

Technical Update

Marc Khayat, CCIE #41288

makhayat@cisco.com

April 2015

**Educating the Architects of
the Internet of Everything**

Cisco Networking Academy



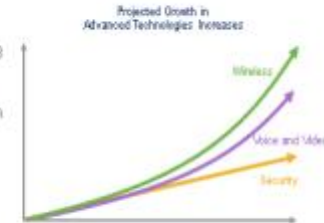
Market Landscape Analysis Summary

- Research from global employers confirms what we're hearing from students, instructors, and employers:
 - Growing skills gap for essential and emerging networking technologies – security, voice, wireless, data center, cloud, video
- Students must move beyond core networking skills to remain relevant and competitive
- Advanced ICT skills and soft skills are essential in enabling students to find a job in the ICT space
- Education trends increasingly shifting from in-classroom to virtual learning
- Need to help students prepare for future jobs that don't yet exist (IoE)

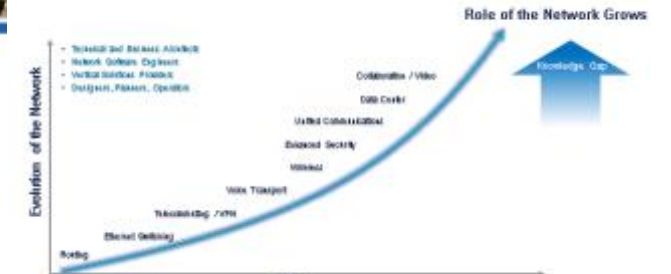
Networking Market and Job Specialization Growth

The demand for dedicated job roles is strong

- Security:**
 - 80 percent of companies expect dedicated roles in 2013
- Voice and Video:**
 - 69 percent expect dedicated voice and video job roles in 2013
- Wireless:**
 - In 2013, 66 percent expect dedicated job roles.



New Demands for Advanced Skills



IDC Networking Skills Gap Analysis

Fast Facts: Latam, Russia/CIS, MENA, APAC, China



Continuing Innovations in Teaching and Learning

Cisco Developed

- Instructor-led, core NetAcad ICT courses offered in partnership with schools and organizations around the world
- Self-enroll courses are self-paced, self-directed courses designed to complement our core offerings

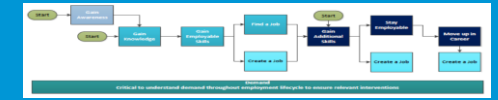
Community Developed

- Learning materials developed by NetAcad instructors partnering with Cisco
- Shared with the entire global NetAcad community to provide a way for instructors to expose students to some essential and emerging technology topics
- All instructors can open/teach classes using this supplemental content

Partner Developed

- Relevant content developed by a third party that aligns with our desire to increase employability
- Enables faster time to market
- Expands learning opportunities for our students with additional technology and soft skills courses

Focus on Employment: Gain Knowledge and Employable Skills



Networking & Technology

OS & IT

Networking

Security

Technology

Packet Tracer

Internet of Everything

Entrepreneurship

Get Connected

IT Essentials

NDG Linux Essentials

NDG Introduction to Linux I

NDG Introduction to Linux II

CCNA Routing & Switching (1-4)

CCNP Routing & Switching (1-3)

Networking Essentials

Intro to Cybersecurity

CCNA Security

Voice Primer

Cloud Primer

Collaboration Primer

Mobility Series: Wireless Tech Standards

Cisco Packet Tracer (PT)

Packet Tracer Know How

PT Mobile Android

Intro2IoE Podcast

Introduction to the Internet of Everything

IoE: Connecting Data

IoE: Connecting People & Process

IoE: Connecting Things

Smart Grid

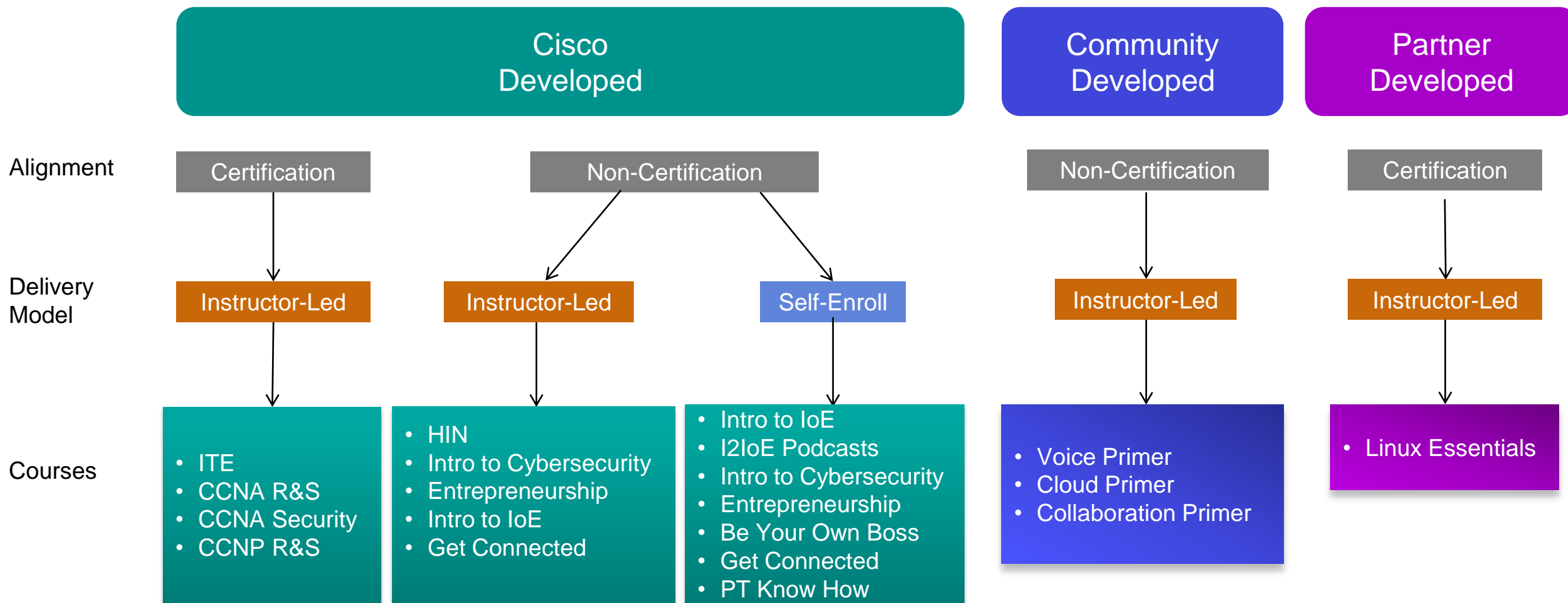
Entrepreneurship

Be Your Own Boss

- Cisco Developed Course
- Community Developed Content
- Partner Developed Course
- Cisco Software
- Planned

- Self-Enroll Option
- Podcast
- Certification Alignment
- Linux Certificate
- Packet Tracer Activities

NetAcad Product Portfolio: Course Delivery



Overview of the New Courses



Entrepreneurship

DESCRIPTION

- Helps students develop an entrepreneurial mindset
- Teaches skills such as business planning, negotiation, financial literacy, and problem solving
- Content organized into 7 modules that include practice activities and quizzes to test understanding

FEATURES

- Students can self-enroll, or instructors can teach this course in their classrooms
- Estimated time to complete: 10-15 hours

TARGET AUDIENCE

- For students who want an introduction to an entrepreneurial mindset and business skills

AVAILABILITY

- Currently available in English, Arabic, Chinese and Spanish
- Self-enroll and instructor led

The screenshot displays the Cisco Networking Academy interface for the 'Entrepreneurship' course. The page is titled 'Entrepreneurship Is Interactive'. On the left, there is a sidebar with a 'Course Introduction' section. The main content area is divided into four sections: 'Audio', 'Video', 'Interactive Activities', and 'Labs'. The 'Audio' section shows a group of people in a meeting. The 'Video' section shows a man speaking. The 'Interactive Activities' section shows a table with columns for 'Sales and Marketing', 'Labs', and 'General and Administration'. The 'Labs' section shows a man working at a computer. The interface is clean and professional, with a blue and white color scheme.

Be Your Own Boss Technopreneur Series

DESCRIPTION

- Provides tips and advice to launch a successful tech business
- Technopreneurs share lessons learned and success stories
- Complements the NetAcad Entrepreneurship course

FEATURES

- Eight 1-hr video recordings of instructional content (15 mins) and experience-sharing (45mins) for each module
- 1 quiz and 1 survey per module
- Estimated time to complete: 1 hour/module, 8 hours for series

TARGET AUDIENCE

- Students interested in owning their own tech businesses
- Entrepreneurship course students seeking insights and advice
- No previous knowledge required

AVAILABILITY

- Language: English
- Self-enroll course in Cisco NetSpace
- 4 modules now available



Introduction to Cybersecurity

DESCRIPTION

- Introduces the importance of cybersecurity and current trends in industry
- Content organized in 8 modules that include presentations and panel discussions with industry experts

FEATURES

- Activities, videos and additional resources for students to explore
- Assessments include a pre-test, 8 quizzes, 1 final exam
- Students can self-enroll
- Estimated time to complete: 20 hours

TARGET AUDIENCE

- Introductory course for students interested in and introduction to cybersecurity and learning about the trends of cybersecurity in the market today
- No previous knowledge required

AVAILABILITY

- Currently available in English
- Self-enroll and instructor-led



Introduction to the Internet of Everything (IoE)

DESCRIPTION

- Introduces the concepts and challenges of the transformational IoE economy
- Broad focus, not aligned to an industry vertical or certification

FEATURES

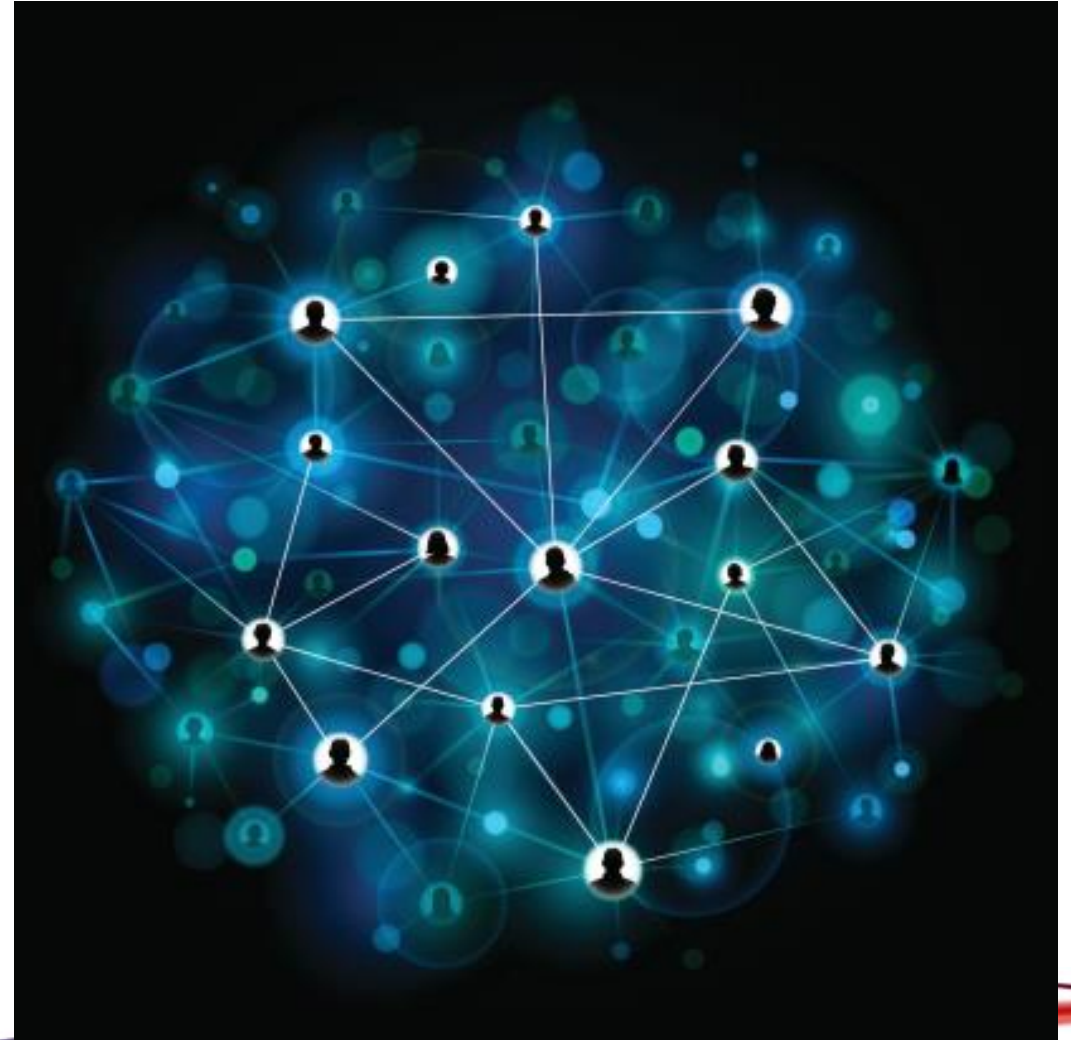
- Five modules of interactive instructional content featuring IoE experts
- Activities, videos, and simulation experiences
- Assessments include a pre-test, module quizzes, and final exam
- Class duration: 6 weeks
- Estimated time to complete: 15-20 hours
- No prerequisites

