means opportunities
### CompTIA Overview
The Computing Technology Industry Association (CompTIA) is the tech-forward community of the $5 trillion IT ecosystem, and the global hub for the more than 35 million professionals who design, deploy, manage and secure the technology that powers the modern economy. Through collaboration, education, certifications, advocacy and market research, CompTIA advances the industries and careers that rely on tech.

### Mission
To deliver IT talent to the global workforce.

### Vendor-Neutral Certifications
CompTIA certifications are mapped to skills and competencies needed for job roles versus vendor specific technology. Vendor neutrality helps IT professionals develop learning agility. By having mastered baseline skills, CompTIA-certified IT professionals are equipped to learn and apply new information quickly.

### Value of Certification
Gaining industry-recognized certifications can help learners differentiate themselves in a challenging job market. It’s essential to validate skills and add valuable credentials to a resume or advance in an IT career. CompTIA certifications can assist with:
- A competitive edge in a highly technical job market
- Heightened career advancement opportunities

### High-stakes Exam
- An extraordinarily high level of rigor is employed in developing CompTIA certifications.
- Each question created undergoes multiple layers of quality assurance and thorough psychometric statistical validation.
- CompTIA certifications are ISO/ANSI accredited.

### Benefits
**Learners/Professionals**
CompTIA certifications are the best way to future-proof a career in the IT industry. Certifications validate knowledge and skills required by employers to ensure their staff can get the job done.

**By the numbers:**
- 97% of employers value certifications enough to provide support for IT employees obtaining IT certification.
- 76% of CompTIA-certified IT pros are satisfied with their job
- Three of the “Top 10 Certifications That Help IT Workers Get Jobs” are CompTIA certifications, according to The Dice Report.

**Enterprise/Employer**
IT pros need to keep their skills current in a constantly evolving industry. CompTIA certifications ensure skills meet the needs of the industry and organization. Save time and resources by using certifications to evaluate candidates. Feel confident that your staff has the competencies to get the job done.

**By the numbers:**
- Loyal workforce: 84% of IT professionals stay with their employer after getting CompTIA certified.
- Certified staff benefit
  - 85% more confidence. Certifications create trust and a can-do attitude.
  - 58% more knowledge. Certifications improve expertise.
  - 53% more ability. Certified staff outperform non-certified staff in job-critical tasks.

### Resources:
- Website: [CompTIA.org](https://CompTIA.org)
- Partner Portal: [Partners.CompTIA.org](Partners.CompTIA.org)
- CompTIA Blog: [CompTIA.org/blog](CompTIA.org/blog)
- Trends and Analysis (Industry): [CompTIA.org/resources](CompTIA.org/resources)

### Government
Certifications below are updated regularly and aligned to NICE Workforce Framework.

Government employees can verify their cyber knowledge and skills and fulfill government directives like FISMA and DoD 8570/8140.

- CompTIA A+
- CompTIA Network+
- CompTIA Security+
- CompTIA Cybersecurity Analyst (CySA+)
- CompTIA Advanced Security Practitioner (CASP+)

### For the Candidate:
- Competitive Edge: 91% of employers believe IT certifications play a key role in the hiring process and are a reliable predictor of a successful employee.*
- Job Satisfaction: 76% of CompTIA certified IT pros are satisfied with their job.**

### Job Role Focused Certifications
CompTIA certifications, which are developed by IT professionals, validate skills and competencies needed for identified job roles.

### Sources:
* CompTIA Employer Perceptions of IT Training and Certification
** CompTIA 2nd Annual IT Career Insights
***CompTIA 2nd Annual IT Career Insights Study
****CompTIA IT Training and Certification: Insights and Opportunities Study
*****CompTIA Military Career Path

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**JUN 2020**

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CompTIA Pathways

**INFRASTRUCTURE PATHWAY**
- Mid-career to advanced level certifications
- For candidates who have at least 3 years of hands-on information security or related experience

**CORE SKILLS CERTIFICATIONS**
- Entry-level certifications for foundational IT knowledge
- For candidates with 0 – 3 years of education and/or experience

- ITF+
- A+
- Network+
- Security+

**PROFESSIONAL SKILLS**
- Specialized professional skills
- CompTIA’s professional certifications cover versatile skillsets that help take careers to the next level

- Project+
- Cloud Essentials+
- CTT+

**CYBERSECURITY PATHWAY**
- Mid-career to advanced level certifications
- For candidates who have at least 3 years of hands-on information security or related experience

- Server+
- Cloud+
- Linux+
- PenTest+
- CASP+
- CySA+
CompTIA IT Fundamentals (ITF+) (FC0-U61)

CompTIA ITF+ Intro
ITF+ is an introduction to basic IT knowledge and skills that helps professionals decide if a career in IT is right for them. It also helps organizations prepare non-technical teams for digital transformation.

VALUE Prop 1 (Career Changer/Student)
ITF+ provides an opportunity to explore all aspects of IT job roles. Learners gain digital literacy skills and are inspired to pursue a career in IT.

VALUE Prop 2 (Employer)
ITF+ is a certification that establishes an IT foundation necessary in preparation for digital transformation, and on-the-job success. It is appropriate for both non-technical and technical staff.

Key Differentiators:
• ITF+ establishes an IT education framework for students in middle school and high school.
• It's the only pre-career certification for students or career changers that validates a competency in information technology to help determine if IT is the right career path.
• It's the only certification that covers all areas of IT foundations, making it ideal for non-technical professionals.

Who would benefit from ITF+?
• Students considering a career in IT
• Professionals working in fields that require a broad understanding of IT
• Marketing, sales and operations staff in IT-based organizations

Resources:
• ITF+ additional information: CompTIA.org/certifications/it-fundamentals
• Recommended Pathways: CompTIA.org/certifications/which-certification
• Posts: https://bit.ly/2JgDuAj

Competitors

<table>
<thead>
<tr>
<th>Competitors</th>
<th>Talking Points / ITF+ Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Technology Associate (MTA)</td>
<td>• ITF+ has a broad focus that allows entry to multiple IT-related paths.</td>
</tr>
<tr>
<td></td>
<td>• ITF+ is 1 single exam with multiple choice; however, the knowledge, skills and abilities (KSAs) in MTA are spread out over 8 exams.</td>
</tr>
<tr>
<td>IC3 Digital Literacy Certification (IC3)</td>
<td>• IC3 prepares for digital skills only, while ITF+ prepares for digital skills as well as IT-readiness.</td>
</tr>
<tr>
<td></td>
<td>• One ITF+ exam represents concepts covered in two IC3 certifications requiring a total of 4 IC3 exams.</td>
</tr>
<tr>
<td>European Computer Driving License (ECDL)</td>
<td>• ECDL requires an extensive time commitment - 12 exams to earn the credential.</td>
</tr>
<tr>
<td></td>
<td>• One ITF+ exam represents concepts covered in five or more ECDL exams.</td>
</tr>
</tbody>
</table>

