



Cisco Networking Academy
Mind Wide Open

April 2015

Introducing

Cisco Networking Academy: The “T” in STEM Education & Mapping to Employment



Marie Zwickert, M.Ed.

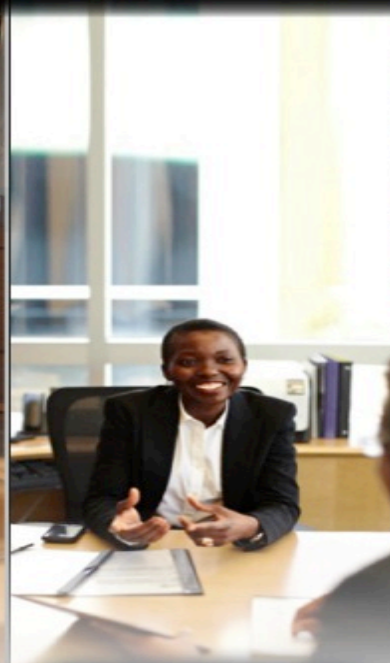
Cisco

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Corporate Philanthropic Initiatives
Northeast Region

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OUR AREAS OF CSR FOCUS



Governance
and Ethics



Supply Chain



Our People



Society



Environment

Technology – We've come a long way baby



Skills Gap

- Large skill gaps and unemployment issues throughout the world
- Challenges in filling existing IT and Networking positions (Entry & Advanced)
- Challenges will be amplified for jobs required in the IoE Economy



17 Years:

Cisco's Commitment to Transform Education



Shaping 21st century teaching and learning to prepare student's for the increasing number of high skill, in demand jobs across a broad spectrum of industries.

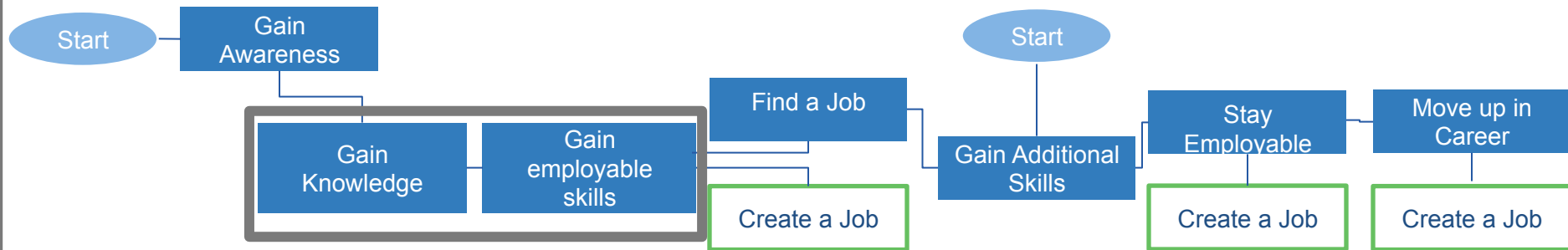
Together, we can change the way we work, live, play and learn.



Aware. Prepare. Connect.

With Cisco Networking Academy

Employment Lifecycle



Critical to understand demand throughout lifecycle to ensure relevant interventions

NetAcad Goals:

- Increase awareness about value of NetAcad to students and employers
- Prepare students to become employable
- Facilitate connections to job opportunities

What the Data is Telling Us

Skills for in-demand IT jobs that are most consistently reported across sources are:

- **Programming and Application Development**
- **Help Desk and Technical Support**
- **Networking**
- **Mobile Application and Device Management**
- Project Management
- Database Administration
- **Security**
- Business Intelligence and Analytics
- **Cloud Computing**
- **Interpersonal Skills**

Sources: Computer World, Comp TIA, Global Knowledge, Dice, Robert Half, TekSystems

The World's Largest Classroom

Cisco Networking Academy Impact Since 1997

COUNTRIES WORLDWIDE

170

INSTRUCTORS WORLDWIDE

20,000

STUDENTS WORLDWIDE

5 Million

ONLINE EXAMS TAKEN

143 Million +

ACADEMIES WORLDWIDE

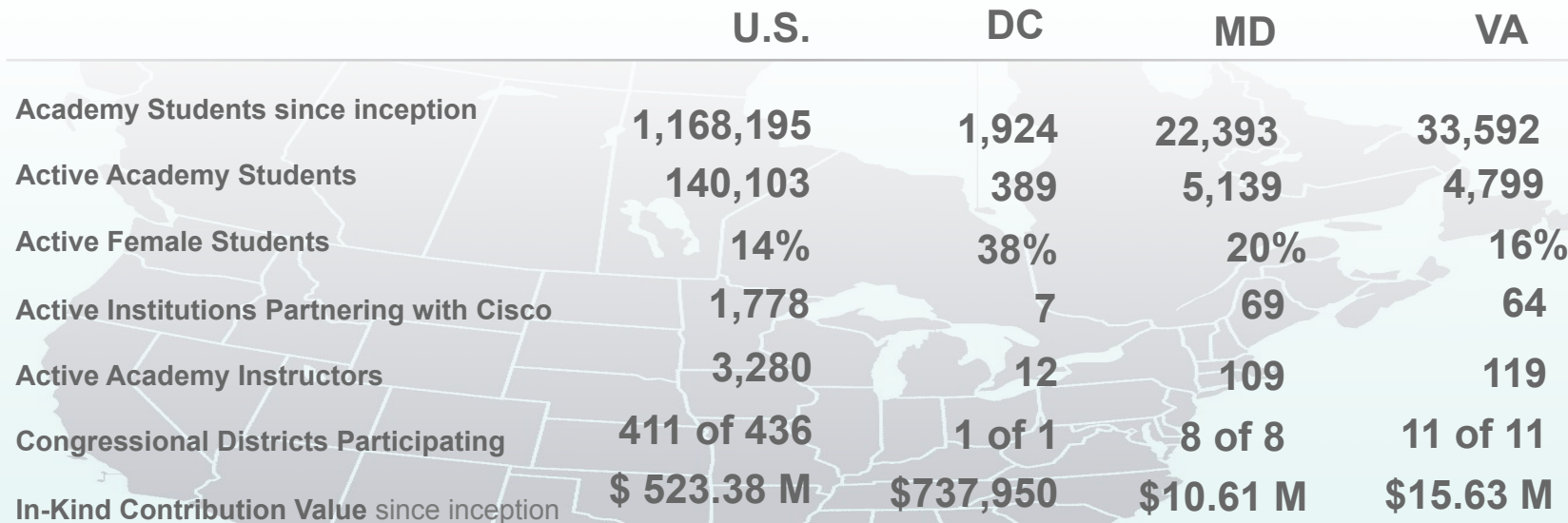
9,500

LANGUAGES

19

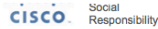
National and Regional Impact

United States, District of Columbia, Maryland and Virginia



	U.S.	DC	MD	VA
Academy Students since inception	1,168,195	1,924	22,393	33,592
Active Academy Students	140,103	389	5,139	4,799
Active Female Students	14%	38%	20%	16%
Active Institutions Partnering with Cisco	1,778	7	69	64
Active Academy Instructors	3,280	12	109	119
Congressional Districts Participating	411 of 436	1 of 1	8 of 8	11 of 11
In-Kind Contribution Value since inception	\$ 523.38 M	\$737,950	\$10.61 M	\$15.63 M

Academy State Impact Profiles



Cisco Networking Academy

Impact Profile

Virginia



ICT and Networking Courses Prepare and Inspire Future Innovators

Today, 2 billion things are connected over the Internet. Experts say that by 2020 more than 37 billion organic and inorganic connections will be made. This rapid increase is called the Internet of Everything, which demands a technology-adept workforce across all fields and disciplines.

Cisco Networking Academy provides information and communication technology (ICT) and networking courses to high schools, community colleges and universities globally. Students learn how to design, build and secure intelligent networks, while developing soft skills like leadership, collaboration and entrepreneurship. Classroom instruction, online learning, interactive games, simulations, and hands-on practice are continuously refreshed and aligned with U.S. STEM and education standards.

More than 1 million students are enrolled in Networking Academy courses around the world, preparing to become the innovators of tomorrow.

The Impact in Virginia



4,799

Students taught in 2013-2014



33,592

Students since inception



64

Organizations offering Cisco ICT courses



119

Instructors preparing the ICT workforce



15.63 Million

Estimated in-kind contribution to education

you + networks = impact^x

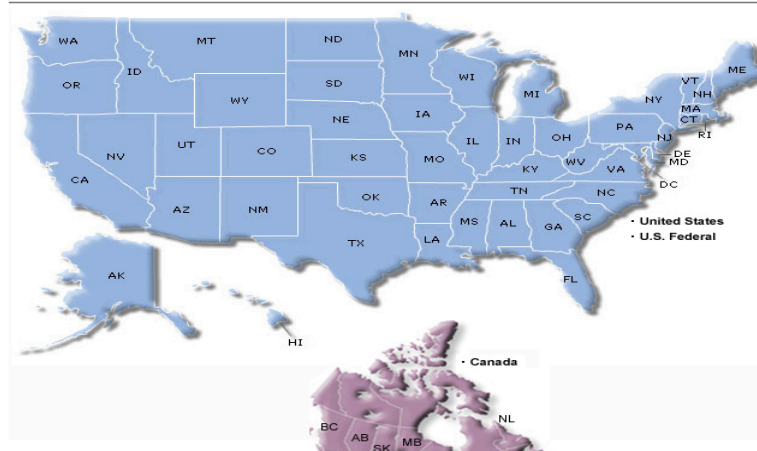
In-Kind Contribution Value for the State of Virginia

Academy Impact Profiles - Individual State Profiles with IKC, metrics and more:

[Academy Impact Profiles url](http://www.cisco.com/web/learning/netacad/us-can/index.html)

Regional Summaries School Impact Stories Student Impact Stories Videos

Here are the 2013 Academy Impact Profiles for the U.S. and Canada, providing regional information, academy locations, and impact data. Profiles are available by country, state and province (as well as U.S. Federal Agencies and Washington D.C.). Click on the region or text label in the map below.



Log In
How do I get a login?

Academy Locator

Find a school offering Cisco courses near you.



Impact in Your Area

Students Schools and Programs

- Regional Summaries
- Ohio
 - Oklahoma
 - Ontario
 - Oregon
 - Pennsylvania
 - Prince Edward Island
 - Quebec
 - Rhode Island
 - Saskatchewan
 - South Carolina
 - South Dakota
 - Tennessee
 - Texas
 - Utah
 - Vermont
 - Virginia
 - Washington
 - West Virginia
 - Wisconsin
 - Wyoming

<http://www.cisco.com/web/learning/netacad/us-can/index.html>

The Internet of Everything is Changing the World





Cisco Networking Academy
Building Skills Today for Tomorrow

What is Cisco Networking Academy?

Cisco leverages its expertise in ICT and networking to develop courses delivered through public-private partnerships

Students attend courses at local schools, community colleges and universities throughout the United States and Canada



Students gain critical skills:

- Technical
- Business
- 21st century soft skills

Students prepare for:

- Entry-level careers
- Industry-recognized certifications
- Entrepreneurship
- Further education

14 Apr 15

OS & IT	Networking	Security	Advanced Technology	Packet Tracer	Internet of Everything	Entrepreneurship
Get Connected	CCNA Routing & Switching (1-4)	Intro to Cybersecurity	Voice Primer	Cisco Packet Tracer (PT)	Intro IoE Summary Podcast	Entrepreneurship
IT Essentials	CCNP Routing & Switching (1-3)	CCNA Security	Cloud Primer	Packet Tracer Know How	Introduction to the Internet of Everything	Be Your Own Boss
NDG Linux Essentials	Networking Essentials		Collaboration Primer	PT Mobile iOS	IoE: Connecting Data	
NDG Introduction to Linux I			Mobility Series: Wireless Tech Standards	PT Mobile Android	IoE: Connecting People & Process	
NDG Introduction to Linux II					IoE: Connecting Things	
					Smart Grid	

Online Curricula

Courses with Embedded Rich Media Learning Activities

C:\KRCO..._COM\Exploration3_English_BETA\lternet\switch.html - Microsoft Internet Explorer provided by Cisco Systems, Inc.

