

uCertify

Course Outline

**Pearson CompTIA Security+
SY0-501**



Lesson



Practice test



Lab

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1. Course Objective

Prepare for the CompTIA Security+ SY0-501 certification exam with the CompTIA Security+ SY0-501 course and lab. The lab simulates real-world, hardware, software, and command-line interface environments and can be mapped to any text-book, course or training. CompTIA Security+ course and lab provide skills and knowledge to identify risk, participate in risk mitigation activities, provide infrastructure, information, operational, and application security. This certification covers the most important principles for securing a network and managing risk.

2. Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

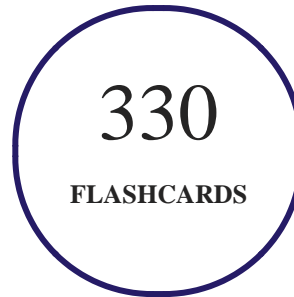
3. Quizzes

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

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QUIZZES

4. Flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.



6. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

7. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

8. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assignments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

9. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- 2014

1. Best Postsecondary Learning Solution

• **2015**

1. Best Education Solution
2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

• **2016**

1. Best Virtual Learning Solution
2. Best Education Cloud-based Solution
3. Best College and Career Readiness Solution
4. Best Corporate / Workforce Learning Solution
5. Best Postsecondary Learning Content Solution
6. Best Postsecondary LMS or Learning Platform
7. Best Learning Relationship Management Solution

• **2017**

1. Best Overall Education Solution
2. Best Student Assessment Solution
3. Best Corporate/Workforce Learning Solution
4. Best Higher Education LMS or Learning Platform

• **2018**

1. Best Higher Education LMS or Learning Platform
2. Best Instructional Solution in Other Curriculum Areas
3. Best Learning Relationship Management Solution

- 2019
 1. Best Virtual Learning Solution
 2. Best Content Authoring Development or Curation Solution
 3. Best Higher Education Learning Management Solution (LMS)

- 2020
 1. Best College and Career Readiness Solution
 2. Best Cross-Curricular Solution
 3. Best Virtual Learning Solution

10. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Introduction

- Who Should Read This Book?

- CompTIA Security+ Exam Topics

Chapter 2: Introduction to Security

- Security 101
- Think Like a Hacker
- Threat Actor Types and Attributes
- Review Key Topics

Chapter 3: Computer Systems Security Part I

- Malicious Software Types
- Delivery of Malware
- Preventing and Troubleshooting Malware
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 4: Computer Systems Security Part II

- Implementing Security Applications
- Securing Computer Hardware and Peripherals
- Securing Mobile Devices

- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 5: OS Hardening and Virtualization

- Hardening Operating Systems
- Virtualization Technology
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 6: Application Security

- Securing the Browser
- Securing Other Applications
- Secure Programming
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 7: Network Design Elements

- Network Design
- Cloud Security and Server Defense
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 8: Networking Protocols and Threats

- Ports and Protocols
- Malicious Attacks
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 9: Network Perimeter Security

- Firewalls and Network Security
- NIDS Versus NIPS

- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 10: Securing Network Media and Devices

- Securing Wired Networks and Devices
- Securing Wireless Networks
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 11: Physical Security and Authentication Models

- Physical Security
- Authentication Models and Components
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 12: Access Control Methods and Models

- Access Control Models Defined
- Rights, Permissions, and Policies
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 13: Vulnerability and Risk Assessment

- Conducting Risk Assessments
- Assessing Vulnerability with Security Tools
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 14: Monitoring and Auditing

- Monitoring Methodologies
- Using Tools to Monitor Systems and Networks
- Conducting Audits

- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 15: Encryption and Hashing Concepts

- Cryptography Concepts
- Encryption Algorithms
- Hashing Basics
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 16: PKI and Encryption Protocols

- Public Key Infrastructure
- Security Protocols
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 17: Redundancy and Disaster Recovery

- Redundancy Planning
- Disaster Recovery Planning and Procedures
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 18: Social Engineering, User Education, and Facilities Security

- Social Engineering
- User Education
- Facilities Security

- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Chapter 19: Policies and Procedures

- Legislative and Organizational Policies
- Incident Response Procedures
- IT Security Frameworks
- Lesson Summary
- Review Key Topics
- Complete the Real-World Scenarios

Videos and How To

uCertify course includes videos to help understand concepts. It also includes How Tos that help learners in accomplishing certain tasks.