TARGET AUDIENCE

- Self-directed learners who want to understand what IoE means for them
- Self-directed learners who want to leverage their technical knowledge into IOE-related functions in the workplace

AVAILABILITY

- Available in English, Chinese, French, Japanese, Br. Portuguese, Russian, Spanish.
- Self-enroll and instructor-led



“Introduction to IoE” - The Podcast

DESCRIPTION

- Is an overview of the Cisco Networking Academy’s online course titled “Introduction to the Internet of Everything”. It is designed for busy individuals who are interested in a discussion about the Internet of Everything and its impact on the way we live, work, play, and learn
- First Podcast in NetAcad - First Cisco Podcast on IoE

FEATURES

- Five modules of short duration 20-40 minutes
- Informal tone and engaging conversations “easy to listen”
- Can be used as door openers for Intro to IoE and other courses.

TARGET AUDIENCE

- Students or busy individual who are curious to learn more about IoE Technologies.
- Spending chunks of 20’ while commuting.
- No previous knowledge required

AVAILABILITY

- Language: English
- Accessible: NetAcad and Public (soon).

Introduction to the Internet of Everything (I2IoE) Summary Podcast

The I2IoE Podcast Series is an overview of the Cisco Networking Academy’s online course titled “Introduction to the Internet of Everything” designed for busy individuals who are interested in a discussion about the Internet of Everything and learn. In addition, Networking Academy students enrolled in the online course are encouraged to explore additional online content.

Module 1: What is the IoE? (27 min) [Download](#)

In this podcast, the panel discusses what makes up the Internet of Everything (IoE). The IoE connects things—that interact to help people improve their quality of life. As we connect more things in our lives, the things we provide will help people make better decisions and improve processes that create more value.

Module 2: Why is my Alarm Clock Talking to my Coffee Pot? (27 min) [Download](#)

In this podcast, the panel talks about the devices that are all around us connecting to the Cloud. A common protocol, the Internet Protocol (IP), to communicate with each other over a network. As more sensors, actuators, and “things” become connected, IPv6 will provide unique growth of these devices and allow them to connect directly to the Internet. Also, Fog computing collects data close to the source for real-time processing.

Looking for more information? Check out these links:

- <https://www.apple.com/appletv/>
- <http://www.xbox.com>
- <http://www.nest.com>
- <http://www.zigbee.org>
- <http://www.teslamotors.com>
- <http://www.arduino.cc>
- <http://www.raspberrypi.org>

Get Connected

DESCRIPTION

- Introductory/Pre-ITE course
- Five modules that include illustrations and narrations guiding students through each topic
- Students can self-enroll or instructors can teach this course in their classrooms

FEATURES

- Activities and videos for students to explore
- Assessments include quizzes, 1 final exam
- Estimated time to complete: 30 hours

TARGET AUDIENCE

- Introductory course for students interested in learning the basics of IT
- No previous knowledge required

AVAILABILITY

- Language: English, Spanish and Brazilian Portuguese.
- Self-enroll and instructor-led



Packet Tracer Know How

DESCRIPTION

- Designed for new users of Packet Tracer for self study and familiarization of Packet Tracer

FEATURES

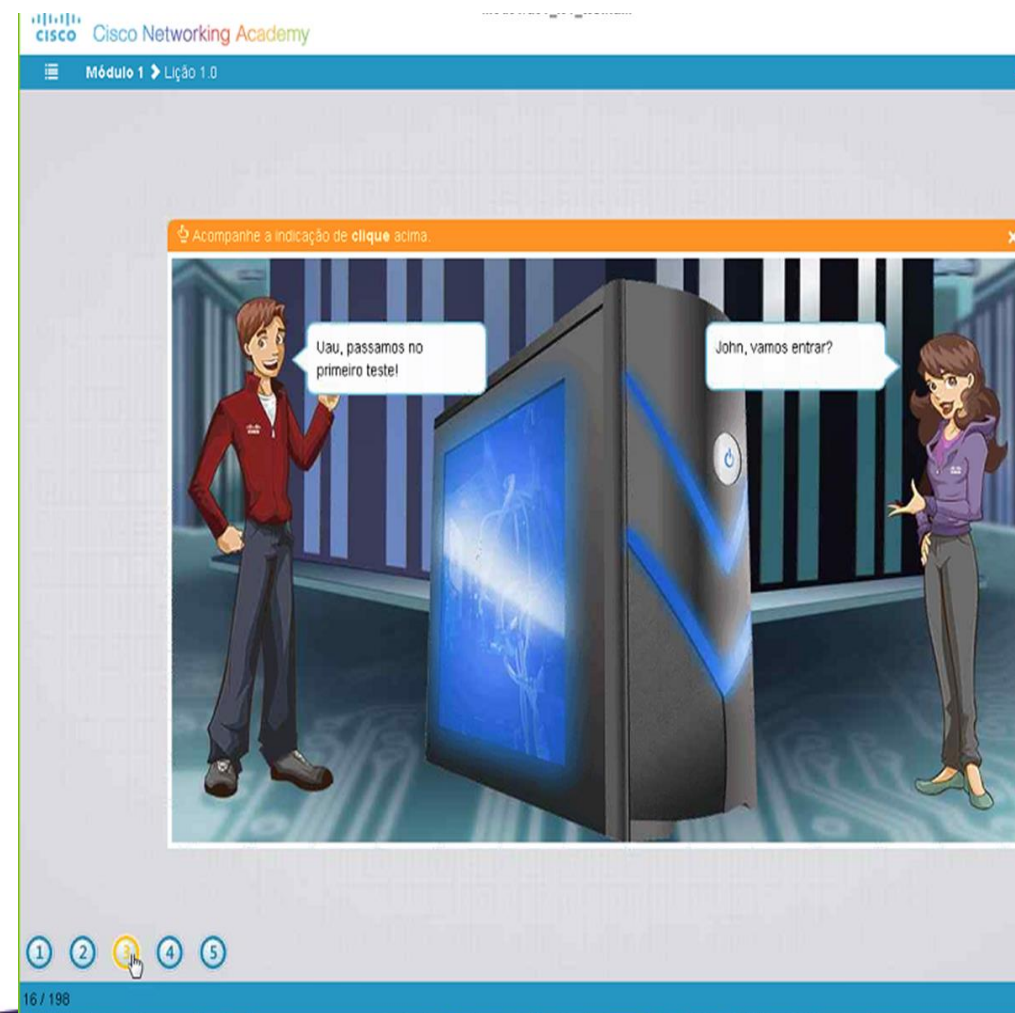
- 3 chapters, 1 hands-on activity, 1 quiz and a survey
- Duration: 1 hour
- More to come

TARGET AUDIENCE

- New NetAcad students wishing to learn more about Cisco Packet Tracer
- No previous knowledge required

AVAILABILITY

- Language: English
- Self-enroll



Voice Primer

DESCRIPTION

- Understand common voice terminology and concepts
- Understand the key advantages of a voice over IP (VoIP) system over a traditional PBX

FEATURES

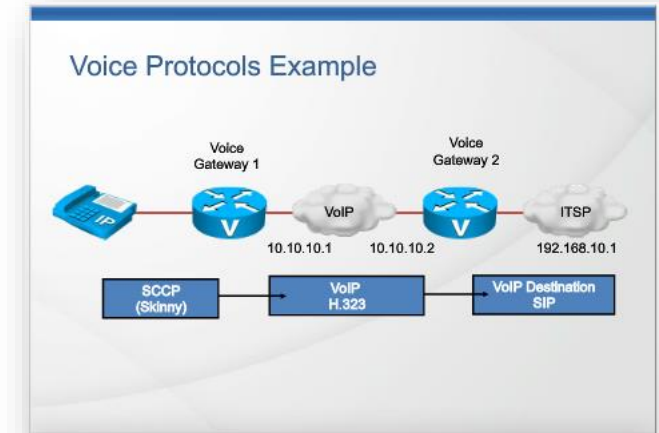
- Use Packet Tracer to configure Cisco Unified Communications Manager Express (CUCME) in a basic two site topology
- Two modules that include instructional slides and labs
- Estimated time to complete: 8 hours

TARGET AUDIENCE

- Supplemental content instructors can add to networking courses
- Recommended knowledge: CCENT-level skills

AVAILABILITY

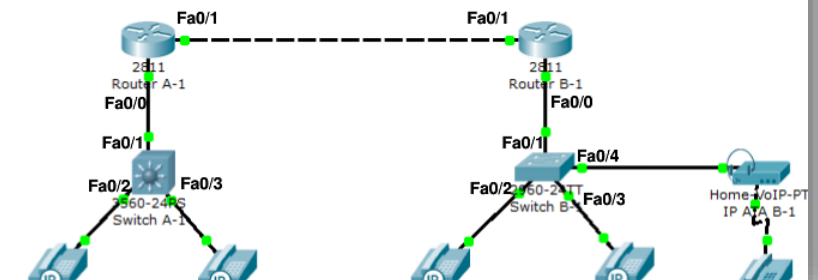
- Language: English
- Instructor-led



CCNA Voice Primer Materials

Voice Primer Packet Tracer Lab

Topology



Collaboration Primer

DESCRIPTION

- Telephony concepts and collaboration technologies at a fundamental level
- Implement Voice over IP technologies on routers and CUCM server
- Introduce Mobile Applications and Tele-Presence

FEATURES

- Include multimedia, labs and formative assessments
- Estimated time to complete: 60 hours
- Recommended knowledge: CCENT-level skills

TARGET AUDIENCE

- Instructors who want to supplement their networking courses with collaboration technology

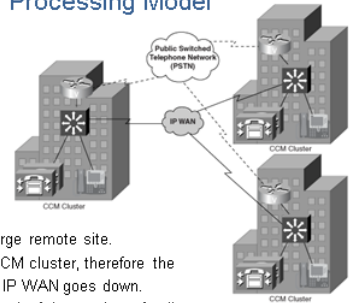
AVAILABILITY

- Available in English
- Instructor-led

Mobile Applications Diversified Mobility



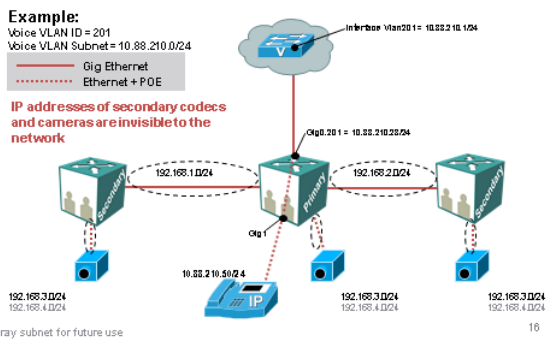
Distributed Call Processing Model



- For companies with large remote site.
- Each site has its own CM cluster, therefore the phones not affected if IP WAN goes down.
- Gatekeeper to keep track of the number of calls being placed between sites and can deny additional calls if capacity is reached.

