

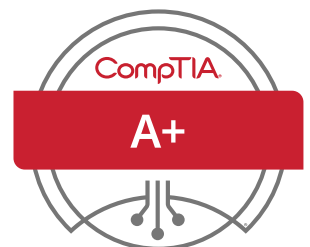
CompTIA A+ - Core 1

CompTIA A+ is a globally recognized IT certification that validates foundational IT skills necessary for entry-level IT roles, ensuring learners are prepared for a successful career in technology.

The latest version of CompTIA A+ (220-1201, 220-1202) reflects important updates to address the evolving needs of the IT industry and educational standards. These changes ensure that learners are equipped with the most relevant skills and knowledge to succeed in today's technology-driven world.

The certification validates that successful candidates have the knowledge and skills to:

- Install, configure, and maintain computer equipment, mobile devices, and software for end users.
- Service components based on customer requirements.
- Understand networking basics and apply basic cybersecurity methods to mitigate threats.
- Properly and safely diagnose, resolve, and document common hardware and software issues.
- Apply troubleshooting skills and provide customer support using appropriate communication skills.
- Understand the basics of scripting, cloud technologies, virtualization, and multi-OS deployments in corporate environments.



Exam Objectives Comparison

The following table aligns exam objectives from 1101 and 1201 for comparison. Skills are aligned by best match.

Domain	Domain name	1101 series	1201 series
1	Mobile Devices	15%	13%
2	Networking	20%	23%
3	Hardware	25%	25%
4	Virtualization and Cloud Computing	11%	11%
5	Hardware and Networking Troubleshooting	29%	28%

1101 Objective	1201 Objective	Added	Removed
1.1 - Given a scenario, install and configure laptop hardware and components	1.1 - Given a scenario, monitor mobile device hardware and use appropriate replacement techniques	Wi-Fi antenna connector/ placement Camera/webcam Microphone	
1.2 - Compare and contrast the display components of mobile devices	3.1 - Compare and contrast display components and attributes.	Types -Mini light-emitting diode (Mini-LED) Attributes -Pixel density - Refresh rates - Screen resolution - Color gamut	Mobile display components Moved to 1.1 WiFi antenna connector/ placement • Camera/webcam Microphone
1.3 - Given a scenario, set up and configure accessories and ports of mobile devices	1.2 - Compare and contrast accessories and connectivity options for mobile devices		Connection Methods -Serial Interfaces
1.4 - Given a scenario, configure basic mobile-device network connectivity and application support	1.3 - Given a scenario, configure basic mobile device network connectivity and provide application support	Mobile Device Management (MDM) -Device configurations - Corporate - Bring your own device (BYOD) -Policy enforcement Mobile Device Synchronization - Business applications - Mail - Cloud storage	Mobile device management (MDM)/mobile application management (MAM) -Corporate email configuration -Two-factor authentication Mobile Device Synchronization -Account setup - Microsoft 365 - Google Workspace - iCloud -Data to synchronize - Photos

1101 Objective	1201 Objective	Added	Removed
2.1 - Compare and contrast Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) ports, protocols, and their purposes	2.1 - Compare and contrast Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) ports, protocols, and their purposes		<p>Ports and protocols</p> <ul style="list-style-type: none"> -161/162 – Simple Network Management Protocol (SNMP)
2.2 - Compare and contrast common networking hardware.	2.5 - Compare and contrast common networking hardware devices		<p>Hub Software-defined networking (SDN)</p>
2.3 - Compare and contrast protocols for wireless networking	2.2 - Explain wireless networking technologies	<p>Frequencies</p> <ul style="list-style-type: none"> - 6GHz 	<p>Channels</p> <ul style="list-style-type: none"> -2.4GHz vs. 5GHz, Long-range fixed wireless - Licensed - Unlicensed - Power - Regulatory requirements for wireless power
2.4 - Summarize services provided by networked hosts	2.3 - Summarize services provided by networked hosts	<p>Server Roles</p> <ul style="list-style-type: none"> - Database servers - Network Time Protocol (NTP) 	
2.5 - Given a scenario, install and configure basic wired/wireless small office/home office (SOHO) networks	2.6 - Given a scenario, configure basic wired/wireless small office/home office (SOHO) networks		
2.6 - Compare and contrast common network configuration concepts	2.4 - Explain common network configuration concepts	<p>DNS</p> <ul style="list-style-type: none"> - Canonical Name (CNAME) <p>DHCP</p> <ul style="list-style-type: none"> - Exclusions 	
2.7 - Compare and contrast Internet connection types, network types, and their features	2.7 - Compare and contrast internet connection types, network types, and their characteristics		
2.8 - Given a scenario, use networking tools	2.8 - Explain networking tools and their purposes		

