   Truth: The tests are not adaptive

2. **Legend**: My exam covered something not listed in the exam topics

   Truth 1: Exam Topics are "guidelines"; the exams may go beyond the exam topics, so you could see such a question

   Truth 2: More likely: the question was a sample item for possible future tests, and did not affect your score

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Cisco Avoids These Questions …

- Those that require the memorization of command syntax or interface/menus
- “Trick questions”
- Version-dependent questions, e.g., configure Cisco IOS vs. Cisco Cat IOS
- Subnetting questions that are ambiguous regarding whether to use the 2^s or $2^s – 2$ formula for the number of subnets

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Time Budget

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Time and Question Counts on the Exams

- The three exams state the following:

ICND1:	90 minutes	50–60 questions
ICND2:	75 minutes	45–55 questions
CCNA:	90 minutes	50–60 questions

- You learn your exam's question count as you begin the exam
- Look at the clock as you begin Sim and Simlet questions

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Time Budget: Short Version

- You need a way to answer the question:

  Am I using too much time per question so far?

- Time consumers: Sim, Simlet, and Testlet questions
- A quick calculation technique:

  Question weight:

  MCSA, MCMA: 1

  Sim, simlet, testlet: 6

  Multiply total weight by 1.2

  You get the **estimated** total number of minutes, or less, you should have taken so far

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Time Budget Example

- During your CCNA Exam
- After question 10, you want to check the remaining time
- You've had one Sim question, no Simlets/Testlets
- Calculation: 9 + 1x6 = 15 weight points
- 15 weight points = 15x1.2 = 18 minutes
- If actual time ≤ 18 minutes, you're doing fine on time

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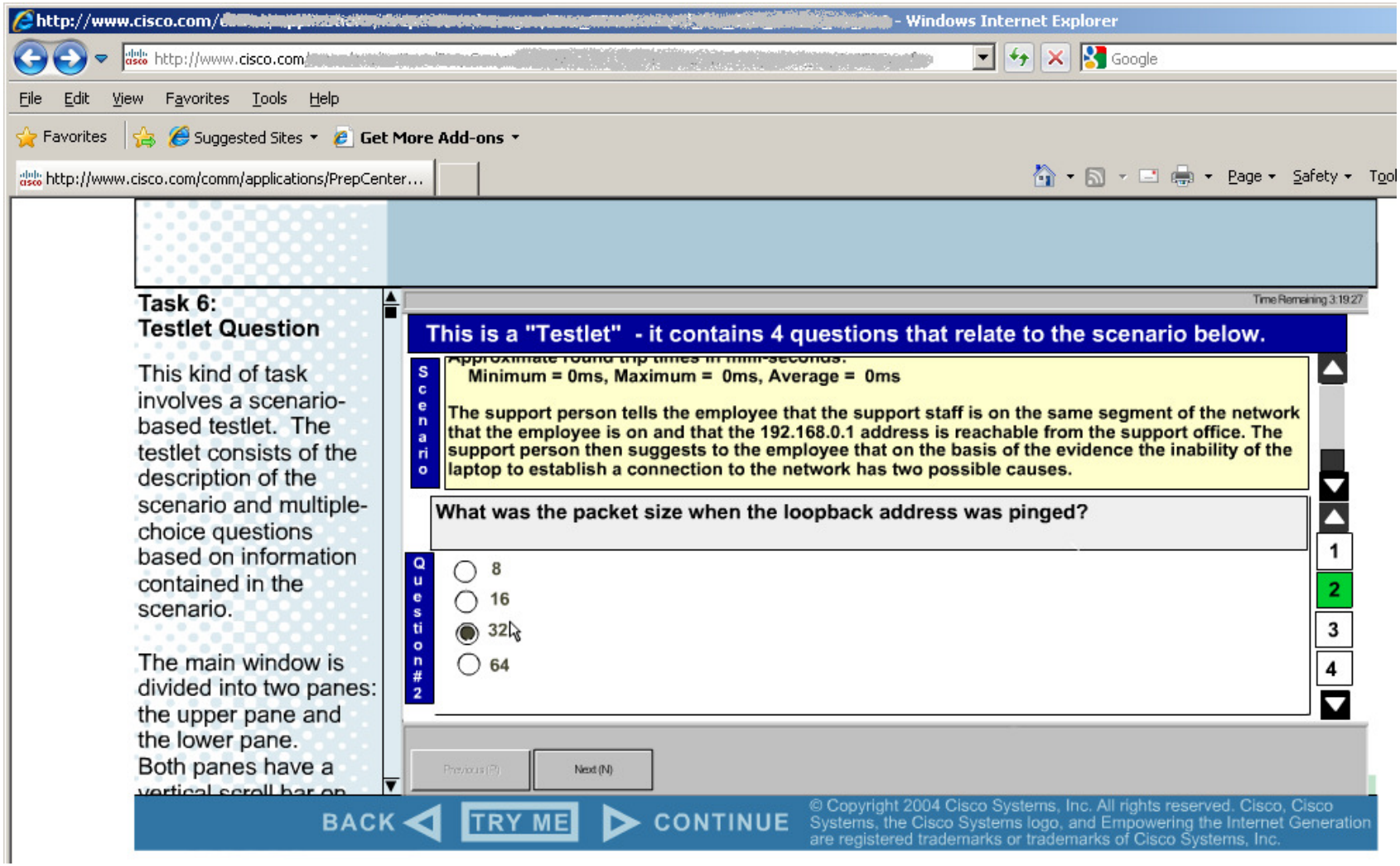
Question Snapshot



