

# CompTIA Cheatsheet

## Essential guide for CompTIA certification success

This comprehensive cheatsheet provides quick reference to CompTIA certification paths, core concepts, key terminology, and study strategies, ideal for beginners and experienced IT professionals pursuing CompTIA credentials.

Core Certifications	Study Strategies	Key Concepts
A+, Network+, Security+ overview	Effective preparation methods	Essential technical knowledge
Exam Tips	Career Paths	
Test-taking strategies	Certification progression routes	

## CompTIA Certification Overview

### Core Certifications

Foundation certifications for IT career success.

# CompTIA A+ (220-1101, 220-1102) <ul style="list-style-type: none"> <li>- Hardware and mobile devices</li> <li>- Operating systems and software</li> <li>- Security and networking basics</li> <li>- Operational procedures</li> </ul>	# CompTIA Network+ (N10-008) <ul style="list-style-type: none"> <li>- Network fundamentals</li> <li>- Network implementations</li> <li>- Network operations</li> <li>- Network security</li> <li>- Network troubleshooting</li> </ul>	# CompTIA Security+ (SYO-601) <ul style="list-style-type: none"> <li>- Attacks, threats, and vulnerabilities</li> <li>- Architecture and design</li> <li>- Implementation</li> <li>- Operations and incident response</li> <li>- Governance, risk, and compliance</li> </ul>	# CompTIA Cloud+ (CV0-003) <ul style="list-style-type: none"> <li>- Cloud architecture and design</li> <li>- Security</li> <li>- Deployment</li> <li>- Operations and support</li> <li>- Troubleshooting</li> </ul>	# CompTIA Server+ (SK0-005) <ul style="list-style-type: none"> <li>- Server hardware installation and management</li> <li>- Server administration</li> <li>- Security and disaster recovery</li> <li>- Troubleshooting</li> </ul>
<b>Specialized Certifications</b>				
Advanced and specialized IT credentials.				

## CompTIA A+ Essentials

Core hardware, software, and troubleshooting concepts for IT support.

01	02	03
<b>Hardware Components</b> Essential computer hardware knowledge and troubleshooting.	<b>Mobile Devices</b> Smartphones, tablets, and mobile device management.	<b>Operating Systems</b> Windows, macOS, Linux, and mobile OS management.
# CPU Types and Features <ul style="list-style-type: none"> <li>- Intel vs AMD processors</li> <li>- Socket types (LGA, PGA, BGA)</li> <li>- Core counts and threading</li> <li>- Cache levels (L1, L2, L3)</li> </ul>	# Mobile Device Types <ul style="list-style-type: none"> <li>- iOS vs Android architecture</li> <li>- Laptop vs tablet form factors</li> <li>- Wearable devices</li> <li>- E-readers and smart devices</li> </ul>	# Windows Administration <ul style="list-style-type: none"> <li>- Windows 10/11 editions</li> <li>- User Account Control (UAC)</li> <li>- Group Policy and Registry</li> <li>- Windows Update management</li> </ul>
# Memory (RAM) <ul style="list-style-type: none"> <li>- DDR, DDR3 specifications</li> <li>- ECC vs non-ECC memory</li> <li>- SODIMM vs DIMM form factors</li> <li>- Memory channels and speeds</li> </ul>	# Mobile Connectivity <ul style="list-style-type: none"> <li>- Wi-Fi standards (802.11/b/g/n/ac/ax)</li> <li>- Cellular technologies (3G, 4G, 5G)</li> <li>- Bluetooth versions and profiles</li> <li>- NFC and mobile payments</li> </ul>	# macOS Management <ul style="list-style-type: none"> <li>- System management</li> <li>- Security</li> <li>- Scripting and containers</li> <li>- Troubleshooting</li> </ul>
# Storage Technologies <ul style="list-style-type: none"> <li>- HDD vs SSD vs NVMe</li> <li>- SATA, PCIe interfaces</li> <li>- RAID configurations (0,1,5,10)</li> <li>- M.2 form factors</li> </ul>	# Mobile Security <ul style="list-style-type: none"> <li>- Screen locks and biometrics</li> <li>- Mobile device management (MDM)</li> <li>- App security and permissions</li> <li>- Remote wipe capabilities</li> </ul>	# Linux Basics <ul style="list-style-type: none"> <li>- File system hierarchy</li> <li>- Command line operations</li> <li>- Package management</li> <li>- User and group permissions</li> </ul>

## Network+ Fundamentals

Network layer understanding and protocol knowledge.