1101 Objective	1201 Objective	Added	Removed
3.1 - Explain basic cable types and their connectors, features, and purposes	3.2 - Summarize basic cable types and their connectors, features, and purposes	Network cables <ul style="list-style-type: none"> - Optical - Single-mode - Multimode 	Network Cables <ul style="list-style-type: none"> -Cat 5 -Cat 5e - Cat 6 -Cat 6a Optical -fiber Hardware drive cables <ul style="list-style-type: none"> -Small Computer System Interface (SCSI) -Integrated Drive Electronics (IDE)
3.2 - Given a scenario, install the appropriate RAM	3.3 - Compare and contrast RAM characteristics	Form factors <ul style="list-style-type: none"> - Small Outline Dual In-line Memory Module (SODIMM) - Dual In-line Memory Module (DIMM) Double Data Rate (DDR) iterations Error-correcting code (ECC) vs. non-ECC RAM Channel configurations	RAM types <ul style="list-style-type: none"> - Virtual RAM - Small outline dual inline memory module (SODIMM) - Double Data Rate 3 (DDR3) - Double Data Rate 4 (DDR4) - Double Data Rate 5 (DDR5) - Error correction code (ECC) RAM Single-channel Dual-channel Triple-channel Quad-channel
3.3 - Given a scenario, select and install storage devices	3.4 - Compare and contrast storage devices	Solid State Drives <ul style="list-style-type: none"> -Serial Attached SCSI [Small Computer System Interface] (SAS) 	
3.4 - Given a scenario, install and configure motherboards, central processing units (CPUs), and add-on cards	3.5 - Given a scenario, install and configure motherboards, central processing units (CPUs), and add-on cards	Mother Board Form Factors <ul style="list-style-type: none"> -microATX BIOS/Unified Extensible Firmware Interface (UEFI) settings <ul style="list-style-type: none"> -BIOS password -Temperature monitoring 	CPU architecture <ul style="list-style-type: none"> Single-core - Multicore - Multithreading - Virtualization support
3.5 - Given a scenario, install or replace the appropriate power supply	3.6 - Given a scenario, install the appropriate power supply	Energy efficiency	
3.6 - Given a scenario, deploy and configure multifunction devices/ printers and settings	3.7 - Given a scenario, deploy and configure multifunction devices/ printers and settings	Firmware	

1101 Objective	1201 Objective	Added	Removed
3.7 - Given a scenario, install and replace printer consumables	3.8 - Given a scenario, perform appropriate printer maintenance	Now 3.8 Impact Multipart paper	Laser - Imaging drum, fuser assembly, transfer belt, transfer roller, pickup rollers, separation pads, duplexing assembly - Imaging process: processing, charging, exposing, developing, transferring, fusing, and cleaning Ink Jet - duplexing assembly, carriage belt - Calibration Thermal Heat sensitivity of paper • Impact - Print head, ribbon, tractor feed - Impact paper 3-D printer - Filament - Resin - Print bed
4.1 - Summarize cloud-computing concepts	4.2 - Summarize cloud computing concepts	Cloud Characteristics -Multitenancy	Moved to 4.1 Desktop virtualization - Virtual Desktop Infrastructure (VDI)
4.2 - Summarize aspects of client-side virtualization	4.1 - Explain virtualization concepts.	Desktop virtualization - Virtual Desktop Infrastructure (VDI) • Containers • Hypervisors - Type I - Type II	

1101 Objective	1201 Objective	Added	Removed
5.1 - Given a scenario, apply the best practice methodology to resolve problems	N/A		<p>Always consider corporate policies, procedures, and impacts before implementing changes</p> <ol style="list-style-type: none"> 1. Identify the problem - Gather information from the user, identify user changes, and, if applicable, perform backups before making changes <ul style="list-style-type: none"> - Inquire regarding environmental or infrastructure changes 2. Establish a theory of probable cause (question the obvious) <ul style="list-style-type: none"> - If necessary, conduct external or internal research based on symptoms 3. Test the theory to determine the cause - Once the theory is confirmed, determine the next steps to resolve the problem - If the theory is not confirmed, re-establish a new theory or escalate 4. Establish a plan of action to resolve the problem and implement the solution <ul style="list-style-type: none"> - Refer to the vendor's instructions for guidance 5. Verify full system functionality and, if applicable, implement preventive measures 6. Document the findings, actions, and outcomes
5.2 - Given a scenario, troubleshoot problems related to motherboards, RAM, CPU, and power	5.1 - Given a scenario, troubleshoot motherboards, RAM, CPUs, and power		
5.3 - Given a scenario, troubleshoot and diagnose problems with storage drives and RAID arrays	5.2 - Given a scenario, troubleshoot drive and RAID issues	<p>Common Symptoms</p> <ul style="list-style-type: none"> - Array Missing - Audible alarms 	
5.4 - Given a scenario, troubleshoot video, projector, and display issues	5.3 - Given a scenario, troubleshoot video, projector, and display issues	<p>Common Symptoms</p> <ul style="list-style-type: none"> - Sizing issues - Distorted image 	
5.5 - Given a scenario, troubleshoot common issues with mobile devices	5.4 - Given a scenario, troubleshoot common mobile device issues	<p>Common Symptoms</p> <ul style="list-style-type: none"> - Unable to install new applications - Stylus does not work - Degraded performance 	

1101 Objective	1201 Objective	Added	Removed
5.6 - Given a scenario, troubleshoot and resolve printer issues	5.6 - Given a scenario, troubleshoot printer issues	Tray not recognized Connectivity issues Frozen Print Queue	Toner not fusing to paper Incorrect color settings
5.7 - Given a scenario, troubleshoot problems with wired and wireless networks	5.5 - Given a scenario, troubleshoot network issues	Common Symptoms - Authentication failures - Intermittent internet connectivity	

