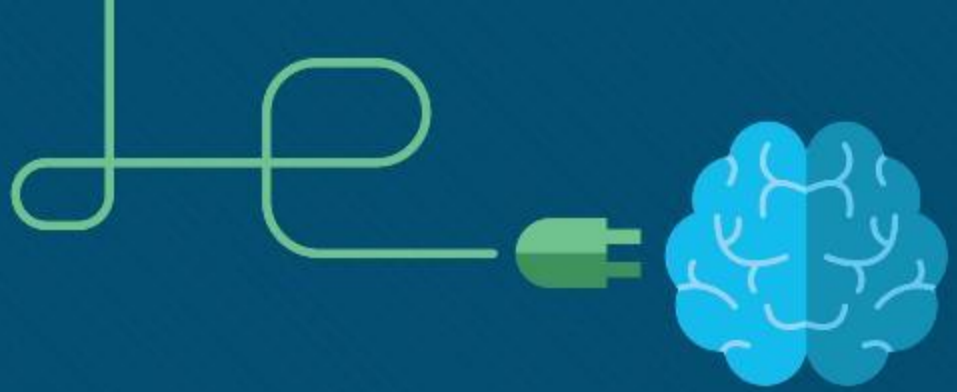
Networking Academy



Course and Technical Updates

Eugene Morozov

Technical Manager

19 June 2020
Slovakia, Czechia, Virtual

#NetAcadIPD

Technical Field Engagement Team

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Gabriela Neira

Serges Nanfack

Ananth B.S

Version 4.1

Agenda

1. New Cisco Certifications
2. CCNA 7
3. CCNP 8
4. Digital Badges
5. Packet Tracer 7.3
6. CyberOps Associate
7. Emerging Technologies Workshops
8. DevNet Associate
9. Professional Development

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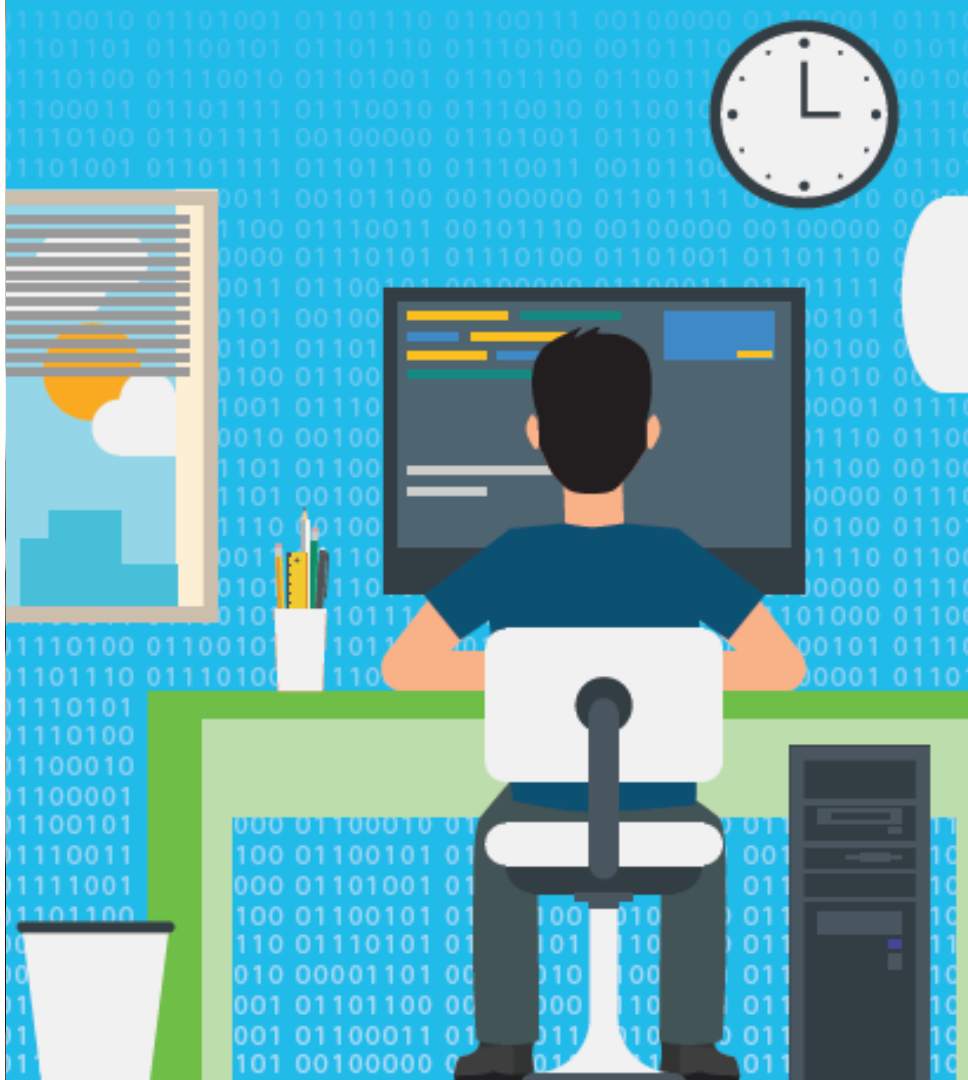
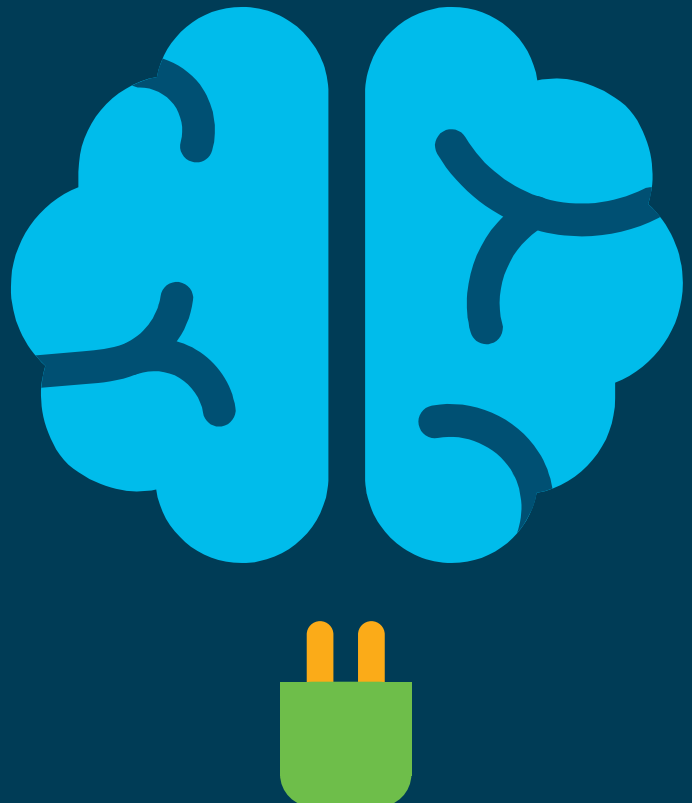
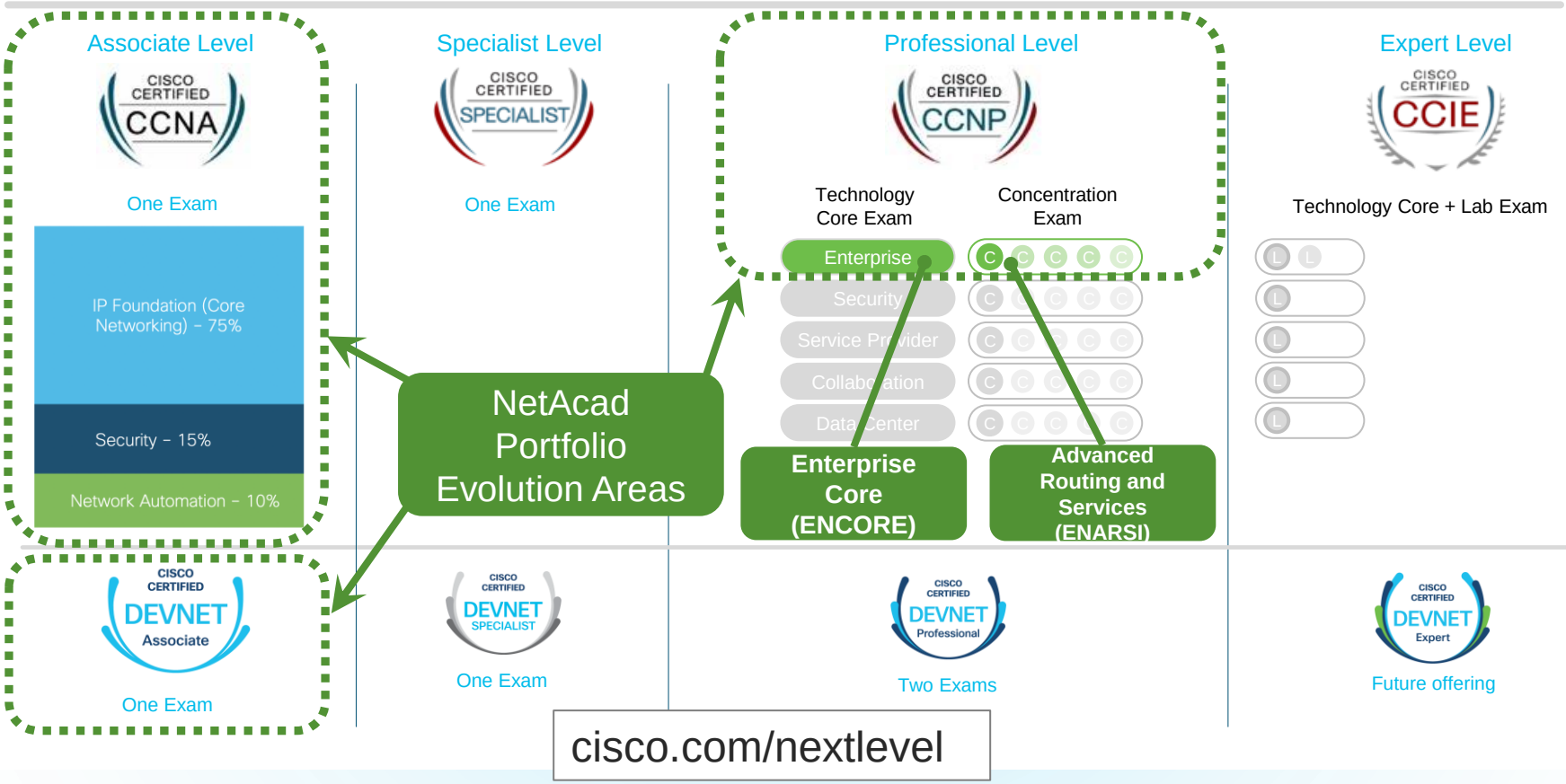


New Certifications and CCNA 7.0



Cisco's Expanded Certification Suite



cisco.com/nextlevel

CCNA 7.0 Course Outlines

Networking Academy

Intro to Networks (ITN)
Networking Today
Basic Switch and End Device Configuration
Protocol Models
Physical Layer
Number Systems
Data Link Layer
Ethernet Switching
Network Layer
Address Resolution
Basic Router Configuration
IPv4 Addressing
IPv6 Addressing
ICMP
Transport Layer
Application Layer
Network Security Fundamentals
Build a Small Network

Switching, Routing, and Wireless Essentials (SRWE)
Basic Device Configuration
Switching Concepts
VLANs
Inter-VLAN Routing
STP
Etherchannel
DHCPv4
SLAAC and DHCPv6 Concepts
FHRP Concepts
LAN Security Concepts
Switch Security Configuration
WLAN Concepts
WLAN Configuration
Routing Concepts
IP Static Routing
Troubleshoot Static and Default Routes

