The CompTIA Career Pathways

The CompTIA Career Pathways follow a hierarchy of skills needed for a career in infrastructure, cybersecurity, or data and analytics; each certification builds upon the skills from the previous one. CompTIA certifications reflect the current job roles of IT professionals, so it makes sense for learners to earn certifications and gain the knowledge and hands-on skills currently being used in the workforce.

CompTIA pathway to jobs

Infrastructure Certification Pathways

CompTIA A+ · CompTIA Network+ · CompTIA Server+ / CompTIA Linux+ · CompTIA Security+ · CompTIA Cloud+ · CompTIA CloudNetX

Cybersecurity Certification Pathways

CompTIA A+ · CompTIA Network+ · CompTIA Security+ · CompTIA CySA+ / CompTIA PenTest+ · CompTIA SecurityX

Data & Analytics Certification Pathways

CompTIA DataSys+ / CompTIA Data+ · CompTIA DataX

IT Fundamentals Program

Pre-professional (Expanded ITF+ program) · Entry-level · Early career · Experienced · Expert

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Infrastructure Pathway
IT infrastructure is the bedrock of IT operations and necessary for any business to function.

Cybersecurity Pathway
The CompTIA Cybersecurity Career Pathway helps technical specialists achieve cybersecurity mastery, from beginning to end.

Data and Analytics Pathway
The Data and Analytics Pathway helps professionals learn to store, manage, and secure data where it can be reviewed and analyzed.

CompTIA Certification Portfolio

CERTIFICATION	COMPETENCIES	JOB ROLES	TEST INFO
CORE CERTIFICATIONS			
CompTIA Tech+ CERTIFICATION Plus Series	• Install software • Establish basic network connectivity • Identify/prevent basic security risks • Explain troubleshooting theory and preventative maintenance of devices	• Sales Associate • Account Manager • Marketing Specialist • Customer Support	**Questions:** Max 75 **Length:** 60 minutes
CompTIA A+ CERTIFICATION Plus Series	• Install and configure end-user devices and software • Connect devices to networks • Perform basic cybersecurity mitigations • Troubleshoot common problems to diagnose and resolve issues • Demonstrate basic knowledge of scripting, the cloud, and virtualization	• IT Support Specialist • Helpdesk Technician • Field Technician • Tier I Support Specialist • Desktop Support Specialist • Associate Network Engineer • Systems Support Technician • Junior Systems Administrator	**Two Exams** **Questions:** Max 90 each **Length:** 90 minutes each
CompTIA Network+ CERTIFICATION Plus Series	• Implement enterprise-level wired and wireless network solutions • Identify and troubleshoot network performance issues • Harden networks against threats to mitigate security vulnerabilities	• Junior Network Administrator • Datacenter Support Technician • Network Engineer • System Administrator • NOC Technician • Telecommunications Technician • Cable Technician	**Questions:** Max 90 **Length:** 90 minutes
CompTIA Security+ CERTIFICATION Plus Series	• Assess the security posture of an enterprise environment and recommend and implement appropriate security solutions • Monitor and secure hybrid environments, including cloud, mobile, Internet of Things (IoT), and operational technology • Operate with an awareness of applicable regulations and policies, including principles of governance, risk, and compliance • Identify, analyze, and respond to security events and incidents	• Security Specialist • Security Administrator • Systems Administrator • Help Desk Analyst • Security Analyst • Security Engineer	**Questions:** Max 90 **Length:** 90 minutes
PROFESSIONAL CERTIFICATIONS			
CompTIA Project+ CERTIFICATION Plus Series	• Summarize the properties of project, phases, schedules, roles and responsibilities, and cost controls, as well as identifying the basic aspects of Agile methodology • Predict the impact of various constraint variables and influences through-out the project and explain the importance of risk strategies and activities • Understand appropriate communication methods of influence and use change control processes within the context of a project • Compare and contrast various project management tools and analyze project and partner-centric documentation	• IT Support Manager • Project Coordinator • Business Analyst • IT Project Manager • IT Manager	**Questions:** Max 90 **Length:** 90 minutes
CompTIA Cloud Essentials+ CERTIFICATION Plus Series	• Explain cloud principles, identify cloud networking concepts and storage techniques, and understand cloud design aspects • Comprehend the financial aspects of engaging a cloud provider, as well as the business aspects of managing vendor relations in cloud adoptions • Explain aspects of operating within the cloud, such as data management, availability, and monitoring • Understand how DevOps plays a role in cloud environments, such as with provisioning or API integration • Understand risk management concepts related to cloud services and identify the importance and impacts of compliance in the cloud	• Business Development Staff That Sell Cloud Services • Technical Sales Specialist • Business Analysts • Business Process Owners • Technical Support Staff	**Questions:** Max 75 **Length:** 60 minutes

CompTIA Certification Portfolio

CERTIFICATION	COMPETENCIES	JOB ROLES	TEST INFO

INFRASTRUCTURE CAREER PATHWAY

CompTIA Linux+ CERTIFICATION Plus Series

- Configure and manage software, storage and process and services
- Understand best practices for permissions and authentication, firewalls, and file management
- Create simple shell scripts and execute basic BASH scripts, version control using Git, and orchestration processes
- Analyze system properties and processes and troubleshoot user, application and hardware issues