Skills and Competencies Acquired:
• Install software
• Establish basic network connectivity
• Identify/prevent basic security risks
• Explain troubleshooting theory and preventative maintenance of devices

Renewal:
The CompTIA IT Fundamentals+ certification is considered good for life and does not need to be renewed.
<table>
<thead>
<tr>
<th>How Does CompTIA Compare?</th>
<th>Microsoft Technology Associate</th>
<th>IC3 Digital Literacy Certification</th>
<th>European Computer Driving License/International Computer Driving License</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification</td>
<td>ITF+</td>
<td>8 exams</td>
<td>3 multiple choice exams</td>
</tr>
<tr>
<td>Number of Exams</td>
<td>Single, multiple choice exam</td>
<td>Microsoft-specific content</td>
<td>End users who lack IT training</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Pre-career assessment of competency for IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience Level</td>
<td>Pre-IT career &amp; Non-IT pros</td>
<td>Students interested in an on-ramp to a career requiring technical expertise in Microsoft products and services</td>
<td>Non-IT pros</td>
</tr>
<tr>
<td>Vendor Neutral</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## CompTIA A+ Intro
CompTIA A+ certified professionals are proven problem solvers. They support today's core technologies from security to networking to virtualization and more. CompTIA A+ is the industry standard for launching IT careers into today's digital world.

### Value Prop 1 (Career Changer/Student)
CompTIA A+ is the industry standard entry-level certification that proves IT knowledge in networking, security, IoT technology, cloud-based storage, hardware and more. It also develops problem-solving skills required in entry-level technical support careers.

### Value Prop 2 (Employer)
CompTIA A+ ensures help desk technicians and IT support specialists have skills required to perform entry-level job tasks and support a hybrid workforce. It is trusted by employers around the world to identify the go-to person in end point management & technical support roles. A+ is also the building block towards meaningful career progression.

**Accredited** by ANSI to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M.

### By the Numbers:
- **More than 337K** job postings by US employers for tech support specialists in last 12 months.
- **43K** U.S. IT job ads posted annually include A+ as a job requirement.
- **Over 1.2 million** active A+ certified professionals.

## Additional Selling Points:
- CompTIA certifications mean proven competency on the job.
- CompTIA performance certifications validate the skills associated with a particular job or responsibility.

### Resources:
- **Average Salary:**
  - Glassdoor.com ([https://s.comptia.org/3vO31dk](https://s.comptia.org/3vO31dk)): IT Support Specialist
  - UK ITJobsWatch.co.uk ([https://s.comptia.org/3KmF8O3](https://s.comptia.org/3KmF8O3)): IT Support Specialist
- **A+ Additional Information:** [CompTIA.org/certifications/a](https://CompTIA.org/certifications/a)
- **Recommended Pathways:** [CompTIA.org/certifications/which-certification](https://CompTIA.org/certifications/which-certification)

## 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

## Companies that Endorse A+:
- BlueCross BlueShield
- Dell
- HP
- Intel
- Nissan
- Ricoh

## Benefits:
- **Candidate:** CompTIA A+ opens many avenues for career development. IT-certified pros can end up working in cybersecurity, network engineering, network administration, business analysis or data analytics.

- **Employers:** Certified employees are trusted by employers around the world as the go-to person in end point management & technical support roles.

### Skills and Competencies Acquired:
- Install and configure end-user devices and software
- Address connectivity problems
- Perform basic cybersecurity mitigations
- Troubleshoot common problems to diagnose and resolve issues
- Demonstrate basic knowledge of scripting, the cloud, and virtualization.

### Key Differentiators:
- **A+ is the only industry recognized credential with performance-based items to prove pros can think on their feet to perform critical IT support tasks in the moment.**
- CompTIA A+ assess hands-on, real world troubleshooting skills. With available hands-on training to performance based items on certification exam, candidates know how to find the problem and fix it.
- **A+ is regularly revised by IT experts to ensure that it validates core skills and abilities demanded in the workplace.**
## CompTIA A+ Competitive Landscape

### CompTIA A+ Alternatives

<table>
<thead>
<tr>
<th><strong>Microsoft</strong></th>
<th>These certifications are retiring as part of their overhaul of their certification program; MTA is retiring June 2022.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other industry certifications</strong></td>
<td>Programs like CCNA indirectly compete with CompTIA A+, but they do not test the same entry-level skills.</td>
</tr>
<tr>
<td><strong>Training but not testing</strong></td>
<td>Some learners will train for their CompTIA A+ certification to develop the skills for the job, but never sit for the exam. Though they may complete the training, the only way for hiring managers to be able to validate candidates’ knowledge is through completion of their certification exam, this is why CompTIA certifications are a requirement for many IT professionals. CompTIA certification exams are considered high-stakes exams, which means there is an extraordinarily high level of rigor put into their development, undergoing multiple layers of quality assurance and psychometric statistical validation. This is how CompTIA certifications earn the ANSI/ISO 17024 accreditation and approved by the DoD for Directive 8140/8570.01-M.</td>
</tr>
<tr>
<td><strong>Trying to skip CompTIA A+</strong></td>
<td>More and more, candidates are skipping CompTIA A+ and going straight to more advanced certifications like CompTIA Security+. If candidates are already working in the job, this might work, but it can also mean learners might be missing key foundational skills needed to pass these more advanced certifications.</td>
</tr>
</tbody>
</table>
CompTIA Network+ (N10-008)

**CompTIA Network+ Intro**
CompTIA Network+ validates the technical skills needed to securely establish, maintain and troubleshoot the essential networks that businesses rely on.

The new CompTIA Network+ focuses on foundational networking tools and technologies used to create secure networks and guarantee the availability of critical business information.