Enterprise Networking, Security and Automation (ENSA)
Single-Area OSPFv2 Concepts
Single-Area OSPFv2 Configuration
WAN Concepts
Network Security Concepts
ACL Concepts
ACLs for IPv4 Configuration
NAT for IPv4
VPN and IPsec Concepts
QoS Concepts
Network Management
Network Design
Network Troubleshooting
Network Virtualization
Network Automation

New/significantly changed content

Complementary Options

+

CCNP Enterprise (ENCOR, ENARSI)

or

CCNA Security / CCNA CyberOps

or

DevNet Associate

or

Python / ETWs

or lead with

IT Essentials

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CCNA Instructor Qualification Mapping

CCNA R&S v6 Course Current Qualification(s)	CCNA v7 Course Qualification(s) Earned	Materials to Review*
CCNA 1 (Intro to Networks)	CCNA 1 (Intro to Networks)	No additional
CCNA 1 (Intro to Networks) CCNA 2 (Routing & Switching Essentials)	CCNA 1 (Intro to Networks) CCNA 2 (Switching, Routing, and Wireless Essentials)	CCNA 2 (SRWE) v7
CCNA 1 (Intro to Networks) CCNA 2 (Routing & Switching Essentials) CCNA 3 (Scaling Networks)	CCNA 1 (Intro to Networks) CCNA 2 (Switching, Routing, and Wireless Essentials) CCNA 3 (Enterprise Networking, Security, and Automation)	CCNA3 (ENSA) v7 + Bridging Course
CCNA 1 (Intro to Networks) CCNA 2 (Routing & Switching Essentials) CCNA 3 (Scaling Networks) CCNA 4 (Connecting Networks)	CCNA 1 (Intro to Networks) CCNA 2 (Switching, Routing, and Wireless Essentials) CCNA 3 (Enterprise Networking, Security, and Automation)	Bridging Course
CCNA 2 (Routing & Switching Essentials)	CCNA 2 (Switching, Routing, and Wireless Essentials)	CCNA2 (SRWE) v7
CCNA 3 (Scaling Networks)	CCNA 3 (Enterprise Networking, Security, and Automation)	CCNA3 (ENSA) v7
CCNA 4 (Connecting Networks)	CCNA 3 (Enterprise Networking, Security, and Automation)	CCNA3 (ENSA) v7

Slovakia: 26 active CCENT-accredited instructors

Czechia: 23 active CCENT-accredited instructors

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Teach CCNA R&S 1-2?

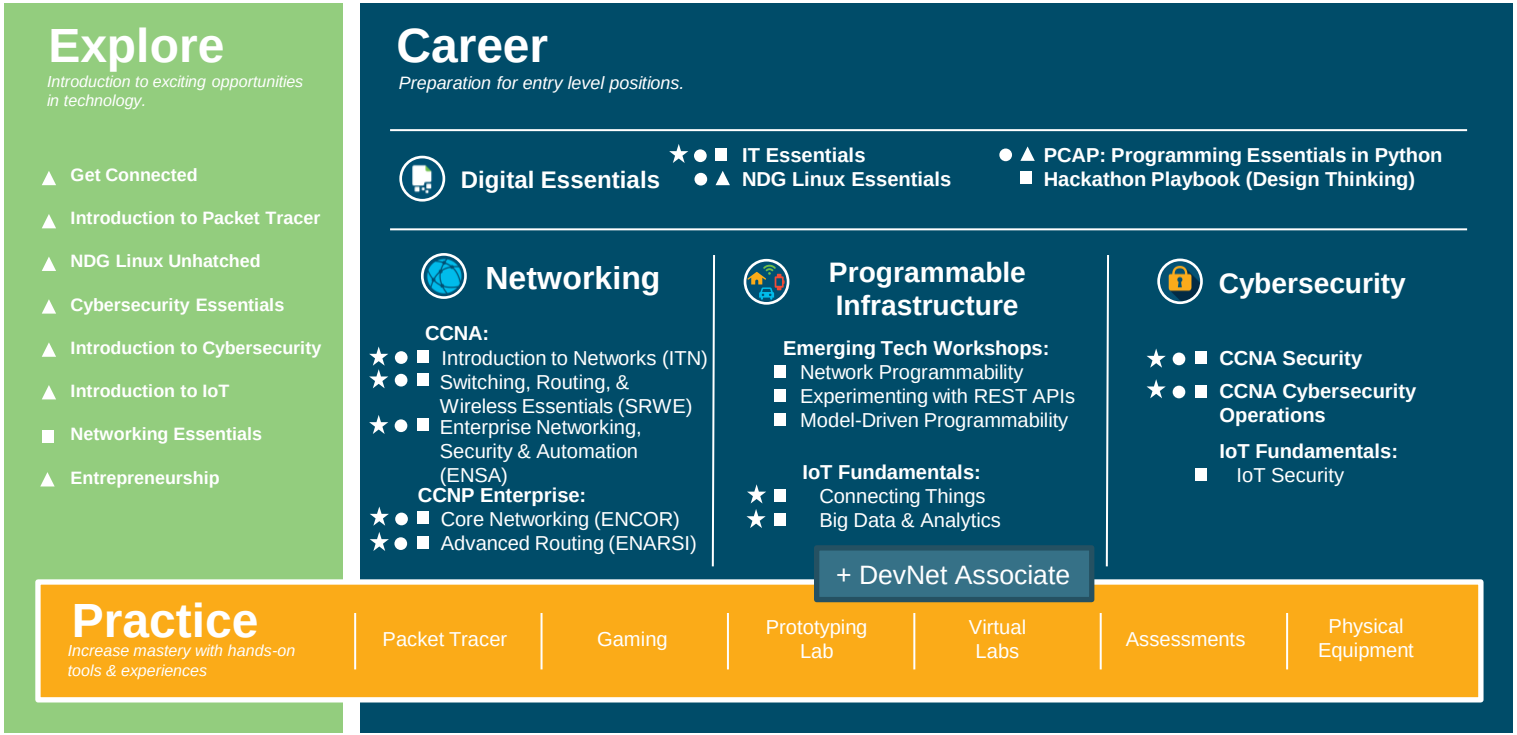
What will be your plan?

- CCENT certification for NetAcad students until 31 July 2020
- CCNA 7.0 1-2 students will not be certification-ready
- No dynamic routing, NAT, ACL taught in CCNA 1-2

Teach full CCNA R&S?

What are you going to add?

- The duration is ~25% less
- Many topics moved to CCNP
- Variety of other NetAcad courses to consider



Complementary Offerings

Additional offerings available from Partners.

NDG

- NDG Linux I
- NDG Linux II
- NDG NetLab+
- NDG CCNA CyberOps Lab

OPENEDG

- CLA: Programming Essentials in C
- CLP: Advanced Programming in C
- CPA: Programming Essentials in C++
- CPP: Advanced Programming in C++

○ Aligns to Certification ☐ Instructor Training Required △ Self-paced ☆ ASC Alignment Required

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CCNA & CCNA Cyber Ops Exam Pricing

As of Feb 24, 2020

Cisco is moving to a Country Pricing Model for select exams

- Exam pricing will be based on the Country in which you sit for the certification exam

  Countries in Group 1 - $300
  Countries in Group 2 - $255 ← Czechia, Slovakia
  Countries in Group 3 - $195

- Qualifying Networking Academy Participates will still receive discounts

  Students with NetAcad discount will pay **~$125** in all Country Groups
  Instructors with NetAcad discount will pay **~$90** in all Country Groups
  Instructor Trainers with NetAcad discount will pay **~$65** in all Country Groups

- To learn more about Certification Pricing and Costs per Country please visit:

  http://www.vue.com/vouchers/pricelist/cisco.asp#prices

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Final Exam Voucher Eligibility

CCNA 6.0 Connecting Networks

CCNA 7.0 Enterprise Networking, Security and Automation,

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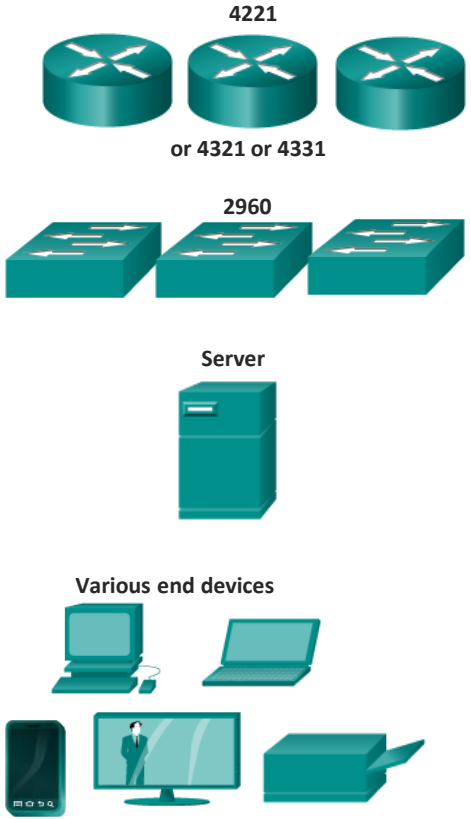
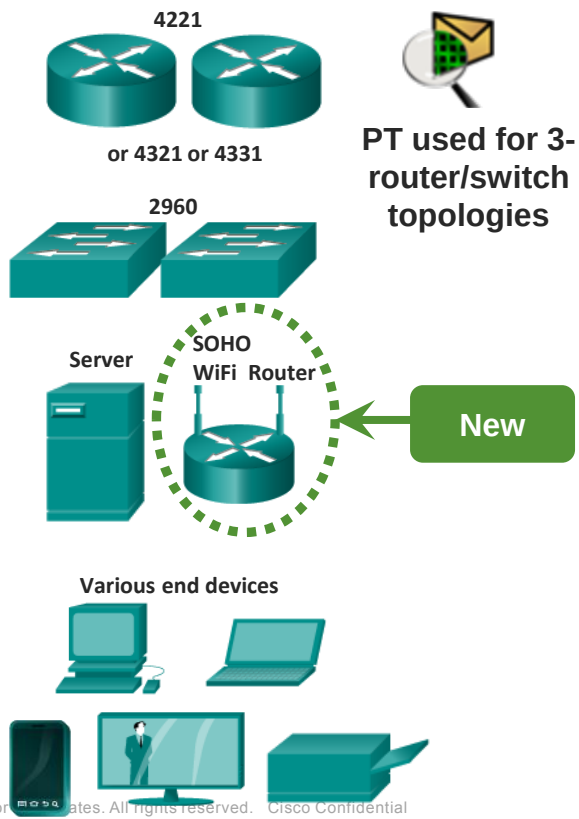
CCNA 6.0 vs 7.0 – Lab Equipment



For CCNAv7 Please Note:

- **Serial ports not required**
- **PT version 7.3 required**



PT used for 3-router/switch topologies

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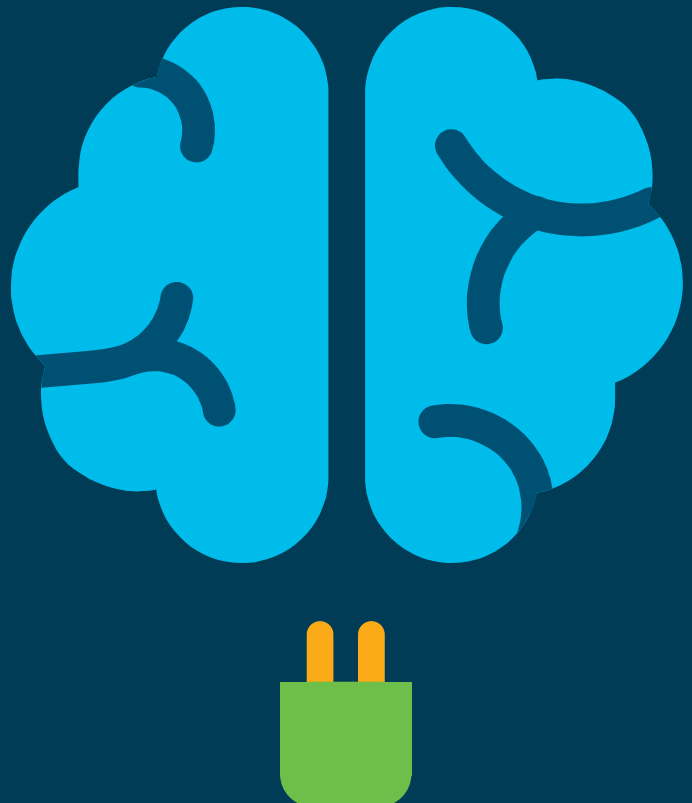
CCNP 8.0



Certification & Exam Alignment

Certification Alignment

Professional Level

Core Exam

Concentration Exam

- Cisco has evolved to a new CCNP Enterprise certification streamlined to require passing two exams
- The **Enterprise Core exam (350-401)** tests a candidate's knowledge of implementing core enterprise network technologies including dual stack architecture, virtualization, infrastructure, network assurance, security and automation and earns a **Cisco Specialist certification** for **Enterprise Core**
- The **Enterprise Advanced Routing and Services exam (300-410)** tests a candidate's knowledge for implementation and troubleshooting of advanced routing technologies and services including Layer 3, VPN services, infrastructure security, infrastructure services, and infrastructure automation and earns a **Cisco Specialist certification** for **Enterprise Advanced Infrastructure Implementation**
- Passing both exams earns a **CCNP Enterprise certification**

CCNP Enterprise: Core Networking (ENCOR) Leveraged and Key New Topics

Leveraged course material

- ROUTE
- SWITCH
- TSHOOT
- CCNA Security
- CCNA R&S v6

CCNP Enterprise: Core Networking (ENCOR)

Key new topics

- Wireless (RF, infrastructure, roaming, authenticating, troubleshooting)
- Multicast (concepts, protocols)
- Fabric technologies (SD-Access, SD-WAN)
- Overlay tunnels (IPSec, VXLAN, LISP)
- QoS (mechanisms, applications)
- Security (network access control, threat defense, endpoint and infrastructure security)
- Programmability concepts (APIs, data models, DevNet, GitHub, Python basics)
- Virtualization concepts (NFV, VMs, virtual switching)
- Automation tools (Embedded Event Manager, Agent and Agentless tools)

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CCNP Enterprise: Advanced Routing (ENARSI) Leveraged and Key New Topics

Leveraged course material

- ROUTE
- TSHOOT
- CCNA Security

CCNP Enterprise: Advanced Routing (ENARSI)

Key new topics

- MPLS Layer 3 VPNs
- Dynamic Multipoint VPN
- DMVPN security
- Advanced BGP
- Troubleshooting IPv6 ACLs
- Flexible Netflow
- Troubleshooting CoPP
- IPv6 First Hop Security
- Cisco DNA Center Assurance

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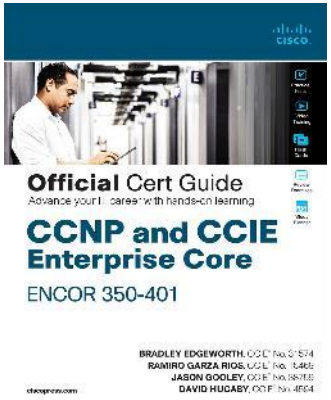
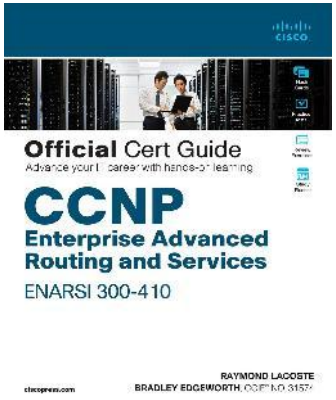
Course Content

Both courses require the Cisco Press Official Cert Guide as student textbook



Certification Guide
Available in book and e-Book formats

Book
ISBN-10: 1-58714-523-5
ISBN-13: 978-1-58714-523-0



Certification Guide
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Book
ISBN-10: 1-58714-525-1
ISBN-13: 978-1-58714-525-4

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CCNP Enterprise 8.0 – Lab Equipment

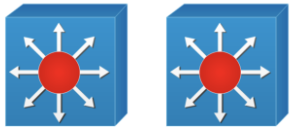
CCNP R&S 7

4221

or 4321 or 4331

2960

3650



Multilayer switch Multilayer switch

Server and End Devices

For CCNP Enterprise 8.0:

- NIM-2T Serial ports needed for 2 of 3 routers
- Packet Tracer 7.3.0 or higher required for optional Packet Tracer activities

Refer to posted [CCNP Enterprise Equipment List]

CCNP Enterprise 8.0

4221

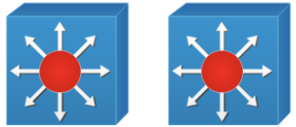
or 4321 or 4331

1 less 4221

2960

1 less 2960

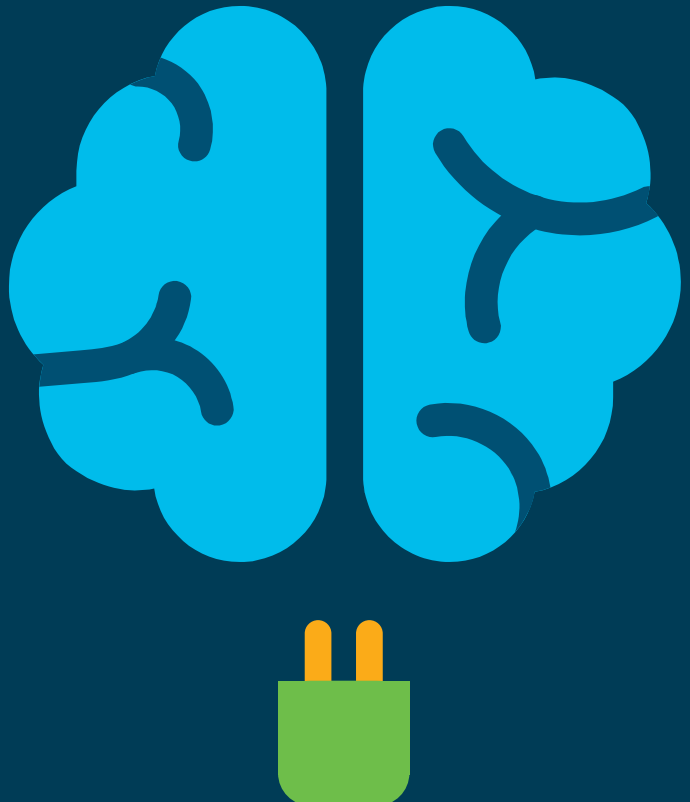
3650



Multilayer switch Multilayer switch

Server and End Devices

Digital Badges



Information In A Digital Badge

What the badge represents

- What the individual has done to earn the badge
- The criteria that the badge has been assessed against
- The badge earner's unique evidence (optionally included)
- When the badge was issued and whether it has expired

Who earned it

- That the badge was issued to the expected recipient (email)

Who issued it

- Details about the organization issuing the badge

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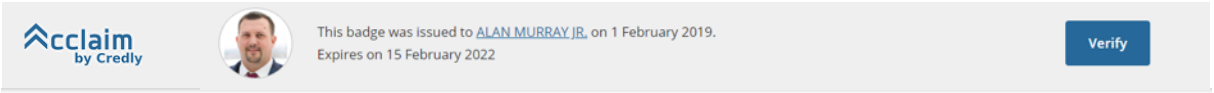
Information



← Recipient

CCNA: Switching, Routing, and Wireless Essentials

← Badge Name

Issued by Cisco

← Issuer

Cisco verifies the earner of this badge successfully completed the Switching, Routing, and Wireless Essentials course and achieved this student level credential. Has a foundation in switching operations, wired and wireless LAN configuration using security best practices, redundancy protocols, and developed problem-solving skills. Earner participated in up to 45 practice activities and accumulated up to 21 hours of hands-on labs using Cisco hardware and/or the Cisco Packet Tracer simulation tool.

← Description

Additional Details

Skills

← Skills/Knowledge

Access Connectivity | Access Security | First-hop Redundancy | High Availability | IP Services | Routing | Switching Protocols | Wireless LAN Controllers

Earning Criteria

← Criteria

- Passing grade from Networking Academy instructor
- Passing score on final exam.

Two Types of Networking Academy Badges

For Course Completion

- Achieve minimum qualification score on first attempt of final exam
- Complete end of course survey
- Marked Pass/Completed by instructor

For Recognition

- 1, 5, 10, 15 and 20 years of active instructor
- Multiply for Growth program
- Learn-A-Thons

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Earning & Accepting a Networking Academy Badge

Step 1	Complete the criteria required to earn the badge
Step 2	Receive an email from Acclaim with instructions
Step 3	Accept your badge on Acclaim, it’s free for life!
Step 4	Share your badge on resume and social media

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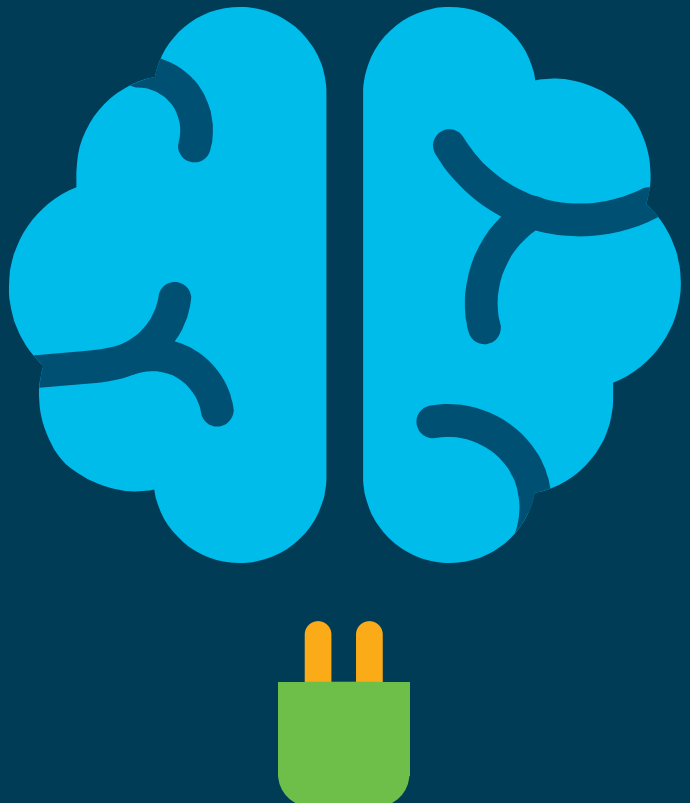
Packet Tracer 7.3



Packet Tracer 7.3

- Supports CCNA 7 & released together with CCNA 7
- New ISR 4331 router to support new topics
- New enhanced 3504 WLC wireless LAN controller
- Dynamic ARP Inspection (DAI)
- DHCP snooping fixes and enhancements
- Section output modifier for show commands
- Improved user authentication: when student takes online PTSA, authentication is not required
- Major GUI framework upgrade for better accessibility and usability

