CERTIFICATION GUIDE

CompTIA Security+

What is it?

CompTIA Security+ is an international, vendor-neutral certification that validates the baseline skills necessary to perform core security functions and pursue an IT security career.

Why is it different?

- No other certification that assesses baseline cybersecurity skills has performance-based questions on the exam. Security+ emphasizes hands-on practical skills, ensuring the security professional is better prepared to problem solve a wider variety of issues.
- More choose Security+ for DoD 8570 compliance than any other certification.
- Focuses on the latest trends and techniques in risk management, risk mitigation, threat management and intrusion detection.
- The new Security+ certification covers the Junior IT Auditor/Penetration Tester job role, in addition to the previous job roles for Systems Administrator, Network Administrator, and Security Administrator

About the exam

CompTIA Security+ is the first security certification IT professionals should earn. It establishes the core knowledge required of any cybersecurity role and provides a springboard to intermediate-level cybersecurity jobs. Security+ incorporates best practices in hands-on trouble-shooting to ensure security professionals have practical security problem-solving skills. Cybersecurity professionals with Security+ know how to address security incidents – not just identify them.

Security+ is compliant with ISO 17024 standards and approved by the US DoD to meet directive 8140/8570.01-M requirements.

Exam #
SY0-501

Release Date
October 2017

Languages
English, Japanese, Portuguese, & Simple Chinese

CE Required?
Yes

Accreditation
Accredited by ANSI to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M.

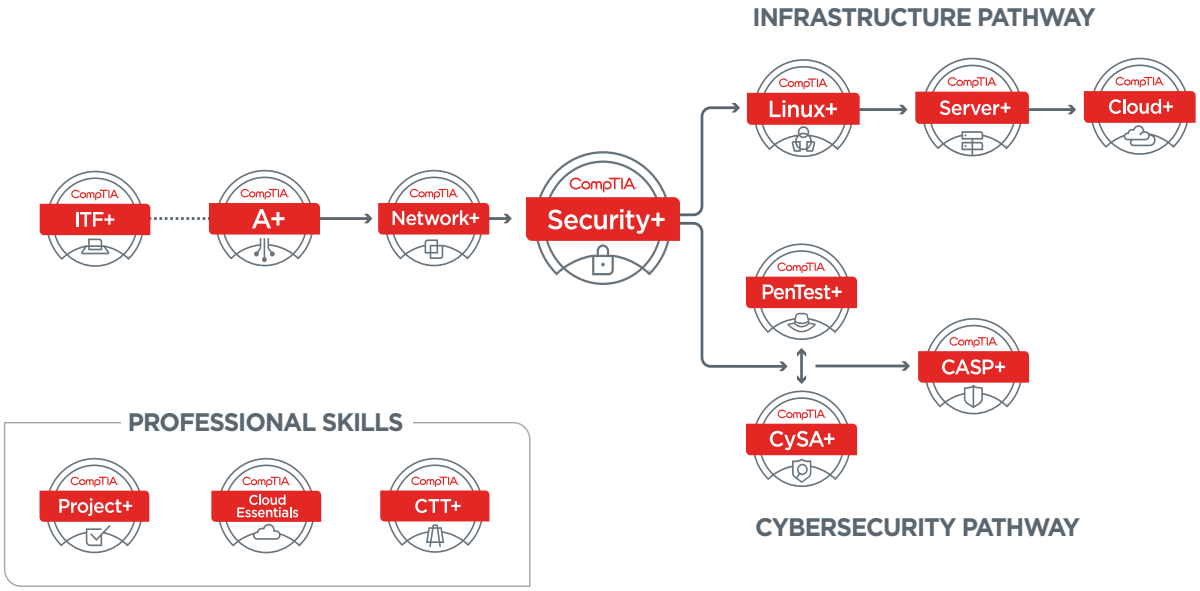
What's in this Version?

The new exam has been updated to better reflect today's best practices for risk management and risk mitigation including the following:

- More emphasis on the practical and hands-on ability to both identify and address security threats, attacks and vulnerabilities.
- Skills covered in Security+ have become a baseline for all cybersecurity jobs and the new version has been updated to reflect how cybersecurity jobs are becoming more specialized, like security analytics. Because of this, the importance of and demand for Security+ has increased for a broader variety of job roles.

CompTIA Certification Pathway

CompTIA certifications align with the skillsets needed to support and manage cybersecurity.
Enter where appropriate for you. Consider your experience and existing certifications or course of study.



"When I got out of the Marine Corps, I realized a lot of potential employers require CompTIA Security+. You need more than just job training – you need certifications."

Michael Bays, Security+ Certified

Technical Areas Covered in the Certification

Threats, Attacks and Vulnerabilities
21%

- Analyze indicators of compromise and determine types of malware
- Compare and contrast types of attacks
- Explain threat actor types and attributes
- Explain penetration testing and vulnerability scanning concepts
- Explain the impact of various types of vulnerabilities

Technologies and Tools
22%

- Install and configure network components, both hardware and software-based, to support organizational security
- Use appropriate software tools to assess the security posture of an organization
- Trouble-shoot common security issues
- Analyze and interpret output from security technologies
- Deploy mobile devices securely
- Implement secure protocols

Architecture and Design
15%

- Explain use cases and purposes for frameworks, best practices and secure configuration guides
- Implement secure network architecture concepts, secure systems design, and explain the importance of physical security controls
- Explain the importance of secure staging deployment concepts and the security implications of embedded systems
- Summarize secure application development, deployment, cloud and virtualization concepts
- Explain how resiliency and automation strategies reduce risk

Identity and Access Management
16%

- Compare and contrast identity and access management concepts
- Install and configure identity and access services
- Implement identity and access management controls
- Differentiate common account management practices

Risk Management
14%

- Explain the importance of policies, plans and procedures related to organizational security
- Summarize business impact analysis concepts and basic concepts of forensics
- Explain risk management processes and concepts, as well as disaster recovery and continuity of operations concepts
- Follow incident response procedures
- Carry out data security and privacy practices

Cryptography and PKI
12%

- Compare and contrast basic concepts of cryptography
- Explain cryptography algorithms and their basic characteristics
- Install and configure wireless security settings
- Implement public key infrastructure

How does Security+ Compare to Alternatives?

