

Security aspects of computer networks

@ Cisco CCNA Security

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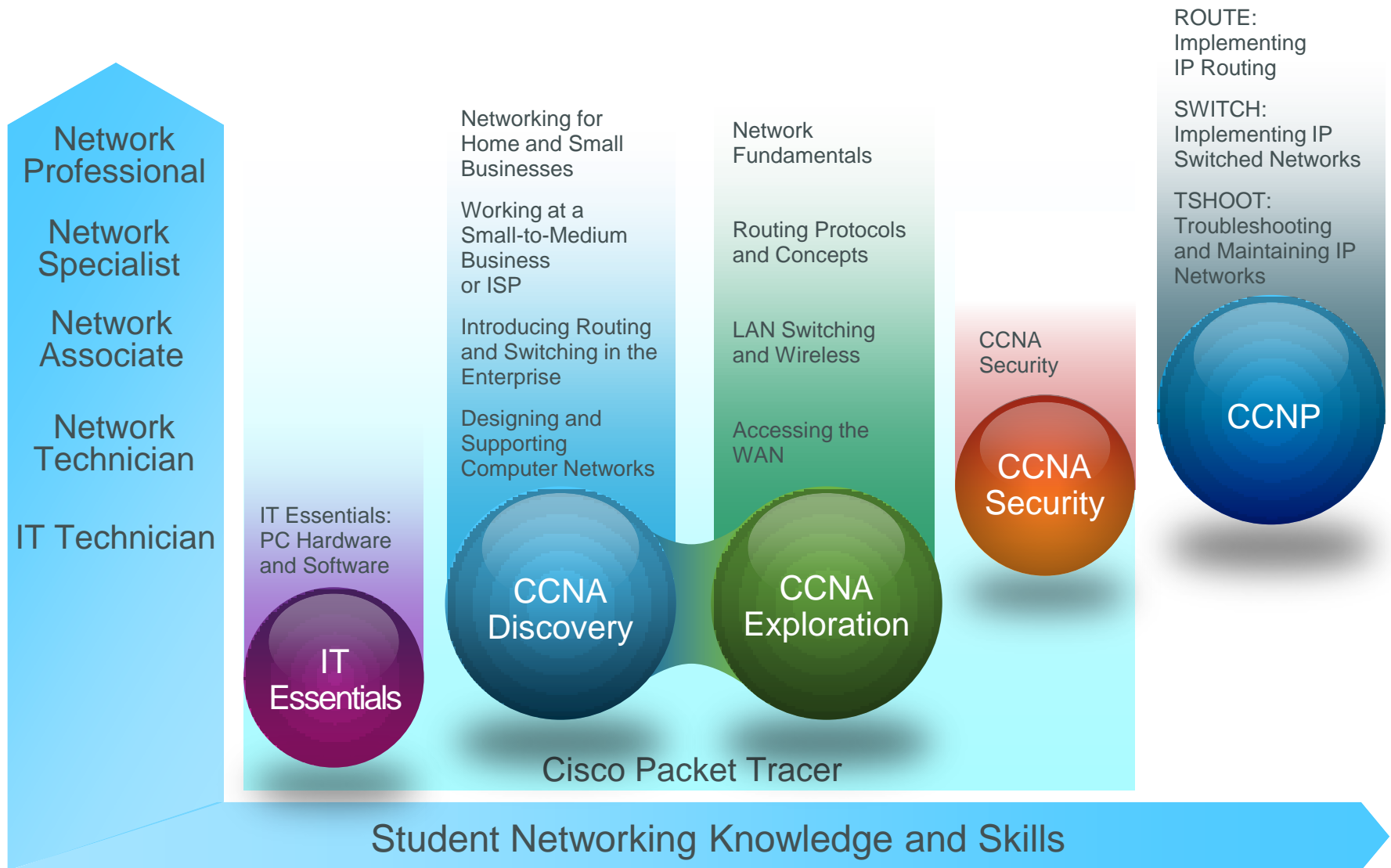
Overview



Course Goals

- To get you your dream job!
- To expand your knowledge!
- To make you more aware of security issues!
- To learn how to hack into ... ;-)
- To learn how to protect your network/applications/users/...
- To pass this university course ;-)

Curricula Portfolio



Alignment to Industry Certifications

Courses Align with Globally Recognized Certifications

CompTIA
A+

CCNA
CCENT

CCNA

CCNA
Security

CCNP

IT
Essentials

CCNA
Discovery

CCNA
Exploration

CCNA
Security

CCNP

Student Networking Knowledge and Skills

CCNA Security Course Goals

CCNA Security helps students:

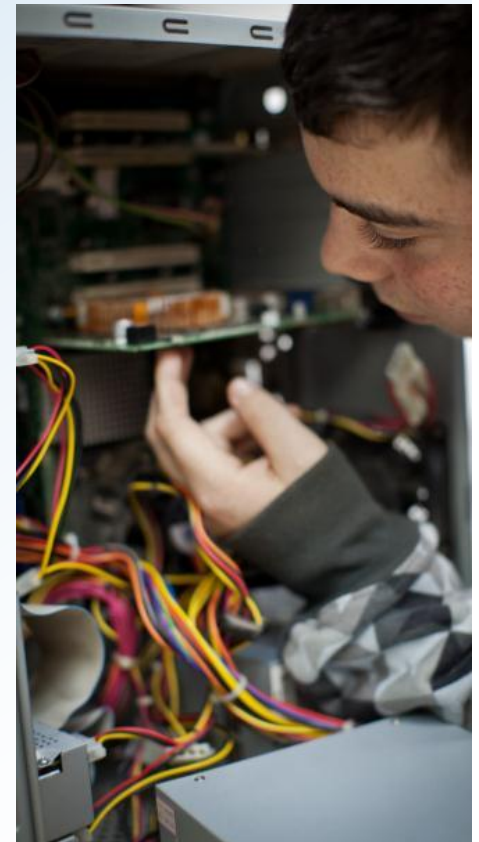
- Understand core security concepts and how to develop and implement security policies to mitigate risks
- Acquire skills needed configure, monitor, and troubleshoot network security
- Prepare for CCNA Security certification exam
- Start or advance a career in network security
- Differentiate themselves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



CCNA Security v1.1: Key Competencies

Upon completion of this course, students will be able to:

- Describe 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 an adaptive security appliance (ASA)
- Implement the Cisco IOS Intrusion Prevention System (IPS) feature set
- Implement site-to-site IP Sec VPNs
- Administer effective security policies



Course and Certification Exam Availability

Cisco IINS Certification Exam Availability

Course	Exam Name	Exam Number	Availability
CCNA Security v1.1	IINS	640-554	Available from 28-Feb-2012

Implementing Cisco IOS Network Security

Exam Number	640-554
Associated Certifications	CCNA Security
Duration	90 minutes (55-65 questions)
Available Languages	English, Japanese, Chinese, Russian

Cisco Security Certifications

Certification Name	Years of Experience	Job Role	Number of Exams
CCNA Security	1 – 3	Network Security Specialist, Security Administrator, Network Security Support Engineer	1
CCNP Security	3 – 5	Network Security Engineer	4
CCIE Security	7+	Network Security Engineer	2

Course Design



CCNA Security v1.1

Course Design

- Same GUI as CCNA Discovery and CCNA Exploration curricula
- 10 chapters and chapter exams
- 10 Cisco Packet Tracer activities
- 16 hands-on labs
- One Packet Tracer Practice skills-based assessment
- One final exam and one skills-based assessment
- Balance of theory, hands-on practice, and application



CCNA Security Course Outline

L	E	Course Chapters and Goals	
1	1	Chapter 1	Modern Network Security Threats Goal: Explain network threats, mitigation techniques, and the basics of securing a network.
2	2	Chapter 2	Securing Network Devices Goal: Secure administrative access on Cisco routers.
3	3	Chapter 3	Authentication, Authorization and Accounting Goal: Secure administrative access with AAA.
4	4	Chapter 4	Implementing Firewall Technologies Goal: Implement firewall technologies to secure the network perimeter.
5	5	Chapter 5	Implementing Intrusion Prevention Goal: Configure IPS to mitigate attacks on the network.
6	6	Chapter 6	Securing the Local Area Network Goal: Describe LAN security considerations and implement endpoint and Layer 2 security features.
7	7	Chapter 7	Cryptographic Systems Goal: Describe methods for protecting data confidentiality and integrity.
7	7	Chapter 8	Implementing Virtual Private Networks Goal: Implement secure virtual private networks.
8	8	Chapter 9	Managing A Secure Network Goal: Create and implement a comprehensive security policy to meet the security needs of an enterprise.
9	8	Chapter 10	Implementing the Cisco Adaptive Security Appliance (ASA) Goal: Implement firewall technologies using the ASA to secure the network perimeter.

L = Lecture week, E = Exercise week

How to pass?

91-100 A

81-90 B

71-80 C

61-70 D

51-60 E

< 51 FX

School exam = max 60 points
 $10 * (\text{Theory Exam})$
+
 $50 * (\text{oral exam})$

Credit = max 40 points
 $C = 40 * (\text{Skills Exam})$

Resources

- www.netacad.com aka. NetSpace
- <http://jozjan.s.cnl.sk/ccnasec/>

Thank you.



Cisco Networking Academy
Mind Wide Open

But before we start ...

- Tomorrow is a special day
- <http://www.youtube.com/watch?v=3pffeMdDSoY>