**By the Numbers:**
- **28%** of organizations say they have a shortage of network security specialists. (Cybersecurity Skills Shortage: A State of Emergency, ESG)
- Over **200k** Network+ certified professionals.
- **Network+** is recognized as one of the top 10 most widely-held certs worldwide (Global Knowledge Report 2020)

**Skills and Competencies Acquired:**
- Implement enterprise-level wired and wireless network solutions
- Identify and troubleshoot network performance issues
- Harden networks against threats to mitigate security vulnerabilities

**Competitors**
- Cisco CCNA
- Vendor-specific

**Talking Points / Network+ Advantages**
- Unlike CCNA, CompTIA Network+ prepares IT pros to support the network regardless of the platform rather than just maintaining a single vendor’s products.
- CompTIA Network+, unlike Cisco, covers essential skills at the depth needed for early networking jobs. CCNA is so broad that it doesn’t cover the depth of knowledge needed to set a firm foundation for networking expertise.
- Trends including multi-vendor architecture, multi-vendor interoperability, & white box networking make it increasingly likely IT pros will encounter more than just Cisco appliances and IOS in the workplace.

**Companies that Endorse Network+:**
- Apple (Consultants)
- Blue Cross Blue Shield
- Cisco Academy
- HP / Dell
- Konica Minolta
- Lenovo
- Microsoft MSSA
- Motorola
- New York State- Office of Technology
- NY City Union
- Pomeroy
- Ricoh
- Sharp
- Verizon
- Xerox

**Job Roles:**
- Junior Network Administrator
- Datacenter Support Technician
- Network Engineer
- System Administrator
- NOC Technician
- Telecommunications Technician
- Cable Technician

**VALUE Prop 1 (Career Changer/Student)**
CompTIA Network+ certifies a professional-level understanding of the latest best practices and foundational networking tools and technologies, including network architecture, high availability, wireless standards and technologies. It is the building block of a successful career in IT Infrastructure.

**VALUE Prop 2 (Employer)**
CompTIA Network+ validates candidates have the technical and hands-on networking skills needed to create secure networks and guarantee the availability of critical business information that drive business objectives.

**Accredited** by ANSI to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M

**Key Differentiators:**
- Network+ prepares candidates to support the network regardless of the platform.
- It forms the foundation professionals need before specializing in a vendor solution.
- Network+ is created by networking professionals who support all vendors so it teaches IT Pros how to support business needs demanded in the workplace.

**Resources:**
- Average Salary
- Network+ Additional Information: CompTIA.org/certifications/network
- Recommended Pathways: CompTIA.org/certifications/which-certification
- Posts: https://bit.ly/2pdQAaH

**AUG 2021**
How does CompTIA Compare?

<table>
<thead>
<tr>
<th></th>
<th>CompTIA Network+</th>
<th>CCNA Vendor-specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification</td>
<td>Network+</td>
<td>CCNA</td>
</tr>
<tr>
<td>Performance-based Questions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Exam Length</td>
<td>1 exam, 90 minutes</td>
<td>1 exam, 90 min.</td>
</tr>
<tr>
<td>Experience Level</td>
<td>Early career</td>
<td>Early career</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Covers networking technologies across all vendors &amp; solutions</td>
<td>Covers networking for only Cisco products &amp; solutions.</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>CompTIA A+ &amp;/or a minimum of 9 months networking experience recommended</td>
<td>1-3 years experience</td>
</tr>
</tbody>
</table>
CompTIA Security+ Intro
CompTIA Security+ is a global certification that validates the baseline skills necessary to improve baseline security readiness and incident response by applying current best practices for preventing and addressing today’s threats.

**VALUE Prop 1 (Career Changer/Student)**
Security+ validates core knowledge required of cybersecurity professionals, and those in related job roles, ensuring organizations have the talent needed to improve baseline security readiness and incident response by applying best practices for preventing and addressing the latest attacks, threats, and vulnerabilities.

**VALUE Prop 2 (Employer)**
CompTIA Security+ validates core knowledge required of any cybersecurity role, and emphasizing vendor-neutral, hands-on practical skills, ensuring the security professional is better prepared to problem solve a wider variety of today’s complex issues.

**Accredited** by ANSI to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M

**Skills and Competencies Acquired:**
- 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

**Key Differentiators:**
- Chosen by more corporations and defense organizations than any certification to validate core security skills and for fulfilling DoD 8570 compliance.
- More job roles turn to Security+ to supplement baseline cybersecurity skills, enabling organizations to improve baseline security readiness and incident response.
- Aligned to the latest trends and techniques including: core technical skills in risk assessment and management, incident response, forensics, enterprise networks, hybrid/cloud operations, and security controls, ensuring high-performance on the job. 80% of the exam includes updated technology and 20% newer concepts and techniques.
- Increased coverage of skills for managing enterprise environments’ architecture, hybrid-networks and reliance on cloud.
- Expanded coverage of incident response, governance, risk and compliance as IT professionals are having to perform tasks earlier in their career.

**Competitors**

<table>
<thead>
<tr>
<th>Competitors</th>
<th>Talking Points / Security+ Advantages</th>
</tr>
</thead>
</table>
| (ISC)² Systems Security Certified Practitioner (SSCP) | • Both SSCP and Security+ cover baseline security skills and are vendor-neutral; however, Security+ includes performance-based questions to validate hands-on skills.  
• SSCP requires working experience before taking the exam while Security+ does not.  
• Security+ is listed in 10% of cybersecurity job ads while SSCP is only listed in 3%. |
| EC-Council Certified Ethical Hacker (CEH) | • CEH focuses only on penetration testing, the questions are multiple choice, with no performance requirement, and it costs nearly 3x more.  
• Security+ includes performance-based questions focusing on the latest threat, attacks, and vulnerabilities, as well as risk management, incident response, and GRC.  
• Security+ is listed in 10% of cybersecurity job ads while CEH is only listed in 1%. |
| GIAC Security Essentials (GSEC) | • Both GSEC and Security+ cover baseline security skills and are vendor-neutral; however, Security+ includes performance-based questions to validate hands-on skills.  
• Security+ is listed in 10% of cybersecurity job ads while GSEC is only listed in 3%.  
• GSEC costs nearly 5x more. |

**Companies that Endorse Security+:**
- General Dynamics IT (GDIT)  
- Johns Hopkins University Applied Physics Laboratory  
- Netflix  
- Ricoh  
- SecureWorks  
- U.S. Navy Center for Information Dominance

**By the Numbers:**
- Over 500,000 Security+ certified professionals.
- Among IT Professionals that hold CompTIA Certifications in North America, 62% hold Security+.
## How does CompTIA Compare?