Cisco TelePresence System

Internal IP Addressing



Cloud Primer

DESCRIPTION

- Introduces cloud computing with references to the underlying technologies in consolidation, virtualization and automation
- Understand the benefits and importance of different cloud computing technologies

FEATURES

- Four modules that include videos, case studies, references and instructional slides
- Estimated time to complete: 40 hours

TARGET AUDIENCE

- Supplemental content instructors can add to networking courses
- Recommended knowledge: CCENT-level skills

AVAILABILITY

- Language: English
- Instructor-led

Cisco Cloud Computing - Data Centre Strategy, Architecture & Solutions.pdf

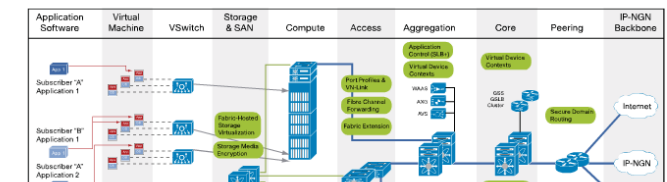
[Download Cisco Cloud Computing - Data Centre Strategy, Architecture & Solutions.pdf \(877.8 KB\)](#)

Scribd Download Print Fullscreen

White Paper

Cisco Cloud Data Center Technology Architecture

Figure 3. Cisco Cloud Data Center Technology Architecture



Cisco Data Center Architecture : The Power to Say Yes



Linux Essentials

DESCRIPTION

- Curriculum developed by Network Development Group (NDG)
- Instructor-led online curriculum
- 16 content modules
- Aligns with Linux Professional Institute (LPI) Linux Essentials Certificate

FEATURES

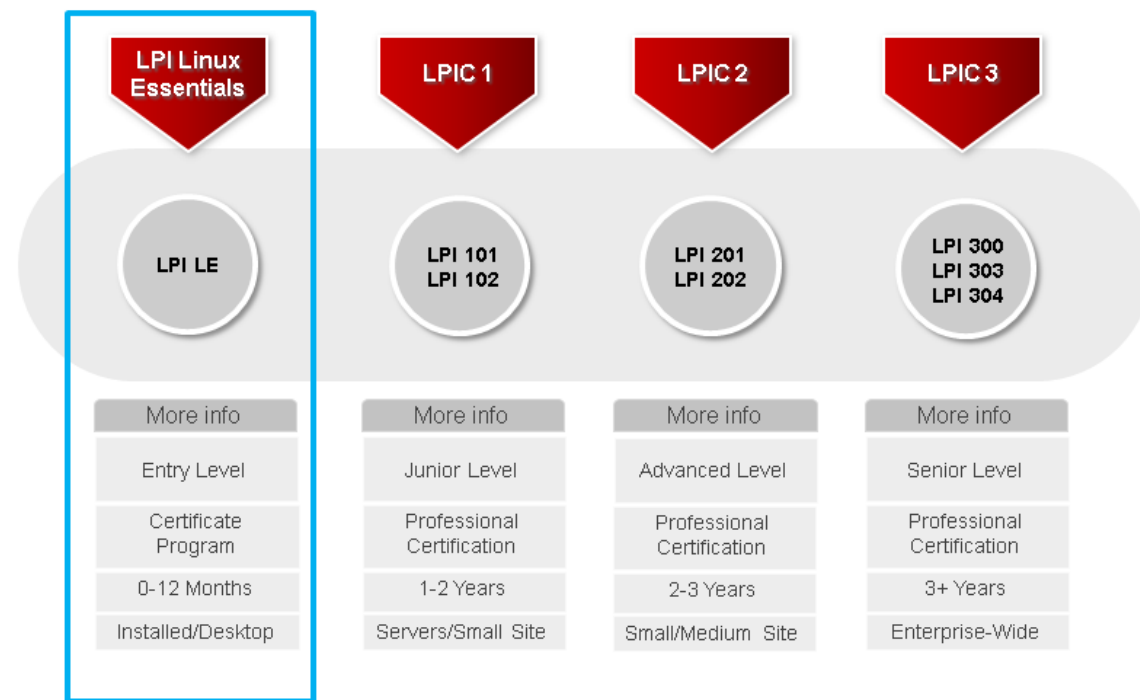
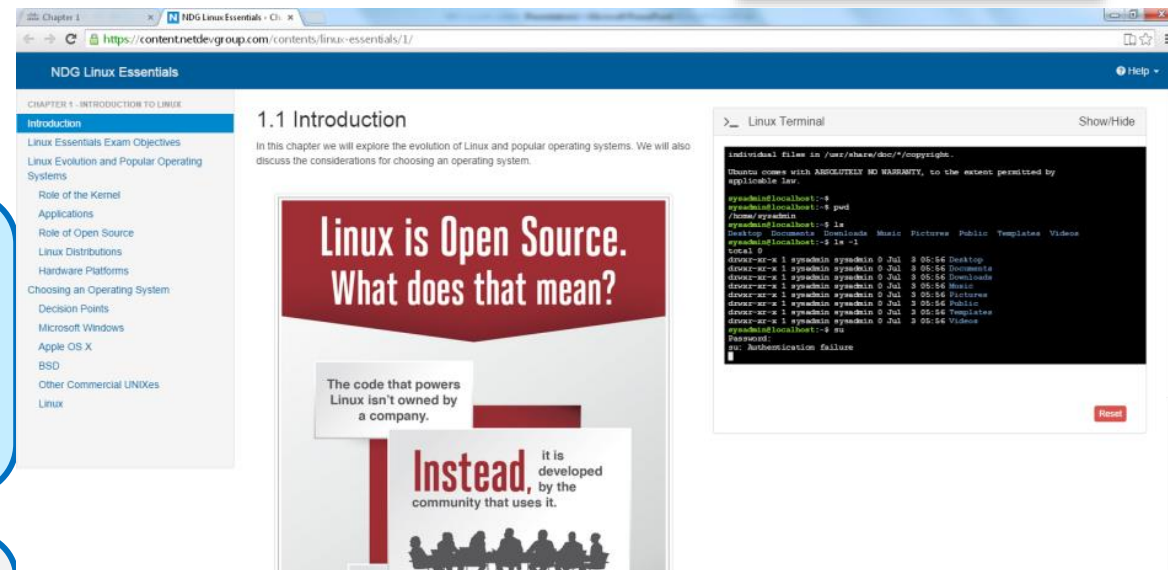
- Include practice lab activities and assessments to test understanding
- Virtual machine throughout the course
- Estimated time to complete: 70 hours
- 20% discount on LE certificate

TARGET AUDIENCE

- Targeted to entry-level Linux professionals
- No previous knowledge required

AVAILABILITY

- Language: English
- Instructor-led



Core NetAcad Offerings



Alignment to Industry Certifications

Courses Align with Globally Recognized Certifications

CompTIA
A+

CCENT

CCNA R&S

CCNA
Security

CCNP R&S

IT
Essentials

CCNA R&S
1-2

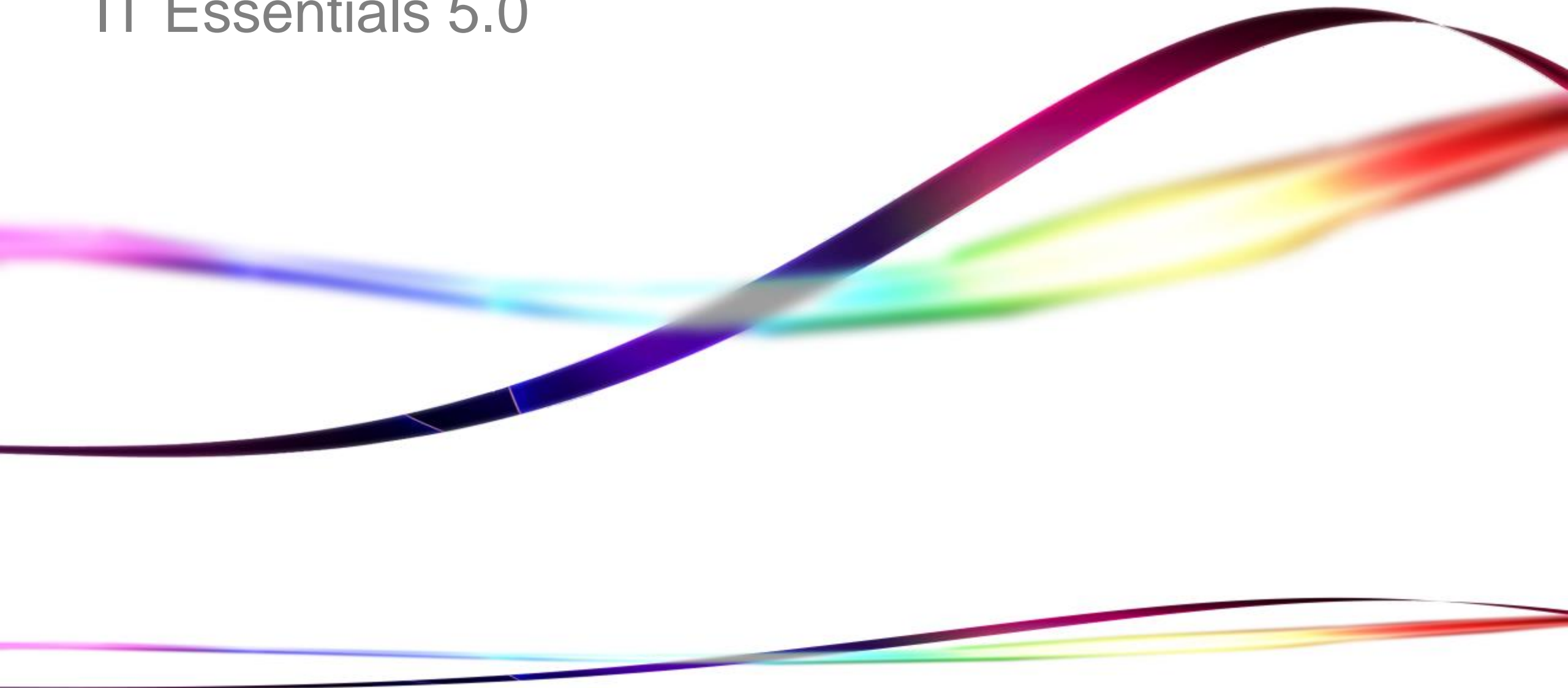
CCNA R&S
3-4

CCNA
Security

CCNP R&S

Student Networking Knowledge and Skills

IT Essentials 5.0



IT Essentials 5.0

- A comprehensive overview of computer hardware and software with an introduction to advanced concepts
- Designed for students pursuing careers in IT who want practical knowledge of how different types of computing devices work
- Interactive learning experience with hands-on labs, assessments that provide immediate diagnostic feedback, Cisco Packet Tracer simulation activities, and virtual learning tools
- CompTIA Approved Quality Content; helps students prepare for latest CompTIA A+ certification exams
- Available in Cisco NetSpace with improved learning and teaching capabilities



Course Design

- 12 chapters
- Based on Windows 7
- New mobile device content
- New client side virtualization skills
- Increased networking and security skills
- Updated skills review exam
- Translated by Cisco and the community to many languages

CCNA Routing and Switching 5.0



Importance of CCNA Certificate

- A CCNA can help technology pros better familiarize themselves with the network OS's fundamentals, while simultaneously strengthening their resume. critical component of enterprise systems.
- iPhones, Blackberries, iPads, Androids, Kindles, etc., there is trend towards moving away from traditional PCs, and Cisco Certified Network Associate certification is highly valued in 2013. Many senior level system administrator and IT Manager positions all highlight this certification.
- This is an ISO Accredited course. The CCNA will provide you with the skills to configure routed and switched networks, and the principles of operation and troubleshooting.
- Cisco Certified Network Professional (CCNP) certification is number 9 on the list of highest paying technical certifications. The average annual salary reported by CCNP holders is \$84,161.

