

# CompTIA A+ Core Series

## What is it?

CompTIA A+ certified professionals are proven problem solvers. They support today's core technologies from security to cloud to data management and more. CompTIA A+ is the industry standard for launching IT careers into today's digital world.

## Why is it different?

CompTIA A+ is the only industry recognized credential with performance-based items to prove pros can think on their feet to perform critical IT support tasks in the moment. It is trusted by employers around the world to identify the go-to person in end point management & technical support roles. CompTIA A+ is regularly re-invented by IT experts to ensure that it validates core skills and abilities demanded in the workplace.

## About the exam

CompTIA A+ is the preferred performance-based qualifying credential for technical support and IT operational roles. A+ certified professionals identify issues and problem solve more effectively than those without certification. CompTIA A+ supports the ability to connect users to the data they need to do their jobs regardless of the devices being used. In order to receive the CompTIA A+ certification, candidates must pass two exams: Core 1 (220-1001) and Core 2 (220-1002). Successful candidates will have the skills to:

- Support basic IT infrastructure, including endpoint management, advanced device connectivity troubleshooting, and basic networking
- Configure and support PC, mobile and IoT device hardware, including components, connectors and peripherals
- Implement basic data backup and recovery methods and apply data storage and management best practices
- Demonstrate baseline security skills for IT support professionals, including detecting and removing malware, addressing privacy concerns, physical security and device hardening
- Configure device operating systems, including Windows, Mac, Linux, Chrome OS, Android and iOS and administer client-based as well as cloud-based (SaaS) software
- Troubleshoot and problem solve core service and support challenges while applying best practices for documentation, change management, and the use of scripting in IT support

## CompTIA A+ Core Series

### Exam #

220-1001 and 220-1002

### Release Date

January 2019

### Languages

English, German, Japanese, Portuguese, Simplified Chinese and Spanish

### 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 CompTIA A+ Core Series includes expanded content on these growing parts of the IT support role:

A general expansion of baseline security topics core to the IT support role, including

- Physical versus logical security concepts and measures
- Social engineering
- Malware detection and removal
- Device hardening for not just PCs but devices in general

A dramatically different approach in defining competency in operational procedures

- Importance of documentation and using best practices
- Change management
- Basic disaster prevention and recovery
- Privacy concerns, including GDPR and handling PII
- Scripting basics
- Use of remote access

Networking and device connectivity are broadened

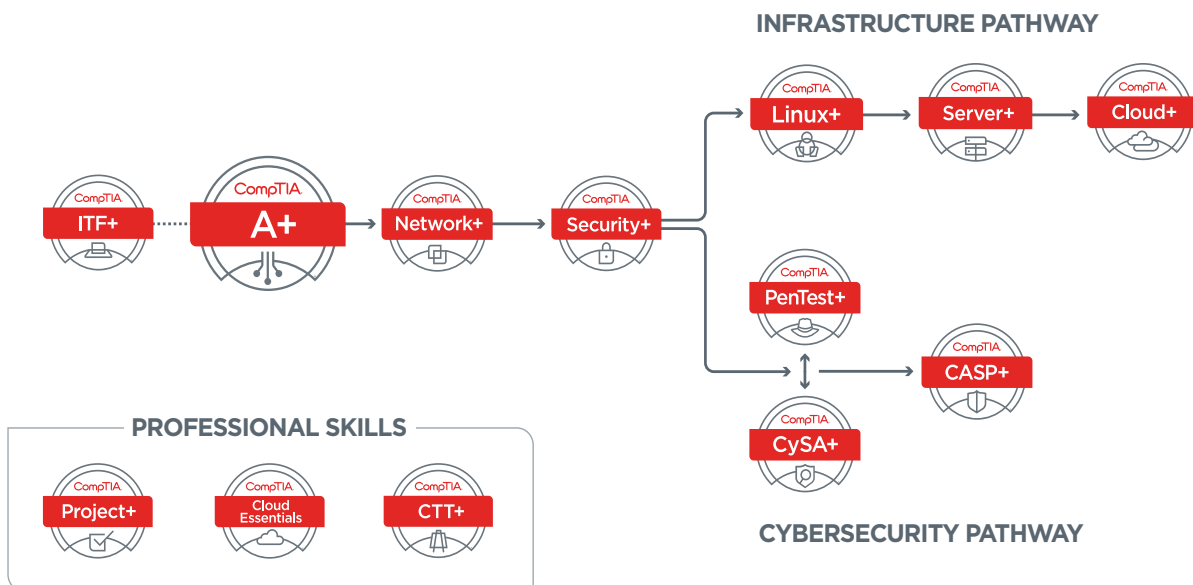
- Cloud and virtualization are now weighed more heavily
- Managing networking and device connectivity includes IoT devices and related protocols
- Includes the concept of Internet appliances and end point management servers
- Added wireless mesh networks to network types