Certification	Security+	CCNA Security	EC-Council Certified Ethical Hacker (CEH)	GIAC Security Essentials (GSEC)
Performance-based Questions	Yes	No	No A second exam, CEH (Practical) offers performance-based questions	No
Exam Length	1 exam, 90 min	1 exam, 90 min	1 exam, 4 hrs	1 exam, 5 hrs
Experience Level	Entry-level cybersecurity	Intermediate	Intermediate	Entry-level cybersecurity
Pre-requisites	CompTIA A+ and Network+ recommended	CCENT, CCNA Routing and Switching, OR CCIE certification	CEH Training, 2 years information security experience, Endorsement	None

Top Security+ Job Roles

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

Organizations that have contributed to the development of Security+

- Northrop Grumman
- State of Minnesota
- Nationwide
- Southeastern Louisiana University
- Norfolk University
- Office of the Comptroller of the Currency
- Agile Defense, Inc.
- The Johns Hopkins University Applied Physics Laboratory
- Modern Technology Solutions, Inc. (MTSI)
- Archdiocese of Philadelphia
- Fayetteville Technical Community College
- Brotherhood Mutual
- The Joint Commission

Research and Statistics

Security Even Higher Priority

About 8 in 10 managers responsible for security at their firms across 12 countries covered in CompTIA's *International Trends in Cybersecurity* **expect security to become an even higher priority** over the next two years.†

Certified Salary

The mean salary for Security+ certified professionals in the United States and Canada is **$87,666** (overall mean is $81,165).[2]

"I needed to establish my career. In this profession, a person who has certifications is more recognized in the market."

Wanderley Martins
Security+ Certified

Official CompTIA Content for Security+

Learn with CompTIA

Official CompTIA Content is the only study material exclusively developed by CompTIA for the CompTIA certification candidate; no other content library covers all exam objectives for all certifications. CompTIA eBooks and CertMaster Products have been developed with our Official CompTIA Content to help you prepare for your CompTIA certification exams with confidence. Learners now have everything they need to learn the material and ensure they are prepared for the exam and their career.

Instructor Guides

Designed to make implementation easy. Includes course setup, delivery tips, presentation planners, facilitator notes and discussion problems.

Study Guides

The core learning material, available both in interactive online or in downloadable PDF versions.

Assessments

Course material includes questions that help learners assess their master of the content.

Videos

Brief animated videos integrated within the course material extend and enhance classroom learning.

Labs

Provide hands-on practice activities Integrated with the Student guides that can be set up on classroom hardware or executed through the Learn on Demand platform.

Tools

Downloadable files, links and checklists provide further resources for instructors to enhance the classroom experience.

Online Learning with CompTIA CertMaster

Whether you are just starting to prepare and need comprehensive training with CertMaster Learn, need a final review with CertMaster Practice, or need to renew your certification upon expiration with CertMaster CE, CertMaster's online training tools have you covered.

CertMaster Learn

Comprehensive Self-Paced Learning

CompTIA CertMaster Learn is comprehensive eLearning that prepares learners for their CompTIA Certification exam and for a career in IT.

CertMaster Labs

Learn By Doing

CertMaster Labs give you the ability to apply knowledge learned from the course material and solve problems for a wide range of technologies in a safe environment using just your browser.

CertMaster Practice

Reinforce Knowledge

CertMaster Practice is an online knowledge assessment and certification training companion tool.

CertMaster CE

Certification Renewal

CompTIA CertMaster CE is a self-paced online course that provides an efficient way to renew a CompTIA certification automatically.

What does it mean to be a "high stakes" exam?

An extraordinarily high level of rigor is employed in developing CompTIA certifications. Each question created for a CompTIA exam undergoes multiple layers of quality assurance and thorough psychometric statistical validation, ensuring CompTIA exams are highly representative of knowledge, skills and abilities required of real job roles. This is why CompTIA certifications are a requirement for many professionals working in technology. Hiring managers and candidates alike can be confident that passing a CompTIA certification exam means competence on the job. This is also how CompTIA certifications earn the ANSI/ISO 17024 accreditation, the standard for personnel certification programs. Over 1.3 million CompTIA ISO/ANSI-accredited exams have been delivered since January 1, 2011.

What does it mean to be a "vendor-neutral" exam?

All CompTIA certification exams are vendor-neutral. This means each exam covers multiple technologies, without confining the candidate to any one platform. Vendor-neutrality is important because it ensures IT professionals can perform important job tasks in any technology environment. IT professionals with vendor-neutral certifications can consider multiple solutions in their approach to problem-solving, making them more flexible and adaptable than those with training in just one technology.

What is a Performance Certification?

CompTIA performance certifications validate the skills associated with a particular job or responsibility. They include simulations that require the test taker to demonstrate multi-step knowledge to complete a task. CompTIA has a higher ratio of these types of questions than any other IT certifying body.

1 International Trends in Cybersecurity – CompTIA, April 2016
2 https://www.globalknowledge.com/us-en/content/salary-report/it-skills-and-salary-report/