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Summary

Prepare!!!

Use Many Resources

Practice on Routers and Switches, PT, Simulators

Time Budget on Questions—Answer All of Them

Don't Be Intimidated by the Simulations

Give Yourself a Time Budget When You Hit a Simulation

Shows and Question Marks work

Answer as Much as You Can

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Golden Rules

- Schedule the exam at your best convenience
- Don’t attempt without preparation
- Have a good night sleep before the exam
- Have a light meal, don’t go on an empty or full stomach
- Be calm… Don’t panic! You’re neither the first nor the last
- Focus on questions
- Keep an eye on time, but don’t lose focus on questions!
- Don’t give up, always finish the exam
- All the best! ☺

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Q and A

You can find all course materials:
http://cisco.webex.com/meet/gbfuster

Password: tutorial

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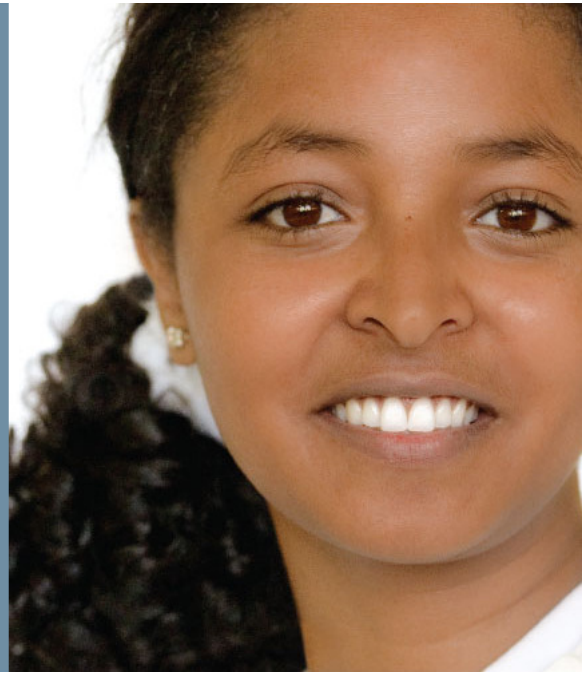
Homework 1:
Practice Exam and PT simulations