3 VLANs
3.2 VLAN Trunking
3.2.2 Trunking Operation

CCNA Exploration
LAN Switching and Wireless

A Trunk in Action
You have learned how a switch handles untagged traffic on a trunk link. You now know that frames traversing a trunk are tagged with the VLAN ID of the access port the frame arrived on. In the figure, PC1 on VLAN 10 and PC3 on VLAN 30 send broadcast frames to switch S2. Switch S2 tags these frames with the appropriate VLAN ID and then forwards the frames over the trunk to switch S1. Switch S1 reads the VLAN ID on the frames and broadcasts them to each port configured to support VLAN 10 and VLAN 30. Switch S3 receives these frames and strips off the VLAN IDs and forwards them as untagged frames to PC4 on VLAN 10 and PC6 on VLAN 30.

Click Play on the animation toolbar in the figure.

Trunking Operation
The S2 and S1 switches send the tagged frames out all ports configured for VLANs 10 and 30.

Click Play to view the animation.

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C:\KRCO..._COM\Exploration1\lternet\switch.html - Microsoft Internet Explorer provided by Cisco Systems, Inc.

7 Data Link Layer
7.4 Putting it All Together
7.4.1 Follow Data Through an Internetwork

CCNA Exploration
Network Fundamentals

The frame also indicates the upper layer protocol of the data with a value of 0000 in the Type field. The frame begins with a Preamble and a Start of Frame (SOF) indicator and ends with a cyclic redundancy check (CRC) in the Frame Check Sequence at the end of the frame for the error detection. It then uses CSMA/CD to control the placing of the frame onto the media.

Data Link layer puts data onto the media

Source: 7 Application, 6 Presentation, 5 Session, 4 Transport, 3 Network, 2 Data Link, 1 Physical

Protocol (LLC/MAC): 802.2/802.3
Media Access Control: CSMA/CD
Source Address: 00:05:6A:3C:7B:00
Destination Address: 00:00:A3:00:CE:04
Upper Layer (Type): 0000 (IPv4)
SOF: 10101010 (7 times)
Preamble: 10101010 (7 times)

MAC address: 00:05:6A:3C:7B:00
MAC address: 00:00:A3:00:CE:04

Click to see the steps.

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Hands-on Labs and Interactive Activities

Practical Application of Learned Skills

Integrated into the Online Curricula

Hands-on Lab: Creating an ACL

Lab 1.3.4 Creating an ACL

Diagram illustrating a network topology for creating an ACL. The topology shows a central Router 1 connected to a Switch 1, which is connected to a Switch 2. Switch 2 is connected to Host 1 and Host 2. A Distinguished Server is also connected to Router 1. The diagram includes a legend for line types: Straight through cable, Serial cable, Console (blue/white), and Crossover cable.

Device	Host Name	Address	Subnet Mask
Router 1	Router1	192.168.1.1	255.255.255.0
Switch 1	Switch1	192.168.1.2	255.255.255.0
Switch 2	Switch2	192.168.1.3	255.255.255.0
Host 1	Host1	192.168.1.4	255.255.255.0
Host 2	Host2	192.168.1.5	255.255.255.0

IT Essentials Virtual Laptop

LEARN

REQUIRED LABS

- Lab 1.3.4.1 Creating an ACL
- Lab 1.3.4.2 Creating an ACL
- Lab 1.3.4.3 Creating an ACL

External cables connect the laptop to the network, power, and other devices. USB devices, Ethernet, and AC power.

In the external cables area, you will work with the following components:

- Network Cable
- Ethernet Cable
- USB Cable
- Ethernet Cable
- Power Cable

TEST

EXPLORE

Existing Wireless APs **Planned Wireless APs**

Click the buttons to view existing and planned wireless AP locations.

IT Essentials Virtual Desktop

LEARN

TEST

EXPLORE

This section acts as a quick reference to the components in their installed state. However a highlight box to have more and to see detailed views of the item.

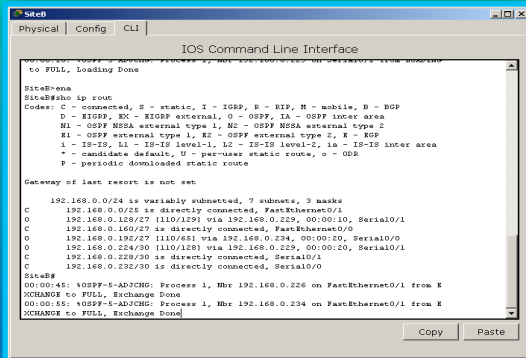
Level 1: Waiting Area (Introduction to wireless)

The aliens need wireless network access while they await visitor's badges in the shuttle bay. Follow the instructions to connect each alien.

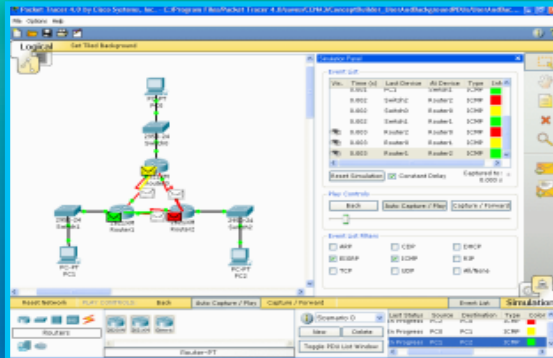
Begin Level

Cisco Packet Tracer

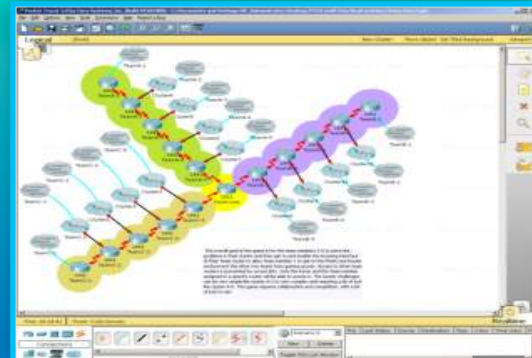
Simulate IOS Commands



Visualize Network Traffic



Collaborate on Multiuser Activities



What comes with a course?

Basic

- Learning objectives
- Practice activities
- Assessments
- Feedback survey

Purpose/Focus	Pre-Test	Section or Topic Quiz	Chapter Quiz	Checkpoint	Assessments		
					Chapter	Practice Final	Final
Purpose/Focus	Proof of prerequisite knowledge/learning background or knowledge/skill level on entering - student/ instructor	self-assessment/student practice and feedback	self-assessment/student practice and feedback	Proof of knowledge progression - student/ instructor	Proof of knowledge progression - student/ instructor	Level of knowledge mastery and readiness for final exam	Level of knowledge mastery
Location	Beginning of Course	End of section/topic	End of Chapter	Following Major Technology TLO/Course	End of Chapter	End of Course	End of Course
Claim/Component Skill Level	Course	TLO	TLO (Chapter)	TLO/Course	Course	Course	Course
Instructional Purpose	Formative	Formative	Formative	Formative	Formative/Summative	Formative	Summative
Item Content:	Multiple Choice Drag and Drop Testlet PT as Media Object Packet Tracer Assessment PT Activity (Standalone/Non-VDS) PTMU Game Hands-On	X X X X X X X X X	X X X X X X X X X	X X X X X X X X X	X X X X X X X X X	X X X X X X X X X	X X X X X X X X X
Number of Items	Depends on type	1-10	10-15	X	15-20	50-60	50-60
Targeted Time to Complete (min)	30-40	15	20	30	50-60	60	60
-Suggested times only	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Required or Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Complexity	Low	Low	Low	Med-High	High	High	High
Security Priority	Low - periodic refresh	None	None	Low - periodic refresh, isomorphs	Low - periodic refresh, randomization, isomorphs	High - periodic refreshes (balanced with final), randomization	High - periodic refreshes, multiple forms, randomization, isomorphs, PT Pools
Initiated by	Instructor	Student	Student	Instructor or Student	Instructor	Instructor	Instructor or Student
Feedback Type	Item/Section Level	Item Level	Item Level	Item/Section Level	Item Level	Item/Section	Item/Section
Delivery System	Canvas	Canvas	Canvas	VDS	VDS	VDS	VDS
Automatic Gradebook Entry	No	No	No	Yes	Yes	Yes	Yes

ITE and CCNA Courses

- Scope & Sequence document
- Full learning & assessment portfolio
- Instructor and Student Lab and PT Manuals
- Instructor PPTs
- Marketing collateral

Claims

Claims	TLO/ELO	OBI	RSE	ITEMS	COVERAGE
2.2 Implement DHCP on a router to automate IP addressing configuration for end devices in a small to medium-sized business network.	CS	CS		5	8%
2.2.3 Implement DHCPv4 to provide IP addressing services to end-devices across multiple LANs in a small to medium-sized business network.	T		10.1.0		
2.2.4 Implement DHCPv6 to provide IP addressing services to end-devices across multiple LANs in a small to medium-sized business network.					

Practice

Practice Quizzes

Chapter 1 Quiz

Unlimited Attempts

This quiz covers the following topics:

- GigabitEthernet 0/0 - 2001:db8:ac:1::1
- GigabitEthernet 0/1 - 2001:db8:ac:1::2
- Serial 0/0/0 - 2001:db8:ac:1::3

Note: You do not have to exit into the router (config) #

Reset

Section Quiz: IPv6 Addressing - Form 26765

Remember, changes to question templates won't automatically update quizzes that are already in progress.

Chapter 2 Quiz

Unlimited Attempts

This quiz covers the following topics:

- 2001:db8:ac:1::1
- 2001:db8:ac:1::2
- 2001:db8:ac:1::3

Chapter 3 Quiz

Unlimited Attempts

This quiz covers the following topics:

- 2001:db8:ac:1::1
- 2001:db8:ac:1::2
- 2001:db8:ac:1::3

Chapter 4 Quiz

Unlimited Attempts

This quiz covers the following topics:

- 2001:db8:ac:1::1
- 2001:db8:ac:1::2
- 2001:db8:ac:1::3

Chapter 5 Quiz

Unlimited Attempts

This quiz covers the following topics:

- 2001:db8:ac:1::1
- 2001:db8:ac:1::2
- 2001:db8:ac:1::3

Diagnose

Apply

Lab - Configuring IPv6 Addresses on Cisco Routers

Topology

Addressing Table

Device	Interface	IPv6 Address	Prefix Length	Default Gateway
R1	G0/0	2001:DB8:ACAD:A::1	64	N/A
R1	G0/1	2001:DB8:ACAD:1::1	64	N/A
S1	VLAN 1	2001:DB8:ACAD:1::B	64	N/A
PC-A	NIC	2001:DB8:ACAD:1::3	64	FE80::1
PC-B	NIC	2001:DB8:ACAD:A::3	64	FE80::1

Objectives

Part 1: Set Up Topology and Configure Basic Router and Switch Settings

Part 2: Configure IPv6 Addresses Manually

Part 3: Verify End-to-End Connectivity

What Cisco provides to educational institutions...

