



Official CompTIA learning resources
for Instructor-Led Training:

CompTIA

Security+ (2019 Update)

Official CompTIA learning resources for Instructor-Led Training are designed with the instructor in mind, providing insights and tools for successfully training learners pursuing their CompTIA Security+ certification.

OVERVIEW

The Official CompTIA Security+ Instructor and Student Guides 2019 Update (Exam SY0-501) are developed exclusively by CompTIA, combining market-leading content with instructor input and the latest instructional design techniques. A refreshed organization of learning resources, additional assessments, scenario-based exercises and exclusive video from ITPro.TV delivers an integrated solution for preparing students for the Security+ certification exam.

OFFICIAL LEARNING RESOURCES

- The Official CompTIA Security+ Instructor Guide 2019 Update (Exam SY0-501)
- The Official CompTIA Security+ Student Guide 2019 Update (Exam SY0-501)
- CompTIA Learning Center – Digital Learning Platform – included with purchase of print and eBook
- The Official CompTIA Security+ CompTIA Labs 2019 Update (Exam SY0-501)
- CompTIA CertMaster Practice for Security+ (Exam SY0-501)

NEW FEATURES IN THE 2019 UPDATE

- **Alignment and Consistency Across Book, Labs and Assessment:** With CompTIA developing all learning materials, the book, labs and assessments work together with a similar approach and voice ensuring that instructors and students have a cohesive “single-sourced” solution for their Security+ courses.
- **Reorganization Lessons:** More lessons (16 compared 11 in the previous edition) distinguish more clearly between functional areas associated with information security roles. The content sequence has been revised, with early lessons providing hands-on activity opportunities with cybersecurity tools and software, before proceeding through identity and access management concepts. Lessons conclude with risk management, software development and security policy uses.
- **Comprehensive Activities:** Hands-on activities have been re-conceived as longer, more comprehensive, lab-style exercises. In addition, extensive review and discussion activities have been added.
- **Hands-on Practice with Virtual Labs:** CompTIA Labs hosted by Learn on Demand Systems allows learning in actual software applications through a remote environment. The 2019 Update aligns with the refreshed lab activities. Students have 180 days of access, providing a fantastic resource for students to practice their skills.
- **Engaging Video Program by ITProTV:** New videos developed exclusively for CompTIA by ITProTV provide short, engaging demonstrations of key activities in the course. The videos provide an alternative to hands-on demonstrations.
- **Robust Assessments:** The Security+ 2019 Update provides practice questions for each lesson and a final assessment covering all lessons, more than 250 questions in total. Additionally, performance-based questions help students apply what they have learned in actual scenarios.
- **Refreshed Interior Design and Image Program:** A modernized interior design updates the presentation of content. More images have been added throughout to complement the narrative and provide visual interest.

KEY FEATURES AND BENEFITS

- **Designed for Instructors by Instructors:** More than 50 instructors were involved in the development of Security+ Official Content providing feedback through focus groups, reviews, and surveys. The result is a suite of resources that works together seamlessly to address the challenges faced by instructors and students in these courses.
- **Rigorously Evaluated to Ensure Adequate Coverage of Exam Objectives:** CompTIA employs trusted third-party subject matter experts to review the content against the exam objectives and validate that an appropriate breadth and depth of coverage has been achieved. This process helps ensure that students using The Official CompTIA Security+ Guides are adequately prepared for the CompTIA Security+ certification exam.
- **Flexible and Customizable Based on Course Format:** Class resources can be easily configured based on modality.

LABS

CompTIA Labs, hosted by Learn on Demand Systems, allow students to learn in actual software applications through a remote lab environment. Labs allow students to practice what they are learning using real, hands-on experiences. Students have access to the software environment for 180 days after a CompTIA Labs access key is redeemed, providing a post-class resource for students to practice their skills.

