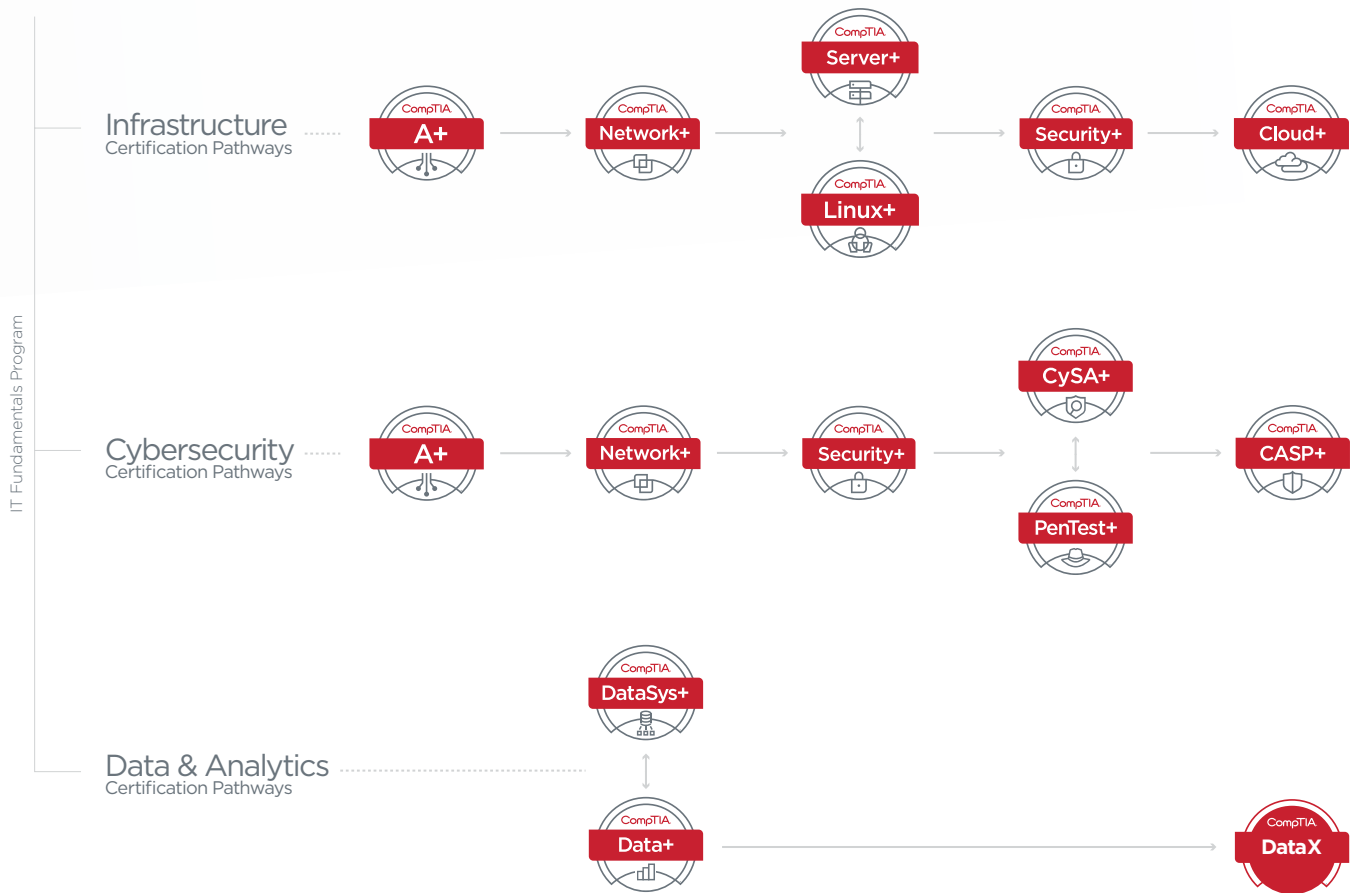# Introducing the CompTIA Career Pathways

A vendor-neutral pathway for IT professionals to achieve infrastructure and cybersecurity mastery, from beginning to end.

Infrastructure
Certification Pathways

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

Cybersecurity
Certification Pathways

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

Data & Analytics
Certification Pathways

CompTIA DataSys+ / CompTIA Data+ → CompTIA DataX

IT Fundamentals Program

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

CompTIA CERTIFICATION PORTFOLIO

CERTIFICATION	COMPETENCIES	JOB ROLES

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

- Data Analyst
- Business Intelligence Analyst
- Reporting Analyst
- Marketing Analyst
- Clinical Analyst
- Business Data Analyst
- Operations Analyst

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.

- Database Administrator
- Task-Oriented Database Administrator
- Application Database Administrator
- Cloud Database Administrator
- Database Manager
- Database Designer

CORE CERTIFICATIONS

ITF+

- 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

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.

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

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

Security+

- Assess security posture and implement security solutions
- Monitor and secure hybrid environments, including cloud, mobile and IoT
- Operate with an awareness of applicable laws and policies
- Identify, analyze, and respond to security events and incidents

- Systems Administrator
- Security Administrator
- Security Analyst
- Security Engineer

CompTIA CERTIFICATION PORTFOLIO

CERTIFICATION	COMPETENCIES	JOB ROLES

INFRASTRUCTURE CAREER PATHWAY

CompTIA 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

CompTIA 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

CompTIA 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

CYBERSECURITY CAREER PATHWAY

CompTIA PenTest+
- Plan and scope a penetration testing engagement
- Understand legal and compliance requirements
- Perform vulnerability scanning and penetration testing using appropriate tools andtechniques, 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

CompTIA 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

CompTIA 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

CompTIA CERTIFICATION PORTFOLIO

CERTIFICATION	COMPETENCIES	JOB ROLES

CompTIA CTT+

- Validates your skills in a traditional or virtual classroom environment
- Ensures you can teach effectively and step up to the front of the class with confidence
- Demonstrates that you have the necessary skills and knowledge to prepare, present, facilitate and evaluate a training session

- Training Consultant
- Training Developer/Instructor
- Career Technical
- Training Instructor
- Academic Instructor

CompTIA 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

CompTIA 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

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**