CCNA Security Overview

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CCNA Security Product Manager, Cisco Networking Academy
Agenda

The Opportunity

The Solution
(becoming part of…)

Call to Action
The Opportunity
The Opportunity – Cyber Security Trends

Threats continue to become more sophisticated as the technical knowledge required to implement attacks diminishes.
The Opportunity – Everyone in Impacted

• Every government, business, organization, or individual that connects to the Internet needs to consider security

• Network administrators, technicians, and engineers MUST have knowledge in security.
The Opportunity – An example

“There is a growing demand within our local employer base for network administrators and technicians that can setup and manage VPNs, and they must be able to administer a firewall, DMZ, and Active Directory (RADIUS) integration.”

“Our students have enjoyed near 100% employment after completing our CCNA program, even through this economy. Two add-on courses to CCNA that we include in our program are consistently cited for this: 1. Cisco CCNA Security 2. Microsoft and Linux server administration”

Dwight Hughes
Academy Instructor
Vancouver, WA
“In the middle of difficulty lies opportunity.”

Albert Einstein
The Solution (becoming part of…)}
The Solution (becoming part of…)

Join in, take on the Cyber Security challenge

Prepare yourself for a career in networking, network security, cyber security

Consider CCNA Security
Cisco Networking Academy Curricula Portfolio

Network Professional
Network Specialist
Network Associate
Network Technician
IT Technician

IT Essentials: PC Hardware and Software
Networking for Home and Small Businesses
Working at a Small-to-Medium Business or ISP
Introducing Routing and Switching in the Enterprise
Designing and Supporting Computer Networks
Routing Protocols and Concepts
LAN Switching and Wireless
Accessing the WAN
Network Fundamentals

CCNA Discovery
CCNA Exploration
CCNA Security
CCNA Security
ROUTE: Implementing IP Routing
SWITCH: Implementing IP Switched Networks
TSHOOT: Troubleshooting and Maintaining IP Networks

Student Networking Knowledge and Skills

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What will I learn in CCNA Security?

| Ch. 1 | Modern Network Security Threats  
<table>
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<tbody>
<tr>
<td></td>
<td>Goal: Explain network threats, mitigation techniques, and the basics of securing a network.</td>
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| Ch. 2 | Securing Network Devices  
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<tr>
<td></td>
<td>Goal: Securing administrative access on Cisco routers.</td>
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| Ch. 3 | Authentication, Authorization and Accounting  
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<tbody>
<tr>
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<td>Goal: Securing administrative access with AAA.</td>
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</table>
## What will I learn in CCNA Security?

<table>
<thead>
<tr>
<th>Ch. 4</th>
<th>Implementing Firewall Technologies</th>
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<tbody>
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<td>Goal: Implement firewall technologies to secure the network perimeter.</td>
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<th>Ch. 5</th>
<th>Implementing Intrusion Prevention</th>
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<td>Goal: Configure IPS to mitigate attacks on the network.</td>
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<th>Ch. 6</th>
<th>Securing the Local Area Network</th>
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<td>Goal: Describe LAN security considerations and implement endpoint and Layer 2 security features.</td>
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What will I learn in CCNA Security?

| Ch. 7 | **Cryptographic Systems**  
|       | Goal: Describe methods for implementing data confidentiality and integrity. |
| Ch. 8 | **Implementing Virtual Private Networks**  
|       | Goal: Implement secure virtual private networks. |
| Ch. 9 | **Managing A Secure Network**  
|       | Goal: Given the security needs of an enterprise, create and implement a comprehensive security policy. |
Upon completion of the course, students will be able to:

• Describe the security threats facing modern network infrastructures
• Secure network device access
• Implement AAA on network devices
• Mitigate threats to networks using ACLs
• Implement secure network management and reporting
• Mitigate common Layer 2 attacks
• Implement the Cisco IOS firewall feature set
• Implement the Cisco IOS IPS feature set
• Implement site-to-site IPSec VPNs
• Administer effective security policies
CCNA Security Course Design

- Same Graphical User Interface (GUI) as the CCNA Discovery and CCNA Exploration curricula
- Nine chapters and chapter exams
- One final exam and skills-based assessment
- One complex hands-on lab per chapter with multiple sections
- Packet Tracer activities
- Balance of theory, hands-on practice, and application
- Available in English only, no translated versions are planned
- Enabled for both in-person and blended learning environments
Online Curricula

Courses with Embedded Rich Media Learning Activities
Cisco Packet Tracer
Simulation, Visualization, and Collaboration Software

- Simulate IOS Commands
- Visualize Network Traffic
- Collaborate on Multiuser Activities
CCNA Security – Student Benefits

CCNA Security helps students:

• Understand core security concepts
• Acquire skills using actual equipment and simulation tools
• Prepare for CCNA Security certification exam
• Start or build a career in network security in roles such as:
  • Network Security Specialists
  • Security Administrators
  • Network Security Support Engineers
Call to Action!
Call to Action

Enroll in CCNA Security with Cisco Networking Academy

Prerequisites: CCNA-level networking concepts and skills
For More Information

- Ask your Instructor about CCNA Security
- Go to the CCNA Security Course Catalog page

www.cisco.com/go/netacadcourses
Student Career Paths

http://www.cisco.com/web/learning/netacad/get_involved/BecomeAStudent.html
Cisco Network Security Certification Overview

Andy Gremett

Learning@Cisco
Agenda

- Need for Security Training
- Cisco Certifications
- Cisco Security Certifications
- Latest Updates to the Program
- Cisco Learning Network
- More Information
“.. The cost of just one data breach can be staggering for an enterprise. Ponemon Institute estimates range anywhere from US $1 million to US $58 million.”