LABS AVAILABLE:

ACTIVITY 1-5: Exploring the Lab Environment
ACTIVITY 1-6: Determining Malware Types
ACTIVITY 3-3: Performing Network Scanning with Software Tools
ACTIVITY 3-5: Analyzing Network Traffic with Packet Sniffing Software Tools
ACTIVITY 3-6: Concealing Data with Steganography Tools
ACTIVITY 3-8: Identifying Vulnerabilities with Scanning Software Tools
ACTIVITY 4-4: Implementing Certificate Services
ACTIVITY 5-3: Deploying Certificates and Implementing Key Recovery
ACTIVITY 6-3: Cracking Passwords using Software Tools
ACTIVITY 7-5: Managing Accounts in a Windows Domain
ACTIVITY 8-5: Implementing a Secure Network Design
ACTIVITY 9-3: Installing and Configuring a Firewall

ACTIVITY 9-5: Installing and Configuring an Intrusion Detection System
ACTIVITY 12-2: Implementing Secure Network Addressing Services
ACTIVITY 12-4: Implementing a Virtual Private Network
ACTIVITY 13-3: Installing and Configuring a Secure Email Service
ACTIVITY 14-6: Using Forensic Tools
ACTIVITY 15-2: Identifying a Man-in-the-Browser Attack

PERFORMANCE-BASED QUESTIONS AVAILABLE:

Lesson 1: Comparing and Contrasting Attacks
Lesson 5: Implementing Public Key Infrastructure
Lesson 9: Installing and Configuring Security Appliances
Lesson 13: Implementing Secure Network Applications
Lesson 15: Summarizing Secure Application Development Concepts

ENHANCED LEARNING RESOURCES

The Official CompTIA Security+ Guides include the accompanying resources:

Comprehensive INSTRUCTOR resources ensure successful course delivery by providing:	Comprehensive STUDENT resources engage students by providing:
<ul style="list-style-type: none">• Course-specific delivery tips provide the instructor with additional insights to deliver the course successfully• Facilitator notes in instructor guide• Solutions to activities and discussions• PowerPoint slides: A complete set of slides to facilitate the class including lists, tables, diagrams, illustrations, annotated screens and activity summaries• Presentation Planners help plan and schedule courses based on different course lengths• Solutions: Instructors have solutions to Activities and Discussion Questions embedded within the Instructor Guide.• Transition Guides help instructors transition to the 2019 Update Instructor-Led Training resources.	<ul style="list-style-type: none">• eBook: An interactive online version of the book, along with secure PDF and downloadable versions• Files: Any course files available to download• Videos: Brief videos, developed exclusively for CompTIA by ITProTV, provide demonstrations of key activities in the course• Assessment: A series of different assessments for each lesson as well an overall self-assessment• PowerPoint slides• Solutions to activities and discussions• Strengths and Weaknesses Dashboard: Students assessments results are aggregated in the Strengths and Weaknesses dashboard to provide an indicator of their overall performance in the course.

EXAM PREP OPTION

CompTIA CertMaster Practice is an online knowledge assessment and remediation tool designed to help learners feel more confident and prepared for the CompTIA exam.

COURSE OVERVIEW

This course is for students who are preparing to take the CompTIA Security+ certification exam SY0-501.

This course is aimed toward the IT professional who has networking and administrative skills in Windows-based Transmission Control Protocol/Internet Protocol (TCP/IP) networks; plus familiarity with other operating systems, such as macOS, Unix or Linux; and who wants to further a career in IT by acquiring foundational knowledge of security topics.

JOB ROLES

- **Systems Administrator**
- **Security Administrator**
- **Security Specialist**
- **Security Engineer**
- **Network Administrator**
- **Junior IT Auditor/Penetration Tester**
- **Security Consultant**



PREREQUISITES

Students should have basic Windows user skills and a fundamental understanding of computer and networking concepts.

Achievement of CompTIA A+ and Network+ certifications, plus two years of experience with IT administration with a security focus.