<table>
<thead>
<tr>
<th>Certification</th>
<th>Security+</th>
<th>(ISC)² Systems Security Certified Practitioner (SSCP)</th>
<th>EC-Council Certified Ethical Hacker (CEH)</th>
<th>GIAC Security Essentials (GSEC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-based Questions</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Exam Length</td>
<td>1 exam, 90 minutes</td>
<td>1 exam, 180 minutes</td>
<td>1 exam, 4 hours</td>
<td>1 exam, 5 hours</td>
</tr>
<tr>
<td>Experience Level</td>
<td>Entry-level</td>
<td>Entry-level</td>
<td>Entry-level</td>
<td>Entry-level</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>CompTIA A+ and Network+ recommended</td>
<td>Minimum of one year work experience in one or more domains</td>
<td>CEH Training, 2 years information security experience, Endorsement</td>
<td>None</td>
</tr>
</tbody>
</table>
CompTIA Linux+ Intro
CompTIA Linux+ is a globally recognized certification that validates mastery of the tools and technologies required to manage, secure, optimize, and troubleshoot production Linux systems.

VALUE Prop 1 (Career Changer/Student)
CompTIA Linux+ validates the skills that modern IT professionals need to secure platforms and systems, power the cloud and keep critical business services running. It is the only foundational job-role-based Linux certification that confirms the most relevant skills demanded by hiring managers.

VALUE Prop 2 (Employer)
CompTIA Linux+ ensures candidates have the skills and knowledge required to configure, manage, operate, and troubleshoot Linux on-premises and cloud-based server environments while using best practices around security, scripting, containerization, and automation. It prepares staff to be proactive in securing organizations, scale and improve operations, and contribute to the bottom line.
CompTIA Linux+ meets the Computing Environment (CE) requirement to renew other CompTIA Certifications.

Key Differentiators:
- CompTIA Linux+ is the only job-focused Linux certification covering the latest foundational skills demanded by hiring managers.
- Unlike other certifications, the new exam includes performance-based and multiple-choice questions to identify the employees who can do the job.
- The exam covers tasks associated with all major distributions of Linux, setting the foundation for advanced vendor/distro-specific knowledge.

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

Resources:
- Average Salary:
- Linux+ Additional Information:
  - CompTIA.org/certifications/linux
  - Recommended Pathways:
    - CompTIA.org/certifications/which-certification

Competitors
- Red Hat Certified Systems Administrator (RHCSA)
- Linux Professional Institute (LPIC-1 from LPI)
- Linux Foundations LFCS

Talking Points / Linux+ Advantages
- RHCSA targets a higher experience level, validates only one way to troubleshoot Linux systems and is performance-based ONLY.
- **CompTIA Linux+**
  - Targets mid-level professionals
  - Covers a wide scope of skills and knowledge
  - Should be used as a foundation to vendor specific certs like RHCSA.
- LPIC-1 is a two-exam certification still containing certain outdated topics with no performance-based questions creating greater risk for unqualified candidates.
- **CompTIA Linux+** is a single exam with refined objectives and performance-based questions designed to stay current with today's technology.
- Linux Foundations LFCS only tests tools, does not cover knowledge of broader topics.
  - It is limited to Ubuntu/ CentOS; Content is all task-based

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

Organizations that use Linux+:
- Amazon
- American Airlines
- Dell
- GEICO
- U.S. Department of Defense
- U.S. Navy
## How does Linux+ Compare to Alternatives?

<table>
<thead>
<tr>
<th>Certification</th>
<th>Linux+</th>
<th>LPIC-1 from LPI</th>
<th>Red Hat Certified Systems Administrator (RHCSA)</th>
<th>Linux Foundations LFCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-based Questions</td>
<td>Yes, as well as multiple choice (single &amp; multiple response) and drag and drop. Many of the questions are scenario-based.</td>
<td>No</td>
<td>Only tests tools, does not cover knowledge of broader topics</td>
<td>Only tests tools, does not cover knowledge of broader topics</td>
</tr>
<tr>
<td>Exam Length</td>
<td>1 exam with a maximum of 90 questions, 90 minutes</td>
<td>2 exams</td>
<td>10-15 hands-on assignments; 2 1/2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>Experience Level</td>
<td>12 months as a Junior Linux Engineer</td>
<td>Early career</td>
<td>High-level Red Hat sys admin experience. Very hard to pass without significant hands-on experience and is recommended for advanced Linux professionals.</td>
<td>Linux system administrators early in their career</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Focuses on the latest technology and trends for IT professionals in an enterprise environment. Covers all major distributions of Linux. Recognized in job ads</td>
<td>Does not focus on working in an enterprise environment, therefore not all items are relevant or up-to-date for IT professionals</td>
<td>Covers only Red Hat systems. As a 100% performance-based exam, it is difficult to study for.</td>
<td>Limited to Ubuntu/CentOS; Content is all task-based</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Recommended CompTIA A+, CompTIA Network+ and 12 months as a Junior Linux Engineer</td>
<td>None</td>
<td>Recommended Red Hat sys admin experience. Though not a prerequisite, Linux+ makes an excellent &quot;ramp-up&quot; to this certification.</td>
<td>None</td>
</tr>
</tbody>
</table>
CompTIA Server+ Intro
CompTIA Server+ validates the hands-on skills of IT professionals who install, manage and troubleshoot servers in data centers as well as on-premise and hybrid environments.

VALUE Prop 1 (Career Changer/Student)
CompTIA Server+ validates the skills necessary to be a server administrator. Server+ covers essential hardware and software technologies of on-premise and hybrid server environments including high availability, cloud computing and scripting, providing an opportunity to advance toward a rewarding career in infrastructure and cybersecurity.

VALUE Prop 2 (Employer)
CompTIA Server+ ensures your IT staff have the skills and competencies necessary to strategically leverage both sides of data centers and cloud environments to deliver a successful infrastructure that meets business objectives.

Skills and Competencies Acquired:
• 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

Key Differentiators:
• CompTIA Server+ certified candidates can work in any environment.
• It is the only certification not restricted to a single platform.
• It is the only industry certification that covers the latest server technologies of on-premise and hybrid server environments including high availability, cloud computing and scripting.
• CompTIA Server+ includes performance-based questions that require the candidate to demonstrate multi-step knowledge to securely deploy, administer and troubleshoot servers.

Additional Selling Points:
• CompTIA certifications mean proven competency on the job.
• CompTIA performance certifications validate the skills associated with a particular job or responsibility.