# OSI 7-Layer Model <ul style="list-style-type: none"> <li>Layer 7: Application (HTTP, HTTPS, FTP)</li> <li>Layer 6: Presentation (SSL, TLS)</li> <li>Layer 5: Session (NetBIOS, RPC)</li> <li>Layer 4: Transport (TCP, UDP)</li> <li>Layer 3: Network (IP, ICMP, OSPF)</li> <li>Layer 2: Data Link (Ethernet, PPP)</li> <li>Layer 1: Physical (Cables, Hubs)</li> </ul>	# TCP/IP Suite <ul style="list-style-type: none"> <li>- IPv4 vs IPv6 addressing</li> <li>- Subnetting and CIDR notation</li> <li>- DHCP and DNS services</li> <li>- ARP and ICMP protocols</li> </ul>	# Wireless Networking <ul style="list-style-type: none"> <li>- Wi-Fi standards (802.11a/b/g/n/ac/ax)</li> <li>- Cellular technologies (3G, 4G, 5G)</li> <li>- Bluetooth versions and profiles</li> <li>- NFC and mobile payments</li> </ul>
<b>Network Devices</b>		

## Security+ Core Concepts

CIA triad and basic security principles.

# CIA Triad <ul style="list-style-type: none"> <li>- Confidentiality: Data privacy and encryption</li> <li>- Integrity: Data accuracy and authenticity</li> <li>- Availability: System uptime and accessibility</li> </ul>	# Authentication Factors <ul style="list-style-type: none"> <li>- Something you know: Passwords, PINs</li> <li>- Something you have: Tokens, smart cards</li> <li>- Something you are: Biometrics</li> <li>- Something you do: Behavior patterns</li> <li>- Somewhere you are: Location-based</li> </ul>	# Cryptography <ul style="list-style-type: none"> <li>- Encryption methods and key management</li> </ul>
<b>Threat Landscape</b>		

## Study Strategies & Tips

Effective methods for CompTIA certification preparation.

Study Planning	Implementation & Documentation
Create a structured approach to certification preparation.	Final steps in the troubleshooting process.
# Study Schedule <ul style="list-style-type: none"> <li>Week 1-2: Review exam objectives</li> <li>Week 3-6: Core material study</li> <li>Week 7-8: Hands-on practice</li> <li>Week 9-10: Practice exams</li> <li>Week 11-12: Final review and exam</li> </ul>	# Remaining Steps <ul style="list-style-type: none"> <li>4. Establish plan of action</li> <li>- Gather steps to resolve</li> <li>- Identify potential effects</li> <li>- Implement solution or escalate</li> </ul>
# Study Materials <ul style="list-style-type: none"> <li>- Official CompTIA study guides</li> <li>- Video training courses</li> <li>- Practice exams and simulators</li> <li>- Hands-on lab exercises</li> <li>- Study groups and forums</li> </ul>	5. Implement the solution or escalate <ul style="list-style-type: none"> <li>- Apply appropriate fix</li> <li>- Test solution thoroughly</li> <li>- Verify full functionality</li> </ul>
<b>Hands-On Practice</b>	6. Document findings, actions, and outcomes <ul style="list-style-type: none"> <li>- Update ticket systems</li> <li>- Share lessons learned</li> <li>- Prevent future occurrences</li> </ul>

## Certification Career Paths

Strategic progression through CompTIA certifications.

1	2
<b>Entry Level</b> CompTIA A+	<b>Infrastructure</b> Network+ & Server+
Foundation certification for IT support roles, covering hardware, software, and basic troubleshooting skills.	Build networking and server administration expertise for infrastructure roles.
<b>3</b>	<b>4</b>
<b>Security Focus</b> Security+ & CySA+	<b>Specialization</b> PenTest+ & Cloud+
Develop cybersecurity knowledge for security analyst and administrator positions.	Advanced specializations in penetration testing and cloud technologies.

## Common Port Numbers

Essential port numbers for CompTIA Network+ and Security+ exams.