TABLE OF CONTENTS		
<p>Lesson 1: Comparing and Contrasting Attacks Topic 1A: Compare and Contrast Information Security Roles Topic 1B: Explain Threat Actor Types Topic 1C: Compare and Contrast Social Engineering Attack Types Topic 1D: Determine Malware Types</p>	<p>Lesson 2: Comparing and Contrasting Security Controls Topic 2A: Compare and Contrast Security Control and Framework Types Topic 2B: Follow Incident Response Procedures</p>	<p>Lesson 3: Using Security Assessment Tools Topic 3A: Explain Penetration Testing Concepts Topic 3B: Use Topology Discovery Software Tools Topic 3C: Use Fingerprinting and Sniffing Software Tools Topic 3D: Use Vulnerability Scanning Software Tools</p>
<p>Lesson 4: Comparing and Contrasting Basic Concepts of Cryptography Topic 4A: Compare and Contrast Basic Concepts of Cryptography Topic 4B: Compare and Contrast Cryptographic Attack Types Topic 4C: Explain Hashing and Symmetric Cryptographic Algorithms Topic 4D: Explain Asymmetric Cryptographic Algorithms</p>	<p>Lesson 5: Implementing Public Key Infrastructure Topic 5A: Implement Certificates and Certificate Authorities Topic 5B: Implement PKI Management</p>	<p>Lesson 6: Implementing Identity and Access Management Controls Topic 6A: Compare and Contrast Identity and Authentication Concepts Topic 6B: Install and Configure Authentication Protocols Topic 6C: Implement Multifactor Authentication</p>
<p>Lesson 7: Managing Access Services and Accounts Topic 7A: Install and Configure Authorization and Directory Services Topic 7B: Implement Access Management Controls Topic 7C: Differentiate Account Management Practices Topic 7D: Implement Account Auditing and Recertification</p>	<p>Lesson 8: Implementing Secure Network Architecture Concepts Topic 8A: Implement Secure Network Architecture Concepts Topic 8B: Install and Configure Secure Switching Infrastructure Topic 8C: Install and Configure Network Access Control Topic 8D: Install and Configure Secure Routing and NAT Infrastructure</p>	<p>Lesson 9: Installing and Configuring Security Appliances Topic 9A: Install and Configure Firewalls and Proxies Topic 9B: Install and Configure Load Balancers Topic 9C: Install and Configure Intrusion Detection/Prevention Systems Topic 9D: Install and Configure Logging and SIEM Systems</p>
<p>Lesson 10: Installing and Configuring Wireless and Physical Access Security Topic 10A: Install and Configure Wireless Infrastructure Topic 10B: Install and Configure Wireless Security Settings Topic 10C: Explain the Importance of Physical Security Controls</p>	<p>Lesson 11: Deploying Secure Host, Embedded, and Mobile Systems Topic 11A: Implement Secure Hardware Systems Design Topic 11B: Implement Secure Host Systems Design Topic 11C: Implement Secure Embedded Systems Design Topic 11D: Implement Secure Mobile Device Systems Design</p>	<p>Lesson 12: Implementing Secure Network Access Protocols Topic 12A: Implement Secure Network Operations Protocols Topic 12B: Implement Secure Remote Access Protocols Topic 12C: Implement Secure Remote Administration Protocols</p>
<p>Lesson 13: Implementing Secure Network Applications Topic 13A: Implement Secure Web Services Topic 13B: Implement Secure Communications Services Topic 13C: Implement Secure Virtualization Infrastructure Topic 13D: Implement Secure Cloud Services</p>	<p>Lesson 14: Explaining Risk Management and Disaster Recovery Concepts Topic 14A: Explain Risk Management Processes and Concepts Topic 14B: Explain Disaster Recovery Planning Concepts Topic 14C: Explain Resiliency and Continuity of Operations Strategies Topic 14D: Summarize Basic Concepts of Forensics</p>	<p>Lesson 15: Summarizing Secure Application Development Concepts Topic 15A: Explain the Impact of Vulnerability Types Topic 15B: Summarize Secure Application Development Concepts</p>
<p>Lesson 16: Explaining Organizational Security Concepts Topic 16A: Explain the Importance of Security Policies Topic 16B: Implement Data Security and Privacy Practices Topic 16C: Explain the Importance of Personnel Management</p>	<p>Appendix A: Mapping Course Content to CompTIA Security+ (Exam SY0-501) Solutions (Student Guide only, solutions are included "in line" in the Instructor Guide) Glossary Index</p>	

PURCHASE EVERYTHING IN ONE PLACE

Official CompTIA learning resources are available on the CompTIA Store at <https://store.comptia.org/>, which means partners will be able to obtain Official CompTIA learning resources, CompTIA CertMaster products and exam vouchers all in one place. Please contact your CompTIA business development representative for more information.