Resources:
• Average Salary:
  • UK Server Administrator: ITJobsWatch.co.uk (https://bit.ly/2rcnOI7)
• Server+ Additional Information: CompTIA.org/certifications/server
• Recommended Pathways: CompTIA.org/certifications/which-certification
• Posts: https://bit.ly/2JzdQqJ

BATTLE CARD

Competitors
Dell EMC Certified Associate
• DECA verifies the fundamental knowledge and skills only in the area of Dell EMC DCA-PowerEdge servers.
• Unlike Dell EMC Certified Associate that only covers a single vendor, CompTIA Server+ focuses on multivendor products and implementations, based on industry standards.

CCNA
• CCNA covers networking for only Cisco products and solutions.
• It is not specifically server administrator role.
• Unlike CCNA, CompTIA Server+ doesn't just focus on networking but on skills needed to install, manage and troubleshoot servers.

• The closest competitors, MCSA Server Administration & CCNA Data Center have both been discontinued.
• Not holding a certification is likely the closest “competitor” for CompTIA Server+.
• 70% of jobs listings do not include any certification. Stand out from other IT professionals by validating skills with Server+.

Primary Job Roles:
• Systems Administrator
• Data Center Technician
• Server Administrator

Secondary Job Roles:
• Network Administrator
• Field Service Technician or Engineer
• IT Technician
• Data Center Engineer

Companies that Endorse Server+
• Microsoft
• Wells Fargo
• AECOM
• General Mills
• U.S. Navy

Renewal:
The CompTIA Server+ certification is considered good for life and does not need to be renewed.
<table>
<thead>
<tr>
<th>Certification</th>
<th>CompTIA Server+</th>
<th>Dell EMC Certified Associate</th>
<th>CCNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam Length</td>
<td>1 exam, 90 min.</td>
<td>1 exam, 90 minutes</td>
<td>1 exam, 90 minutes</td>
</tr>
<tr>
<td>Experience Level</td>
<td>Early career</td>
<td>Early career</td>
<td>Early career</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Focuses on multivendor products and implementations, based on industry standards</td>
<td>Verifies the fundamental knowledge and skills in the area of Dell EMC DCA-PowerEdge servers</td>
<td>Job role based. Networking for Cisco products &amp; solutions</td>
</tr>
<tr>
<td>Pre-requisites</td>
<td>Recommended CompTIA A+ and two years of IT experience</td>
<td>None</td>
<td>1-3 years experience</td>
</tr>
<tr>
<td>Vendor Neutral</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
CompTIA Cloud+ certification validates the skills needed of system administrators/system engineers to deploy and automate secure cloud environments that support business systems and data.

**Value Prop 1 (Career Changer/Student)**

CompTIA Cloud+ ensures IT infrastructure professionals have validated skills in the areas of cloud architecture and design, security, automation and virtualization, disaster recovery, providing a wide range of job opportunities.

**Value Prop 2 (Employer)**

IT professionals certified in Cloud+ can better realize the return on investment of cloud infrastructure services. Unlike other certifications, which may focus on a specific vendor or a single function like security or networking, Cloud+ reflects the breadth of skills needed to protect an organizations mission critical applications and data storage.

Accredited by ANSI to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M.

**Key Differentiators:**

- IT professionals certified in Cloud+ demonstrate a high level of skill in cloud computing and infrastructure management in either a hybrid or cloud only environment.
- Cloud+ is the only independent, job-role based, vendor neutral cloud certification that validates the technical skills needed to operate in the cloud.

**Research:**

**Challenge:** Businesses report that a lack of expertise is among their top challenges.

**Solution:** Cloud+ ensures IT pros can fill the cloud technical skills gap.

**Skills and Competencies Acquired:**

- 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

**Resources:**

- Average Salary:
- Cloud+ Additional Information: CompTIA.org/certifications/cloud
- Recommended Pathways: CompTIA.org/certifications/which-certification

**Competitors**

<table>
<thead>
<tr>
<th>Competitor</th>
<th>Talking Points / Cloud+ Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Certified Azure Administrator</td>
<td>• Azure Administrator covers only Microsoft products and solutions, while Cloud+ covers a variety of vendor solutions.</td>
</tr>
<tr>
<td>Amazon Web Services (AWS) IT Operations Pathway</td>
<td>• AWS covers only Amazon products and solutions.</td>
</tr>
<tr>
<td></td>
<td>• AWS tests at a very high experience level - late systems admins, analyst, and engineer-level roles. Cloud+ tests a wide range from early-mid career.</td>
</tr>
<tr>
<td></td>
<td>• CompTIA Cloud+ provides the foundation for future vendor specific certs like AWS.</td>
</tr>
<tr>
<td>ISC2 Certified Cloud Security Professional (CCSP)</td>
<td>• CCSP is not job role-based. Cloud+ maps to the skills needed for a cloud engineer.</td>
</tr>
<tr>
<td></td>
<td>• CCSP only covers cloud security and not the complete range of topics needed to do the job.</td>
</tr>
</tbody>
</table>

**Talking Points / Cloud+ Advantages**

- Only 5% of job ads ask for a certification. Stand out from other IT professionals by validating your skills and closing the skills gap with Cloud+.
- CompTIA Cloud+ competes with security-based exams to meet requirements for the DoD. Cloud+ offers a unique infrastructure-focused certification in these categories.

**Companies that Endorse Cloud+**

- NTT Communications Corp.
- Oracle
- MacAulay-Brown, Inc.
- General Dynamics Information Technology

**Job Roles:**

- Sr. Systems Administrator
- Systems Engineer
- Cloud Engineer
- Sr. Network Administrator

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

**MAY 2021**
## How does CompTIA Cloud+ Compare to Alternatives?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exam Length</strong></td>
<td>1 exam, 90 min.</td>
<td>125 questions, 4 hours</td>
<td>2 exams, 130 minutes each</td>
</tr>
<tr>
<td><strong>Experience Level</strong></td>
<td>2-3 years in system administration (5 years total IT experience)</td>
<td>5 years (3 in InfoSec &amp; 1 in an exam domain)</td>
<td>Intermediate career</td>
</tr>
<tr>
<td><strong>Performance-based Questions</strong></td>
<td>Yes</td>
<td>No</td>
<td>Varied</td>
</tr>
<tr>
<td><strong>Exam Focus</strong></td>
<td>Job role based, covers cloud technologies across all vendors and solutions</td>
<td>Not based on job roles; covers cloud security across job roles</td>
<td>Covers only Amazon products &amp; solutions</td>
</tr>
<tr>
<td><strong>Prerequisites</strong></td>
<td>No pre-requisites, but 24 to 36 months of systems administration experience recommended</td>
<td>Experience required</td>
<td>None</td>
</tr>
<tr>
<td><strong>Vendor Neutral</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
CompTIA PenTest+ (PTO-002)

CompTIA PenTest+ Intro
CompTIA PenTest+ is the most comprehensive cybersecurity exam covering all red team activities and is designed for cybersecurity professionals tasked with penetration testing and vulnerability management.