ISO Accreditation
for Global
Consistency

[Home / 10 Things](#)

10 Things

The 10 best IT certifications: 2012

By Erik Eckel | March 26, 2012, 6:34 AM PDT

The 5 best IT certifications of 2013



[RETURN TO BLOG HOME](#)

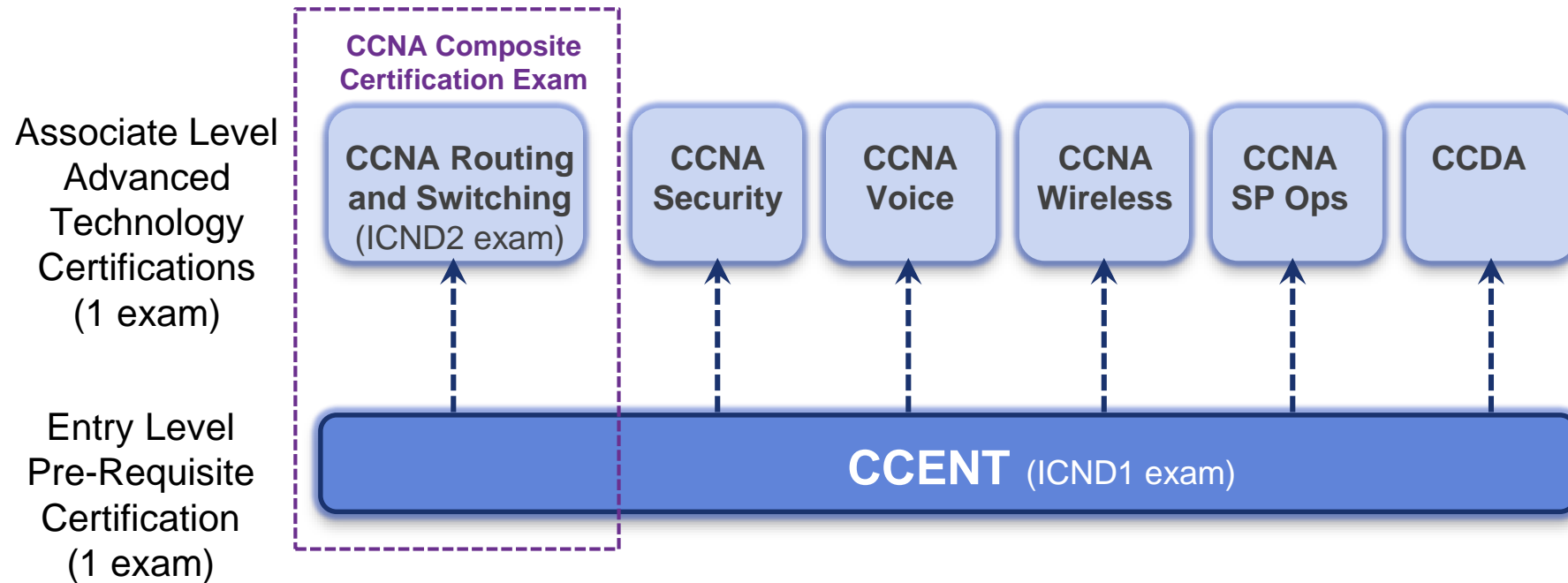
Top 10 IT Certifications for IT Professionals in 2013

JANUARY 22, 2013

Top 15 Highest Paying Certifications in the Technology Industry

From [Laura Schneider](#), former About.com Guide

Redesigned Cisco CCNA Certifications



- **CCENT** is the new pre-requisite certification for advanced technology certifications
- **CCNA R&S** also is accepted as pre-requisite.
- **CCNA Video/Service Provider/Data Center** require no pre-requisite (2 exams).
- <http://www.cisco.com/web/learning/certifications/index.html>

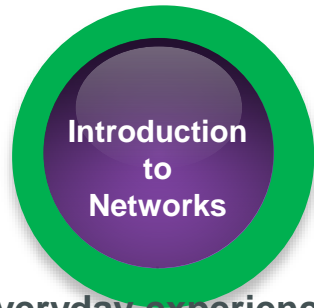
Supplemental Materials

| Topics | Concepts | | Practice & Assessments | | |
|--|------------|----------------------------|------------------------|-------------|------------------------------|
| | PPTs, Docs | Videos / Recorded Sessions | PT Activities | Final PTSAs | Certification Practice Exams |
| IPv6 | X | X | X | X | X |
| Multi-Area OSPF | X | X | X | | |
| IOS 15 & IOS 15 Licensing | X | X | X | | |
| Layer 3 Redundancy (HSRP) | X | X | X | | |
| Link Aggregation (EtherChannel) | X | X | X | | |
| Network Management: NTP, Syslog, SNMP, and NetFlow | X | X | X | | |

- **Student self-study; Different learning experience from online courses**
- <https://www.netacad.com/group/offerings/ccna-rs-bridging-materials>

CCNA Routing and Switching Curriculum

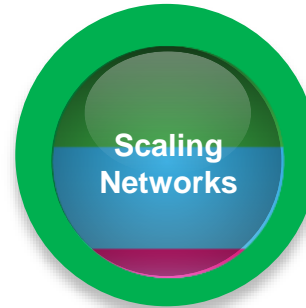
Translated



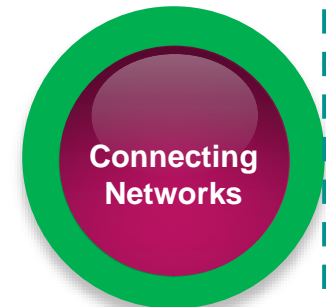
- Everyday experiences
- OSI model bottom up



CCENT



- Business applications
- OSI model top down



CCNA
R&S

No translations
End of life soon



CCNA Security 1.2



CCNA Security Course Goals

CCNA Security helps students:

- Understand core security concepts and how to develop and implement security policies to mitigate risks
- Acquire skills needed to configure, monitor, and troubleshoot network security
- Prepare for CCNA Security certification exam
- Start or advance a career in network security
- Differentiate themselves in the market with specialized skills and expertise to achieve success

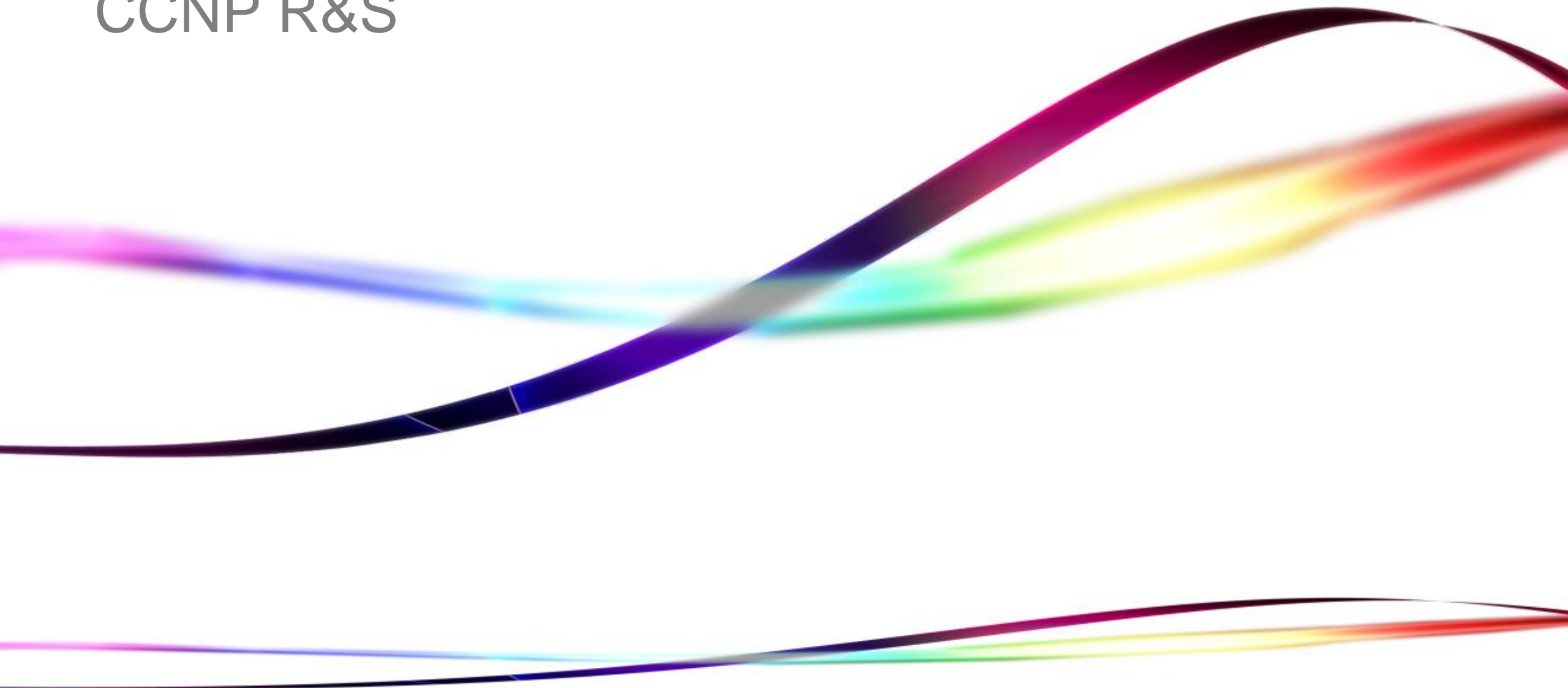


Course Design

- 10 chapters and chapter exams
- 10 Cisco Packet Tracer activities
- 16 hands-on labs
- One Packet Tracer Practice skills-based assessment
- One final exam and one skills-based assessment
- Balance of theory, hands-on practice, and application
- Available in English only, no translated versions are planned
- Enabled for both in-person and blended learning environments



CCNP R&S



Course Details

- Cisco Certified Network Professional (CCNP®) validates the ability to plan, implement, verify and troubleshoot local and wide-area enterprise networks
- Appropriate for those with at least one year of networking experience who are ready to advance their skills and work independently on complex network solutions
- CCNP certification requires three separate certification exams
- Demonstrates skill for enterprise roles such as network technician, support engineer, systems engineer or network engineer



CCNP => CCNP R&S

- Possible to mix v1 and v2 exam
- Main change: DMVPN, StackWise, VSS, and IPv6 expansion

- <http://www.cisco.com/web/learning/certifications/professional/ccnp/index.html>

| Required Exam(s) | Recommended Training |
|---|--|
| 642-902 ROUTE Last day to test: January 29, 2015 OR | Implementing Cisco IP Routing (ROUTE v1.0) OR Implementing Cisco IP Routing (ROUTE v2.0) |
| 300-101 ROUTE | |
| AND | |
| 642-813 SWITCH Last day to test: January 29, 2015 OR | Implementing Cisco IP Switched Networks (SWITCH v1.0) OR |
| 300-115 SWITCH | Implementing Cisco IP Switched Networks (SWITCH v2.0) |
| 642-832 TSHOOT Last day to test: January 29, 2015 OR | Troubleshooting and Maintaining Cisco IP Networks (TSHOOT v1.0) OR |
| 300-135 TSHOOT | Troubleshooting and Maintaining Cisco IP Networks (TSHOOT v2.0) |

What are/aren't we doing?