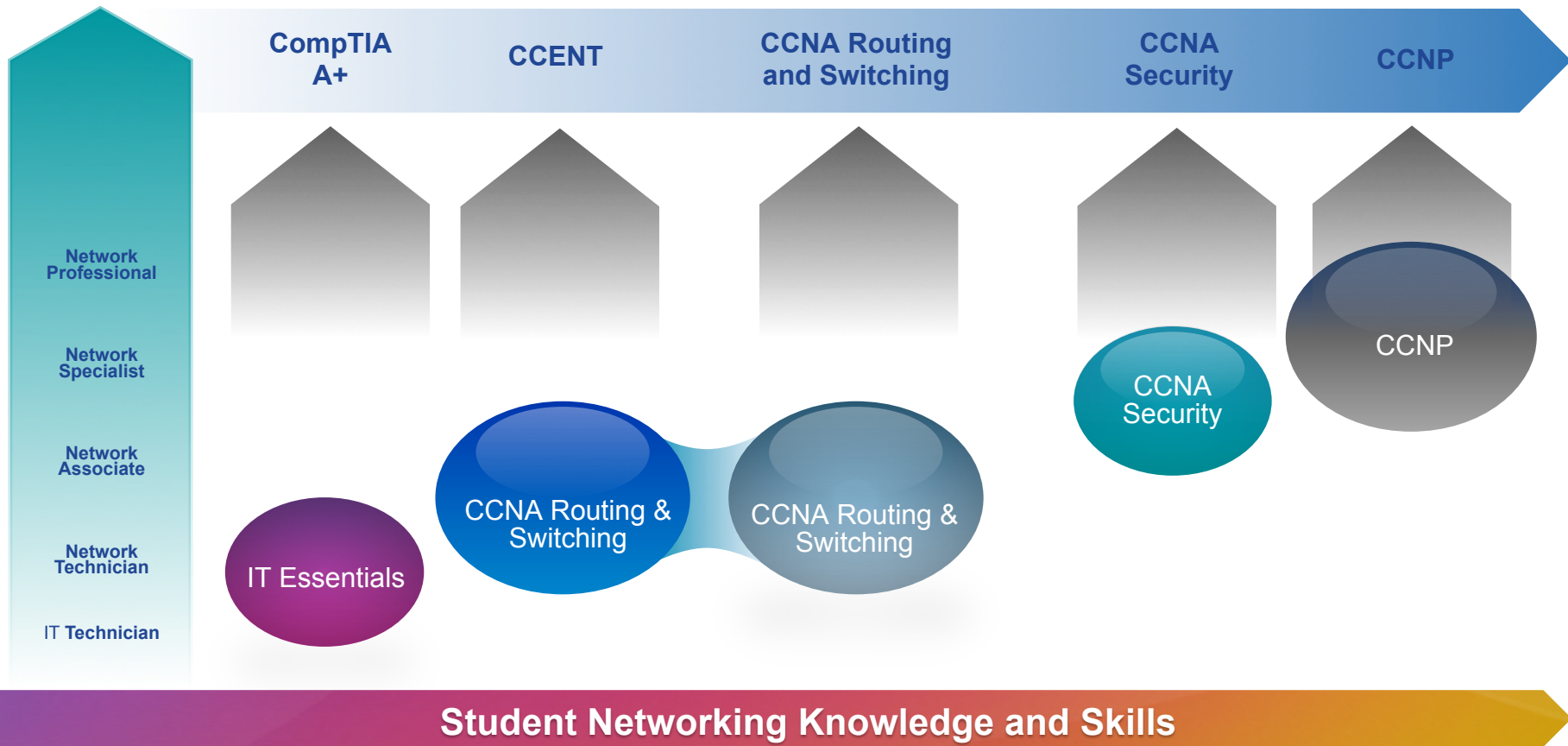
Academies receive...	For...
Curriculum	Licensed At No Cost
Labs & lab keys, presentations	Licensed At No Cost
LMS (Rosters, online exams, certs, etc)	Licensed At No Cost
Helpdesk 24/5, email/chat/	Licensed At No Cost
Simulation software, games	Licensed At No Cost
Equipment (Contact your partner of choice)	70% Discount
Software upgrades, TAC support	Licensed At No Cost
Exam Discount Vouchers	58% Discount
Monthly Instructor IPD by Technical Marketing	Licensed At No Cost
Monthly Student Webinars on Refining Career Skills	Licensed At No Cost
ASC and ITC (Support and Initial Instructor Training)	Fee's Determined by ASC / ITC

What Your Organization Provides



1. **Classroom space** for in-person instruction.
2. Funds to purchase **lab equipment bundles** (varies by curriculum).
3. Student **PC's** for viewing online curricula and labs.
4. **Internet access** with sufficient network connections and bandwidth.
5. **Alignment with an Academy Support Center (ASC).**
6. **Instructor available to receive training via an Instructor Training Center (ITC).**

Core Courses with Certification Alignment



Salaries by Cisco Certification Levels

[2014 IT Skills & Salary Report](#)



CCENT: Cisco Certified Entry Networking Technician

\$71,482



CCNA: Cisco Certified Network Associate Routing and Switching

\$81,308

CCNA Security: Cisco Certified Network Associate Security

\$82,293

CCNA Voice: Cisco Certified Network Associate Voice

\$87,480



CCNP: Cisco Certified Network Professional Routing and Switching

\$90,833

Fast Track Courses

Get Connected

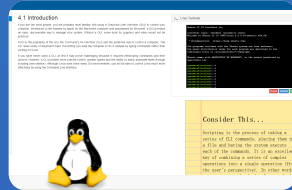
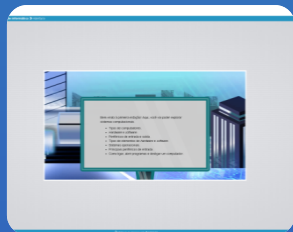
Introduction to the Internet
of Everything

Introduction to
Cybersecurity

NDG Linux Essentials

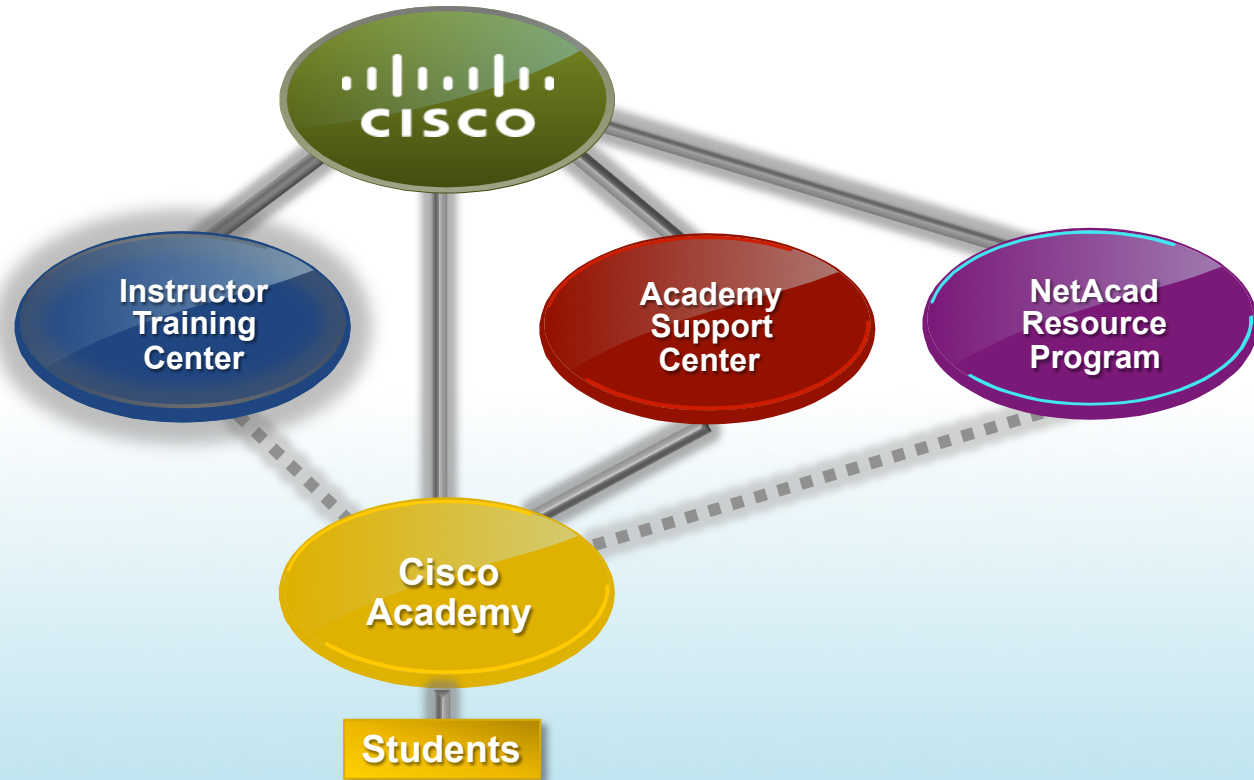
Be Your Own Boss

Entrepreneurship



No instructor training or equipment purchase
requirements

Open Partner Support & Training Model



Northeast Partnerships That Make It Work

Government

Education

Nonprofits

Business

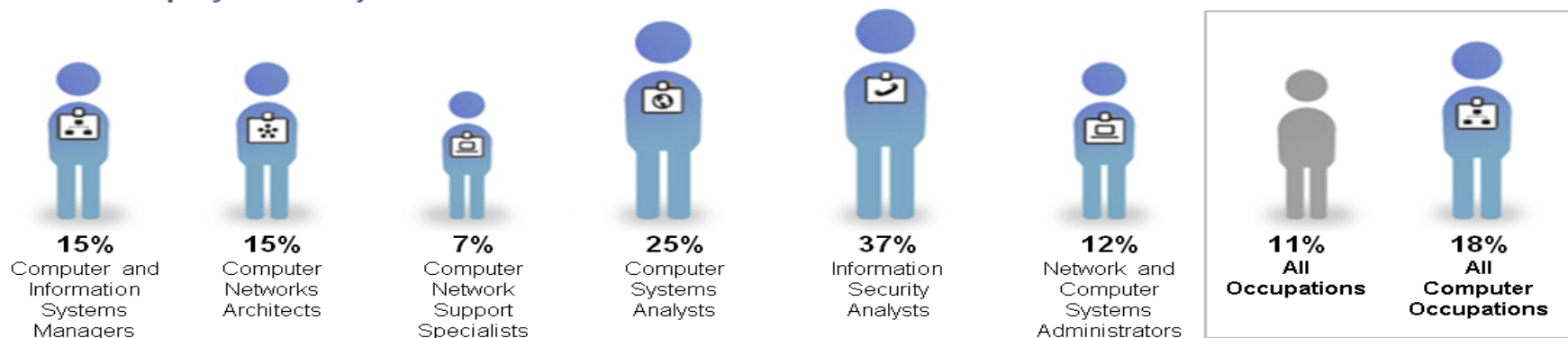


Camden Dream Center, Towson University, Montgomery County Community College, Rensselaer Polytechnic Institute/Schenectady; Community College of Rhode Island, Bridgmont Community & Technical College, TRECA and Cuyahoga Community College

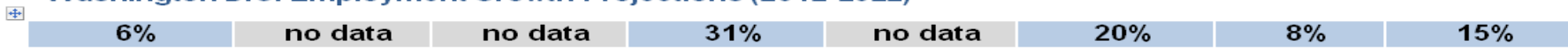
ICT Job Projections

United States and District of Columbia

2022 U.S. Employment Projections¹



Washington D.C. Employment Growth Projections (2012-2022)¹

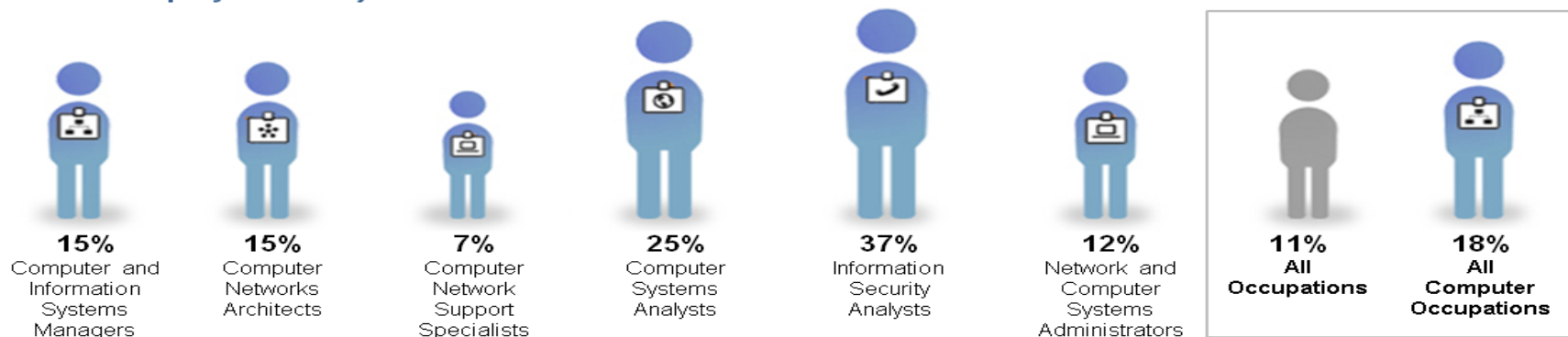


¹ Source: US Department of Labor, Bureau of Labor Statistics, www.projectionscentral.com