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Homework: Practice Exam1

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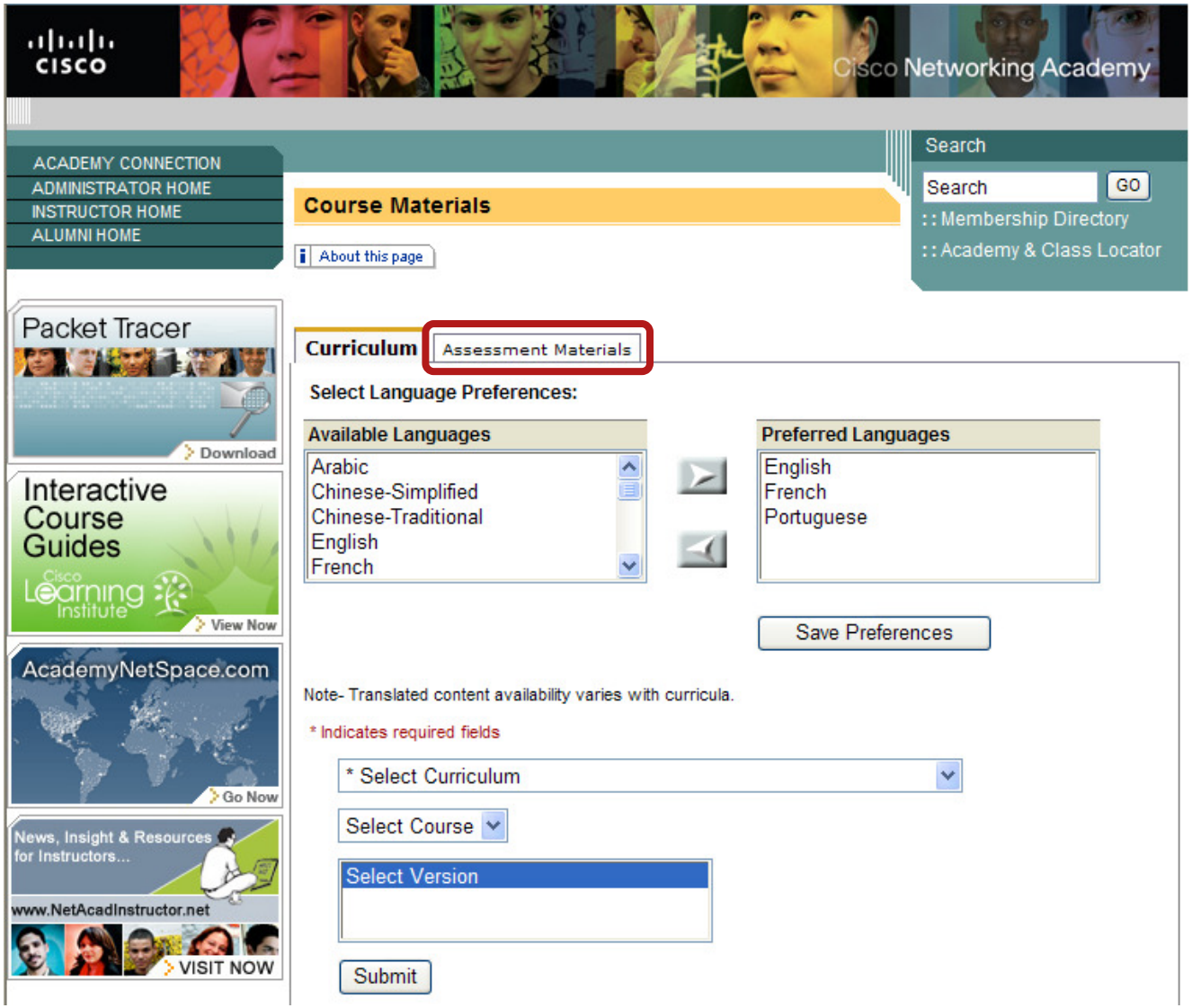
Homework: Practice Exam1