- Linux Administrator
- Junior Cloud Engineer
- Junior DevOps Support Engineer
- Technical Support Specialist
- Systems Administrator
- Network Administrator
- Web Administrator/ Developer
- Cybersecurity Engineer
- Linux Engineer

Questions: Max 90
Length: 90 minutes

CompTIA Server+ CERTIFICATION Plus Series

- Install, configure, and manage server hardware and server operating systems
- Implement proper server hardening and security controls
- Successfully troubleshoot common server problems
- Demonstrate an understanding of key disaster recovery, high availability, and backup concepts

- Systems Administrator
- Data Center Technician
- Server Administrator
- Network Administrator
- Field Service Technician or Engineer
- IT Technician
- Data Center Engineer

Questions: Max 90
Length: 90 minutes

CompTIA Cloud+ CERTIFICATION Plus Series

- Understand cloud architecture and design
- Deploy cloud services and solutions
- Successfully maintain, secure, and optimize a cloud environment
- Troubleshoot common issues related to cloud management

- Sr. Systems Administrator
- Systems Engineer
- Cloud Engineer
- Sr. Network Administrator
- Sr. Network Engineer
- Cloud Specialist
- Cloud Project Manager

Questions: Max 90
Length: 90 minutes

CompTIA CloudNetX CERTIFICATION Xpert Series

- Analyze business requirements to design and configure secure network architecture for on-premises and cloud environments
- Analyze requirements to design for network security, availability, Zero Trust, and identify and access management technologies
- Apply and configure concepts and tools related to network monitoring and performance, automation, and scripting
- Troubleshoot network issues related to connectivity, performance, access, and security
- Perform network operation and maintenance

- Network Operations Specialist
- Enterprise Architect
- Security Architect
- Infrastructure Architect
- Cloud Architect
- Systems Architect

Launching in 2025

CYBERSECURITY CAREER PATHWAY

CompTIA PenTest+ CERTIFICATION Plus Series

- Plan and scope a penetration testing engagement
- Understand legal and compliance requirements
- Perform vulnerability scanning and penetration testing using appropriate tools and techniques, and then analyze the results
- Produce a written report containing proposed remediation techniques, effectively communicate results to the management team, and provide practical recommendations

- Penetration Tester
- Security Consultant
- Cloud Penetration Tester
- Web App Penetration Tester
- Cloud Security Specialist
- Network & Security Specialist
- Information Security Engineer
- Security Analyst

Questions: Max 85
Length: 165 minutes

CompTIA Certification Portfolio

CERTIFICATION	COMPETENCIES	JOB ROLES	TEST INFO
CompTIA CySA+ CERTIFICATION Plus Series	• Leverage intelligence and threat detection techniques • Analyze and interpret data • Identify and address vulnerabilities • Suggest preventative measures • Effectively respond to and recover from incidents	• Security Analyst • Threat Intelligence Analyst • Security Engineer • Application Security Analyst • Compliance Analyst • Threat Hunter	**Questions:** Max 85 **Length:** 165 minutes
CompTIA SecurityX CERTIFICATION Xpert Series	• Architect, engineer, integrate, and implement secure solutions across complex environments to support a resilient enterprise • Use monitoring, detection, incident response, automation to proactively support ongoing security operations in an enterprise environment • Apply security practices to cloud, on-premises, endpoint, and mobile infrastructure, while considering cryptographic technologies and techniques • Consider the impact of governance, risk, and compliance requirements throughout the enterprise	• Security Architect • Senior Security Engineer • SOC Manager • Security Analyst • IT Cybersecurity Specialist/ INFOSEC Specialist • Cyber Risk Analyst	**Questions:** Max 90 **Length:** 165 minutes

DATA PATHWAY

CERTIFICATION	COMPETENCIES	JOB ROLES	TEST INFO
CompTIA Data+ CERTIFICATION Plus Series	• Mining data • Manipulating data • Visualizing and reporting data • Applying basic statistical methods • Analyzing complex datasets while adhering to governance and quality standards throughout the entire data life cycle	• Data Analyst • Business Intelligence Analyst • Reporting Analyst • Marketing Analyst • Clinical Analyst • Business Data Analyst • Operations Analyst	**Questions:** Max 90 **Length:** 90 minutes
CompTIA DataSys+ CERTIFICATION Plus Series	• Compare and contrast database structure types • Explain database implementation, testing, and deployment phases • Explain the purpose of monitoring and reporting for database management and performance • Explain data security concepts as well as the purpose of governance and regulatory compliance • Explain the importance of disaster recovery and restore best practices and processes	• Database Administrator • Task-Oriented Database Administrator • Application Database Administrator • Cloud Database Administrator • Database Manager • Database Designer	**Questions:** Max 90 **Length:** 90 minutes
CompTIA DataX CERTIFICATION Xpert Series	• Understand and implement data science operations and processes • Apply mathematical and statistical methods appropriately and understand the importance of data processing and cleaning, statistical modeling, linear algebra and calculus concepts • Apply machine-learning models and understand deep-learning concepts • Utilize appropriate analysis and modeling methods and make justified model recommendations • Demonstrate understanding of industry trends and specialized data science applications	• Data Scientist • Quantitative Analyst • Machine Learning Engineer/Specialist • Computer & Information Research Scientist	**Questions:** 90 **Length:** 165 minutes

CompTIA CertMaster Learning Solutions

The only official content for CompTIA training

CompTIA CertMaster Perform

CertMaster Perform is a comprehensive, interactive online learning solution that brings together narrative instructional content, videos, skills assessments, and lab activities in simulated and live environments to prepare candidates for their CompTIA certification exam and a career in IT.