- Labs, quizzes and exams will be updated by Jan 2015 ✓
 - Cisco Press CCNP R&S books will be available by Jan 2015 ✓
 - Same equipment as current CCNP ✓
 - No bridging materials ✗
-
- CCNP Switch Foundation Learning Guide will be available in May. Use Certification Guide in the interim.

Health Information Networking

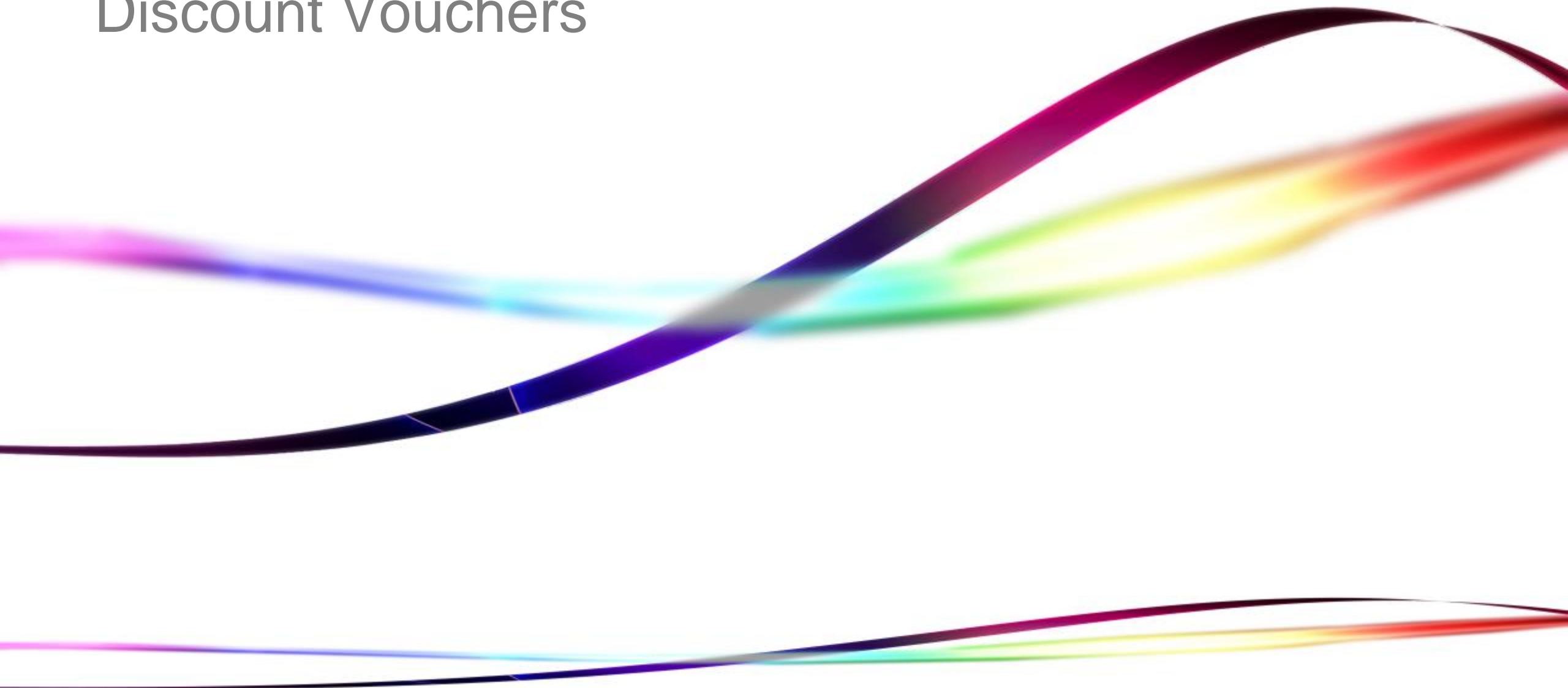


Course Details

- Provide an introduction to information technology and networking in the healthcare industry
- Equip students with the knowledge and skills needed to design and support networks in a healthcare environment
- Employ industry-relevant instructional approaches to help students prepare for entry-level healthcare ICT and networking jobs



Discount Vouchers



Discount Voucher Eligibility Criteria

Discount vouchers are available for the following Cisco certification exams:

| Exam | Course | Student discount | Instructor discount |
|-----------------------|---------------|------------------|---------------------|
| CompTIA A+ (2 exams)* | IT Essentials | 54 % | No voucher |
| ICND1 | CCNA 2 | 58 % | No voucher |
| ICND2 | CCNA 4 | 58 % | No voucher |
| CCNA Composite | CCNA 4 | 58 % | 70 % |
| CCNA Security IINS | CCNA Sec | 50 % | 70 % |
| CCNP | CCNP | No voucher | No voucher |

To qualify for a discount voucher you must meet the following criteria:



* A+ vouchers are available in limited countries.

Certifications and Vouchers Resources

The screenshot shows the Cisco Networking Academy website interface. At the top, there is a navigation bar with the Cisco logo, the text 'Cisco Networking Academy', and the slogan 'Mind Wide Open'. A search bar and user information ('Welcome, NetAcad Instructor, Sign Out | Help') are also present. Below the navigation bar, there are dropdown menus for 'NetSpace Home', 'About Us', 'Program', 'Offerings', and 'Communities'. The main content area is titled 'Program' and features a sidebar with links to 'NetSpace Tutorials', 'Cisco Certifications and Vouchers', 'Equipment Information', and 'Curriculum Features'. The main content area is titled 'Certification Exams and Discount Vouchers' and contains several sections: 'Industry Certifications', 'Certification Exam Discount Vouchers', 'Exams and Testing Centers', and 'Certification FAQs'. A 'Share Idea' button is visible on the right side of the page. At the bottom, there is a section for 'Access Resources' with a link to 'Cisco Certifications And Vouchers'.

Welcome, NetAcad Instructor, Sign Out | Help |

cisco Cisco Networking Academy Mind Wide Open

NetSpace Home About Us ▾ Program ▾ Offerings ▾ Communities ▾

Program

- > [NetSpace Tutorials](#)
- > [Cisco Certifications and Vouchers](#)
- > [Equipment Information](#)
- > [Curriculum Features](#)

Certification Exams and Discount Vouchers

Through a partnership with Learning@Cisco, Networking Academy is able to offer significant discounts on many Cisco certification exams to qualified students and instructors.

Find more detailed information in the Certification Exam Discount Vouchers folder below.

Industry Certifications

Resources in this folder show how Networking Academy curricula map to industry certifications and the benefits of certification.

Certification Exam Discount Vouchers


Learn how you can qualify for discounts and gain access to retired industry certification exams.

Exams and Testing Centers

Discover how to register for industry certification exams and find a testing center near you. This folder also contains information on how to become a Pearson VUE Testing Center.

Certification FAQs

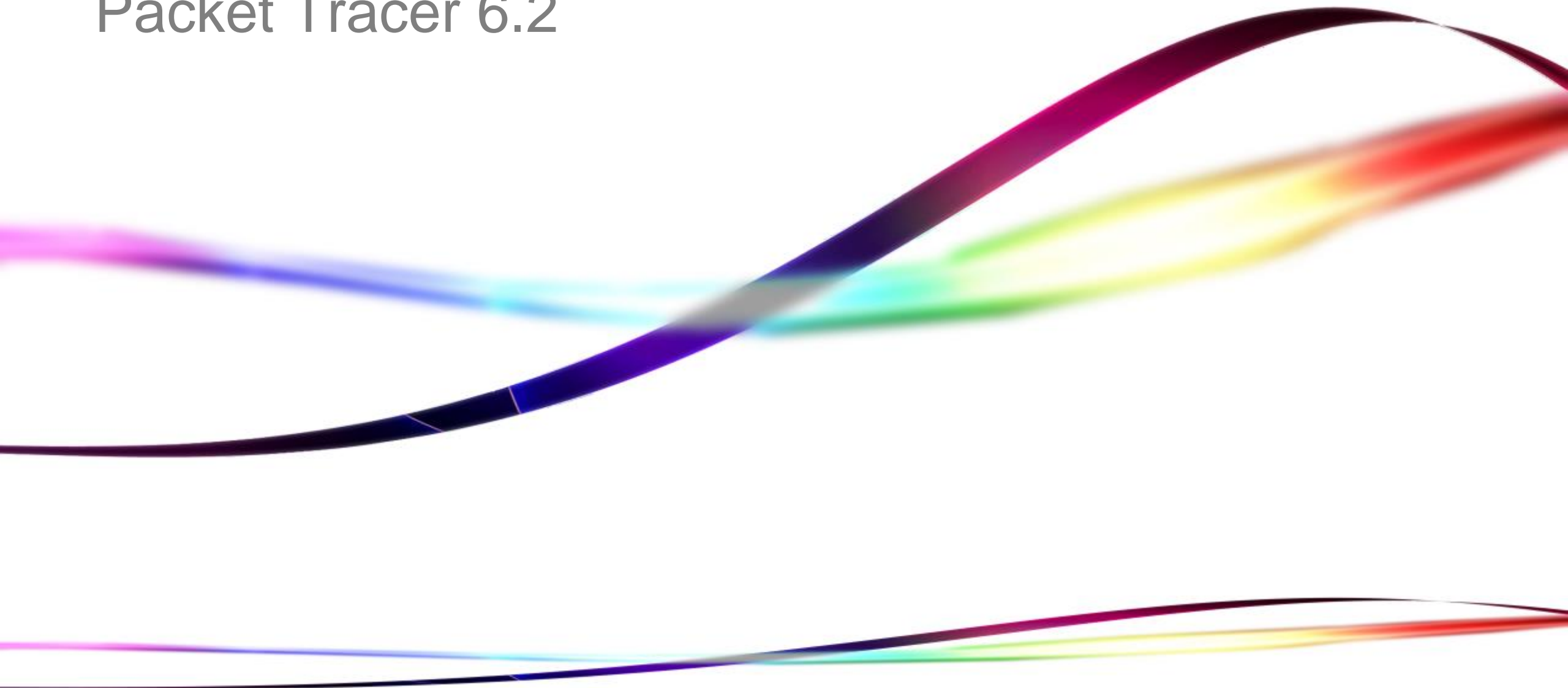
Find helpful answers to common questions asked by students and instructors.