ICT Job Projections

United States and Maryland

2022 U.S. Employment Projections¹



Maryland Employment Growth Projections (2012-2022)¹

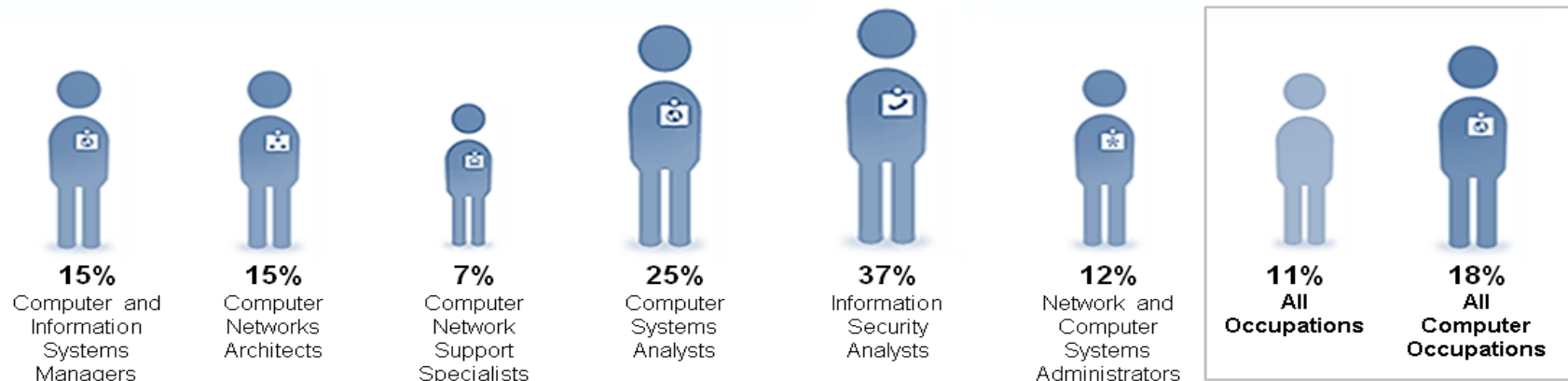


¹ Source: US Department of Labor, Bureau of Labor Statistics, www.projectionscentral.com

ICT Job Projections

United States and Virginia

2022 U.S. Employment Projections¹



Virginia Employment Growth Projections (2012-2022)¹



21%

25%

16%

30%

50%

21%

14%

26%



¹ Source: US Department of Labor, Bureau of Labor Statistics, www.projectionscentral.com

More than just curriculum...

“Stepping Stones to Success”

Opportunities for High Achievers

- Cisco Live “Dream Team”
- Internships/Co-Ops

Skills Competitions

- Cisco Net Riders
- Skills USA
- Cyber Patriots

Career Resources

- Social Media Groups
- Development Webinars

Technical Skills

- Hands-On Experience
- Opportunities and Connections



Networking
Academy

Career Resources: NetAcad Advantage

- NetAcad Advantage provides valuable “resources” to help students prepare and advance in an IT Career including:
 - Tips to apply for a job, create CV/Resume, and succeed in an interview
 - Exclusive access to thousands of IT job opportunities
 - Webinars on career related topics
 - Videos from IT professionals in tech careers
 - Career success stories
 - Inspirational articles for Women in IT
 - www.NetAcadAdvantage.com

**New content
posted weekly**

Skills Competitions: Showcase Student Skills

NETRIDERS, SKILLS USA, WORLD SKILLS

- Benefits:
 - Engage Students
 - Showcase their skills
 - Identify Top Talent >>Connect with Career Opportunities



Opportunities for High Achievers

- Opportunities for students/alumni to demonstrate skills & get connected to job opportunities...



Cisco PACT

A Hire Opportunity



Cisco **Partners** + Cisco **Academies** = **Connection for Talent**



- Connecting Cisco Channel Partners to Networking Academies
 - Identifying local IT talent pipeline
 - Enhancing learning opportunities (i.e. internships, mentoring)
 - Creating awareness
 - Success stories

www.cisco.com/go/pact



The more you put in, the more you get in return

Choose the level of engagement that fits your objectives



Connecting Students to Jobs



- LinkedIn Premier Talent
 - Outreach to instructors to nominate high-potential talent
- Jobs @ Cisco
 - Internships, Co-Ops, and Full Time positions w/Cisco Services (Ongoing)
 - Target Locations: NC, TX, MA, GA, CA
- Veteran Hiring
 - US IT Pipeline: www.usitpipeline.com

Supporting Instructor Success

Teaching Resources Materials

Instructor webinars, Instructor Orientation Course, Instructor Spotlight

Hands-on Experiences Support

Deep discounts on new Cisco Equipment, PT community, regression testing on older equipment

Reporting Tools and Analytics

Student Reporting , Academy Success reporting

Just in Time Support

Robust FAQ Library, NetSpace tutorials, 5x24 Help Desk, instructor community

ASC and ITC Partnerships

Onboarding and Sustaining, Instructor Training & Support, Regional conferences

Collaboration and Communication Tools

Instructor Communities, in-class communications, Social Media communities

News and Announcements

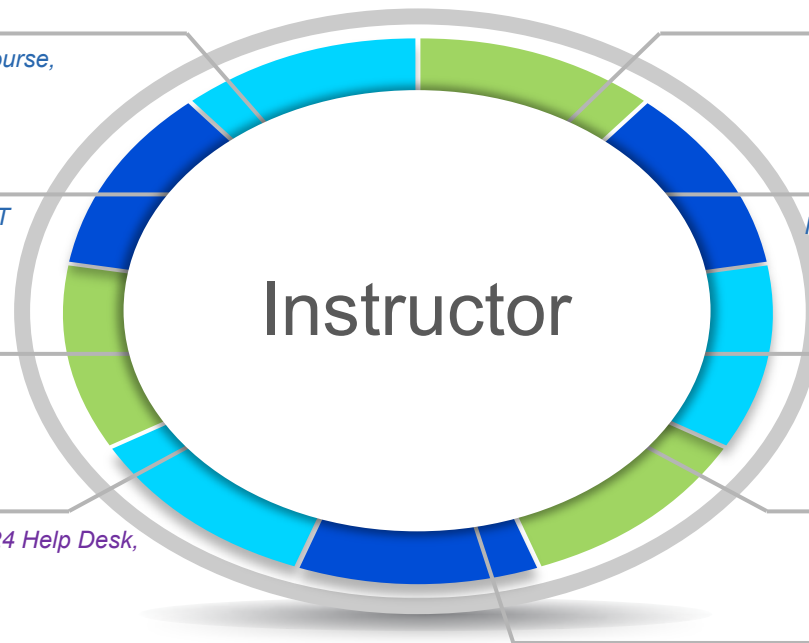
Monthly newsletter, weekly NetAcad News

NetAcad Advantage

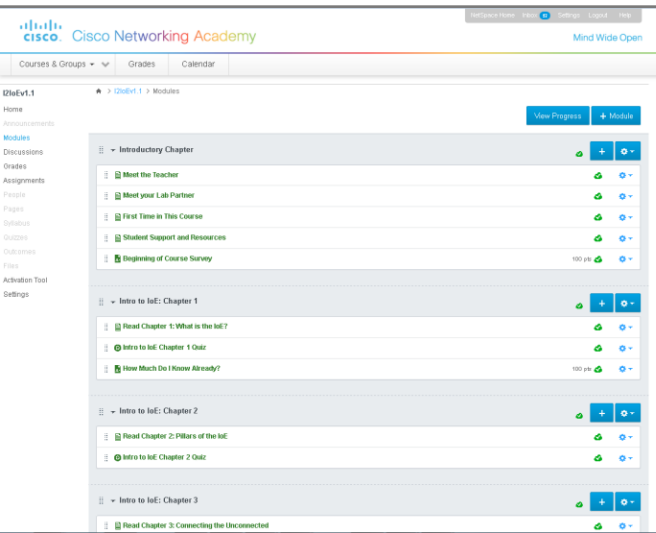
Soft skills training, Job Posts

NetAcad.com

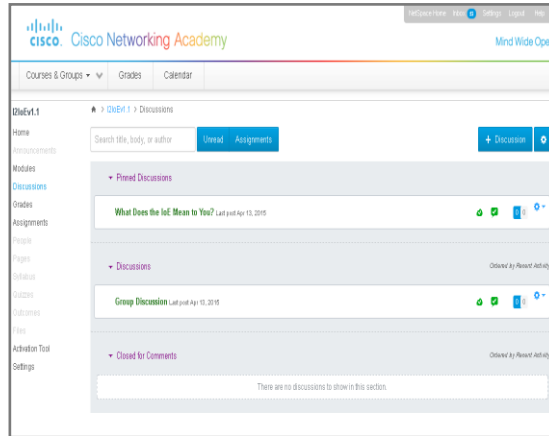
Learning Management System Functionality



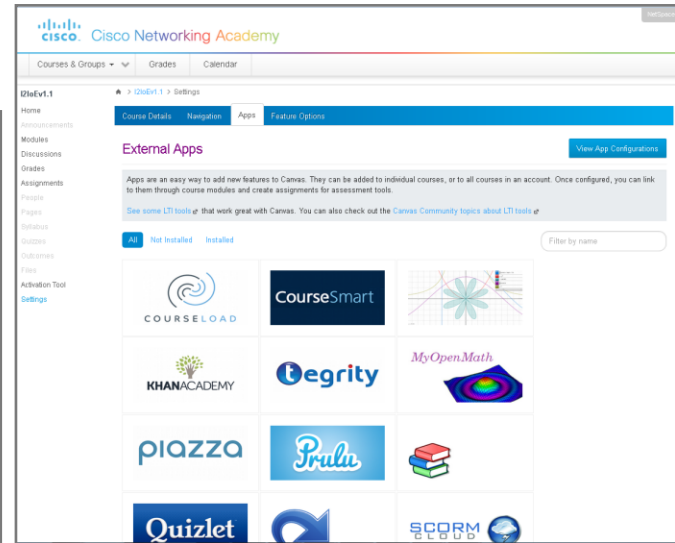
Empowering you to Personalize Instruction for your Students



Add your own
content,
activities &
assessments



Add social
learning
(Discussions
and Peer
Review)



Engage with
partners and
other
instructors to
share ideas



Models of Best Practice



Nancy Null

Towson University

Support & Training Manager

Towson University Cisco Academy Support & Training Center

Towson University Division of Innovation & Applied Research

Center for Professional Studies

7801 York Rd., Suite 342 Towson MD 21204

nnull@towson.edu

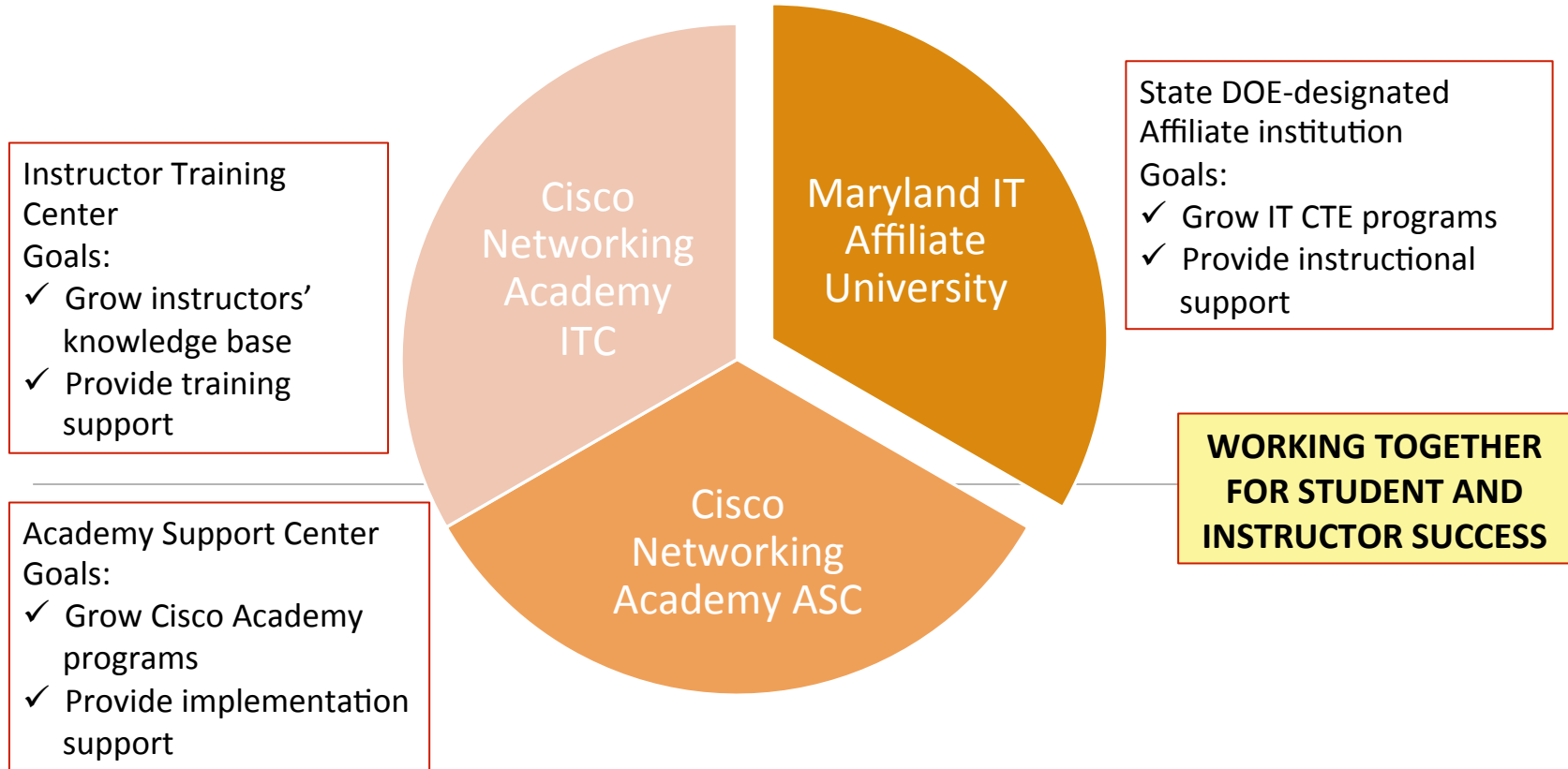
Office: 410-704-6565



Connecting Academies & Communities:

BUILDING NEXT-GENERATION SKILLS



Multi-faceted model



Affiliate university value

- ✓ Embed Cisco Academy content in statewide initiatives
 - “We’re the T in STEM”
 - Alignments: Common Core/Next Generation Science/STEM
- ✓ Link Academy programs to Maryland’s IT employers
 - Mock interviews, field trips, school visits
 - Mentoring for students and instructors
- ✓ Support IT industry certification for students and instructors

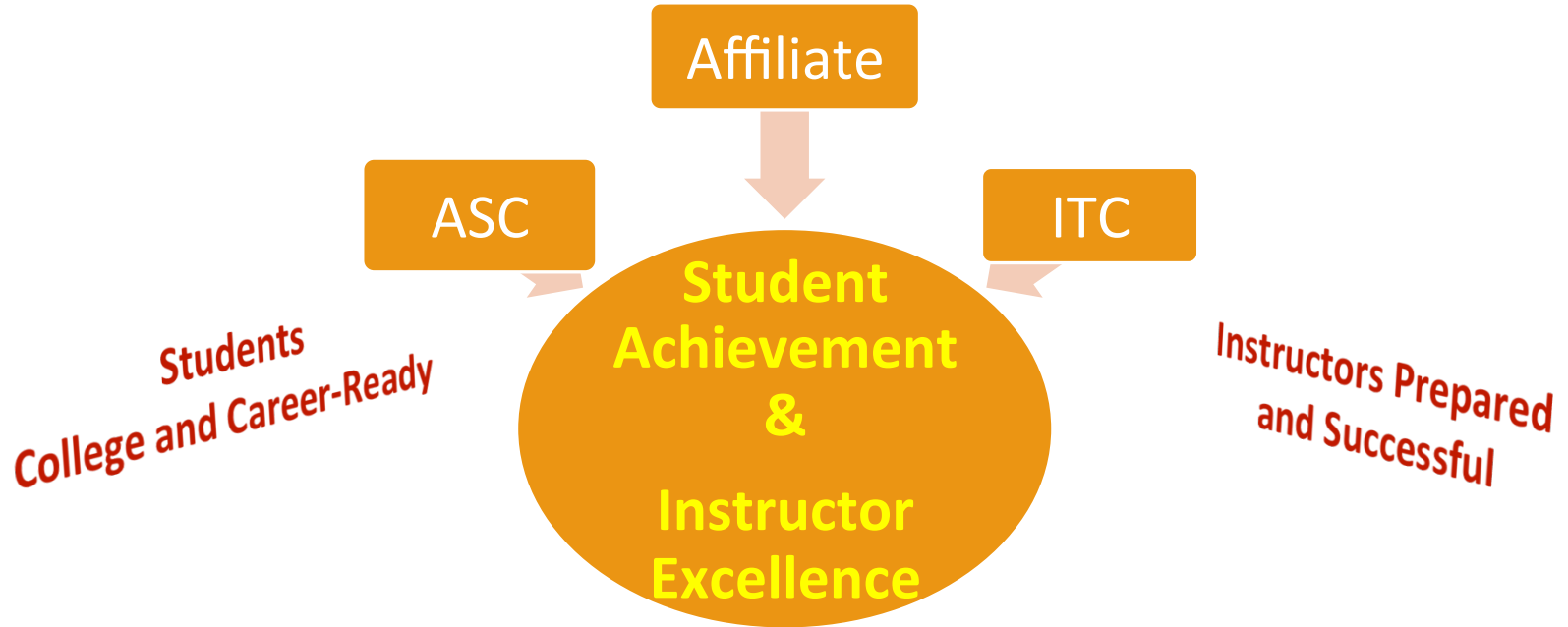
ASC value

- ✓ Extend Cisco Academy community beyond geography
- ✓ First-line contact for questions and challenges
- ✓ Onboarding and continuing support
- ✓ Bridge gaps and build communication
 - School-based  nonprofit community-based programs
 - Secondary  post-secondary program articulations

ITC value

- ✓ Extend instructor community beyond geography
 - Support technical innovations and enhancements
 - Encourage community sharing
- ✓ Build quality in the classroom
 - New instructor training
 - Methods and best practices workshops
- ✓ Establish and nurture a cohort of instructor-trainers

Value to the community!



A group of seven people, including students and an adult, are standing in front of a brick wall. The group is diverse in age and ethnicity. The text is overlaid on the center of the image.

Shade Adeleke

Anne Arundel County Public Schools

Cisco Academy Instructor

Center of Applied Technology North

800 Stevenson Road

Severn, MD 21144

FADELEKE@AACPS.org

Cisco Networking Academy at the Center of Applied Technology North, Severn MD

Instructor: Shade Adeleke

Cisco Academy at CATN

- Two or three year program;
 - Students are admitted into the program in the 10th grade
 - (Career Exploration is available for 9th grade students)
 - Year 1 – 10th grade (Two periods every other day)
 - Year 2 – 11th grade (Two periods every day)
 - Year 3 – 12th (Optional Internship/Work study)
- Certifications Available;
 - Cisco Certified Entry Network Technician (CCENT)
 - Cisco Certified Network Associate (CCNA)
- Internship Opportunities available for students at various organizations.
 - National Security Agency (NSA)
 - Northrop Grumman
 - Innovex

Benefits of Participating

- Industry Recognized Certifications
 - 50-60% of students in this program earn at least one Industry recognized certification before they graduate high school.
- Internship/work study
 - About 50-60% of students that graduate from our program participate in one form of Internship or work study program.
- College Credits
 - Students in our program are eligible for up to 16 college credits from AACC and 4.5 credits from Johnson and Wales as a result of articulation agreements. These are proficiency credits, that students do not have to pay for.
- High School Weighted Credits
 - The Cisco curriculum is a college level course taught in high school hence it is a Honors level class and students earn weighted credits for taking these classes.

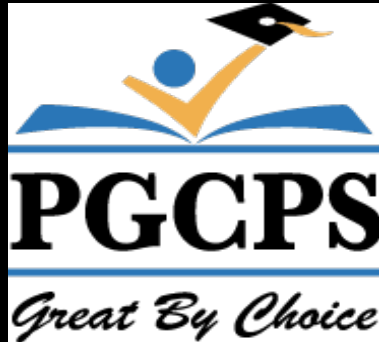


Steve Cottingham

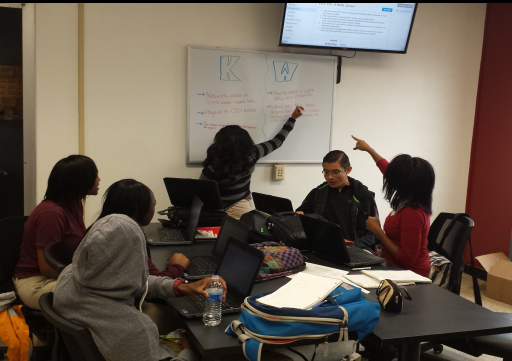
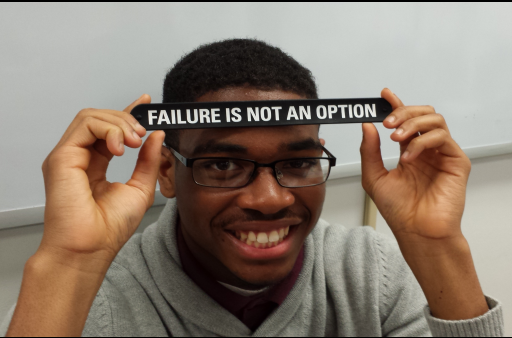
Prince George's County Public Schools
Cisco Academy Instructor
IT Academy at Fairmont Heights High School
1401 Nye Street
Capitol Heights, MD 20743

IT ACADEMY

at Fairmont Heights High School



HISTORY



- We “opened our doors” in 2011 through a partnership with the CIO of PGCPs.
- Expose students to information technology through two courses of study:
 - Systems Engineering
 - Software Programming
- Program is complemented by a **Technology Distribution Center**.

CISCO

NETWORKING ACADEMY

SYSTEMS ENGINEERING

YEAR	COURSE	CERTIFICATION
9	IT Essentials	CompTIA A+
10	Systems Engineering	Microsoft Technology Associate: <ul style="list-style-type: none">• Operating Systems• Networking Fundamentals• Security
11	CCNA I: Intro to Networks	
12	CCNA II: Routing & Switching Essentials	Cisco Certified Entry Networking Technician (CCENT)

TECHNOLOGY DISTRIBUTION CENTER

- Prepares and deploys technology throughout PGCPs and its schools.
- Techs and Engineers provide classroom support in the form of curriculum planning and assistance during hands-on activities.



STATS & RESULTS



- 240 students currently enrolled
- 50%+ female enrollment over last 3 years
- 40 CompTIA A+ certifications
- 40% of students passed high-level Microsoft certification exams
- CCENT testing starts this year





David Hall, Ph.D

Montgomery County College

Chair - Science, Engineering and Technology

Professor of Information Technology

20200 Observation Drive, Germantown, MD 20876

david.hall@montgomerycollege.edu

Office Phone: 240-567-7827



Cisco Program Montgomery College

David A. Hall





- Montgomery College has been a member of the Cisco Networking Academy since 1999.
- In 2000, the 4 CCNA Academy courses were incorporated as one of our core tracks in our Networking A.A.S. degree program.
- In 2003 we also added the CCNP program to our curriculum.
- In 2004, MC along with other founding members of the CyberWatch consortium, incorporated the Cisco CCNA program as a core requirement of the cybersecurity curriculum proposed to the National Science Foundation.
- In 2008, the CCNA program was incorporated as part of our new Cybersecurity Program. Since that time our yearly Cisco enrollment has risen several hundred percent.
- In 2012, Montgomery College became a National Center of Academic Excellence in Cybersecurity for 2-year institutions: [CAE2Y](#)



MC Cybersecurity Curriculum

Program Requirements

	CS 110	Computer Concepts	3
	NW 127	Microcomputer Control Programs	3
★	NW 151	Introduction to Networking	3
	NW 173	Network Security	3
	NW 203	Microsoft Windows Server	3
	NW 245	Hardening the Infrastructure	3
	NW 246	Network Defense and Countermeasures	3
★	NW 252	Cisco Networking 2	3
★	NW 253	Cisco Networking 3	3
★	NW 254	Cisco Networking 4	3
	NW 270	Information Security Capstone	3
	PL 202	Introduction to the Study of Ethics	3
		Elective from approved list*	3-4



Certificates

- Cisco Certified Network Associate + Security Preparation Certificate
- Prepares student for entry-level career in cybersecurity.
- Intended for those already employed in computing or who have a computing background, the certificate prepares the student to install, operate, and troubleshoot medium-sized router and switched networks including implementation and verification of connections to remote sites in a WAN.