VALUE Prop 1 (Student)
PenTest+ is a unique exam that demonstrates hands-on skills and knowledge of the most relevant pen testing skills for the cloud, hybrid environments, web applications, customized systems (IoT), and traditional on-premises that employers seek to improve the overall resiliency of enterprise networks.

VALUE Prop 2 (Employer)
PenTest+ validates the most up-to-date skills and competencies needed to determine the resiliency of any network. It focuses on the latest pen testing techniques, attack surfaces, vulnerabilities management, post-delivery, and compliance tasks that are ideal for your company’s red team employees to develop a robust security strategy that meets business objectives.

Accredited by ANSI to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M.

Key Differentiators:
- PenTest+ is the most comprehensive exam covering all penetration testing stages. It uses both performance-based and knowledge-based questions to ensure all stages are addressed.
- PenTest+ is the only exam on the market to include all aspects of vulnerability management covering hands-on vulnerability assessment, scanning, and analysis, including planning, coping, and managing weaknesses, not just exploiting them.
- PenTest+ is the current penetration testing exam covering the latest techniques against expanded attack surfaces, such as cloud, hybrid environments, web applications, customized systems (IoT), and traditional on-premises.

Skills and Competencies Acquired:
- 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

By the Numbers:
- The U.S. Bureau of Labor Statistics predicts that information security analysts will be the fastest-growing job category, with 31% overall growth between 2019 and 2029.
- The penetration testing market is expected to grow 22% from 2020 to 2025.

Competition:
- EC-Council Certified Ethical Hacker (CEH)
- GIAC Penetration Tester (GPEN)
- Offensive Security Certified Professional (OSCP)

Talking Points / PenTest+ Advantages
- CEH assesses vulnerability tools, such as scanners, but NOT vulnerability management like PenTest+.
- CEH does NOT cover soft skills, such as business processes, project flow, best practices and professionalism in penetration testing. PenTest+ cover both technical and soft skills.
- CEH only covers penetration testing job roles, while PenTest+ covers two job roles, both pen testing and vulnerability assessment and management.
- Unlike GPEN, PenTest+ is based upon cybersecurity industry survey results, providing a heightened real-world applicability compared to other certs.
- OSCP tests at an advanced level of experience and costs 2X as much.
- OSCP is a 24 hour “capture the flag” exam making PenTest+ both cost and time efficient.

Competitors that Endorse PenTest+:
- Paylocity
- SecureWorks
- Jon Hopkins University Applied Physics Laboratory
- Ricoh
- U.S. Navy Center for Information Dominance

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

Resources:
- Average Salary:
  - U.S. Penetration Tester: indeed.com (https://indeedhi.re/2KN2Zdv)
  - UK Penetration Tester: ITJobsWatch.co.uk (https://bit.ly/2XyFh9K)
- PenTest+ Additional Information: CompTIA.org/certifications/pentest
- Recommended Pathways: CompTIA.org/certifications/which-certification
### How does CompTIA Compare?

<table>
<thead>
<tr>
<th>Certification</th>
<th>PenTest+</th>
<th>EC-Council Certified Ethical Hacker (CEH)</th>
<th>GIAC Penetration Tester (GPEN)</th>
<th>Offensive Security Certified Professional (OSCP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-based Questions</td>
<td>Yes</td>
<td>No. Second exam required, CEH Practical</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Exam Length</td>
<td>1 exam, 90 questions, 165 minutes</td>
<td>1 exam, 4 hours</td>
<td>1 exam, 3 hours</td>
<td>1 exam, 24 hours</td>
</tr>
<tr>
<td>Experience Level</td>
<td>Intermediate</td>
<td>Beginner / Intermediate</td>
<td>Intermediate</td>
<td>Intermediate / Advanced</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Penetration testing and vulnerability management</td>
<td>Penetration testing</td>
<td>Penetration testing from a business-value</td>
<td>Real World-based with a lab and submitted report</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Network+, Security+ or equivalent knowledge. Minimum of 3-4 years of hands-on experience working in a security consultant or penetration tester job role.</td>
<td>CEH Training, 2 years information security experience, Endorsement</td>
<td>None</td>
<td>Must first complete the Penetration Testing with Kali Linux training course (self-paced)</td>
</tr>
</tbody>
</table>
CompTIA CySA+ Intro

CompTIA Cybersecurity Analyst (CySA+) is an IT workforce certification that applies behavioral analytics to networks and devices to prevent, detect and combat cybersecurity threats.

**VALUE Prop 1 (Student)**

CySA+ proves candidates can perform security analysis to identify vulnerabilities, threats, and risks to an organization of all sizes. It is essential for IT professionals looking to gain the behavioral security analyst skills that are required of experienced blue team members around intrusion detection and response.

**VALUE Prop 2 (Employer)**

CySA+ qualifies employees to analyze, monitor and protect cybersecurity resources. It is an internationally targeted validation of behavioral security analyst skills, making it ideal for any organization’s blue team employees tasked with ensuring the protection of all applications and systems within the organization.

**Accredited by ANSI** to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M.

**Skills and Competencies Acquired:**

- Leverage intelligence and threat detection techniques
- Analyze and interpret data
- Identify and address vulnerabilities
- Suggest preventative measures
- Effectively respond to and recover from incidents

**Job Roles:**

- Security Analyst
- Threat Intelligence Analyst
- Security Engineer
- Application Security Analyst
- Incident Response or Handler
- Compliance Analyst
- Threat Hunter

**Key Differentiators:**

- CompTIA CySA+ is the only intermediate, high-stakes cybersecurity analyst certification exam with both hands-on, performance-based and multiple-choice questions, to ensure each candidate possesses the skills, knowledge, and ability to address security analytics, intrusion detection and response.
- CySA+ is the most up-to-date security analyst certification that covers advanced persistent threats in a post-2014 (Target attack) cybersecurity environment.

**By the Numbers:**

The number of jobs of Information Security Analysts is expected to grow by more than 32% by 2028, according to the Bureau of Labor Statistics.