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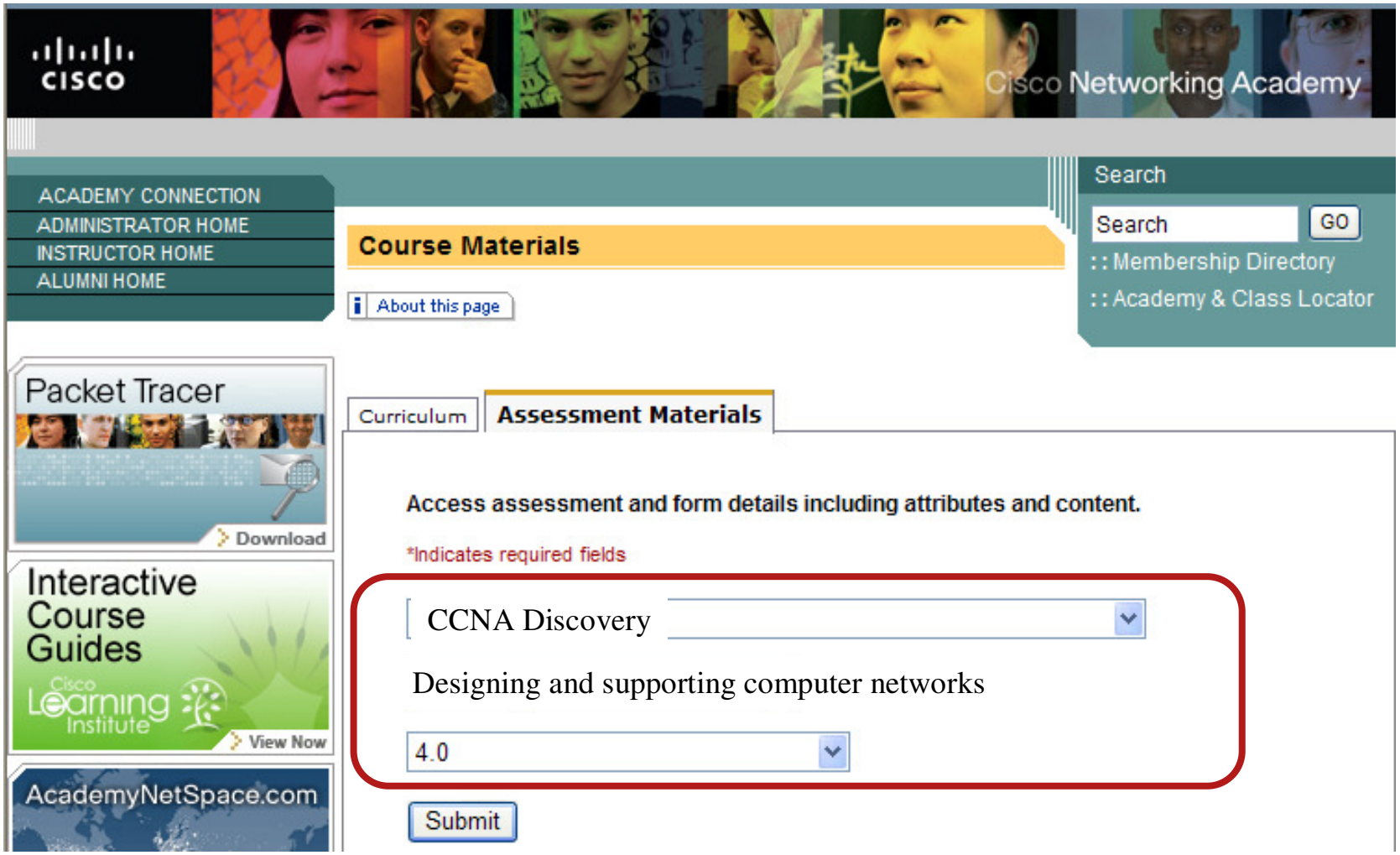
Homework: Practice Exam1