Training alone is not enough. A lot of training varies in scope, quality and content. A+ establishes a consistent standard that ensures the material one learns maps directly to job roles. CompTIA A+ certification validates that a candidate has mastered the foundational skills for that role.

## CompTIA Certification Pathway

IT support professionals work with critical-path teams, including security operations center (SOC) team members, cloud and network administrators, and applications analysts. These teams offer a glimpse of future options and a gateway to career advancement. CompTIA A+ is the key to unlocking these options and setting you on the IT career pathway of your choosing.





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



## Technical Areas Covered in the Certification

<b>CompTIA A+ CORE 1 (220-1101)</b>	<p><b>Mobile Devices</b> <b>14%</b></p> <ul style="list-style-type: none"> <li>• Install and configure laptop &amp; components</li> <li>• Compare and contrast characteristics of various types of other mobile devices</li> <li>• Connect and configure accessories and ports of other mobile devices &amp; accessories</li> <li>• Configure basic mobile device network connectivity and application support</li> <li>• Use methods to perform mobile device synchronization</li> </ul>	<p><b>Networking</b> <b>20%</b></p> <ul style="list-style-type: none"> <li>• Compare and contrast TCP and UDP ports, protocols, and their purposes</li> <li>• Compare and contrast common networking hardware devices</li> <li>• Install and configure a basic wired/wireless SOHO network</li> <li>• Compare and contrast wireless networking protocols</li> <li>• Summarize the properties and purposes of services provided by networked hosts</li> <li>• Explain common network configuration concepts</li> <li>• Compare and contrast Internet connection types, network types, and their features</li> </ul>	<p><b>Hardware</b> <b>27%</b></p> <ul style="list-style-type: none"> <li>• Explain basic cable and connector types, features, and their purposes</li> <li>• Summarize power supply types and features</li> <li>• Select and configure appropriate components &amp; devices for a custom PC configuration to meet customer specifications or needs</li> <li>• Configure SOHO multifunction devices/ printers and settings</li> <li>• Install and maintain various print technologies</li> </ul>	<p><b>Virtualization and Cloud Computing</b> <b>12%</b></p> <ul style="list-style-type: none"> <li>• Compare and contrast cloud computing concepts</li> <li>• Set up and configure client-side virtualization</li> </ul>	<p><b>Network and Hardware Troubleshooting</b> <b>27%</b></p> <ul style="list-style-type: none"> <li>• Use the best practice methodology to resolve problems</li> <li>• Troubleshoot hard drives and RAID arrays and problems related to motherboards, RAM, power and more</li> <li>• Troubleshoot video, projector, and display issues</li> <li>• Troubleshoot common mobile device issues while adhering to the appropriate procedures</li> <li>• Troubleshoot common wired and wireless network problems</li> </ul>
	<b>CompTIA A+ CORE 2 (220-1102)</b>	<p><b>Operating Systems</b> <b>27%</b></p> <ul style="list-style-type: none"> <li>• Compare and contrast common operating system types and their purposes</li> <li>• Compare and contrast features of Microsoft Windows versions</li> <li>• Summarize general OS installation considerations and upgrade methods</li> <li>• Use appropriate Microsoft command line tools</li> <li>• Use Microsoft operating system features and tools</li> <li>• Use Microsoft Windows Control Panel utilities</li> <li>• Summarize application installation and configuration concepts</li> <li>• Configure Microsoft Windows networking on a client/desktop</li> <li>• Use features and tools of the Mac OS and Linux client/desktop operating systems</li> </ul>	<p><b>Security</b> <b>24%</b></p> <ul style="list-style-type: none"> <li>• Summarize the importance of physical security measures</li> <li>• Explain logical security concepts</li> <li>• Compare and contrast wireless security protocols and authentication methods</li> <li>• Given a scenario, detect, remove, and prevent malware using appropriate tools and methods</li> <li>• Compare and contrast social engineering, threats, and vulnerabilities</li> <li>• Compare and contrast the differences of basic Microsoft Windows OS security settings</li> <li>• Implement security best practices to secure a workstation</li> <li>• Implement methods for securing mobile devices</li> <li>• Implement appropriate data destruction and disposal methods</li> <li>• Configure security on SOHO wireless and wired networks</li> </ul>	<p><b>Software Troubleshooting</b> <b>26%</b></p> <ul style="list-style-type: none"> <li>• Troubleshoot Microsoft Windows OS problems</li> <li>• troubleshoot and resolve PC security issues</li> <li>• Use best practice procedures for malware removal</li> <li>• Troubleshoot mobile OS and application issues</li> <li>• Troubleshoot mobile OS and application security issues</li> </ul>	<p><b>Operational Procedures</b> <b>23%</b></p> <ul style="list-style-type: none"> <li>• Compare and contrast best practices associated with types of documentation</li> <li>• Implement basic change management best practices</li> <li>• Implement basic disaster prevention and recovery methods</li> <li>• Explain common safety procedures</li> <li>• Explain environmental impacts and appropriate controls</li> <li>• Explain the processes for addressing prohibited content/ activity, and privacy, licensing, and policy concepts</li> <li>• Use proper communication techniques and professionalism</li> <li>• Identify the basics of scripting</li> <li>• Use remote access technologies</li> </ul>