**Competitors**

- EC-Council Certified Security Analyst (ECSA)
- GIAC Continuous Monitoring Certification (GMON)
- ISACA Certified Information Systems Auditor (CISA)

**Talking Points / CySA+ Advantages**

- ECSA is a continuation of CEH and goes beyond the foundational ethical hacking skill set. CySA+ is not as advanced as ECSA because CySA+ is also focused heavily on vulnerability management, unlike ECSA.
- CySA+ includes hands-on, performance-based assessments as well as multiple-choice questions, while ECSA is multiple choice only.
- CySA+ costs only 1/3 of the price of ECSA and has more job roles associated with the exam.
- CySA+ includes hands-on, performance-based assessments as well as multiple-choice questions, while GMON is multiple choice only.
- CySA+ and GMON both cover the core security analyst job role. CySA+ is hands-on, nearly 5x less expensive and covers additional job roles, such as application security analyst and incident response.
- CISA is for IT auditors and audit managers to validate their ability to assess vulnerabilities and institute IT controls for an organization. CySA+ covers more domains and is for security analysts who will audit as a part of their role.
- CySA+ is available year-round. CISA is only available three times a year through ISACA.
- CySA+ has performance-based questions and is half the cost of CISA.
- CySA+ maps to seven job roles in the U.S. DoD 8570.01-M approved job categories, including Auditor. CISA only maps to two categories.

**Companies that Endorse CySA+:**

- BlackKnight Cyber Security International
- Dell SecureWorks
- Integra
- Japan Business Systems (JBS)
- Kirkpatrick Price
- Linux Professional Institute
- Netflix
- Northrop Grumman
- Ricoh USA
- Splunk
- Target
- U.S. Department of Defense (DoD)
- U.S. Department of Veterans Affairs
- U.S. Navy

**Resources:**

- Average Salary:
  - UK Security Engineer: ITJobsWatch.co.uk ([link](https://bit.ly/3f1iEDi))
- CySA+ Additional Information: CompTIA.org/certifications/cybersecurity-analyst
- Recommended Pathways: CompTIA.org/certifications/which-certification
- Posts: [link](https://bit.ly/2N1JO12)
### How does CySA+ Compare to Alternatives?

<table>
<thead>
<tr>
<th></th>
<th>CySA+</th>
<th>EC-Council Certified Security Analyst (ECSA)</th>
<th>GIAC Continuous Monitoring Certification (GMON)</th>
<th>ISACA Certified Information Systems Auditor (CISA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-based Questions</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Exam Length</td>
<td>1 exam, 165 minutes</td>
<td>1 exam, 4 hours</td>
<td>1 exam, 3 hours</td>
<td>1 exam, 4 hours</td>
</tr>
<tr>
<td>Experience Level</td>
<td>Intermediate</td>
<td>Intermediate</td>
<td>Intermediate</td>
<td>Advanced</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Security analytics, intrusion detection and response</td>
<td>Pen testing Methodology</td>
<td>Defensible security and continuous security monitoring</td>
<td>Auditing and vulnerability assessment</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Recommended Network+, Security+ or equivalent knowledge plus a minimum of 4 years of hands-on experience in a technical cybersecurity job role</td>
<td>Attend approved training or 2 years of working experience in a related InfoSec domain</td>
<td>Must have a basic understanding of network protocols and devices and experience with Linux</td>
<td>5 years of professional information systems auditing, control or security work experience</td>
</tr>
</tbody>
</table>
CompTIA CASP+ Intro

CompTIA Advanced Security Practitioner (CASP+) is an advanced-level cybersecurity certification for security architects and senior security engineers charged with leading and improving an enterprise’s cybersecurity readiness.

VALUE Prop 1 (Student)

CASP+ provides hands-on technical mastery and is the ideal certification for advanced practitioners of cybersecurity who require the necessary skills to design, implement, and manage cybersecurity solutions on complex networks to skillfully build a resilient enterprise and prevent the next attack.

VALUE Prop 2 (Employer)

CASP+ verifies the expertise and technical skills of an established IT security professional in security, governance, risk, and compliance, assessing enterprise cybersecurity readiness, and leading technical teams to implement enterprise-wide cybersecurity solutions.

It was born out of an industry need for a hands-on, advanced-level cybersecurity assessment for organizations that require mastery-level skills to work directly with cybersecurity technologies and tools that protect the organization and prevent future threats.

Accredited by ANSI to show compliance with the ISO 17024 Standard. It is also approved by the DoD for Directive 8140/8570.01-M.

Key Differentiators:

- CASP+ is the only hands-on, performance-based certification for advanced practitioners
- Unlike other certifications, CASP+ covers both security architecture and engineering
- It is the only certification that qualifies technical leaders to assess cyber readiness within an enterprise, and design and implement solutions to ensure the organization is ready for the next attack.

By The Numbers:

- 2.3 million and growing CompTIA ISO/ANSI-accredited exams have been delivered since January 1, 2011. Regulators and government rely on ANSI accreditation because it provides confidence and trust in the outputs of an accredited program.
- Over the next ten years, positions aligned to CASP+ will experience an 18 percent growth rate, according to Burning Glass.

Resources:

- Average Salary:
- CASP+ Additional Information: CompTIA.org/certifications/comptia-advanced-security-practitioner
- Recommended Pathways: CompTIA.org/certifications/which-certification

Competitors

<table>
<thead>
<tr>
<th>Competitors</th>
<th>Talking Points / CASP+ Advantages</th>
</tr>
</thead>
</table>
| (ISC)2 Certified Information Systems Security Professional (CISSP) | • Both CASP+ and CISSP assess advanced-level cybersecurity skills and are vendor-neutral, however:
  - CISSP does NOT use simulations to test hands-on skills to build cybersecurity systems and programs. CASP+ has both simulations and performance-based questions.
  - CISSP requires a minimum of five years cumulative paid work experience in two or more of the eight exam domains.
  - CASP+ is mandated by organizations like the U.S. Navy to assess cybersecurity roles of personnel not in management positions. |
| GIAC Certified Enterprise Defender (GCED)        | • GCED costs almost 4x as much and requires a training bundle. CASP+ allows you to choose your preferred training methods. |
| ISACA Certified Information Security Manager (CISM) | • CISM focuses on management skills, while CASP+ assesses the skills of professionals who are actively engaged as individual contributors not only management roles. |

Skills and Competencies Acquired: Job Roles: Companies that Endorse CASP+

- Architect, engineer, integrate, and implement secure solutions across complex environments to support a resilient enterprise.
- 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
- RxSense
- Ricoh
- U.S. Marine Corps
- U.S. Navy Center for Information Dominance
- U.S. Army
## How does CompTIA Compare?