 Access Resources
[Cisco Certifications And Vouchers](#)

Share Idea

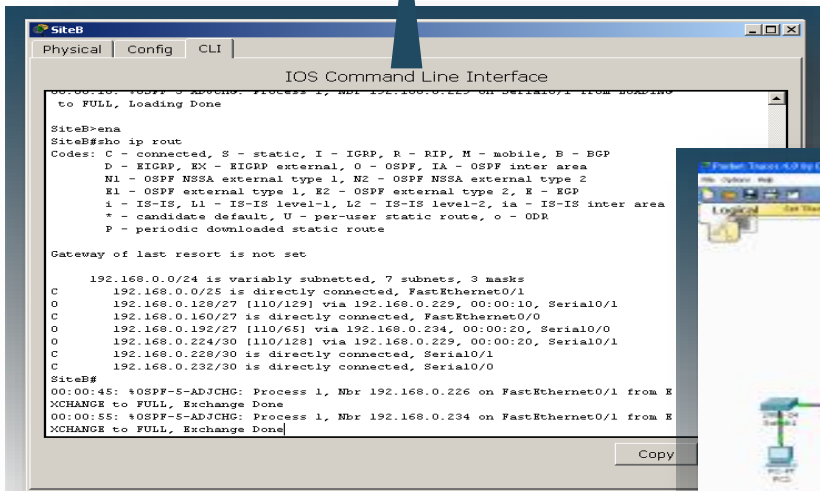
<https://www.netacad.com/group/program/cisco-certifications-and-vouchers>

Packet Tracer 6.2

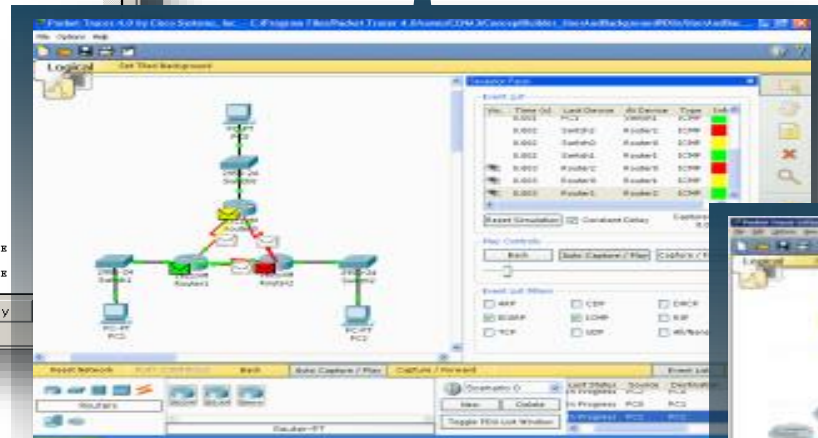


Simulation, Visualization, Collaboration

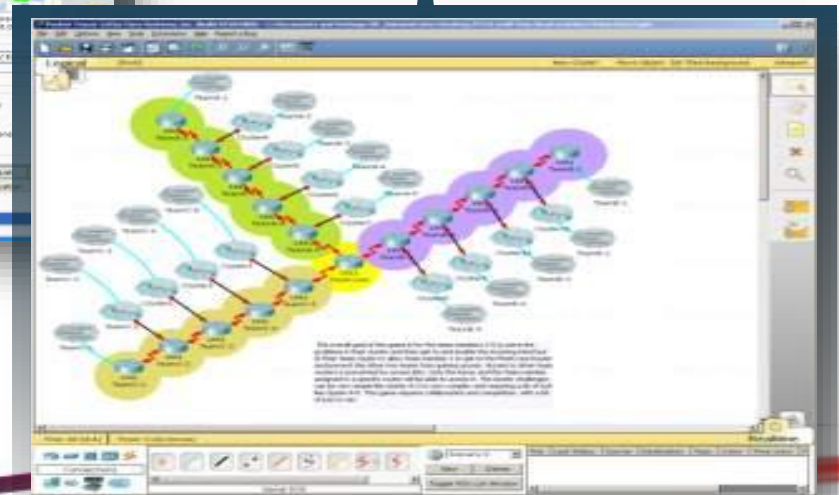
Simulate IOS Commands



Visualize Network Traffic



Collaborate on Multiuser Activities



Packet Tracer Activity Wizard

- Anyone can author, the PT Activity Wizard guides you
- The process is basically write instructions, build a correct answer network, specify grading, specify an initial network, save
- Ability to create your own learning activities, tasks, labs, games and complex assessments
- Build scaffolded learning experiences, formative and summative assessments

The screenshot displays the 'Activity Wizard' interface. On the left is a yellow sidebar with navigation buttons: Welcome, Variable Manager, Instructions, Answer Network (highlighted), Initial Network, Password, Test Activity, Check Activity, Save, and Exit. The main window is titled 'Building Answer Network' and includes an 'Import/Export' section with buttons for 'Import File to Answer Network' and 'Export Answer Network to File'. Below this is the 'Assessment Tree' section with tabs for 'Assessment Tree', 'Connectivity Test', 'Overall Feedback', and 'Settings'. A 'View Filter' section allows selecting assessment categories: IP, Physical, Variables, Routing, Switching, ACL, NAT, and View/Hide All. The 'Assessment Items' table lists various network components and their associated points and feedback messages.

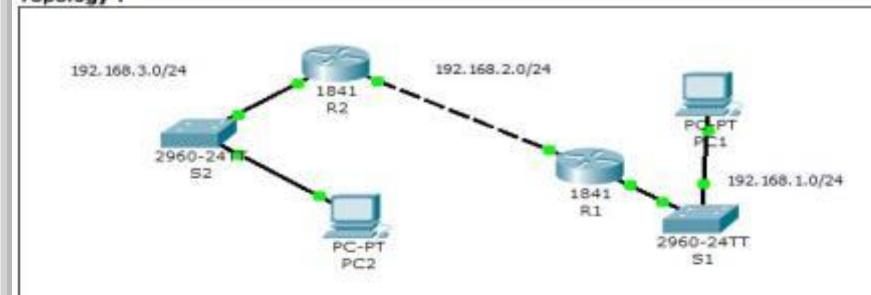
| Assessment Items | Points | Component(s) | Feedback When Incorrect |
|-------------------------------|--------|--------------|---|
| Network | | | |
| 1A | | | |
| Default Gateway: 192.168.3.30 | 2 | Layer3 | Gateway for this PC is the IP Addr of the router in |
| DNS Server IP | 1 | Layer7 | Instructions will give you a hint as to the DNS Adc |
| Ports | | | |
| FastEthernet | | | |
| Auto Config: 0 | 1 | Ip | |
| Bandwidth | 1 | Physical | |
| Duplex | 1 | Physical | |
| IP Address: 192.168.3.1 | 2 | Layer3 | See instructions for hints on IP addressing schem |
| Ipv6 Address | 1 | Ip | |
| IPv6 Enable: 0 | 1 | Ip | |
| Link Local: 0.0.0.0 | 1 | Ip | |
| Link to S1-Central | | | |
| MAC Address: 0005.5E3D.286C | 1 | Physical | |
| Power: 1 | 1 | Physical | |
| Subnet Mask: 255.255.255.224 | 2 | Layer3 | IP addresses are not complete without appropri |
| Power: 1 | 1 | Physical | |
| RS232 | | | |
| 1B | | | |
| Eagle_Server | | | |

Highlights

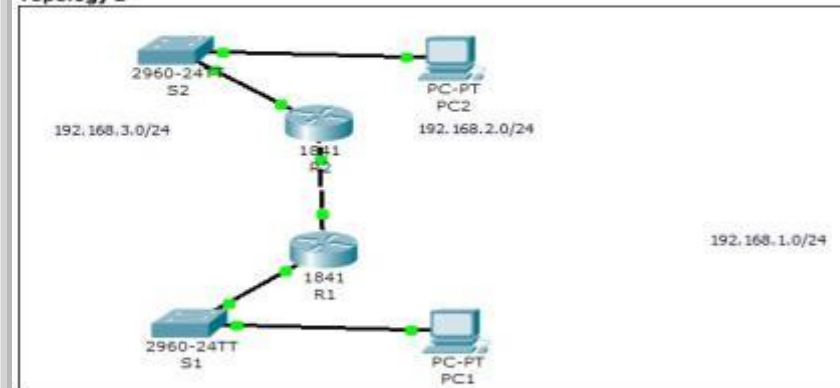
- **IOS 15** - Models new devices and IOS licensing
- **IPv6** - IPv6 desktop config. IPv6 Tunnel over IPv4, CBACv6
- **HSRP** - Hot Standby Routing Protocol
- **Graded Circling Tool** - Model the key classroom interaction of “circling” aspects of networks
- **Isomorphs** - Isomorphs with varying IP addresses, device names, & topology orientations

Topology

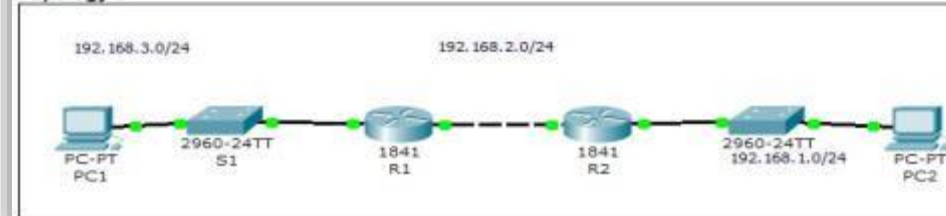
Topology 1



Topology 2



Topology 3



Added features/functionality

- New devices: Cisco 819 router, cell tower, CO server, sniffer
- Improved physical view: You can add devices directly into physical view
- Improved HTTP server: Supports JavaScript and CSS, also supports import files via FTP server inside PT
- Improved IOS command support

Packet Tracer Availability

- Packet Tracer is available free to all Networking Academy instructors, students and alumni
- Download PT from the CCNA resource area:



- Or... <https://www.netacad.com/group/offerings/packet-tracer>

Visit the communities to...

Download games

Access PT activities

Share best practices

Use ExApps

And much more...

Devices in the classroom

- Over time, as teachers, we have brought devices to the classroom:

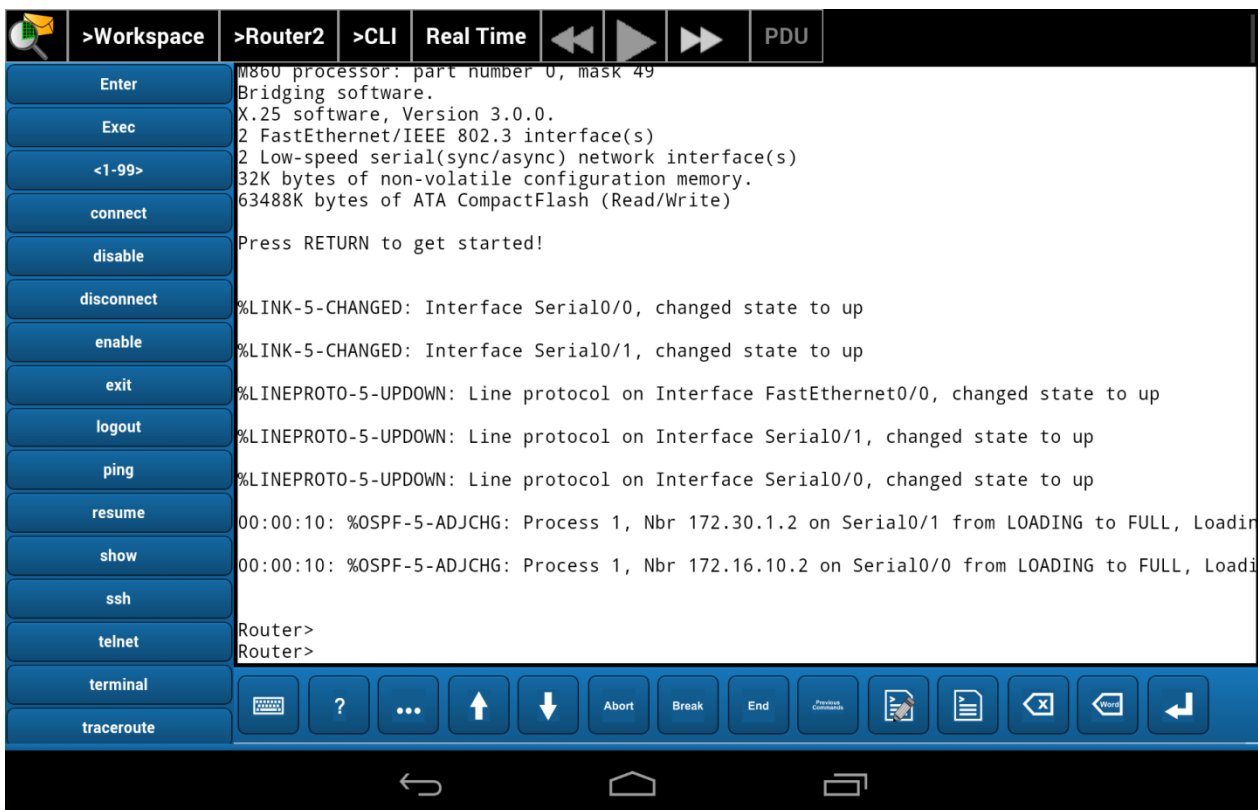


- For the first time, students are bringing a device in the classroom:



Going Mobile

- Available on Android tablets
- NetSpace login needed



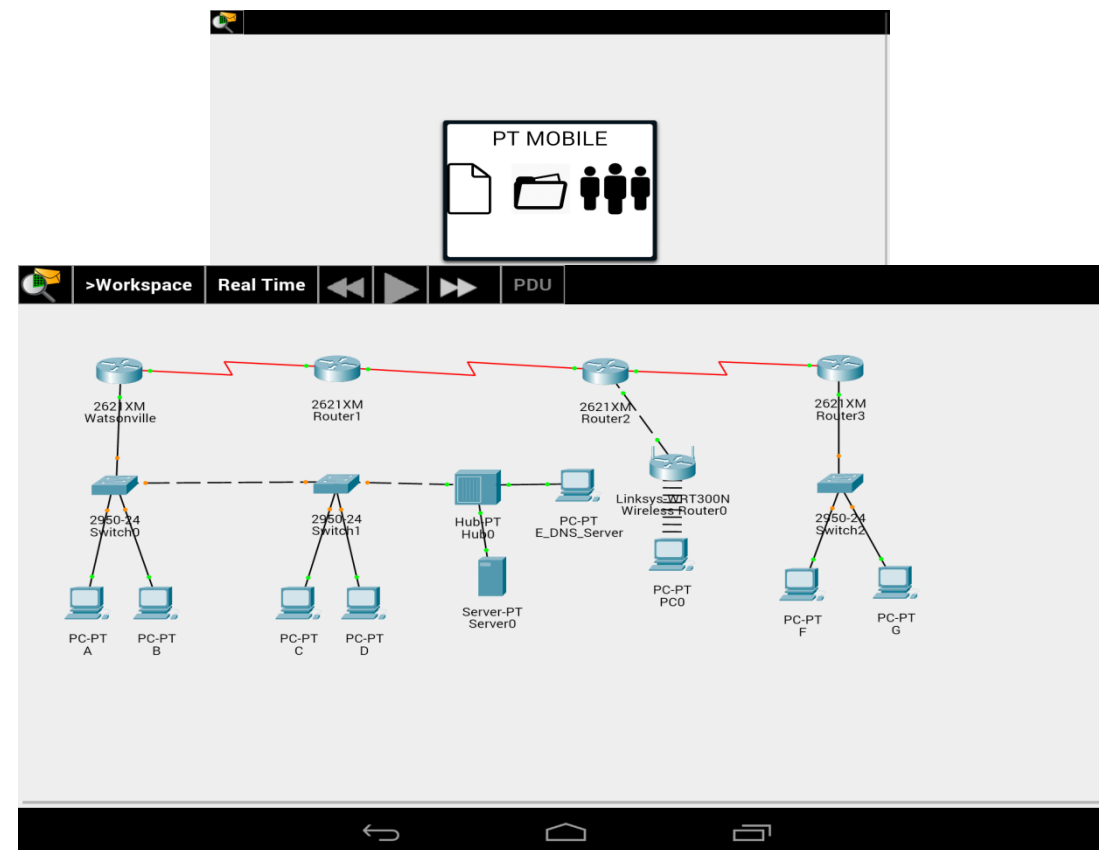
The screenshot displays the NetSpace mobile interface. At the top, there is a navigation bar with tabs for '>Workspace', '>Router2', '>CLI', 'Real Time', and 'PDU'. Below this is a terminal window showing the output of a 'show' command on a Cisco router. The output includes details about the processor, software version, interfaces, and memory. A command menu is visible on the left side of the terminal window, listing various actions like 'Enter', 'Exec', 'connect', 'disable', 'disconnect', 'enable', 'exit', 'logout', 'ping', 'resume', 'show', 'ssh', 'telnet', 'terminal', and 'traceroute'. At the bottom, there is a standard Android navigation bar with back, home, and recent apps buttons.

```
m860 processor: part number 0, mask 49
Bridging software.
X.25 software, Version 3.0.0.
2 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

Press RETURN to get started!

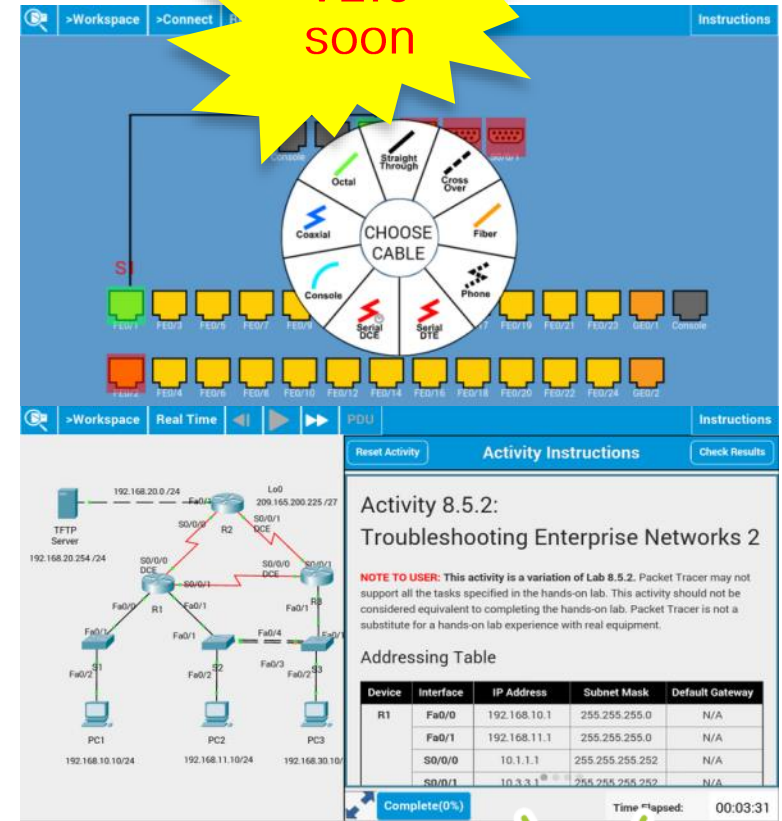
%LINK-5-CHANGED: Interface Serial0/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
00:00:10: %OSPF-5-ADJCHG: Process 1, Nbr 172.30.1.2 on Serial0/1 from LOADING to FULL, Loading Done
00:00:10: %OSPF-5-ADJCHG: Process 1, Nbr 172.16.10.2 on Serial0/0 from LOADING to FULL, Loading Done

Router>
Router>
```



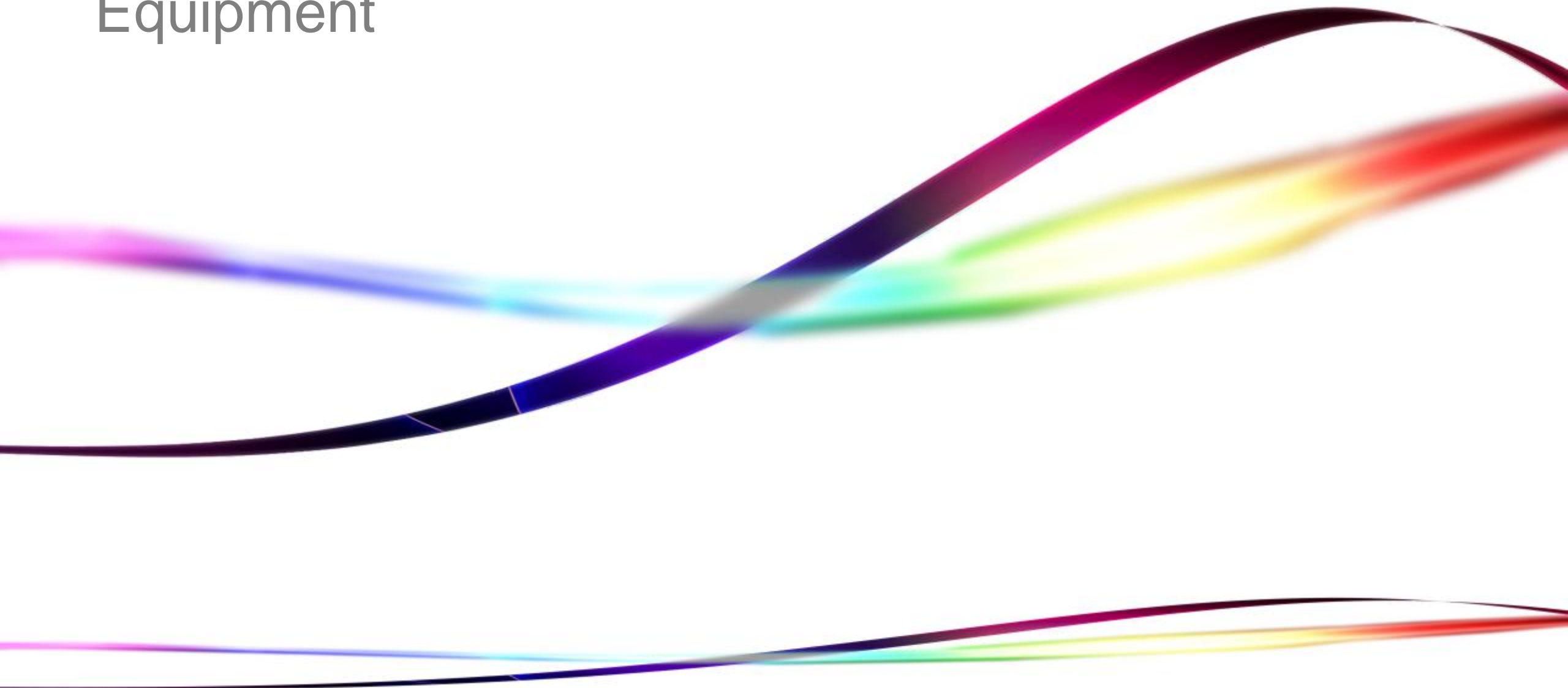
Cisco Packet Tracer Mobile 1.0 (Android)

- First release of Packet Tracer for Android tablets
- Optimized for screens with a minimum size of 7 inches
- Supports multiple Android tablets with ARM CPUs running Android 4.1 or later
- 46 reference topologies included
- Simulation engine is based on Packet Tracer 6.1
- Users must be authenticated by logging into the Cisco Networking Academy® Cisco NetSpace™ application before the Packet Tracer Mobile app is activated
- After the initial authentication, an Internet connection is NOT required.
- Download today from Google Play!



<https://play.google.com/store/apps/details?id=com.netacad.PacketTracerM&hl=en>

Equipment



Top 1 FAQ about equipment

Question: what is the latest equipment list?

Answer: it's on NetSpace!!!

The screenshot displays the Cisco Networking Academy NetSpace user interface. At the top, the Cisco logo and 'Cisco Networking Academy' text are visible, along with a search bar and the slogan 'Mind Wide Open'. A navigation menu includes 'NetSpace Home', 'About Us', 'Program', 'Offerings', and 'Communities'. Below this, there are tabs for 'Teach', 'Manage', and 'Learn'. The main content area is titled 'Access the Courses You A' and lists several course categories: 'IT 5' (IT Essentials: PC Hardware and Software), 'ccnatest' (CCNA R&S: Introduction to Networks), and 'IPD' (CCNA R&S: Instructor Professional Development). A dropdown menu is open over the 'Offerings' link, listing various resources: 'NetSpace FAQs and Tutorials', 'Cisco Certifications and Vouchers', 'NetAcad Advantage', 'Equipment Information' (highlighted with a red box), 'Curriculum Features', 'Marketing Toolkit', and 'Recognition'. On the right side, there is a 'My Tasks' section with a task titled 'Introduce Yourself'.

Another VERY common question

Question: Does my ISR G1 router (1800/2800) support IOS 15?

Answer: Yes!!!



More info on...