## How does A+ Compare to Alternatives?

				
<b>Certification</b>	<b>A+</b>	<b>MCSA</b>	<b>MTA Infrastructure</b>	<b>CCENT</b>
<b>Performance-based Questions</b>	Yes	Yes	No	Yes
<b>Exam Length</b>	2 exams, 90 min. each	2-3 exams	4 exams	1 exam, 90 min.
<b>Experience Level</b>	Entry	Entry	Entry	Entry
<b>Exam Focus</b>	Vendor-neutral, technical & professional skills	Tied to specific products (e.g., MCSA Windows 8 or MCSA Server 2012)	Broad-based intro to IT. Gateway to Microsoft's product-centric certifications.	Entry level networking for Cisco products & solutions
<b>Pre-requisites</b>	None. 9-12 months experience recommended	None. Prior experience recommended.	None	None

### Top A+ Job Titles

- Service Desk Analyst
- Help Desk Tech
- Technical Support Specialist
- Field Service Technician
- Associate Network Engineer
- Data Support Technician
- Desktop Support Administrator
- End User Computing Technician
- Help Desk Technician
- System Support Specialist

### Organizations that Use A+

- Best Buy/Geek Squad
- Blue Cross Blue Shield
- Canon
- Dell
- Fry's Electronics
- General Dynamics
- HP
- Intel
- Nissan
- Ricoh
- Sharp
- U.S. Department of Defense (DoD)
- Verizon
- Wells Fargo

### Research and Statistics

#### More Domain Knowledge

CompTIA A+ staff have more core domain knowledge than uncertified staff with the same amount of experience. In addition, **CompTIA certified staff with less than 1 year experience even demonstrate more domain knowledge** than uncertified staff with 3 years experience.<sup>1</sup>

#### Long Term Job Growth

The CompTIA IT Employment snapshot showed a **2.3% growth** from 2015 to 2016 with a **16% growth forecasted for the next 10 years**. More than 23,500 job postings in 2016 required applicants to have CompTIA A+ certification.<sup>2</sup>

#### Salary Snapshot

The CompTIA IT Employment snapshot shows an average salary of **\$48,620 for computer user support specialists**.<sup>2</sup>

“My primary job is to repair computer systems and networks. Obtaining A+ and Network+ certifications exposed me to easily recognizing — and thus repairing and troubleshooting — problems.”

**Tony Carmichael**  
USAF Veteran

# Official CompTIA Content for A+

## 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

Core learning materials, 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

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. <https://www.bls.gov/ooh/computer-and-information-technology/computer-support-specialists.htm#tab-6>
2. <https://comptia.app.box.com/s/l8ojaxnwtl9d6fuge5auxyh6uaoqb7>

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