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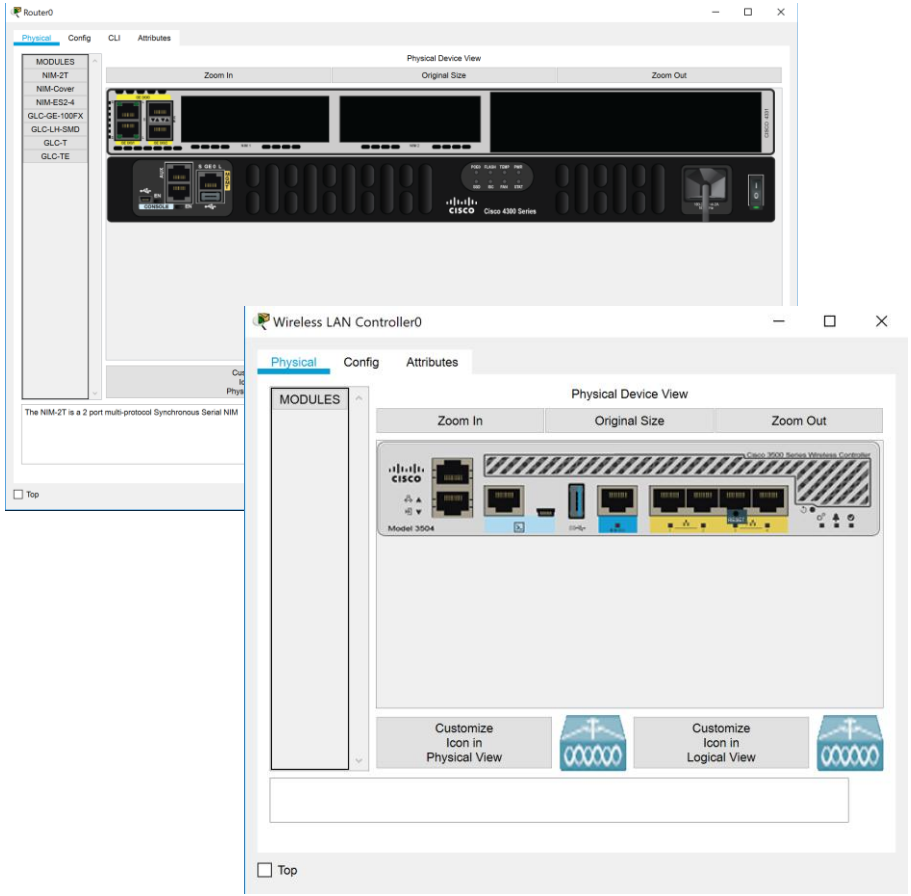
New Devices Details

Cisco 4331 ISR

- 1 GE/SFP, 1 GE, 1 SFP integrated WAN ports
- 2 NIM slots

Cisco 3504 WLC

- Provides centralized control, management, and troubleshooting next-gen wireless networks



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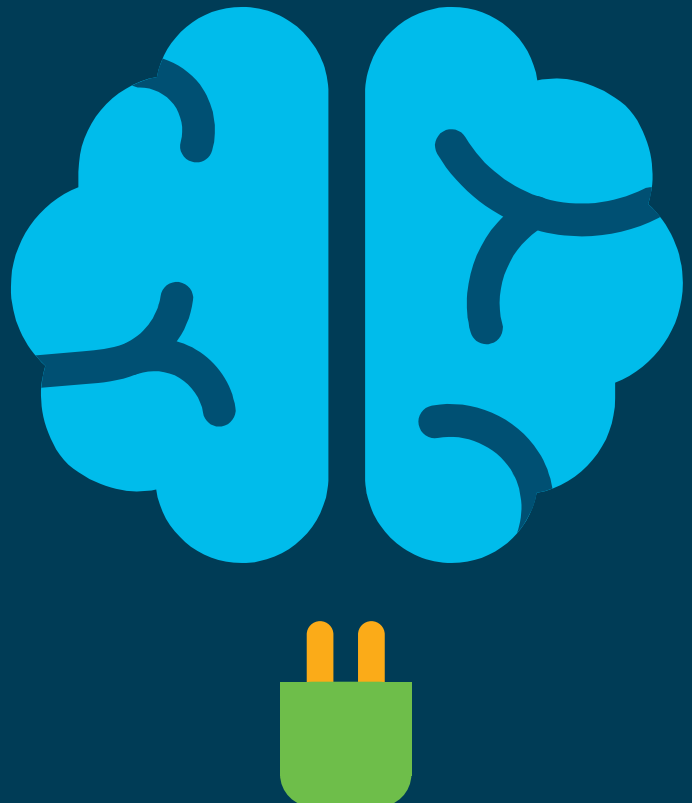
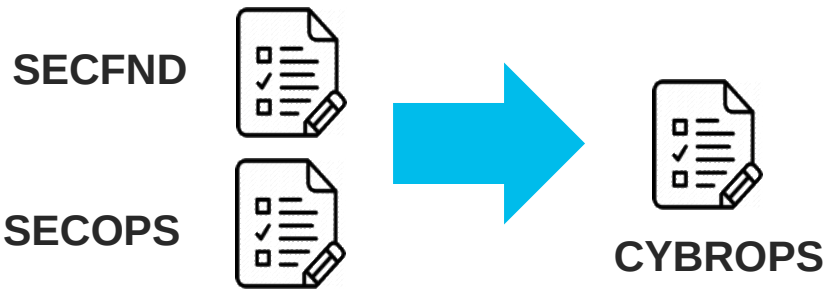
CyberOps Associate



CyberOps Associate – What's changing?



- Certification is streamlining and simplifying
- Two 90 min exams will be merged to one 120 min exam
- CYBROPS exam will primarily focus on security concepts and analysis
- It reduces explicit focus on networking fundamentals

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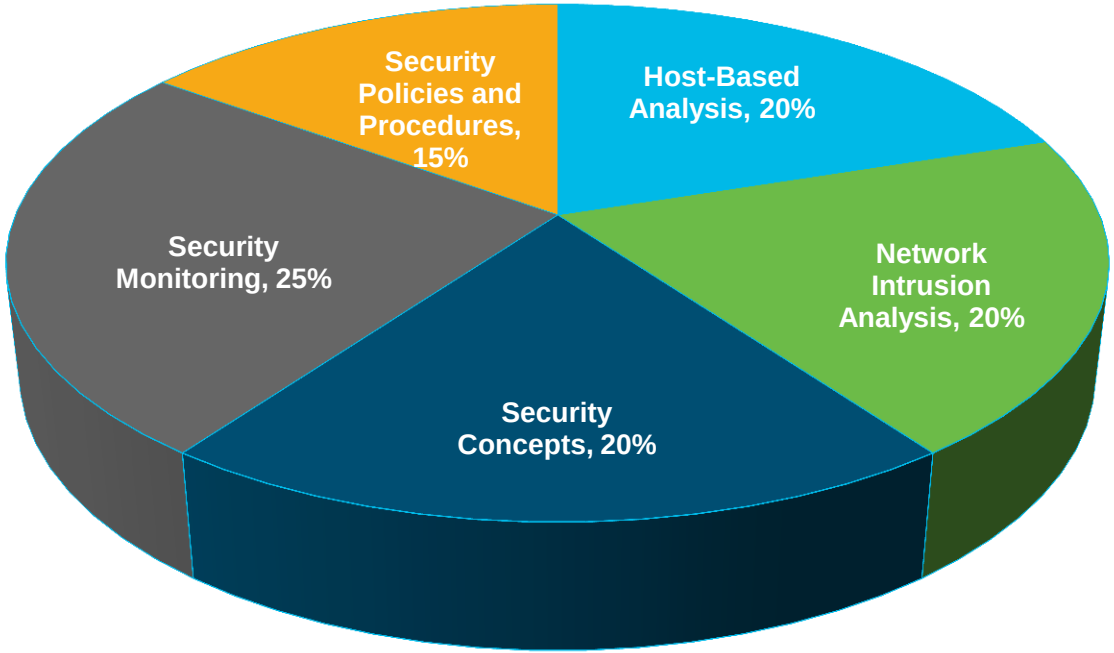
Certification exam topics



- Security Policies and Procedures is a new exam topic
- CyberOps Associate is more vendor neutral
- It enables students to think about the right datapoints/considerations in the evolving landscape

CISCO CERTIFIED CyberOps Associate

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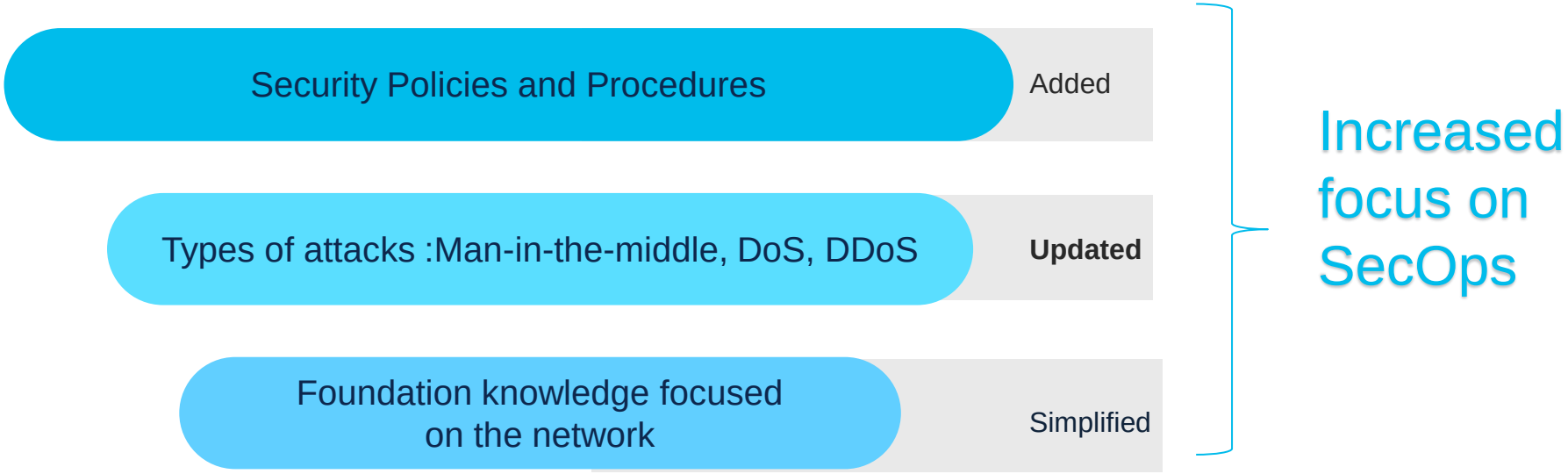
What’s new ?