NW 151	Introduction to Networking	3
NW 252	Cisco Networking 2	3
NW 253	Cisco Networking 3	3
NW 254	Cisco Networking 4	3
NW 261	Managing Network Security I	4
		Total credit hours 16



Benefits

Our partnership with the Cisco Networking Academy since 1999 has created many benefits for our students and our college:

- The rigor of the Cisco courses gives our students both the skills and the confidence to more easily master the technologies taught in our other networking and cybersecurity courses.
- Passing the CCNA or CCENT exams gives our students an extra step up when entering the work force.
- The quality of our Cisco courses and labs has drawn students to our college.
- The use of on-line available curricula courseware and tools has significantly reduced the cost of these courses for students.
- The support we get from the Academy greatly simplifies the management of these courses.
- The training opportunities and yearly face-to-face meetings for Cisco faculty creates a real sense of community for our instructors.



Louis D'Alessandro

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Cisco Networking Academy at George Mason University Louis R. D' Alessandro



April 21, 2015

Bachelor of Science Degree and CCNA Certification

Networking and Telecommunications Concentration

IT 342 OS Fundamentals

IT 348 Cloud Computing

IT 366 Network Security I

IT 441 Network Servers and Infrastructures

IT 341 IT Network Fundamentals

IT 445 Networking Principles II

IT 455 Introduction to Wireless Communications & Networking

IT 471 Applications of Digital Technologies

IT 481 Concepts of Multimedia Processing and Transmission

IT 484 Voice Communications Technologies

IT 488 Fundamentals of Satellite Communications





Mason's Local Academy

CCNA, Exploration, & Routing & Switching

Courses from 2007 to 2015

All Contain Content for CCNA Certification

Course	Students Enrollment at Start	Students Successfully Completed	Students % Successful
Network Fundamentals	1,454	1,234	84.87%
Routing Protocols & Concepts / Routing & Switching	249	166	66.67%
LAN Switching & Wireless / Scaling Networks	185	147	79.46%
WAN / Connecting Networks	136	113	83.09%
Totals	2,024	1,660	82.02%

Major Accomplishments

- **High Enrollment of BS Students in Cisco Academy Courses**
- **Published two Papers**
 - ❑ **Cisco Academy Support Center and Distance Education Course (International Networking Conference in Lisbon, Portugal)**
 - ❑ **Combining Academic Studies with IT Certifications: Becoming a Cisco Regional Academy (SIGITE Conference Fairfax, VA)**
- **Cisco Awarded grant to study and improve on-line delivery currently underway**
- **Net On-Line Course Delivery at the School of Continuing Education Cisco Virtual Academy - Open to all in the highest concentration of IT jobs in the in the USA (Government and the Systems Integrators)**



An Academy Graduate with Success at an Early Age

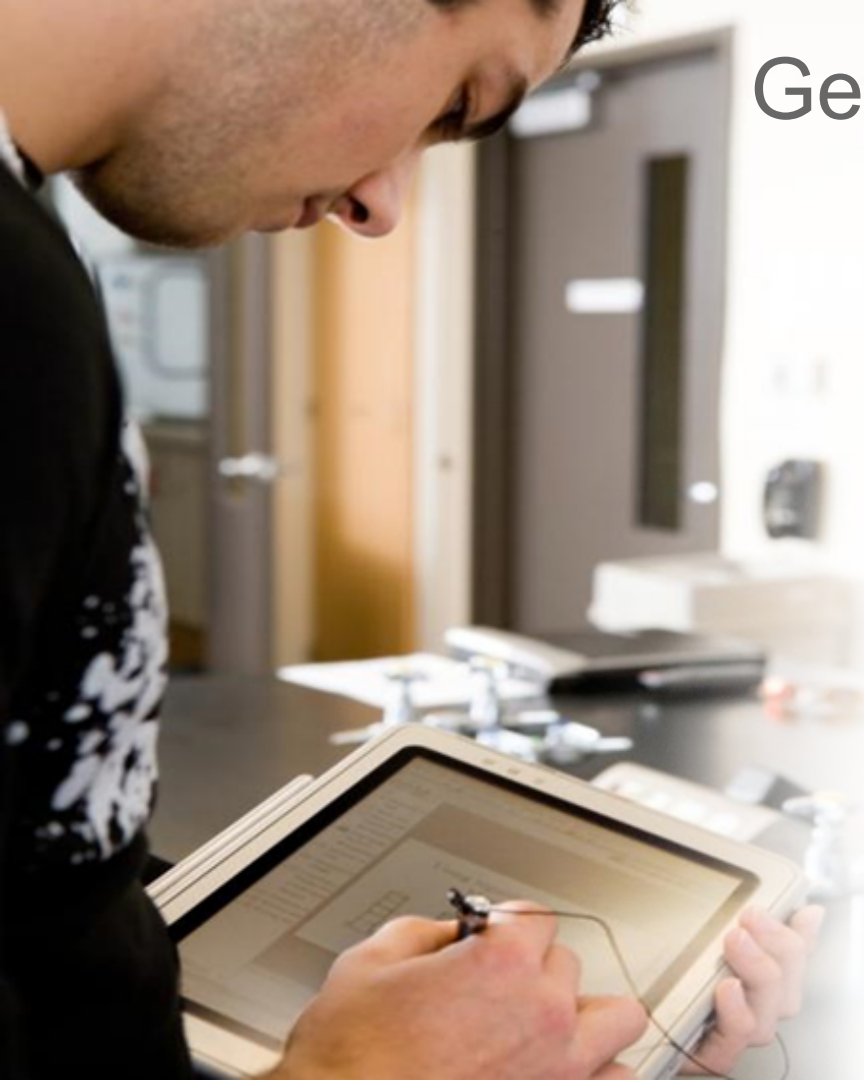


Stephen Lynch Bachelor of Science in Applied Information Technology & CCIE

“Taking the academy courses was the best decision I ever made. It has defined my career, my future, and my life.” “It motivates me to continue my education and broaden my skill set. Academy students are exactly what companies like ABS Technology Architects are looking for. I hope I can encourage someone else in the same way Cory and Trent have encouraged me.”

Cisco Networking Academy: Mind Wide Open





Get Involved

- For more information:
<https://www.netacad.com/home>
- Start building the pipeline of needed ICT professionals with Cisco Networking Academy courses at your school or organization
- Students prepare for entry-level career opportunities, continuing education, industry-recognized certifications, and career advancement
- To complete a “Become An Academy” form:
<https://www.netacad.com/web/about-us/get-involved/become-an-academy>

In Closing...Our Aspiration

A long-exposure night photograph of a city highway interchange, likely in Dubai, showing light trails from cars and illuminated buildings in the background. A semi-transparent green text box is overlaid in the center of the image.

Cisco will play a foundational role
by making networking, software and ICT education
relevant and exciting
thus fueling the knowledge of students to support the
growth of our Economy, with the Internet of Everything

Overview of Cisco Networking Academy Course offerings

Operating Systems & Information Technology

Why OS & IT?

A basic understanding of computer operating systems and information technologies provides the foundational knowledge needed for students to connect to the Internet and understand how systems and processes work together to power the Internet of Everything.

In partnership with NDG, we offer several courses on Linux, which is increasingly regarded as an essential platform for application development. These courses teach the skills needed to fill a growing number of jobs in the information and communication technology (ICT) field.

Career Prep

Courses range from Internet connectivity and social networking basics to teaching the skills needed to gain career certifications as a support technician, system administrator, network technician, or Linux professional.



Get Connected



IT Essentials

PT



NDG Linux
Essentials



NDG
Introduction to
Linux I

NDG
Introduction to
Linux II

Get Connected

Course Overview

Get Connected teaches the basic information technology skills needed to compete in the global workforce, with a focus on basic communication and collaboration technologies.

Students are introduced to the Internet and experiment with various social networking sites.

Prerequisites: None

Languages: English & Portuguese-Brazilian

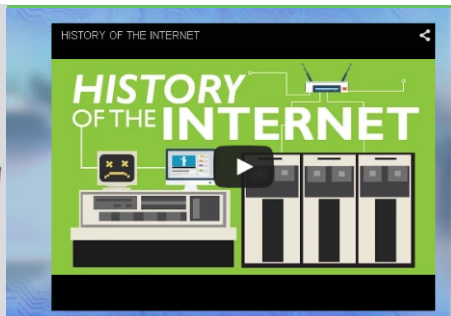
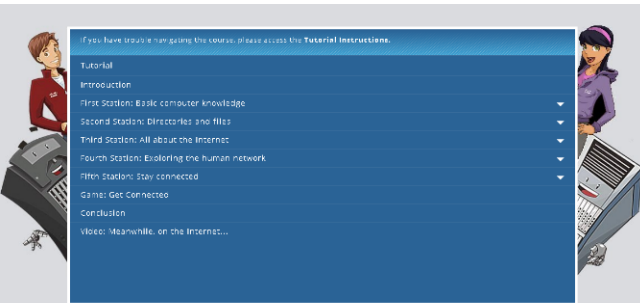
Course Delivery: Instructor led or self paced

Estimated Time to Complete: 30 hours

Recommended Next Course: IT Essentials

Career Prep

Anyone seeking to develop basic ICT and social networking skills, which are essential for career advancement.



Learning Components

- 5 chapters
- Illustrations and narrations guide students through topics
- Videos and activities
- Quizzes

IT Essentials

Course Overview

IT Essentials covers the fundamentals of computer hardware and software and introduces advanced security and networking concepts.

Students learn how to assemble computers and troubleshoot hardware and software issues.

Career Prep

Upper secondary and junior college students seeking career-oriented, entry-level hardware and software skills to prepare for technical support roles. Aligns with the CompTIA A+ certification for IT support technicians, administrators, and specialists.

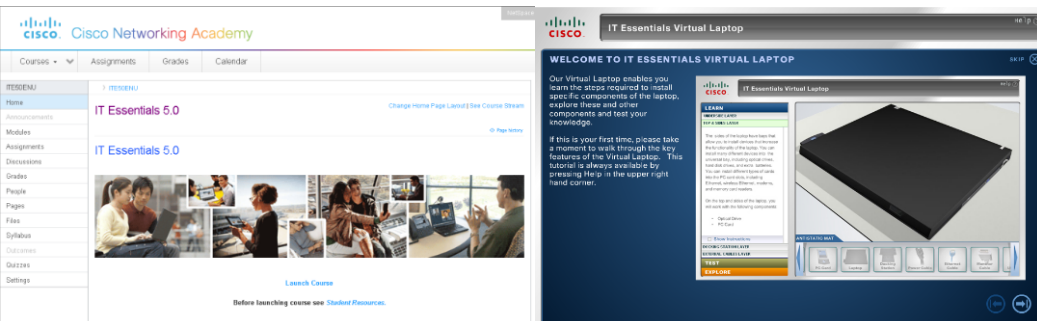
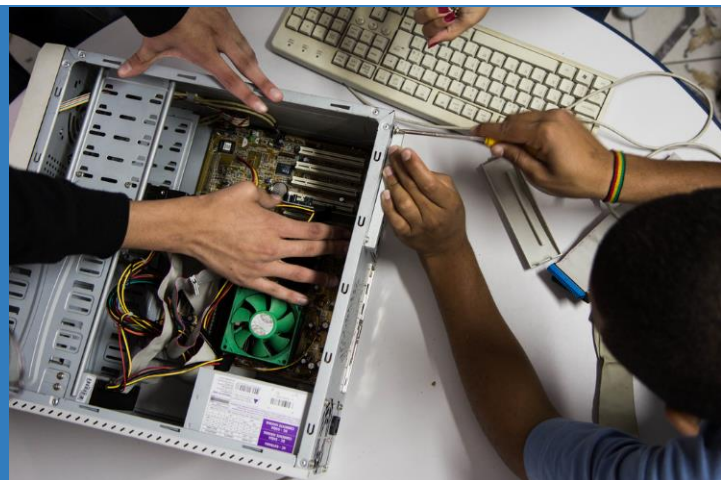
Prerequisites: None

Languages: Arabic, Chinese-Simplified, Chinese-Traditional, Croatian, English, French, German, Hebrew, Hungarian, Italian, Japanese, Portuguese-Brazilian, Romanian, Russian, Spanish, Turkish, Ukrainian

Course Delivery: Instructor led

Estimated Time to Complete: 70 hours

Recommended Next Course: CCNA R&S Intro to Networks



Learning Components

- 12 chapters
- 180 hands-on labs and learning activities
- Packet Tracer, virtual laptop, and virtual desktop learning tools
- 12 chapter exams, 1 checkpoint exam, 1 skills review exam, 1 practice final exam, 1 final exam, 1 skills-based assessment, and 2 practice exams for CompTIA A+ certification

NDG Linux Essentials

Course Overview

The Linux Essentials course, developed by NetAcad partner NDG, teaches students the fundamentals of the Linux operating system and command line and open source concepts.