Equipment lists

- CCNA, CCNA-Sec, CCNP, CCNA-Voice, ITE

Equipment ordering

- How to buy bundles

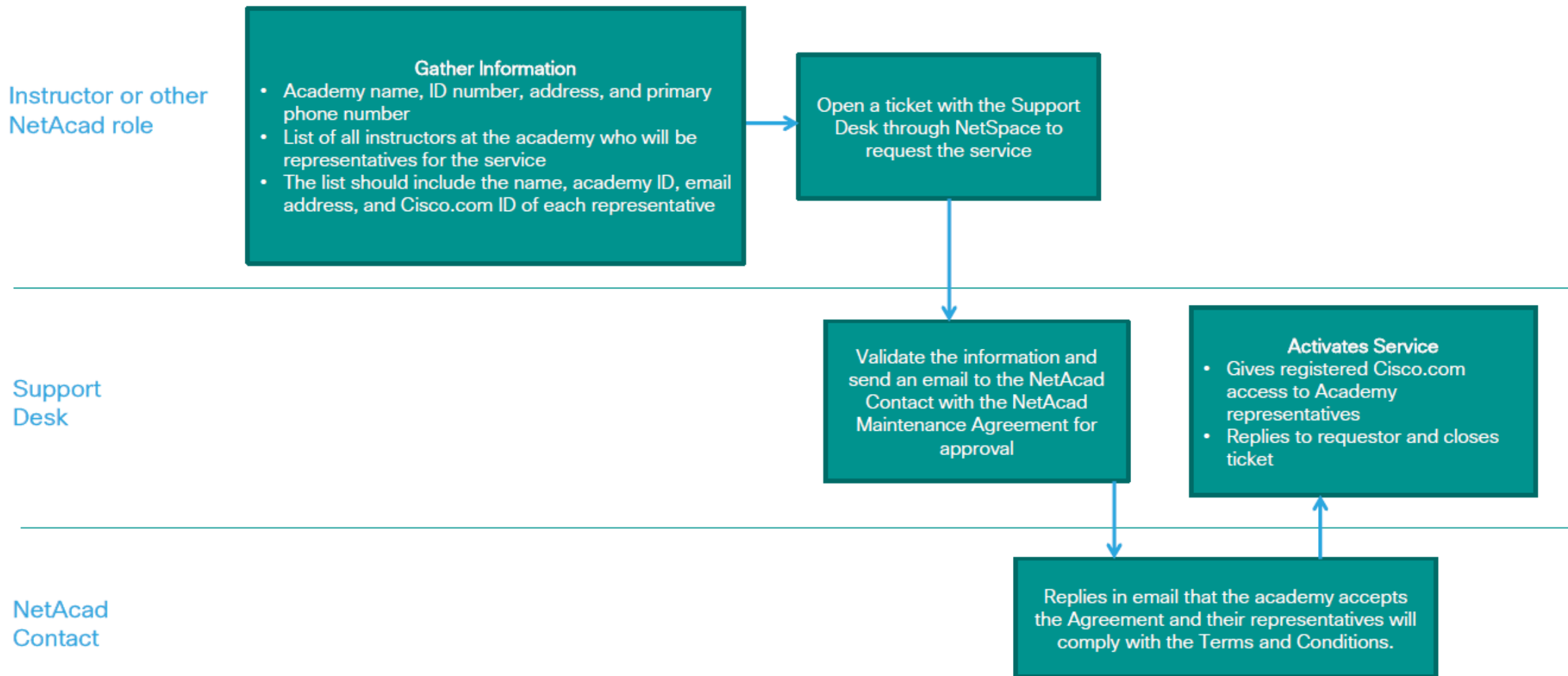
NetAcad Maintenance

- Download IOS
- Activate SEC technology package

Software Installation and Configuration

- CCP

NetAcad Maintenance Sign-up Process



IOS for Teaching CCNA Security and CCNP R&S

Purchase 1900/2900
model routers with IP
Base IOS

Sign up for NetAcad
Maintenance

Upgrade to Security
IOS for Free
Lifetime Right to Use
License

Bundle Details

- Routers: 1941, 2901, 2911 (ISR G2)
- Switches: 2960, 3650
- ASA: 5505
- In addition to serial interfaces and cables

- Can upgrade existing ISR G1 (1800/2800) to use IOS15. Need to purchase RAM and Flash.
- Can purchase ASA-only bundle.

Collaboration and Professional Development



IPD Week

- Once per quarter
- Deep dives on NetAcad Offerings
- Updates on NetAcad
- Ran by the Technical team
- Open to all instructors

Instructor Resources

- [NetAcad Assessment Resources Spotlight](#)

Most frequently used Assessment Resources

Tutorials on Assessment features

[Navigation from CCNA R&S page](#)

- [NetAcad Instructor Resources Spotlight](#)

Most frequently used resources for CCNA instructors

[Navigation from CCNA R&S page](#)

CCNA Routing and Switching

Growing Need for ICT Professionals

Information and Communication Technology (ICT) professionals are in short supply. (See **Related Resource**: Networking is predicted to be the second fastest growing occupation, faster than the average for all occupational investments are made in newer, faster technology, and mobile networks.)

The Cisco CCNA curriculum helps students prepare for ICT careers and are aligned with the globally recognized certifications, further validating skills to potential employers.

CCNA, Designed for Entry-Level ICT Jobs

The Cisco CCNA® Routing and Switching curriculum is designed for Cisco Networking Academy® students : industry or fulfilling prerequisites in pursuing more specialized ICT skills. The curriculum provides comprehensive fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience.

Cisco Packet Tracer

Packet Tracer is an integral part of the CCNA curriculum. Packet Tracer provides simulation, visualization, and capabilities and facilitates the teaching and learning of complex technology concepts. [Learn more about Cisco Packet Tracer](#)

Instructor Resources Spotlight

Visit the [CCNA Routing and Switching Instructor Resources Spotlight](#) page for helpful material in developing a

Assessment

A wide array of assessment types and tools are available to help students, instructors, and administrators understand the progress of individuals as they progress through a curriculum. Visit the [NetAcad Assessment Resources Spotlight](#) for more resources.

Related Resources

- [CCNA Discovery](#)
- [CCNA Exploration](#)
- [CCNA Routing and Switching Bridging Materials](#)
- [CCNA Routing and Switching Video \(1.37 mins\)](#)



Assessment Resource Spotlight

- Importance
- Features
- Customization
- Viewer
- Etc.

NetAcad Assessment Resources Spotlight

NetAcad Assessment Resources

[Assessment FAQ](#) - Frequently Asked Questions on Assessments (PDF)

[Next-generation Assessment](#) - Cisco Networking Academy Next-generation assessments and their implications for K-12 education - a whitepaper from Clayton Christensen Institute

[Values of NetAcad Assessments](#) - NetAcad Assessments are still strong educational tools even if the answers are posted on the Internet

[Mitigation of exposed NetAcad Assessments](#) - Helpful tips from instructors to mitigate the impact of exposed assessments

[NetSpace FAQs and Tutorials](#) - Comprehensive list of FAQs and tutorials on NetSpace and assessments

Managing NetAcad Assessments using Assignments tab

[Default Assessments](#) - Learn how to activate NetAcad Assessments using default settings

[Advanced Assessments](#) - Learn how to activate NetAcad Assessments using advanced settings

[Manage Assessments](#) - Learn how to manage NetAcad Assessments after activation

Managing NetAcad Assessments using Activation Tool tab

[Activation Tool: Creating an Activation Profile](#) - Learn how to create and copy an activation profile to apply advanced settings for NetAcad Assessments

[Activation Tool: Bulk Activation](#) - Learn how to activate multiple NetAcad Assessments at one time

[Activation Tool: Manage Activations](#) - Learn how to manage NetAcad Assessments after activation

Assessments Viewer

[Assessment Viewer](#) - Learn how to view the assessment questions using the Assessment Viewer

Using Canvas Quizzes

[Edit Quiz Tutorial](#) - Learn how to modify and adjust an existing quiz

[Advanced Quiz Tutorial](#) - Learn how to add questions to a quiz

[Update Question Bank Tutorial](#) - Learn how to update a question bank and relink to a quiz

[Create a Quiz from a Question Bank Tutorial](#) - Learn how to create a quiz by linking to multiple question banks

<https://www.netacad.com/group/offerings/netacad-assessment-center>

Global Instructor Resources

Welcome to NetSpace

Teach

Manage

Learn

Cisco

Access the Courses You Are Teaching

Show Concluded

test MK

Edit

CCNA R&S: Introduction to Networks
Demonstration Cisco Academy

IPD Week - Spring Edition

Edit

Networking Academy Conferences
IPD Academy

ITE ITQ test

Edit

IT Essential Instructor Trainer Qualification

Actions

Create a Course

Manage Instructor Accreditation

Access Academy Reports

NetAcad News

4/23/14 7:00 AM

[Improve Your Presentation Skills](#)

4/22/14 7:00 AM

[Academy Orientation Course Now Available for Self-Enrollment](#)

4/22/14 7:00 AM

[IT Essentials 5.0 Now Available in Brazilian](#)



Professional Development

Explore resources designed to expand your knowledge and facilitate teaching.

Global Instructor Resources

Global Instructor Resources

Edit



Edit

What's New:

> More

Recommended

> More

IPv6

> More

Routing

> More

Switching

> More

WAN

> More

Security

> More

Cisco NetSpace

> More

Packet Tracer

> More

IT Essentials

> More

Events

> More

Other


> More

Feedback from some instructors

- Solutions to challenges in teaching CCNA R&S
- Focusing on ITN and RSE
- Changes in labs, presentat
- Tips and tricks

Best Practices for Teaching CCNA R&S

<http://cs.co/90032U7x>



Karen Alderson
Lubbock, TX
United States
Joined: 8/29/12
★ 1284 Points

March 25, 2015 7:57 PM

Methods and materials collected from CCNA R&S instructors around the world on how they are customizing and modifying their curriculum delivery for student success.

| Course | Instructor | The Situation | The Solution | Resources |
|----------------------|--|---|---|---|
| CCNA R&S ITN and RSE | Ioan Goian CREDIS Bucuresti Bucharest, Romania | Increased volume of new information, especially in ITN and RSE Parts of RSE seem rushed, in order to squeeze in all objectives for ICND1 NAT and ACLs particularly difficult to grasp as early as RSE | Increased number of total practical teaching sessions The hands-on sessions are created by our instructors for every class, in accordance with the number of students present and the overall class proficiency. Our instructors bring into the mix real world experience from working as network engineers for a Cisco Sales Partner. NAT is presented summarily during RSE, students are shown only how to configure NAT Overload on the outside interface. Full static and dynamic NAT/PAT presentation is done in CCNA R&S Connecting Networks course. As a rule of thumb, we strongly encourage all students to read (or, at least, skim through) the corresponding course chapters before attending a hands-on session, so the instructor can focus on the more difficult concepts, Q&A and practical tasks on real Cisco equipment. | |
| CCNA R&S ITN and RSE | Jeff Mason and Rod Thompson Newport High School Bellevue, Washington USA | How do you fit in all this new curriculum AND give a meaningful lab experience! | Good planning Lab modification—modify, modify, modify! | Download resources Course calendar Modified labs Rubrics Watch recorded presentation PowerPoint Presentation |
| CCNA R&S ITN | A Kayode Adesemowo Nelson Mandela | Huge first-year student classes with diverse backgrounds. | CCNA R&S ITN is year long class CCNA R&S ITN students use Packet Tracer while all other CCNA R&S students use physical hardware | Watch recorded presentation |

Edit

Share Idea

Facebook Communities



Find us on
Facebook

Ask questions

Connect with
peers

Get the latest
news

Share best
practices

Seek and
provide advice

And much
more!

<https://www.facebook.com/groups/AcademyInstructors/>

Thank you!

**Educating the Architects of
the Internet of Everything**

Cisco Networking Academy