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NetAcad CyberOps Associate Course

NetAcad will revise CCNA CyberOps as CyberOps Associate course

It will align to the Cisco CyberOps Associate certification

The course will focus on

- Security Monitoring
- Host based analysis
- Network intrusion analysis

No prerequisites

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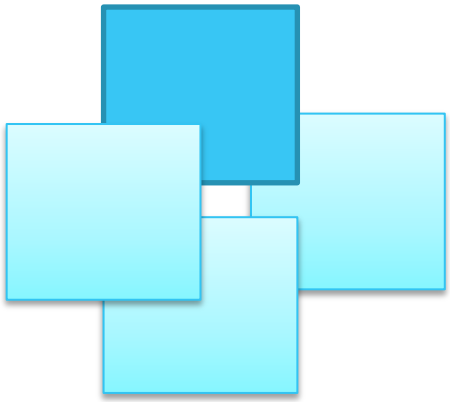
Cyber Ops Associate

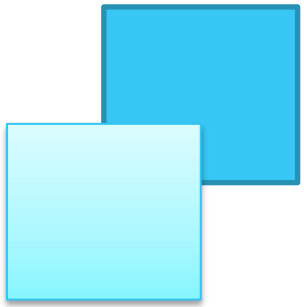
DRAFT

Equipment Requirements



4 VM's

Simplified Lab Setup



2 VM's

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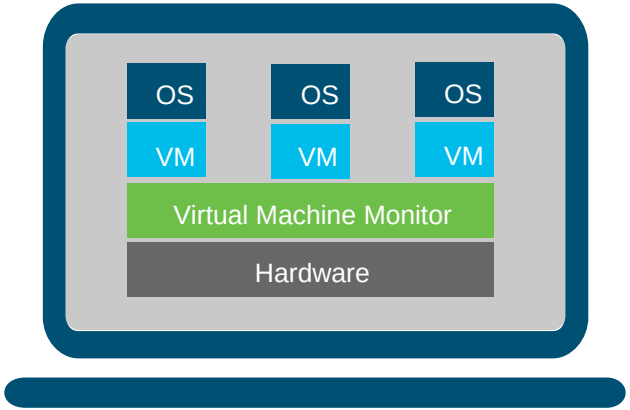
Cyber Ops Associate

DRAFT

Equipment Requirements

Virtual Machine	Disk Space	RAM
CyberOps Workstation VM	7 GB	1 GB
Security Onion VM (ELK tool)	20 GB	4 GB Min /8GB Recommended



Lab Setup

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NetAcad CyberOps Associate course - Instructor

All existing CCNA CyberOps instructors will be accredited to teach the CyberOps Associate course

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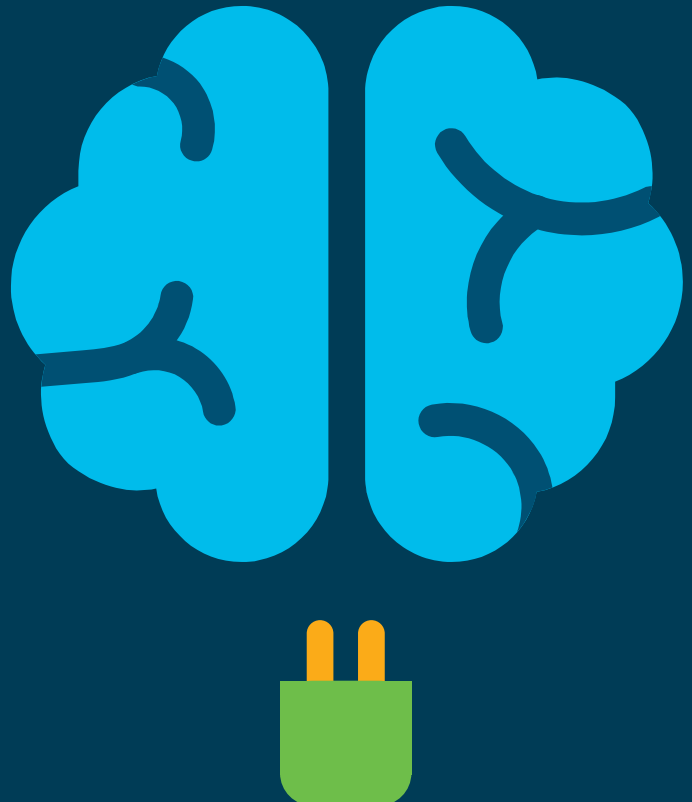
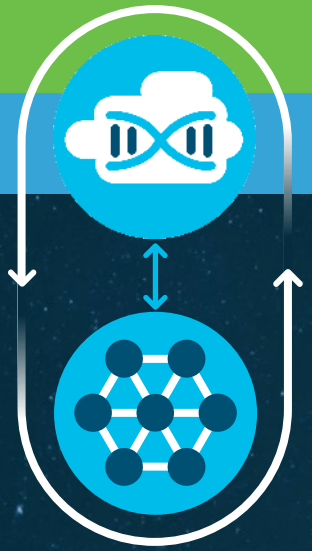
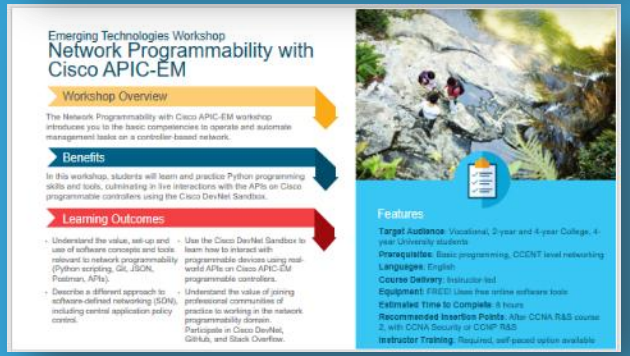
Emerging Technologies Workshops



Cisco DNA & Emerging Tech Workshops

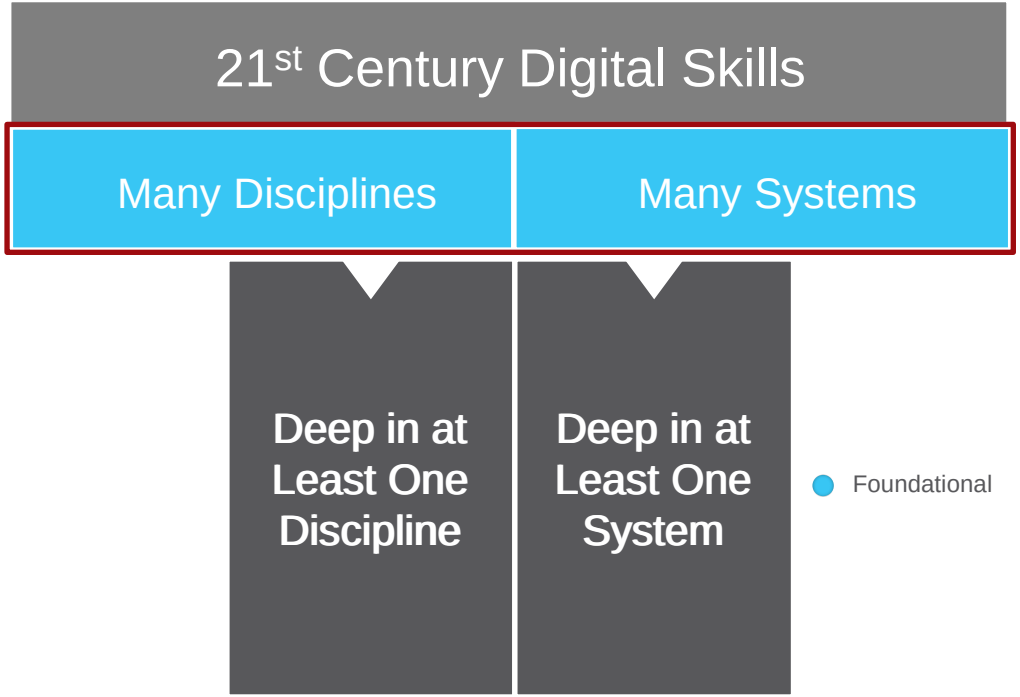




Emerging Technologies Workshops

Increase Employability by Building Breadth in the T-Shaped Professional

The Networking Academy Learning Portfolio Approach



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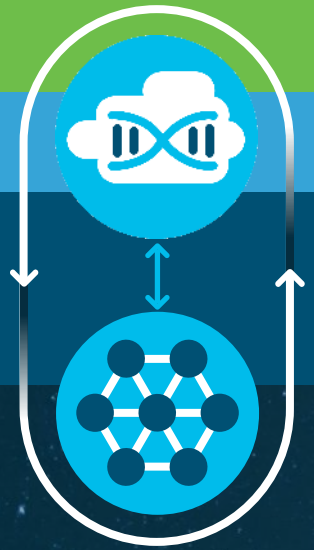
NetAcad Offering Comparison

Component	NetAcad Foundational & Career-Ready Courses	Emerging Technologies Workshops
Curriculum Instructional Goal	Gateway to Entry-level Networking and IT careers	Take students from Buzzwords to Hello World on latest technologies
Instructional Hours	30-70 hours	8 hours
Hands-on Labs	Real equipment in the classroom, Packet Tracer simulations	Hands-on experience on enterprise software using Cisco online platforms and Cisco DevNet sandboxes
Assessments	Formative, Performance-based, Comprehensive summative	Formative, Short summative
Instructor Resources	Instructor PPTs	Instructor PPTs + Activity Transcript

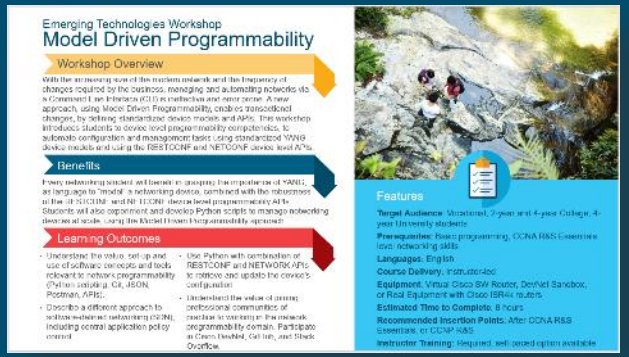
Cisco DNA & Emerging Tech Workshops

Experimenting with REST APIs using Webex Teams

Network Programmability using Cisco APIC-EM



NEW



Emerging Technologies Workshop

Model Driven Programmability

Workshop Overview

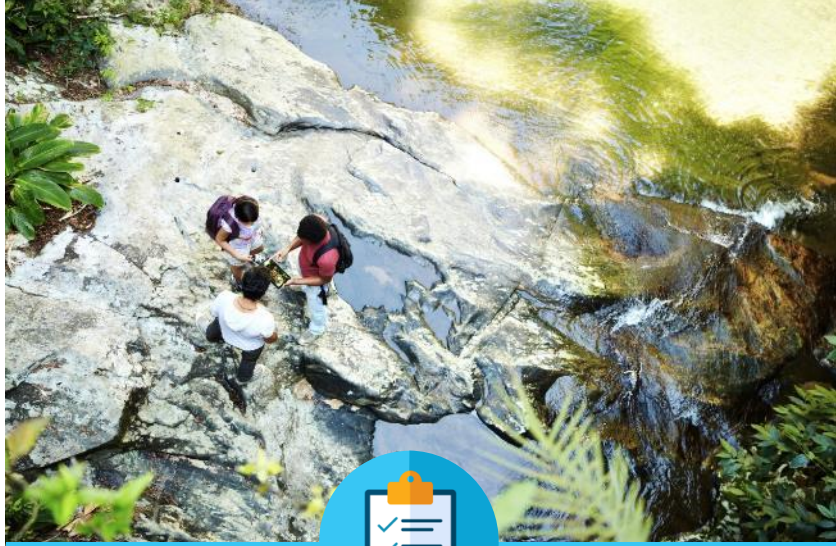
With the increasing size of the modern network and the frequency of changes required by the business, managing and automating networks via a Command Line Interface (CLI) is ineffective and error prone. A new approach, using Model Driven Programmability, enables transactional changes, by defining standardized device models and APIs. This workshop introduces students to device level programmability competencies, to automate configuration and management tasks using standardized YANG device models and using the RESTCONF and NETCONF device level APIs.

Benefits

Every networking student will benefit in grasping the importance of YANG, as language to “model” a networking device, combined with the robustness of the RESTCONF and NETCONF device level programmability APIs. Students will also experiment and develop Python scripts to manage networking devices at scale, using the Model Driven Programmability approach.

