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

CompTIA ITF+

Rebranding from ITF+ to Tech+ August 2024

CompTIA Tech+

Professional Certifications

CompTIA Project+

CompTIA Cloud Essentials+

Infrastructure
Certification Pathways

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

Coming in 2025

Cybersecurity
Certification Pathways

CompTIA A+ → CompTIA Network+ → CompTIA Security+ → CompTIA CySA+ / CompTIA PenTest+ → CompTIA CASP+ → CompTIA SecurityX

Rebranding from CASP+ to SecurityX November 2024

Data & Analytics
Certification Pathways

CompTIA DataSys+

CompTIA Data+ → CompTIA DataX

Launching June 2024

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

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	MORE INFO

DATA

Data+

- 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

Job Roles:
- Data Analyst
- Business Intelligence Analyst
- Reporting Analyst
- Marketing Analyst
- Clinical Analyst
- Business Data Analyst
- Operations Analyst

More Info:
Questions: Max 90
Length: 90 minutes

DataSys+

- 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.

Job Roles:
- Database Administrator
- Task-Oriented Database Administrator
- Application Database Administrator
- Cloud Database Administrator
- Database Manager
- Database Designer

More Info:
Questions: Max 90
Length: 90 minutes

DataX

- 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.

Job Roles:
- Data Scientist
- Quantitative Analyst
- Machine Learning Engineer/ Specialist
- Computer & Information Research Scientist

More Info:
Questions: 90
Length: 165 minutes

CORE CERTIFICATIONS

ITF+

- Install software
- Establish basic network connectivity
- Identify/prevent basic security risks
- Explain troubleshooting theory and preventative maintenance of devices

Job Roles:
- Sales Associate
- Account Manager
- Marketing Specialist
- Customer Support

More Info:
Questions: Max 75
Length: 60 minutes

A+

- 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

Job Roles:
- IT Support Specialist
- Helpdesk Technician
- Field Technician
- Tier I Support Specialist
- Desktop Support Specialist
- Associate Network Engineer
- Systems Support Technician
- Junior Systems Administrator

More Info:
Two Exams
Questions: Max 90 each
Length: 90 minutes each

CompTIA CERTIFICATION PORTFOLIO

CERTIFICATION	COMPETENCIES	JOB ROLES	MORE INFO
Network+	• 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
Security+	• 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

INFRASTRUCTURE CAREER PATHWAY

CERTIFICATION	COMPETENCIES	JOB ROLES	MORE INFO
Linux+	• 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
Server+	• 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
Cloud+	• 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

CYBERSECURITY CAREER PATHWAY

CERTIFICATION	COMPETENCIES	JOB ROLES	MORE INFO
PenTest+	• 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	MORE INFO
CySA+	• 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
CASP+	• 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

PROFESSIONAL CERTIFICATIONS

CERTIFICATION	COMPETENCIES	JOB ROLES	MORE INFO
Project+	• 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
Cloud Essentials+	• 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

LEARN MORE ABOUT STACKABLE CERTIFICATIONS

Stackable certifications demonstrate multiple CompTIA certifications have been earned and the certification holder has the knowledge and experience needed to grow in their IT career. Stackable certifications validate the skills of various IT roles and show a deeper mastery, opening up more job opportunities.

CompTIA Stackable Certifications follow the two CompTIA Career Pathways:
- **CompTIA Infrastructure Career Pathway**
- **CompTIA Cybersecurity Career Pathway**

CompTIA Stackable Certifications are categorized by experience level and certifications earned:
- **Specialist**: Early-career IT professionals with 0–2 years of experience
- **Professional**: Mid-level IT professionals with 2–5 years of experience
- **Expert**: Established IT professionals with more than 5 years of experience

STACKABLE CERTIFICATIONS

Infrastructure Career Pathway

Specialist

CompTIA IT Operations Specialist
(A+ / Network+)

CompTIA Systems Support Specialist
(A+ / Linux+)

Professional

CompTIA Cloud Admin Professional
(Network+ / Cloud+)

CompTIA Network Infrastructure Professional
(Network+ / Server+)

CompTIA Linux Network Professional
(Network+ / Linux+)

Cybersecurity Career Pathway

Specialist

CompTIA Secure Infrastructure Specialist
(A+ / Network+ / Security+)

Professional

CompTIA Secure Cloud Professional
(Security+ / Cloud+)

CompTIA Security Analytics Professional
(Security+ / CySA+)

CompTIA Network Vulnerability Assessment Professional
(Security+ / PenTest+)

CompTIA Network Security Professional
(Security+ / PenTest+ / CySA+)

Expert

CompTIA Security Analytics Expert
(Security+ / CySA+ / CASP+)

CompTIA Security Infrastructure Expert
(Security+ / CySA+ / PenTest+ / CASP+)

Learn more at **Certification.CompTIA.org**