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VIDEOS

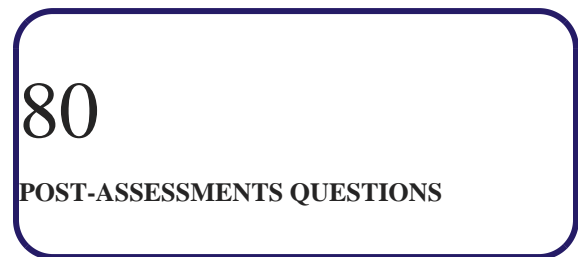
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HOURS

11. Practice Test

uCertify provides full length practice tests. These tests closely follow the exam objectives and are designed to simulate real exam conditions. Each course has a number of test sets consisting of hundreds of items to ensure that learners are prepared for the certification exam.

Here's what you get



Features

Full Remediation

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Learn, Test and Review Mode

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

12. Performance Based Labs

uCertify's performance-based labs are Live Labs. Learn the real world skills using Live Labs. uCertify Labs are cloud-based, device-enabled and can be easily integrated with an LMS. Features of uCertify labs:

- Provide hands-on experience in a safe, online environment
- Labs simulate real world, hardware, software & CLI environment
- Flexible and inexpensive alternative to physical Labs
- Comes with well-organized component library for every task
- Highly interactive - learn by doing
- Explanations and remediation available
- Videos on how to perform

Lab Tasks

- Using Windows Defender
- Managing Windows Firewall
- Encrypting Files with EFS
- Configuring Windows Firewall
- Using BitLocker in Windows 10
- Configuring Group Policy Settings
- Managing Services with Group Policy
- Configuring Audit Group Policy
- Creating a Virtual Machine

- Importing a Virtual Machine
- Configuring Secondary Virtual Hard Disk
- Installing the Web Server IIS Server Role
- Installing and Configuring NLB
- Configuring NLB Operations
- Creating a Virtual Switch
- Configuring a Perimeter Firewall
- Viewing Results of Live Hosts
- Verifying Network Services
- Enabling Intrusion Prevention and Detection
- Spoofing MAC Address with SMAC
- Clearing the DNS Cache
- Using Ettercap for ARP Spoofing
- Detecting Phishing Site Using Netcraft
- Preventing Zone Transfers
- Simulating a DoS Attack
- Implementing Data Execution Prevention
- Securing Default Accounts
- Resetting a Password
- Creating a Fine-Grained Password Policy
- Configuring Remote Access VPN
- Configuring a Static TCP/IP Address
- Configuring Kerberos Policy Settings
- Installing Remote Access Services
- Assigning Permissions to Folders
- Restricting Local Accounts
- Creating a User Account and Configuring Restrictions
- Configuring Account Policies
- Managing a User Account
- Running a Security Scan to Identify Vulnerabilities
- Remediating Vulnerabilities on the Local Workstation
- Remediating Vulnerabilities on the Network
- Using Network Monitoring

- Observing Traffic Patterns Using Wireshark
- Analyzing Protocols with Wireshark
- Working with Task Manager
- Viewing Running Processes on a Linux-based Machine
- Enabling Debug Logging on the DNS Server
- Enabling Audit Policies
- Enabling Object Access Auditing
- Observing MD5 Hash
- Configuring SSL Connections
- Configuring the SSL Port Setting
- Using OpenSSL to Create a Public/Private Key Pair
- Adding a Certificate to MMC
- Installing Windows Server Backup
- Creating a Backup Schedule
- Creating a Backup Once

Here's what you get

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PERFORMANCE BASED
LAB

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VIDEO TUTORIALS

06:22

HOURS

13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

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