Learning Outcomes

- Understand the value, set-up and use of software concepts and tools relevant to network programmability (Python scripting, Git, JSON, Postman, APIs).
- Describe a different approach to software-defined networking (SDN), including central application policy control.
- Use Python with combination of RESTCONF and NETWORK APIs to retrieve and update the device's configuration
- Understand the value of joining professional communities of practice to working in the network programmability domain. Participate in Cisco DevNet, GitHub, and Stack Overflow.



Features

Target Audience: Vocational, 2-year and 4-year College, 4-year University students

Prerequisites: Basic programming, CCNA R&S Essentials level networking skills

Languages: English

Course Delivery: Instructor-led

Equipment: Virtual Cisco SW Router, DevNet Sandbox, or Real Equipment with Cisco ISR4k routers

Estimated Time to Complete: 8 hours

Recommended Insertion Points: After CCNA R&S Essentials, or CCNP R&S

Instructor Training: Required, self-paced option available

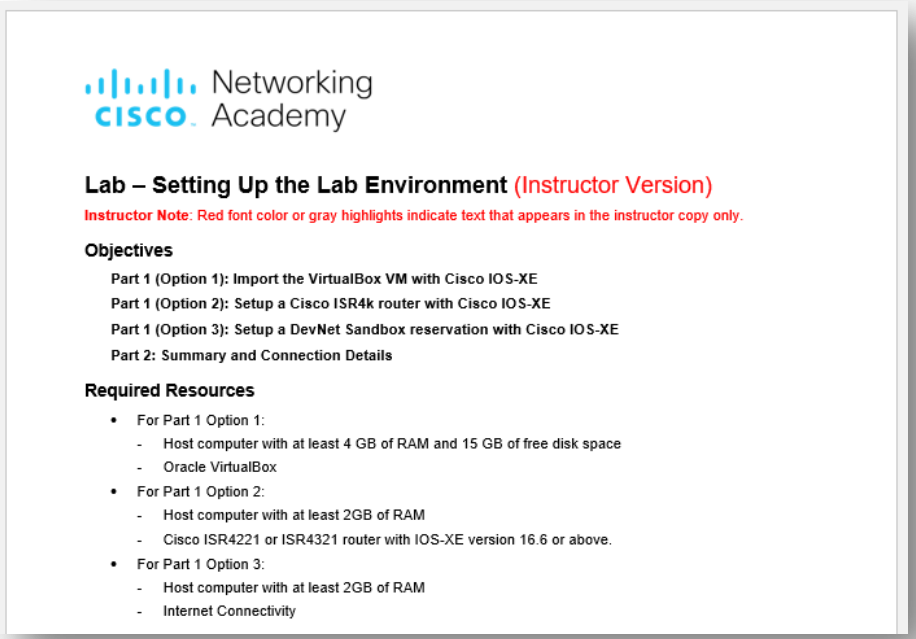
Equipment Required For The New Workshop

- 3 Flexibility Options:
  1. Virtual Cisco SW Router
     - Cisco CSR1000v software router
     - Instructors need active NetAcad Maintenance access:

Determining if you are Signed up

1. Login to Cisco.com
2. Click on your profile icon in the top right corner
3. Click Manage Profile
4. Click Access Management
5. Under "Your Current Access" you will see the following, "You may have been granted additional service and support access. See your current access"
6. Click "your current access"
7. Any contracts you have; NetAcad Maintenance = 95698496

  2. DevNet Sandbox reservation
     - Free, Remote using VPN.
  3. Real Equipment with Cisco ISR4k routers
     - Academies with new CCNA Bundles



Networking Academy

Lab – Setting Up the Lab Environment (Instructor Version)

Instructor Note: Red font color or gray highlights indicate text that appears in the instructor copy only.

Objectives

Part 1 (Option 1): Import the VirtualBox VM with Cisco IOS-XE

Part 1 (Option 2): Setup a Cisco ISR4k router with Cisco IOS-XE

Part 1 (Option 3): Setup a DevNet Sandbox reservation with Cisco IOS-XE

Part 2: Summary and Connection Details

Required Resources

- For Part 1 Option 1:
  - Host computer with at least 4 GB of RAM and 15 GB of free disk space
  - Oracle VirtualBox
- For Part 1 Option 2:
  - Host computer with at least 2GB of RAM
  - Cisco ISR4221 or ISR4321 router with IOS-XE version 16.6 or above.
- For Part 1 Option 3:
  - Host computer with at least 2GB of RAM
  - Internet Connectivity

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How to access the new workshop?

- Globally available as Alpha in Limited Availability to all instructors
  - Check the Course Resources page for updates: www.netacad.com/portal/resources/course-resources
- Instructors can get their accreditation using the existing model for ETWs and IoTF:

Novice instructors

Option 1

ITC Value-Add Course

Best in class training by a Cisco Qualified Instructor Trainer

Experienced instructors with good programming skills.

Option 2

Online Self-Paced Course

Most flexible solution for Instructor Trainers and experienced instructors planning immediate adoption

- All accredited instructors will be able to immediately teach the workshop to their students.
  - **Extend the skillset of your CCNA students with important network programmability skills today!**

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Cisco Certification Evolution

	Associate Level	Professional Level	Expert Level
Network Engineers	CISCO CERTIFIED CCNA	CISCO CERTIFIED CCNP	CISCO CERTIFIED CCIE
Software Developers	CISCO CERTIFIED DEVNET Associate	CISCO CERTIFIED DEVNET Professional	CISCO CERTIFIED DEVNET Expert (Future Offering)

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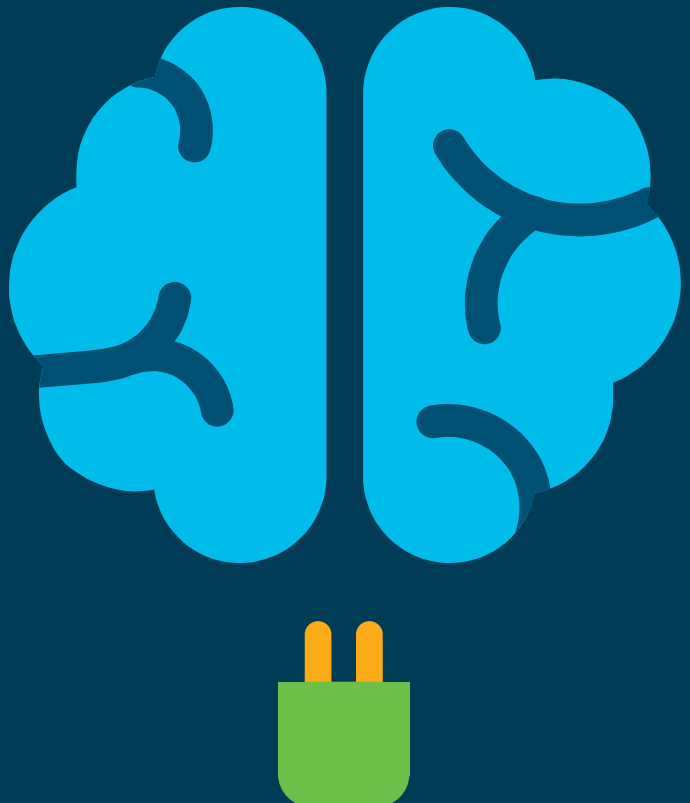
DevNet Associate



DevNet Associate Course from NetAcad

Features	• Online Curriculum with Formative and Summative Assessments • Hands-On Labs running Locally using Software tools • Introduction of a Project-Based Learning Framework
Target Audience	• Vocational Training Center • College • University
Prerequisites	• Writing code in any Object-Oriented Programming language (Python, C#, Java, etc.) • Fundamental skills of networking, equivalent of CCNA ITN
Course Delivery	Instructor-Led

Equipment	• 2 Virtual Machines:
	  • Student's Lab VM bundled with all software tools
	  • Cisco CSR1000v
	• Packet Tracer for Network Automation

Estimated Time to Complete	70h
Learning Domains	1. Software Development and Design 2. Understanding and Using APIs 3. Cisco Platforms and Development 4. Application Deployment and Security 5. Infrastructure and Automation 6. Network Fundamentals

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ETWs vs. the DevNet Associate Course

Emerging Technologies Workshops

- From Buzzwords to Hello World on latest technologies
- 8h bite-sized learning
- Hello world level
- Very hands-on workshops
- Little theoretical background
- Quick way to get excitement about APIs

- **Goals:**
  - Expose CCNA students to single aspects of the Programmable Infrastructure
  - Pave the way for the instructors towards the Programmable Infrastructure
  - Our first offering in Programmable Infrastructure

DevNet Associate Course

- Gateway to Entry-level Networking and IT careers
- 70 hours = Fully Fledged Course
- Career-Ready
- Certification aligned
- Theoretical deep-dive into various topics
- Lot of hands-on lab activities
- Introduction of a Project Based Learning framework

- **Goals:**
  - Target new software audience, usable for CCNA students
  - Get students ready to successfully pass the certification
  - Our flagship offering in Programmable Infrastructure

DevNet Associate (200-901) Exam Topics

15%	1.0 Software Development and Design
20%	2.0 Understanding and Using APIs
15%	3.0 Cisco Platforms and Development
15%	4.0 Application Deployment and Security
20%	5.0 Infrastructure and Automation
15%	6.0 Network Fundamentals

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DEVASC Domain #1: Software Development and Design (15%)

- 1.1 Compare data formats (XML, JSON, and YAML)
- 1.2 Describe parsing of common data format (XML, JSON, and YAML) to Python data structures
- 1.3 Describe the concepts of test-driven development
- 1.4 Compare software development methods (agile, lean, and waterfall)
- 1.5 Explain the benefits of organizing code into methods / functions, classes, and modules
- 1.6 Identify the advantages of common design patterns (MVC and Observer)
- 1.7 Explain the advantages of version control
- 1.8 Utilize common version control operations with Git
  - 1.8.a Clone
  - 1.8.b Add/remove
  - 1.8.c Commit
  - 1.8.d Push / pull
  - 1.8.e Branch
  - 1.8.f Merge and handling conflicts
  - 1.8.g diff

©

DEVASC Domain #2: Understanding and Using APIs (20%)

- 2.1 Construct a REST API request to accomplish a task given API documentation
- 2.2 Describe common usage patterns related to webhooks
- 2.3 Identify the constraints when consuming APIs
- 2.4 Explain common HTTP response codes associated with REST APIs
- 2.5 Troubleshoot a problem given the HTTP response code, request and API documentation
- 2.6 Identify the parts of an HTTP response (response code, headers, body)
- 2.7 Utilize common API authentication mechanisms: basic, custom token, and API keys
- 2.8 Compare common API styles (REST, RPC, synchronous, and asynchronous)
- 2.9 Construct a Python script that calls a REST API using the requests library

DEVASC Domain #3: Cisco Platforms and Development (15%)

- 3.1 Construct a Python script that uses a Cisco SDK given SDK documentation
- 3.2 Describe the capabilities of Cisco network management platforms and APIs (Meraki, Cisco DNA Center, ACI, Cisco SD-WAN, and NSO)
- 3.3 Describe the capabilities of Cisco compute management platforms and APIs (UCS Manager, UCS Director, and Intersight)
- 3.4 Describe the capabilities of Cisco collaboration platforms and APIs (Webex Teams, Webex devices, Cisco Unified Communication Manager including AXL and UDS interfaces, and Finesse)
- 3.5 Describe the capabilities of Cisco security platforms and APIs (Firepower, Umbrella, AMP, ISE, and ThreatGrid)
- 3.6 Describe the device level APIs and dynamic interfaces for IOS XE and NX-OS
- 3.7 Identify the appropriate DevNet resource for a given scenario (Sandbox, Code Exchange, support, forums, Learning Labs, and API documentation)
- 3.8 Apply concepts of model driven programmability (YANG, RESTCONF, and NETCONF) in a Cisco environment
- 3.9 Construct code to perform a specific operation based on a set of requirements and given API reference documentation such as these:
  - 3.9.a Obtain a list of network devices by using Meraki, Cisco DNA Center, ACI, Cisco SD-WAN, or NSO
  - 3.9.b Manage spaces, participants, and messages in Webex Teams
  - 3.9.c Obtain a list of clients / hosts seen on a network using Meraki or Cisco DNA Center