CompTIA CertMaster Learn

CompTIA CertMaster Learn is a comprehensive, interactive online learning solution that combines instructional lessons with engaging videos, skills assessments, practice questions, and lab activities in a simulated environment, equipping participants with the knowledge and practical experience necessary to prepare candidates for their CompTIA certification exam and a career in IT.
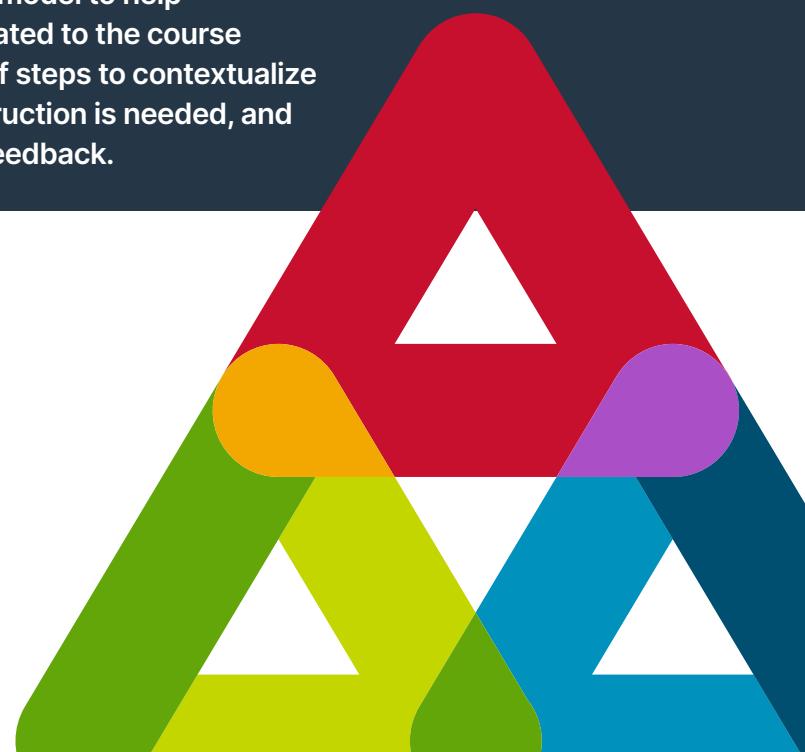
CompTIA CertMaster Practice

CompTIA CertMaster Practice is an online knowledge assessment and training companion tool to help candidates prepare for their CompTIA certification exam. Featuring an adaptive question-first design, CertMaster Practice quickly assesses what candidates already know and what they still need to learn. For those topics where candidates need more support, CertMaster Practice provides personalized remediation and feedback. Once a candidate is ready, they can demonstrate their knowledge on a timed practice test complete with performance-based questions.

CompTIA CertMaster Labs

CompTIA CertMaster Labs is a standalone lab solution that allows candidates to apply knowledge learned from the course material and solve problems for a wide range of technologies in a remote, browser-based environment.

Instruction is centered around a learning progression model to help candidates learn concepts and actively build skills related to the course objectives. This learning methodology uses a series of steps to contextualize the material, elaborate on areas where additional instruction is needed, and provide relevance through practice and customized feedback.

CompTIA Training Solutions

OnDemand Product

CompTIA's OnDemand product offers learners maximum schedule flexibility while providing a highly structured learning environment with high-quality eLearning materials, performance feedback, measurable skills development, and robust support features. CompTIA's OnDemand product allows learners to progress on their own schedule and timeline, with assistance from a detailed pacing guide that provides week-to-week guidance. In addition, study modules and activities are structured to facilitate steady and sustainable learning progress.

OnDemand is designed to promote demonstrable evidence of learning and provide comprehensive preparation for job roles aligned with specific CompTIA certifications. Each OnDemand product provides the necessary scaffolding to guide students to certification readiness regardless of their previous study or experience in technology.

CertMaster CE

CertMaster CE is a self-paced, online course that provides an efficient way to renew a CompTIA certification automatically. CertMaster CE is only available for CompTIA A+, Network+, and Security+.

Other options to renew your certification include:

1. Complete continuing education (CE) activities and earn a sufficient number of Continuing Education Units (CEUs) (annual renewal fee required)

2. Earn a qualifying higher-level CompTIA certification (no annual renewal fee required)

3. Pass the most current version of the exam for your respective, existing certification (no annual fee required)

CompTIA.

Learn more at CompTIA.org/Certifications