The Linux virtual machine is embedded in the course; allowing students to experiment with Linux commands.

Career Prep

Upper secondary school and junior college students interested in learning Linux OS, open source programming, and IoT skills to expand IT knowledge beyond networking. Aligns with the Linux Professional Institute (LPI) Linux Essentials Professional Development Certificate.

Prerequisites: None

Language: English

Course Delivery: Instructor led

Estimated Time to Complete: 70 hours

Recommended Next Course: CCNA R&S
Introduction to Networks



Network Development Group

Overview

Linux Essentials Course



Why is knowing the command line important?

Flexibility and mobility!

By understanding the foundation of Linux, you have the ability to work on ANY Linux distribution. This could mean one company with a mixed environment or a new company with a different Linux distribution.

Learning Components

- 16 chapters
- Built-in virtual machine to experiment with Linux commands
- 13 lab exercises
- Learner-directed activities
- Chapter exams, mid-term, and final exam

Networking

Why Networking?

As our world becomes increasingly reliant on computer networks and networking technologies, there's a growing need for professionals who can design, build, manage, and secure networks.

Our networking courses introduce students to a range of topics, from routing protocols and network applications to network services and configurations. The courses emphasize hands-on learning and troubleshooting.

Career Prep

Our networking courses align with globally recognized career certifications including Cisco CCENT, CCNA R&S, and CCNP R&S.

Students learn how to become network administrators and network managers.



CCNA Routing
& Switching
(1-4)



CCNP Routing
& Switching
(1-3)



Coming
Soon

Networking
Essentials



CCNA Routing and Switching Curriculum

Curriculum Overview

The 4 courses in the CCNA R&S curriculum help students develop a comprehensive understanding of how networks operate, from protocols and services to network management, with an emphasis on hands-on learning and essential career skills like problem solving and collaboration.

Career Prep

Courses 1-2 align with the Cisco CCENT certification and courses 3-4 align with the Cisco CCNA R&S certification. Students gain the skills needed to become network administrators, technicians, or managers.

Prerequisites: IT Essentials or equivalent knowledge

Languages: Arabic, Chinese-Simplified, English, French, Japanese, Portuguese-Brazilian, Russian, Spanish (courses 1 and 2 also available in German, Hungarian, and Turkish; course 1 also available in Romanian)

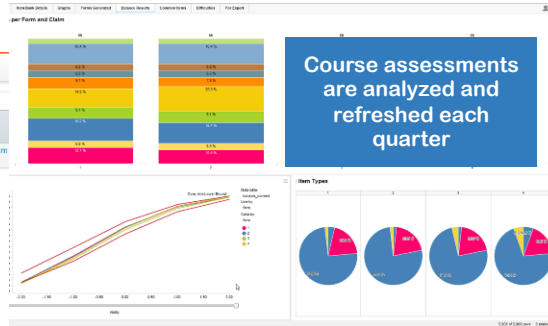
Course Delivery: Instructor led

Estimated Time to Complete: 280 hours

Recommended Next Course: CCNA Security or CCNP



The screenshot shows the Cisco Networking Academy's 'View Grading History' page. It includes a sidebar with options like 'Download Scores (.csv)', 'Upload Scores (from .csv)', 'Set Group Weights', 'Hide Student Names', 'Arrange columns by due date', 'Treat Ungraded as 0', 'Show Concluded Enrollments', and 'Show Notes Column'. The main area displays a table with columns for 'Protest Exam', 'Chapter 1 Exam', 'Chapter 2 Exam', 'Chapter 3 Exam', and 'Chapter 4 Exam', each with a 'Due at' date. A blue box overlay on the right side of the table contains the text: 'Assessments are automatically scored and recorded in the Gradebook'.



Learning Components

- 4 courses: Introduction to Networks, Routing and Switching Essentials, Scaling Networks, Connecting Network
- Hands-on labs and Cisco Packet Tracer network simulation activities
- Videos and activities to reinforce learning
- Quizzes and exams to measure learning outcomes

CCNA R&S: Introduction to Networks

Course Overview

The first course in the Cisco CCNA Routing and Switching curriculum teaches students about the architecture, structure, functions and components of the Internet and other computer networks.

Students gain an essential foundational understanding of how networks operate.

Career Prep

Secondary school through university students seeking skills for entry-level networking jobs or more specialized ICT training.

Prerequisites: IT Essentials or equivalent knowledge

Languages: Arabic, Chinese-Simplified, English, French, German, Hungarian, Japanese, Portuguese-Brazilian, Romanian, Russian, Spanish, Turkish

Course Delivery: Instructor led

Estimated Time to Complete: 70 hours

Recommended Next Course: CCNA R&S Routing & Switching Essentials



Chapter 8: IP Addressing 8.2.4.2 Static Configuration of a Global Unicast Address

IPv4 Address
- 3.4 IPv4 Unicast Address

IPv4 Network Address
- 3.4.1 Structure of an IPv4 Global Unicast Address

Router Configuration
- 3.4.2 Static Configuration of a Global Unicast Address

Host Configuration
- 3.4.3 Static Configuration of a Global Unicast Address

Activity - Unicast, Broadcast, or Multicast?
Click Start to view the Destination IP Address. Next, click the host(s) which will receive a packet based on the address type (Unicast, Broadcast or Multicast).
This is a timed activity.

Destination IP Address =

Source Host

192.168.100.1
225.5.77.126 group

192.168.100.2
237.192.126.17 group

192.168.100.3

192.168.100.4
237.192.126.17 group

192.168.100.5
225.5.77.126 group

Time Remaining
10

Learning Components

- 11 chapters
- 33 hands-on labs and 1 hands-on skills assessment
- Pre-test, 11 chapter quizzes, 2 sectional quizzes, 11 chapter exams, and 1 final exam
- 2 Cisco Packet Tracer Skills Based Assessments

CCNA R&S: Routing and Switching

Course Overview

The second course in the CCNA Routing and Switching curriculum describes the architecture, components, and operations of routers and switches in a small network.

Students learn how to configure a router and a switch for basic functionality

Career Prep

Secondary school through university students seeking Cisco CCENT certification and skills for entry-level network technician jobs.

Prerequisites: CCNA R&S: Introduction to Networks

Languages: Arabic, Chinese-Simplified, English, French, German, Hungarian, Japanese, Portuguese-Brazilian, Russian, Spanish, Turkish

Course Delivery: Instructor led

Estimated Time to Complete: 70 hours

Recommended Next Course: CCNA R&S Scaling Networks or CCNA Security



Chapter 7: VLANs > 7.3.1.2 Double Tagging Attack

VLAN Security and Design

7.3.1.2.1 Problem Statement

7.3.1.2.2 Solution

7.3.1.2.3 Summary

7.3.1.2.4 Key Takeaways

7.3.1.2.5 References

7.3.1.2.6 Additional Resources

7.3.1.2.7 Conclusion

7.3.1.2.8 Acknowledgments

7.3.1.2.9 Disclaimer

7.3.1.2.10 License

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7.3.1.2.194 Page Wholesaler

7.3.1.2.195 Page Retailer

7.3.1.2.196 Page Supplier

7.3.1.2.197 Page Manufacturer

7.3.1.2.198 Page Wholesaler

7.3.1.2.199 Page Retailer

7.3.1.2.200 Page Supplier

7.3.1.2.201 Page Manufacturer

7.3.1.2.202 Page Wholesaler

7.3.1.2.203 Page Retailer

7.3.1.2.204 Page Supplier

7.3.1.2.205 Page Manufacturer

7.3.1.2.206 Page Wholesaler

7.3.1.2.207 Page Retailer

7.3.1.2.208 Page Supplier

7.3.1.2.209 Page Manufacturer

7.3.1

Learning Components

- 11 chapters
- 33 hands-on labs and 1 hands-on skills assessment
- Pre-test, 11 chapter quizzes, 11 chapter exams, 2 sectional quizzes, and 1 final exam
- 3 Cisco Packet Tracer Skills Based Assessments

Course Overview

Students learn how to configure and troubleshoot routing and switching technologies and protocols.

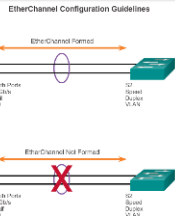
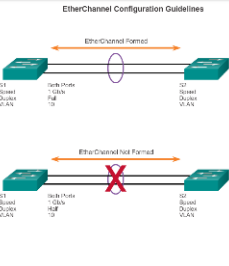
Career Prep

Junior college and university students seeking skills for entry-level network administration jobs or more specialized ICT training

Languages: Arabic, Chinese-Simplified, English, French, Japanese, Portuguese-Brazilian, Russian, Spanish

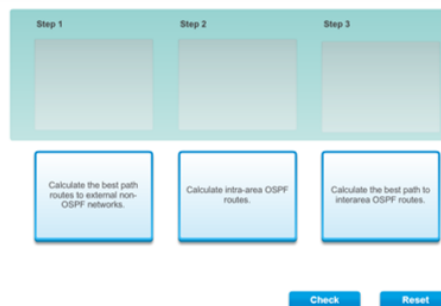
Estimated Time to Complete: 70 hours

Recommended Next Course: CCNA R&S Connecting Networks



Activity - OSPF Best Path Calculations

OSPF routers use the criteria listed below to select the best route to be installed in the routing table. Put these criteria in order by dragging each statement to its appropriate numbered field.



Learning Components

- 9 chapters
- 19 hands-on labs and 2 hands-on skills assessments
- Pre-test, 9 chapter quizzes, 9 chapter exams, 2 sectional quizzes, and 1 final exam
- 2 Cisco Packet Tracer Skills Based Assessments

CCNA R&S: Connecting Networks

Course Overview

The fourth and final course in the CCNA Routing and Switching curriculum covers the WAN technologies and network services employed by converged applications in a complex network.

Students learn how to configure and troubleshoot network devices and implement virtual private networks.

Career Prep

Junior college and university students seeking Cisco CCNA R&S certification and skills for entry-level network administration jobs

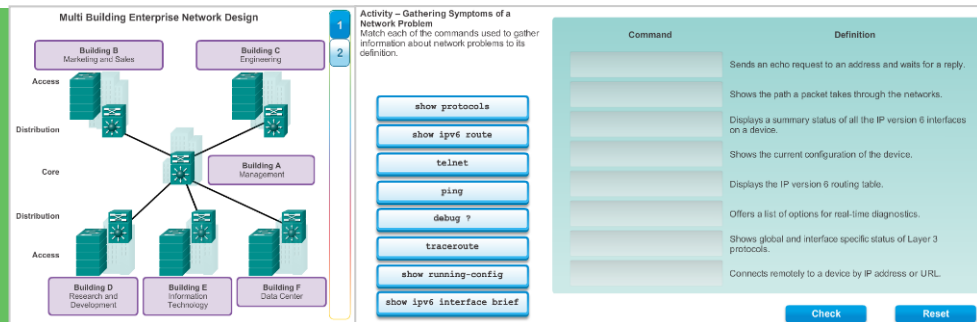
Prerequisites: CCNA R&S: Scaling Networks

Languages: Arabic, Chinese-Simplified, English, French, Japanese, Portuguese-Brazilian, Russian, Spanish

Course Delivery: Instructor led

Estimated Time to Complete: 70 hours

Recommended Next Course: CCNA Security or CCNP R&S ROUTE



Learning Components

- 9 chapters
- 12 hands-on labs and 1 hands-on skills assessment
- Pre-test, 9 chapter quizzes, 9 chapter exams, 2 sectional quizzes, and 1 final exam
- 2 Cisco Packet Tracer Skills Based Assessments

CCNP Routing & Switching

Course Overview

The three CCNP Routing & Switching courses provide a comprehensive overview of enterprise-level networking concepts, including advanced routing, switching, and troubleshooting.

The curriculum integrates industry-relevant instructional approaches to help students prepare for career opportunities.