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DEVASC Domain #4: Application Deployment and Security (15%)

- 4.1 Describe benefits of edge computing
- 4.2 Identify attributes of different application deployment models (private cloud, public cloud, hybrid cloud, and edge)
- 4.3 Identify the attributes of these application deployment types
  - 4.3.a Virtual machines
  - 4.3.b Bare metal
  - 4.3.c Containers
- 4.4 Describe components for a CI/CD pipeline in application deployments
- 4.5 Construct a Python unit test
- 4.6 Interpret contents of a Dockerfile
- 4.7 Utilize Docker images in local developer environment
- 4.8 Identify application security issues related to secret protection, encryption (storage and transport), and data handling
- 4.9 Explain how firewall, DNS, load balancers, and reverse proxy in application deployment
- 4.10 Describe top OWASP threats (such as XSS, SQL injections, and CSRF)
- 4.11 Utilize Bash commands (file management, directory navigation, and environmental variables)
- 4.12 Identify the principles of DevOps practices

DEVASC Domain #5: Infrastructure and Automation (20%)

- 5.1 Describe the value of model driven programmability for infrastructure automation
- 5.2 Compare controller-level to device-level management
- 5.3 Describe the use and roles of network simulation and test tools (such as VIRL and pyATS)
- 5.4 Describe the components and benefits of CI/CD pipeline in infrastructure automation
- 5.5 Describe principles of infrastructure as code
- 5.6 Describe the capabilities of automation tools such as Ansible, Puppet, Chef, and Cisco NSO
- 5.7 Identify the workflow being automated by a Python script that uses Cisco APIs including ACI, Meraki, Cisco DNA Center, or RESTCONF
- 5.8 Identify the workflow being automated by an Ansible playbook (management packages, user management related to services, basic service configuration, and start/stop)
- 5.9 Identify the workflow being automated by a bash script (such as file management, app install, user management, directory navigation)
- 5.10 Interpret the results of a RESTCONF or NETCONF query
- 5.11 Interpret basic YANG models
- 5.12 Interpret a unified diff
- 5.13 Describe the principles and benefits of a code review process
- 5.14 Interpret sequence diagram that includes API calls

DEVASC Domain #6: Network Fundamentals (15%)

- 6.1 Describe the purpose and usage of MAC addresses and VLANs
- 6.2 Describe the purpose and usage of IP addresses, routes, subnet mask / prefix, and gateways
- 6.3 Describe the function of common networking components (such as switches, routers, firewalls, and load balancers)
- 6.4 Interpret a basic network topology diagram with elements such as switches, routers, firewalls, load balancers, and port values
- 6.5 Describe the function of management, data, and control planes in a network device
- 6.6 Describe the functionality of these IP Services: DHCP, DNS, NAT, SNMP, NTP
- 6.7 Recognize common protocol port values (such as, SSH, Telnet, HTTP, HTTPS, and NETCONF)
- 6.8 Identify cause of application connectivity issues (NAT problem, Transport Port blocked, proxy, and VPN)
- 6.9 Explain the impacts of network constraints on applications

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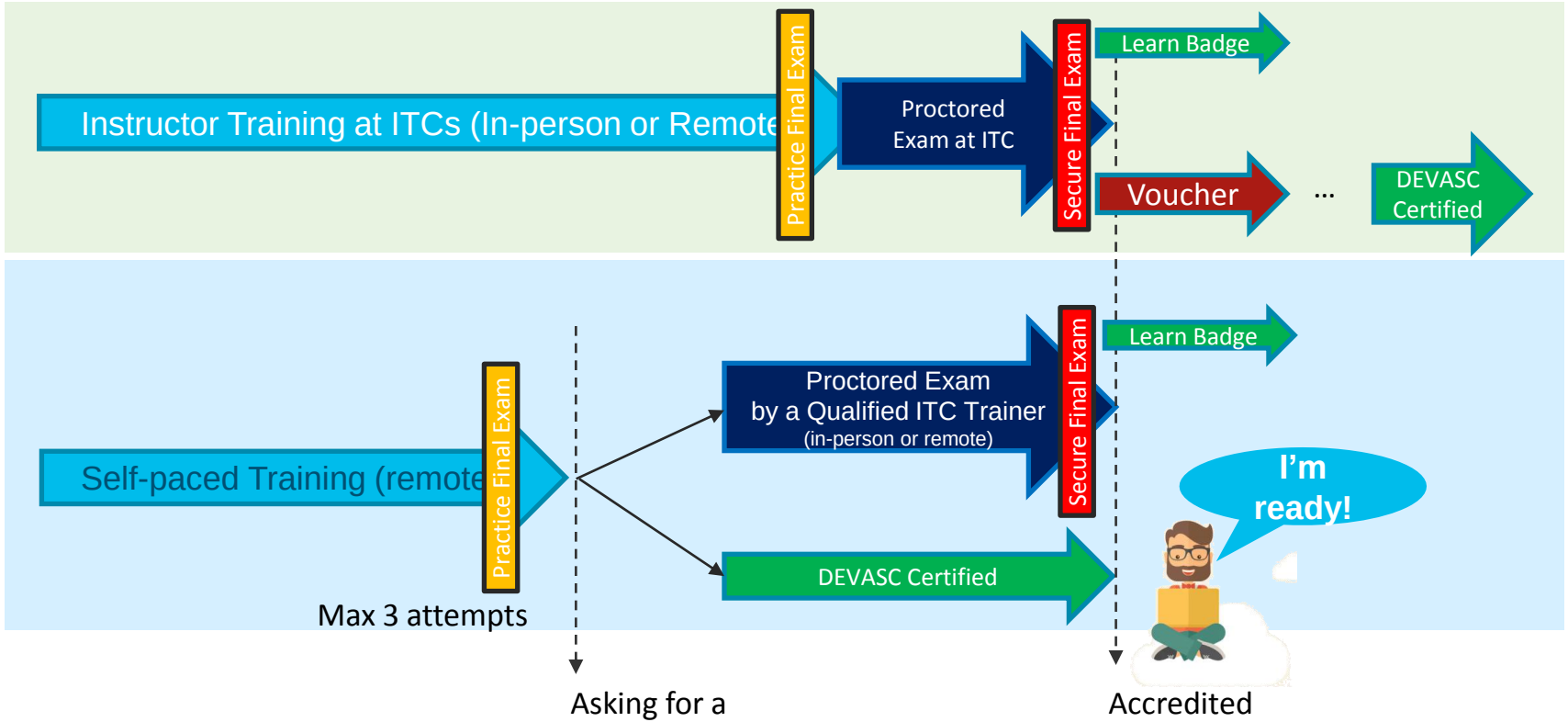
Instructor Training Options



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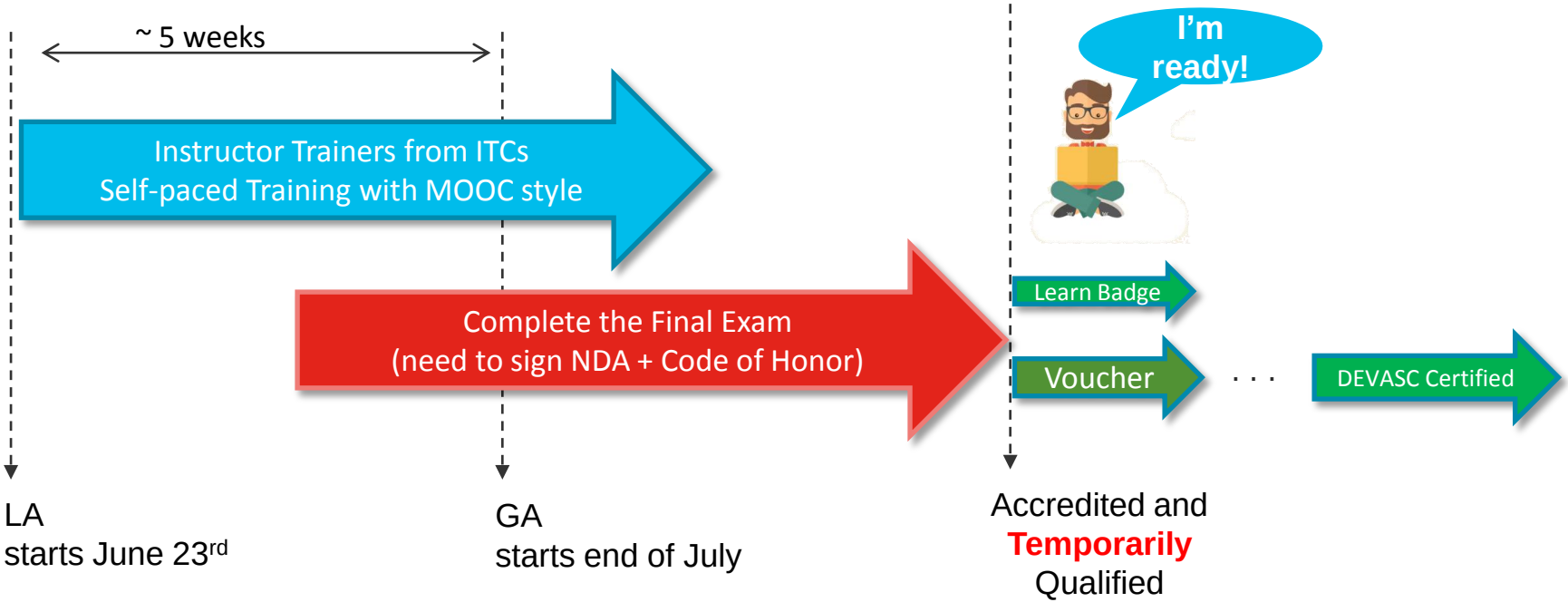
Limited Availability Timeframe (for Trainers Only)