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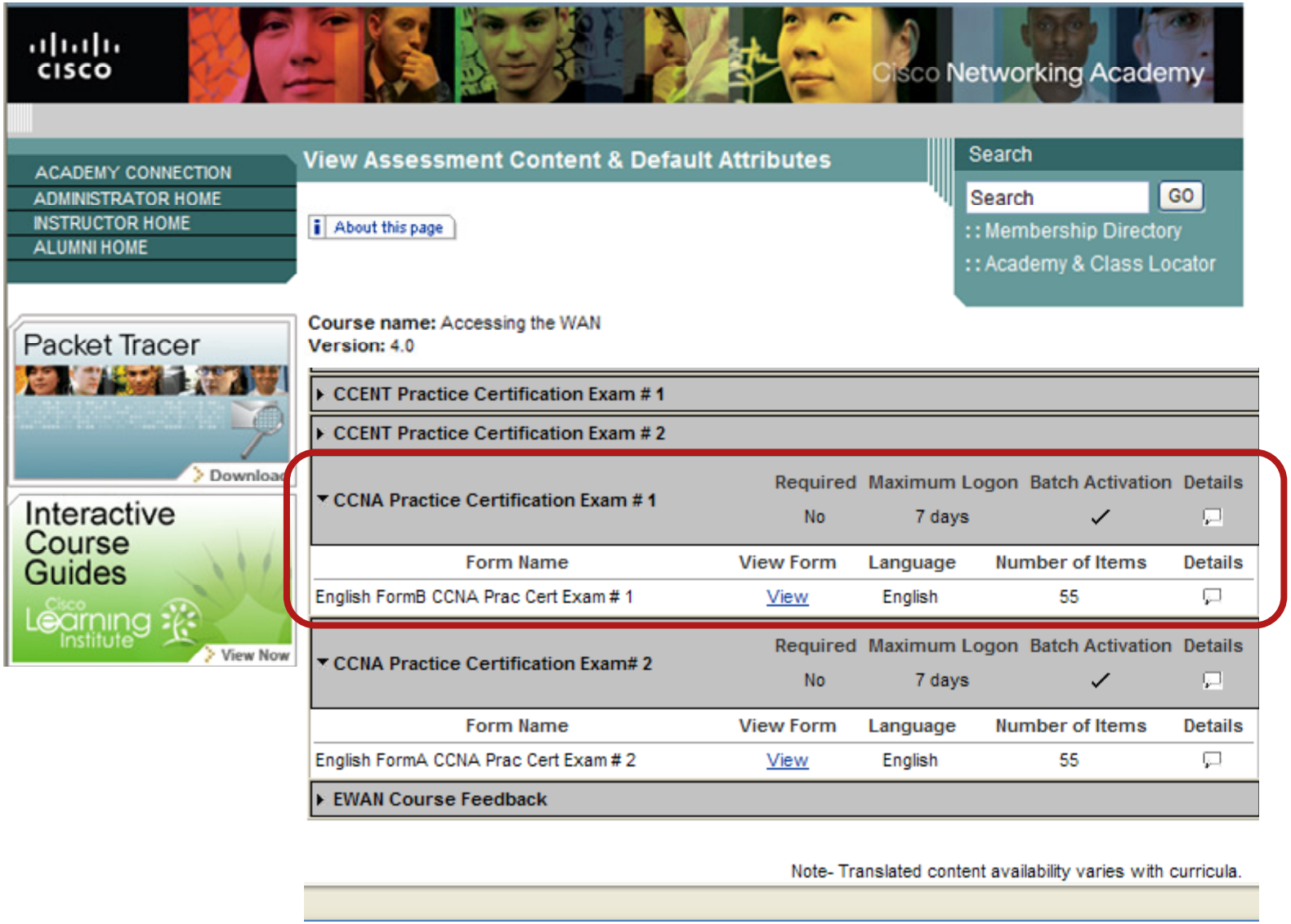
Homework: Practice Exam1