Well-Known Ports (0-1023)	Registered Ports (1024-49151)
Standard ports for common network services.	Common application and database ports.
# Web & File Transfer <ul style="list-style-type: none"> <li>Port 20/21: FTP (File Transfer Protocol)</li> <li>Port 22: SSH (Secure Shell)</li> <li>Port 23: Telnet</li> <li>Port 25: SMTP (Simple Mail Transfer Protocol)</li> <li>Port 53: DNS (Domain Name System)</li> <li>Port 67/68: DHCP (Dynamic Host Configuration)</li> <li>Port 69: TFTP (Trivial File Transfer Protocol)</li> <li>Port 80: HTTP (Hypertext Transfer Protocol)</li> <li>Port 110: POP3 (Post Office Protocol v3)</li> <li>Port 143: IMAP (Internet Message Access Protocol)</li> <li>Port 161/162: SNMP (Simple Network Management)</li> <li>Port 433: HTTPS (HTTP Secure)</li> <li>Port 993: IMAPS (IMAP Secure)</li> <li>Port 995: POP3S (POP3 Secure)</li> </ul>	
# Storage & Memory <ul style="list-style-type: none"> <li>HDD: Hard Disk Drive</li> <li>SSD: Solid State Drive</li> <li>RAM: Random Access Memory</li> <li>ROM: Read-Only Memory</li> <li>BIOS/UEFI: System firmware</li> </ul>	
# Interfaces & Ports <ul style="list-style-type: none"> <li>USB: Universal Serial Bus</li> <li>SATA: Serial ATA</li> <li>PCIe: Peripheral Component Interconnect Express</li> <li>HDMI: High-Definition Multimedia Interface</li> <li>VGA: Video Graphics Array</li> <li>RJ45: Ethernet connector</li> </ul>	

## Troubleshooting Methodologies

Systematic approaches to problem-solving in IT environments.

CompTIA Troubleshooting Steps	Implementation & Documentation
Standard methodology for technical problem resolution.	Final steps in the troubleshooting process.
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<b>Hands-On Practice</b>	6. Document findings, actions, and outcomes <ul style="list-style-type: none"> <li>- Update ticket systems</li> <li>- Share lessons learned</li> <li>- Prevent future occurrences</li> </ul>

## Performance-Based Question Tips

Effective methods for CompTIA certification preparation.

Study Strategies & Tips	Implementation & Documentation
Effective methods for CompTIA certification preparation.	Final steps in the troubleshooting process.
<b>A+ Performance Questions</b>	<b>Security Terminology</b>
Common simulation scenarios and solutions.	Information security terms and concepts.
# Network Configuration <ul style="list-style-type: none"> <li>- VLAN setup and port assignments</li> <li>- Router ACL configuration</li> <li>- Wireless security settings</li> <li>- IP addressing and subnetting</li> </ul>	# Security Frameworks <ul style="list-style-type: none"> <li>CIA: Confidentiality, Integrity, Availability</li> <li>AAA: Authentication, Authorization, Accounting</li> <li>PKI: Public Key Infrastructure</li> </ul>
# Troubleshooting Tasks <ul style="list-style-type: none"> <li>- Cable testing and replacement</li> <li>- Network connectivity diagnosis</li> <li>- DNS and DHCP troubleshooting</li> <li>- Performance optimization</li> <li>- Security implementation</li> </ul>	# Incident Response <ul style="list-style-type: none"> <li>- Log analysis and interpretation</li> <li>- Threat identification</li> <li>- Vulnerability assessment</li> <li>- Security control implementation</li> <li>- Risk mitigation strategies</li> </ul>
# Exam Format <ul style="list-style-type: none"> <li>- Multiple choice: Read all options</li> <li>- Performance-based: Practice simulations</li> <li>- Drag-and-drop: Understand relationships</li> <li>- Hot spot: Know interface layouts</li> </ul>	# General Simulation Tips <ul style="list-style-type: none"> <li>- Success Strategies</li> <li>- Read instructions carefully and completely</li> <li>- Take screenshots before making changes</li> <li>- Practice simulations</li> <li>- Drag-and-drop: Understand relationships</li> <li>- Hot spot: Know interface layouts</li> </ul>

## Performance-Based Question Tips

Strategies for CompTIA simulation and hands-on questions.

Common Port Numbers	Implementation & Documentation




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