2011 Annual Security Report, Cisco
The Security Challenge

How Do I Secure?

- Any device, anywhere
- New collaboration and social media applications
- Data moving to the cloud
- Data center and virtualization
- Against increasing complex threats
“A safe and functioning cyberspace is critical to our society, economy and national security.

The frequency and sophistication of cyber attacks will continue to grow, and so must our capabilities and response plans.”

Singapore Deputy Prime Minister Teo Chee Hean – ST Breaking News
Initiatives Become Security Opportunities

**Business Initiatives**

- Social Media
- Collaboration applications
- Bring your own device (BYOD)
- Cloud computing
- Virtualization
- Limited IT security budget

**Security Threats**

- Data loss
- Malware through social applications
- Theft of intellectual property
- Lost or stolen devices
- Malware for mobile devices
- Damage to corporate reputation
- Spearphishing (high profile targets)
- Data Breach notification
- Hacktivism (hacking and activism)
Need for Security Professionals

- UK Intelligence agency sponsored a code cracking game
- Protecting national security interests
  - Cybercrime and terrorists
  - Participants were presented with a single image - the code to crack
- Visitors who cracked the code were taken to a recruitment page
Cisco Certifications
Cisco Certifications

- Wireless: CCNA Wireless, CCNP Wireless, CCIE Wireless
- Voice: CCNA Voice, CCNP Voice, CCIE Voice
- Service Provider Operations: CCNA SP Ops, CCNP SP Ops, CCIE SP Ops
- Storage Networking: CCENT, CCNA, CCNP, CCIE SAN
- Routing & Switching: CCNA Security, CCNP Security, CCIE R&S
- Security: CCNA/CCDA, CCDP, CCDE
- Design: Entry, Associate, Professional, Expert, Architect
Expanding Cisco Certifications

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<tr>
<th>Career</th>
<th>Specialist</th>
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<tr>
<td><strong>Entry:</strong></td>
<td>CCENT, CCT</td>
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<tr>
<td><strong>Associate:</strong></td>
<td>CCNA, CCNA SP Ops, CCNA Security, CCNA Voice, CCNA Wireless, and CCDA</td>
</tr>
<tr>
<td><strong>Professional:</strong></td>
<td>CCNP, CCNP SP Ops, CCSP, CCNP Security, CCNP Voice, CCDP, and CCNP Wireless</td>
</tr>
<tr>
<td><strong>Expert:</strong></td>
<td>CCIE R&amp;S, CCIE SP Ops, Storage, SP, Security, Voice, Wireless, and CCDE</td>
</tr>
<tr>
<td><strong>Architect:</strong></td>
<td>Cisco Certified Architect</td>
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- Security
- Unified Communications
- Wireless
- Storage Networking
- Optical
- Advanced Routing and Switching
- Data Center
- Video
- Foundation
Cisco Certified Network Associate Security (CCNA Security)

• Validates skills in job roles, including:
  - Network Security Support Engineer
  - Security Administrator
  - Network Security Specialist

• Enables installation, monitoring, and troubleshooting of Cisco security technologies

• Confirms ability to implement security policies and mitigate risk in networks

• Exam needed for certification: IINS

• CCNA is a prerequisite
Cisco Certified Network Professional Security (CCNP Security)

• Validates skills and is aligned specifically to the job role of the Network Security Engineer

• Confidently uses Cisco security devices and solutions to test, deploy, configure, and troubleshoot the core technologies that make up the network security.

• Exams needed for certification:
  SECURE
  FIREWALL
  VPN
  IPS v7.0

• CCNA Security is a prerequisite
Cisco Certified Internetwork Expert (CCIE)

• Most highly respected IT certification for more than 15 years
• Hands-on lab differentiates the CCIE certification
• More than 20,000 CCIE certified experts worldwide—less than 2 percent of all professionals who are certified by Cisco
• Demonstrate strong commitment and investment in networking career, life-long learning, and dedication to remaining an active CCIE certified expert
• Validates skills in job roles, including:
  Lead Network Engineer
  Designer
  Administrator
Cisco CCIE Security

• Validates skills in job roles, including:
  Network Security Engineer
  Network Security Architect

• Configure complex, end-to-end secure networks; troubleshoot environments; and anticipate and respond to network attacks

• Required exams:
  350-018 written exam
  CCIE Security lab exam

• No pre-requisites
Security Specialist Certifications

- Cisco IPS Specialist
  Deploy, configure, and troubleshoot Cisco Intrusion Prevention System (IPS)

- Cisco VPN Security Specialist
  Configure, maintain, and troubleshoot VPN solutions using Cisco IOS software and Cisco ASA

- Cisco Firewall Security Specialist
  Implement perimeter security solutions using Cisco security appliances

- Cisco IOS Software Security Specialist
  Secure the network environment and provide security services based on Cisco IOS software

- Cisco Network Admission Control Specialist
  Identify, isolate, and clean infected devices that access the network
Latest Security Certification Enhancements
Security Certification Exam Updates

- CCNA Security
  640-554 Implementing Cisco IOS Network Security (IINS)

- CCNP Security
  642-648 Deploying Cisco ASA VPN Solutions (VPN v2.0)
  642-618 Deploying Cisco ASA Firewall Solutions (FIREWALL v2.0)

- Cisco VPN Security Specialist
  VPN exam update

- Cisco Firewall Security Specialist
  FIREWALL exam update
Study Resources
Study Resources

- Cisco Learning Network
  Exam blueprints
  Study groups and blogs
  Discussions, documents and polls
  Ask the expert sessions

- Cisco Press
  Books and study guides
Thank you.