

[CT-Security+]: CompTIA® Security+® (Exam SY0-501)

Length : 5 Days
Delivery Method : Instructor-led (Classroom)

Course Overview

CompTIA® Security+® (Exam SY0-501) is the primary course participants will need to take if participant's job responsibilities include securing network services, devices, and traffic in participant's organization. Participants can also take this course to prepare for the CompTIA Security+ certification examination. In this course, participants will build on their knowledge of and professional experience with security fundamentals, networks, and organizational security as participants acquire the specific skills required to implement basic security services on any type of computer network.

This course can benefit participants in two ways. If participants intend to pass the CompTIA Security+ (Exam SY0-501) certification examination, this course can be a significant part of your preparation. But certification is not the only key to professional success in the field of computer security. Today's job market demands individuals with demonstrable skills, and the information and activities in this course can help participants build their computer security skill set so that participants can confidently perform their duties in any security-related role.

Audience Profile

This course is targeted toward the information technology (IT) professional who has networking and administrative skills in Windows®-based Transmission Control Protocol/Internet Protocol (TCP/IP) networks; 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; preparing for the CompTIA Security+ certification examination; or using Security+ as the foundation for advanced security certifications or career roles.

At Course Completion

In this course, participants will implement information security across a variety of different contexts.

- Identify the fundamental components of information security
- Analyze risk
- Identify various threats to information security
- Conduct security assessments to detect vulnerabilities
- Implement security for hosts and software
- Implement security for networks
- Manage identity and access
- Implement cryptographic solutions in the organization

AVANTUS TRAINING PTE LTD

80 Jurong East Street 21 #04-04 Devan Nair Institute Singapore 609607
Main Line: +65 6661 0888 | Fax: +65 6661 0886
Email: enquiries@AvantusTraining.com
www.AvantusTraining.com

- Implement security at the operational level
- Address security incidents
- Ensure the continuity of business operations in the event of an incident

Pre-Requisites

To ensure participants success in this course, participants should possess basic Windows user skills and a fundamental understanding of computer and networking concepts. Participants can obtain this level of skills and knowledge by taking one of the following Logical Operations courses:

- Using Microsoft® Windows® 10
- Microsoft® Windows® 10 Transition from Windows® 7

CompTIA A+ and Network+ certifications, or equivalent knowledge, and six to nine months' experience in networking, including configuring security parameters, are strongly recommended. Participants can obtain this level of skill and knowledge by taking any of the following CHOICE courses:

- CompTIA® A+®: A Comprehensive Approach (Exams 220-901 and 220-902)
- CompTIA® Network+® (Exam N10-006)

Additional introductory courses or work experience in application development and programming, or in network and operating system administration for any software platform or system, are helpful but not required. For instance, to gain experience with managing Windows Server® 2016, participants could take any or all of the following CHOICE courses:

- Microsoft® Windows® Server 2016: Install, Store, and Compute
- Microsoft® Windows® Server 2016: Networking
- Microsoft® Windows® Server 2016: Identity

Course Outline

Module 1: Identifying Security Fundamentals

Lessons

- Identify Information Security Concepts
- Identify Basic Security Controls
- Identify Basic Authentication and Authorization Concepts
- Identify Basic Cryptography Concepts

Module 2: Analyzing Risk

Lessons

- Analyze Organizational Risk

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- Analyze the Business Impact of Risk

Module 3: Identifying Security Threats

Lessons

- Identify Types of Attackers
- Identify Social Engineering Attacks
- Identify Malware
- Identify Software-Based Threats
- Identify Network-Based Threats
- Identify Wireless Threats
- Identify Physical Threats

Module 4: Conducting Security Assessments

Lessons

- Identify Vulnerabilities
- Assess Vulnerabilities
- Implement Penetration Testing

Module 5: Implementing Host and Software Security

Lessons

- Implement Host Security
- Implement Cloud and Virtualization Security
- Implement Mobile Device Security
- Incorporate Security in the Software Development Lifecycle

Module 6: Implementing Network Security

Lessons

- Configure Network Security Technologies
- Secure Network Design Elements
- Implement Secure Networking Protocols and Services
- Secure Wireless Traffic

Module 7: Managing Identity and Access

Lessons

- Implement Identity and Access Management
- Configure Directory Services
- Configure Access Services
- Manage Accounts

Module 8: Implementing Cryptography

Lessons

- Identify Advanced Cryptography Concepts
- Select Cryptographic Algorithms
- Configure a Public Key Infrastructure
- Enroll Certificates
- Back Up and Restore Certificates and Private Keys

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- Revoke Certificates

Module 9: Implementing Operational Security

Lessons

- Evaluate Security Frameworks and Guidelines
- Incorporate Documentation in Operational Security
- Implement Security Strategies
- Manage Data Security Processes
- Implement Physical Controls

Module 10: Addressing Security Incidents

Lessons

- Troubleshoot Common Security Issues
- Respond to Security Incidents
- Investigate Security Incidents

Module 11: Ensuring Business Continuity

Lessons

- Select Business Continuity and Disaster Recovery Processes
- Develop a Business Continuity Plan

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