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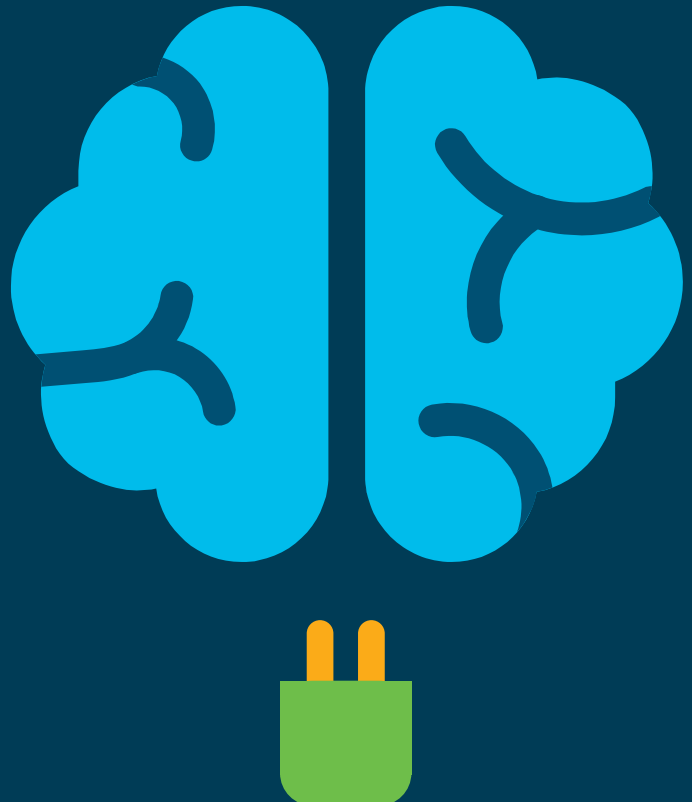
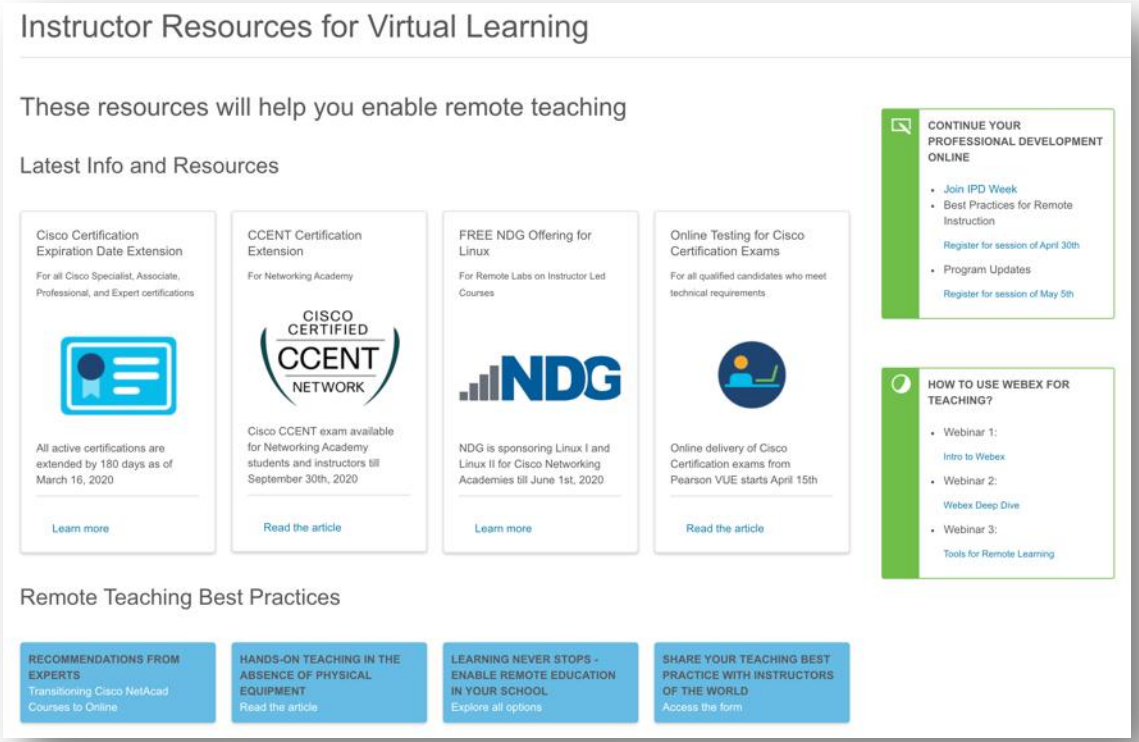
Instructor Professional Development



Resources for Virtual Learning - Instructors

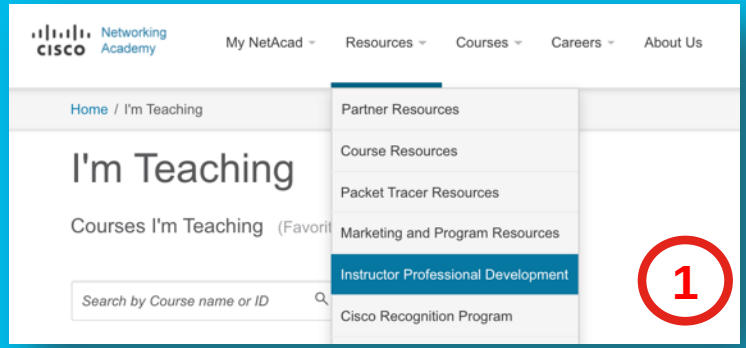
Access for Instructors 20+ Useful resources

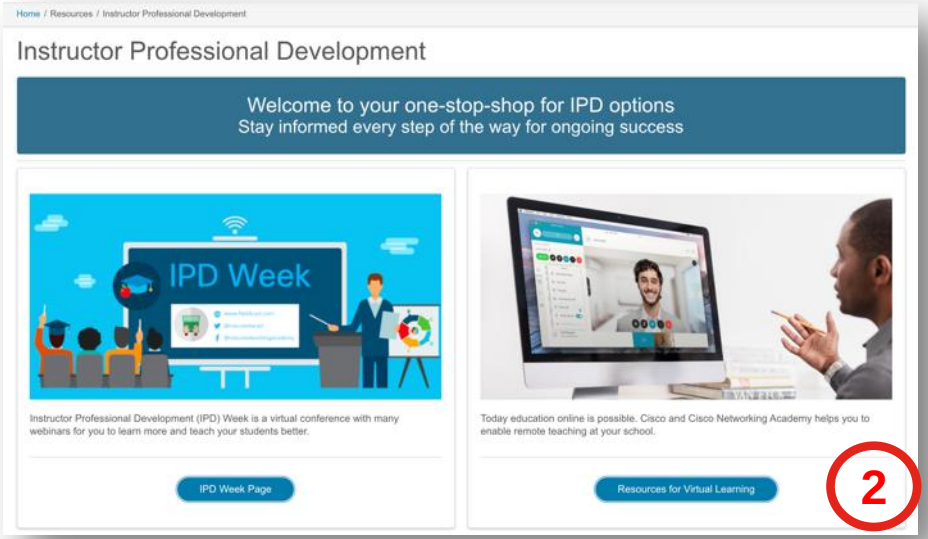


- Latest Information
- Teaching Best Practices
- IPD Week sessions
- Links to past and future webinars
- All options to get Webex

…and more

To Access:





Refreshed IPD Area

- Easy to navigate
- Support of IPD Week and Learning-Never-Stops

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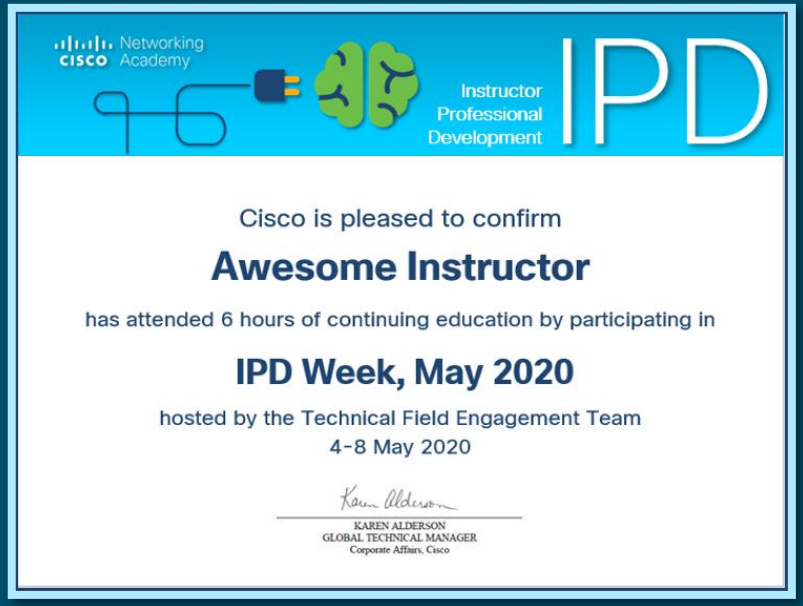
IPD Week 4 - 8 May



Program Updates

- Catch up on the latest strategies and products from Cisco Networking Academy!

Technical Session Topics Include:

- Understanding DNS using Wireshark
- Understanding Kill Chain
- Windows 10 Networking in IT Essentials
- CCNP Deep Dive
- In-depth Look at the DevNet Associate Certification
- New CCNA Community Developed Packet Tracer Labs
- Best Practices for Remote Instruction Parts 1 & 2
- WebEx Teams API and Hands-on with Python SDK

Networking Academy

Instructor Professional Development IPD

Agenda

- Packet Tracer Physical Rack view to enhance Layer 1 skills
- Simulated Hands-on Labs in Packet Tracer
- Live demos!

Find the labs here:
http://cs.co/communitydeveloped

Most live participation!
(352 attendees)

New CCNA Community Developed Packet Tracer Labs

Watch the recording in IPD Week course: English Technical Session

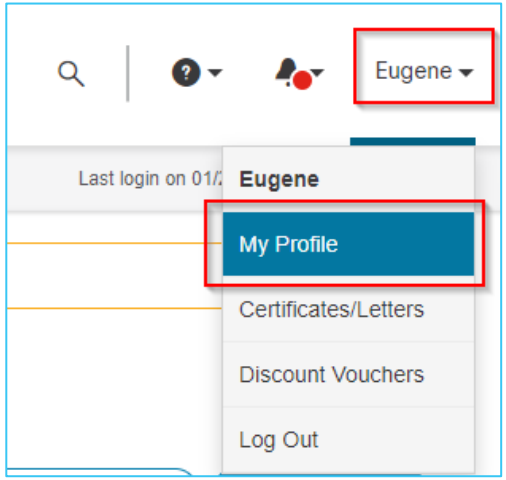
Echo Rantanen
Technical Manager
US/Canada

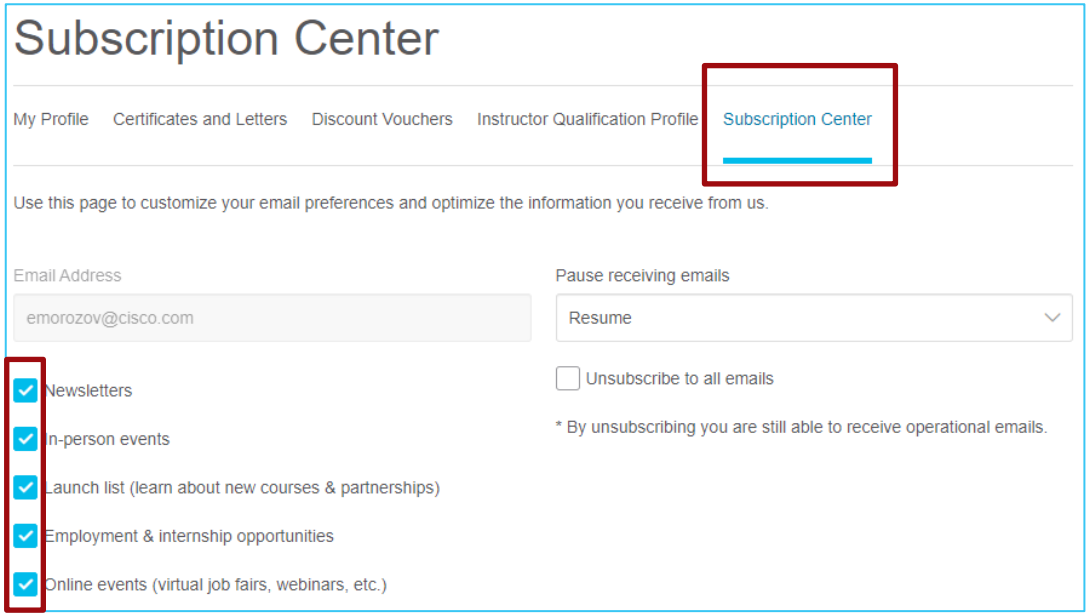
Bob Samson
Instructor Trainer
Mesa, AZ USA

Gustavo Salazar
Instructor Trainer
Ecuador

Do not miss important updates!

- Check you email settings





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