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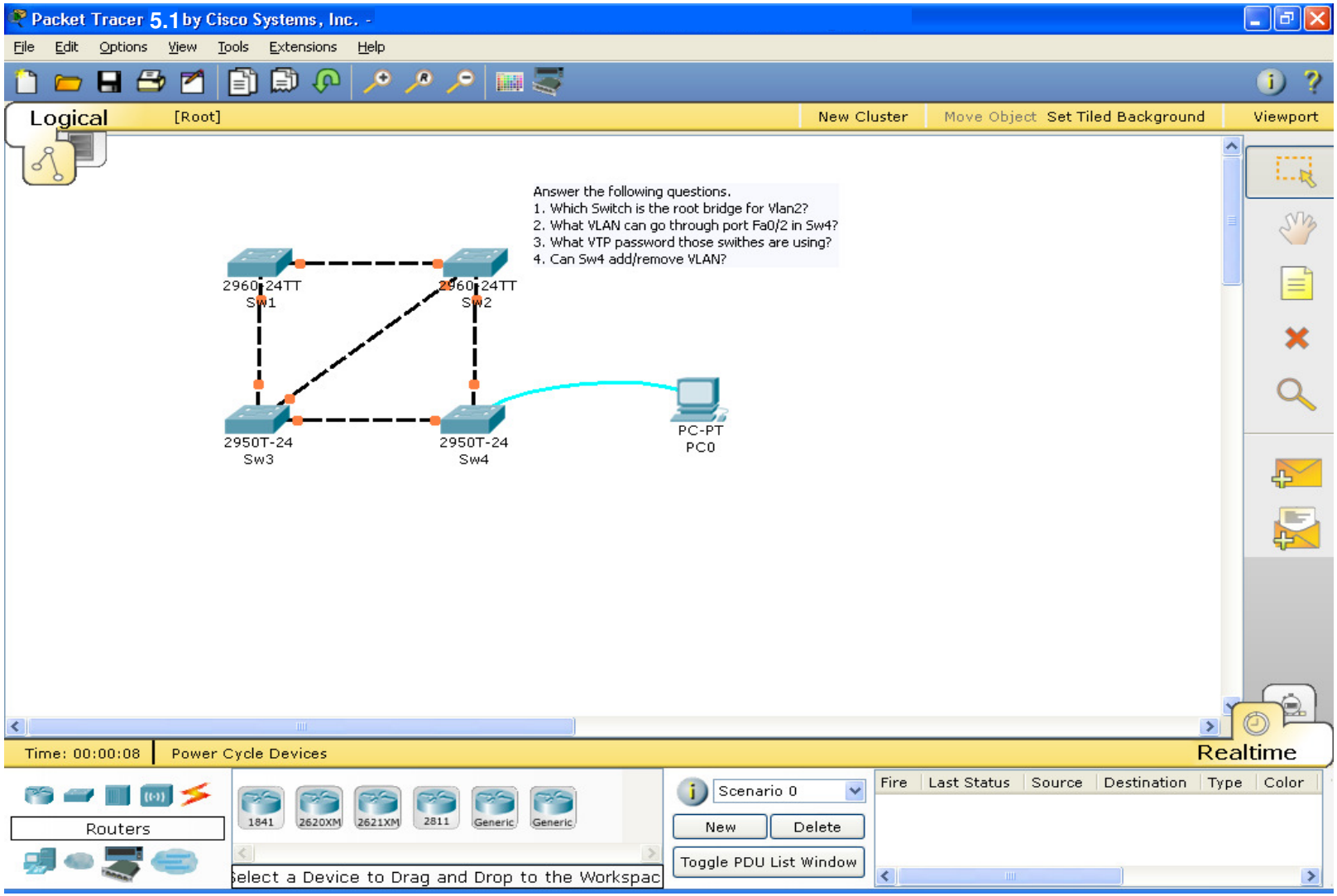
Homework: Practice PT v5.1 Simulations



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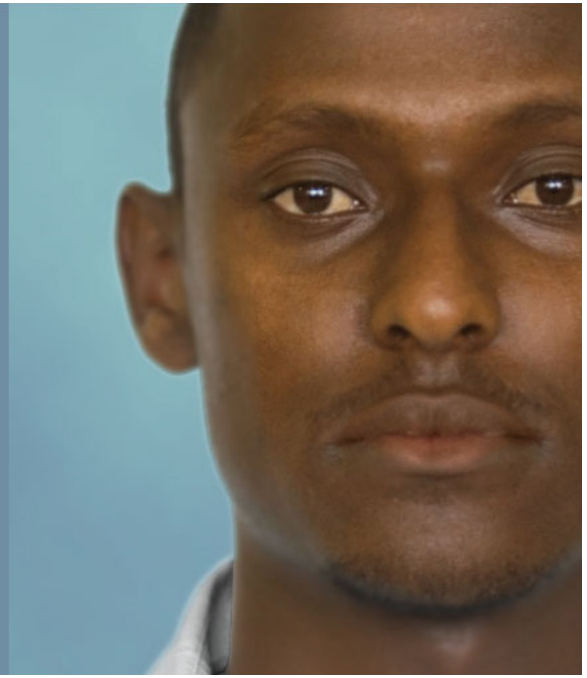
Q&A



You can find all course materials:
http://cisco.webex.com/meet/gbfuster

Password: tutorial

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