Career Prep

College students seeking hands-on practical experience, Cisco CCNP R&S certification, and career skills in advanced routing, switching, and troubleshooting.

Prerequisites: CCNA R&S courses 1 and 2

Languages: English

Course Delivery: Instructor led, textbook based

Estimated Time to Complete: 210 hours



Learning Components

- 3 courses: CCNP R&S ROUTE: Implementing IP Routing, CCNP R&S SWITCH: Implementing IP Switched Networks, and CCNP R&S TSHOOT: Troubleshooting and Maintaining IP Networks
- Hands-on labs
- Cisco Press textbooks
- Chapter exams and final exams

Security

Why Security?

The demand for security experts has grown three times faster than the demand for other information and communication technology professionals.

Our security courses equip students with the skills needed to protect networks from those with malicious intent to help ensure the integrity and availability of data and services.

Career Prep

Our security courses teach the core concepts and skills needed to secure and protect computer networks and explore career opportunities.

CCNA Security aligns with the Cisco CCNA Security certification.



Intro to
Cybersecurity



CCNA Security

PT

Introduction to Cybersecurity

Course Overview

Introduction to Cybersecurity covers trends and career opportunities in the growing field of computer network security

It features presentations and panel discussions delivered by cybersecurity professionals and industry experts.

Career Prep

Upper secondary and junior college students interested in learning about trends, certifications, and career opportunities in the cybersecurity field.

Prerequisites: None

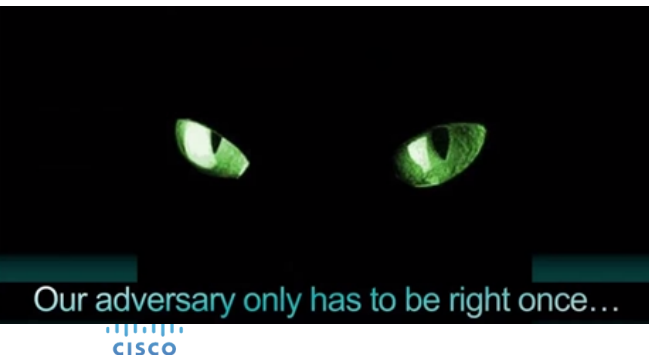
Languages: English

Course Delivery: Instructor led or self paced

Estimated Time to Complete: 15 hours

Recommended Next Course: CCNA R&S Introduction to Networks

Introduction to Cybersecurity



Delete doesn't mean deleted

Over 3 years later, "deleted" Facebook photos are still online - CNN.com
By Jacques Chénay, Ars Technica
10/2/14 @ 08:27 / 759-382



Learning Components

- 8 modules
- Video presentations and panel discussions
- Activities that reinforce learning
- Pre-test, 8 quizzes, and final exam
- Links to related resources

CCNA Security

Course Overview

CCNA Security introduces the core security concepts and skills needed to troubleshoot and monitor computer networks and help ensure the integrity of devices and data.

It emphasizes the practical application of the skills needed to design, implement, and manage network security systems

Career Prep

CCNA R&S students interested building security and data protection expertise for the Cisco CCNA Security career certification and jobs as network security specialists.

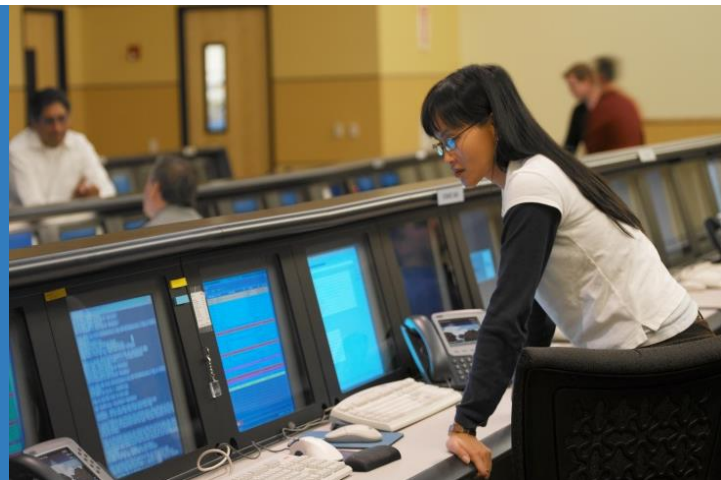
Prerequisites: CCNA R&S: Routing and Switching Essentials or equivalent knowledge

Languages: English

Course Delivery: Instructor led

Estimated Time to Complete: 70 hours

Recommended Next Course: CCNP



CCNA Security



Part 1: Lab Setup



Learning Components

- 10 chapters and 10 chapter exams
- 10 Cisco Packet Tracer network simulation activities
- 16 hands-on labs
- 1 practice Cisco CCENT certification exam, 1 practice Cisco Packet Tracer Skills Assessment, 1 practice final exam, 1 hands-on skills exam, and 1 final exam



Advanced Technology

Why Advanced Technology?

Our Technology content is developed by a community of NetAcad instructors and covers concepts related to computer networks, such as cloud computing and wireless technologies.

Instructors may use these learning materials to create courses for students.

Career Prep

These learning resources are designed to expand knowledge of networking-related technologies and provide an overview of technologies students may encounter in their careers.



Voice Primer

Cloud Primer

Collaboration
Primer

Mobility Series:
Wireless Tech
Standards

Cisco Packet Tracer

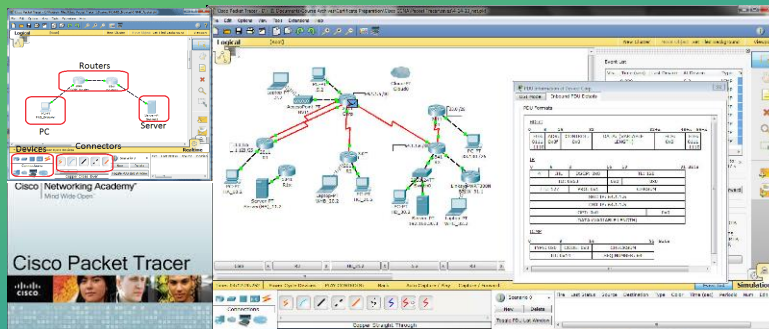
Why Packet Tracer?

The Cisco Packet Tracer simulation tool allows students to experiment with network behavior in a virtual environment. It supplements physical networking equipment by allowing students to create virtual networks with unlimited devices; encouraging practice, discovery, and troubleshooting.

As an integral part of the NetAcad learning experience, Packet Tracer provides simulation, visualization, authoring, assessment, and collaboration capabilities and facilitates the teaching and learning of complex technology concepts.

Career Prep

The Packet Tracer simulation-based learning environment promotes the development of essential career skills ranging from teamwork and critical thinking to creative problem solving.



Cisco Packet Tracer (PT)



Packet Tracer Know How



PT Mobile iOS

PT Mobile Android

Internet of Everything

Why IoE?

As the number of networked connections between people, processes, data, and things grows exponentially, it's essential to understand the technologies that enable the Internet of Everything (IoE), and how increased connectivity creates new opportunities to excel and improve business processes, and address some of the world's greatest challenges.

These courses broaden students' thinking beyond core networking and technology concepts.

Career Prep

Students explore the technologies that underpin the Internet of Everything and learn about millions of career opportunities that are emerging from data centers and cloud, big data and Internet of Things.



Intro to the Internet of Everything Summary

Series Overview

This podcast series provides an introduction to the future of the Internet, where a network foundation connects billions of things and trillions of gigabytes of data, enhancing our decision making and daily interactions.

It can be used to prepare for the Introduction to the Internet of Everything course.

Prerequisites: None

Languages: English

Delivery Method: mp3 files

Estimated Time to Complete: 2.5 hours

Recommended Next Course: Introduction to the Internet of Everything

Career Prep

Anyone seeking to develop a broad understanding of trends, technologies, and career opportunities in the Internet of Everything.



Learning Components

- 5 modules featuring a panel of IoE experts
- Links to related resources
- Downloadable mp3 files



Introduction to the Internet of Everything

Course Overview

The Introduction to the Internet of Everything (Intro2IoE) course introduces learners to the technologies that support the IoE, and the career and social opportunities created by the growing number of networked connections between people, processes, data, and things.

Career Prep

Secondary school through university students seeking an overview of trends, technologies, and career opportunities in the Internet of Everything.

Prerequisites: None

Languages: Chinese-Simplified, English, French, Japanese, Portuguese-BR, Russian, Spanish

Course Delivery: Instructor led or self paced

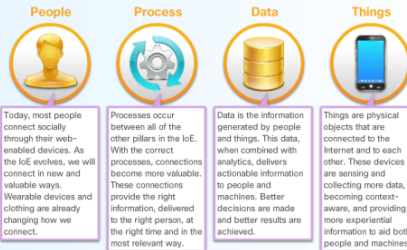
Estimated Time to Complete: 20 hours

Recommended Next Course: IT Essentials or CCNA R&S Introduction to Networks



CISCO

What is the IoE?
The Internet of Everything is the networked connection of people, process, data, and things.



Learning Components

- 5 modules of interactive content featuring IoE experts
- Activities, videos, and simulations to enhance the learning experience
- Pre-test, module quizzes, and a final exam

Entrepreneurship

Why Entrepreneurship?

In addition to technology skills, business owners and professionals need entrepreneurial skills such as creative thinking, communication, business management, and problem solving skills.

Our Entrepreneurship offerings help students develop essential skills to successfully launch new ventures or excel within team environments.

They broaden students' thinking beyond core networking and technology concepts.

Career Prep

Our Entrepreneurship courses help students develop an entrepreneurial mindset and cultivate the habits and skills needed for success in the Internet of Everything.



Entrepreneurship



Be Your
Own Boss

Entrepreneurship

Course Overview

Entrepreneurship supplements the ICT skills gained in CCNA R&S curriculum by teaching business and financial skills, behaviors, and attitudes, to help students develop an entrepreneurial mindset.

Students learn by completing a series of interactive case studies.

Career Prep

High school through college students seeking to supplement ICT expertise with entrepreneurial thinking, business development, and financial management skills.

Prerequisites: None

Languages: Arabic, Chinese-Traditional, English, and Spanish

Course Delivery: Self paced

Estimated Time to Complete: 15 hours

Recommended Next Course: CCNA R&S ITN



Entrepreneurship

Course Introduction

The Aspire game is an interactive game where you must use the skills and knowledge learned in other Cisco Networking Academy courses, as well as the business and soft skills you learned in Entrepreneurship. You will not only be asked to set up and configure computers, you will also have to make timely business decisions.

Click the buttons to learn more about Aspire to see the business challenges and the technical challenges that this game offers. You can go as far along in the game as you like. If the technical challenges are beyond your current expertise, you may still want to give them a try. You might surprise yourself!

The Aspire Game



Business Challenges

Technical Challenges

2 Starting on the net case 3 From the net to the router 2.1 Recognizing a Problem

The router on the net is a key component of the network. It is responsible for routing traffic between different networks. In this case study, you will learn how to identify and troubleshoot a problem with a router on the net.

Click the buttons to learn more about the router on the net case study.

Click the buttons to learn more about the router on the net case study.

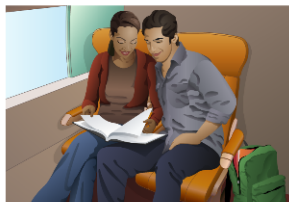
Click the buttons to learn more about the router on the net case study.

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Click the buttons to learn more about the router on the net case study.

Click the buttons to learn more about the router on the net case study.

Click the buttons to learn more about the router on the net case study.



Click Play to hear the audio.

Learning Components

- 7 modules
- Modules feature interactive case studies and videos that reinforce business management skills
- Quizzes for each module
- Discussion board

Be Your Own Boss

Course Overview

The Be Your Own Boss Technopreneur Series provides the guidelines, insights, and advice needed to launch successful tech ventures.

The series features video presentations by entrepreneurs from around the world who share lessons learned along their journeys to success.

Prerequisites: None

Languages: English

Course Delivery: Self paced

Estimated Time to Complete: 8 hours

Recommended Next Course: Entrepreneurship

Career Prep

Technology students interested in developing the entrepreneurial skills and habits needed to launch and grow a successful technology business.



Learning Components

- 8 modules
- Technopreneurs sharing personal success stories in video format
- Quizzes and surveys for each module