<table>
<thead>
<tr>
<th>Certification</th>
<th>CASP+</th>
<th>(ISC)2 Certified Information Systems Security Professional (CISSP)</th>
<th>GIAC Certified Enterprise Defender (GCED)</th>
<th>ISACA Certified Information Security Manager (CISM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-based Questions</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Exam Length</td>
<td>90 questions, 165 minutes</td>
<td>100-150 questions, 3 hours</td>
<td>115 questions, 3 hours</td>
<td>150 questions, 4 hours</td>
</tr>
<tr>
<td>Experience Level</td>
<td>Advanced</td>
<td>Advanced</td>
<td>Advanced</td>
<td>Advanced</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Cybersecurity Practitioner Skills, Architect &amp; Engineer</td>
<td>Cybersecurity Management Skills</td>
<td>Cybersecurity Practitioner Skills, Engineer</td>
<td>Cybersecurity Management Skills</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Recommend 10 years of IT administration, including 5 years hands-on, technical security experience.</td>
<td>Documented proof of minimum 5 years full-time IT work experience in two or more of the eight domains.</td>
<td>None. However, learners should be aware of the technical level required for the certification.</td>
<td>Documented proof of minimum 5 years IS work experience in three or more of the job practice analysis areas.</td>
</tr>
</tbody>
</table>
CompTIA Data+ (DA0-001)

CompTIA Data+ Intro
CompTIA Data+ is an early-career data analytics certification for professionals tasked with developing and promoting data-driven business decision-making. Data+ is an ideal certification for not only data-specific careers but other career paths outside of IT can also benefit from analytics processes and data analytics knowledge.

VALUE Prop 1 (Career Changer/Student)
Data+ ensures professionals have the confidence to bring data analysis to life. Data+ arms candidates with foundational, tool-agnostic data skills that help organizations listen and make critical business decisions.

Candidates who can effectively analyze data and validate those skills with an industry-recognized certification could be considered an invaluable asset to any team.

VALUE Prop 2 (Employer)
CompTIA Data+ validates candidates have the knowledge and skills to effectively mine data, confidently interpret insights, and analyze complex datasets while adhering to governance and quality standards that drive business priorities and promote data-driven business decision making.

Key Differentiators:
- **Better Analyze and Interpret Data**
  Mine data more effectively. Analyze with rigor. Avoid confounding results.
- **Communicate Insights**
  Highlight what's important. Produce reports that persuade, not confuse. Make informed data-driven decisions.
- **Demonstrate Competency**
  Proof of data literacy means employability and more upward mobility.
- **Recruit and Train (Employers)**
  Develop teams that have the right talent and training to make the best use of company data.

Skills and Competencies Acquired:
- Identify basic concepts of data schemas and understand the difference between common data structures and file formats
- Explain data acquisition concepts, reasons for cleansing and profiling, and techniques for data manipulation
- Apply the appropriate descriptive statistical methods and summarize types of analysis
- Translate business requirements to form the appropriate visualization
- Summarize important data governance concepts and apply data quality control concepts

By the Numbers:
- **20%** job growth expected for positions aligned to Data+ over the next ten years, according to Burning Glass.
- **70%** of data job roles fall outside of Tech Occupations (Burning Glass, Feb 2022)

Vendor Neutral
CompTIA Data+ is the only data analyst certification that covers baseline data analytics skills, assesses hands-on abilities and is vendor neutral.

Vendor-neutral certifications provide analyst skills needed to perform various job roles regardless of the specific programs and tools being used. Compare this to vendor-specific certifications, which equip your team to work with just one platform (such as SAS, Tableau, or Microsoft).

<table>
<thead>
<tr>
<th>Competitors</th>
<th>Talking Points / Data+ Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS® Certified Specialist: Visual Business Analytics</td>
<td>SAS Certified Specialist: Visual Business Analytics is designed for analysts who are using SAS® Visual Analytics to analyze data and design reports.</td>
</tr>
<tr>
<td>Tableau Certified Data Analyst</td>
<td>A Tableau Data Analyst is designed for analysts specifically using Tableau to make business decisions by understanding the problem, identifying data to explore, and delivering actionable insights.</td>
</tr>
<tr>
<td>Microsoft Certified: Data Analyst Associate</td>
<td>Those who earn Microsoft Certified: Data Analyst Associate are proficient in data preparation, data modeling, data visualization and data analysis in the context of Power BI.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Companies That Contributed to Data+</th>
<th>Job Roles:</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Maryland Global Campus</td>
<td>Data Analyst</td>
</tr>
<tr>
<td>Discover Financial Services</td>
<td>Business Intelligence Analyst</td>
</tr>
<tr>
<td>Rogers Communications</td>
<td>Reporting Analyst</td>
</tr>
<tr>
<td>PayPal</td>
<td>Clinical Analyst</td>
</tr>
<tr>
<td>Molina Healthcare</td>
<td>Business Data Analyst</td>
</tr>
<tr>
<td>Woz U</td>
<td>Operations Analyst</td>
</tr>
<tr>
<td>CDW</td>
<td>Marketing Analyst</td>
</tr>
<tr>
<td>Sears Home Services</td>
<td>Cars.com</td>
</tr>
<tr>
<td>SunSource</td>
<td>Child.com</td>
</tr>
</tbody>
</table>

Resources:
- Average Salary:
  - UK Data Analyst: ITJobsWatch.co.uk (https://bit.ly/3KAMDSq)
- Data+ Additional Information: CompTIA.org/data
- Recommended Pathways: https://s.comptia.org/3baRBTQ
- Posts: https://s.comptia.org/3qLrnAl

FEB 2022
## How does Data+ Compare to Alternatives?

<table>
<thead>
<tr>
<th></th>
<th>Data+</th>
<th>SAS® Certified Specialist: Visual Business Analytics</th>
<th>Tableau Certified Data Analyst</th>
<th>Microsoft Certified: Data Analyst Associate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Certification</strong></td>
<td>Data+</td>
<td>SAS® Certified Specialist: Visual Business Analytics</td>
<td>Tableau Certified Data Analyst</td>
<td>Microsoft Certified: Data Analyst Associate</td>
</tr>
<tr>
<td><strong>Vendor-neutral</strong></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Performance-based Questions</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Exam Length</strong></td>
<td>1 exam, 90 minutes</td>
<td>1 exam, 100 minutes</td>
<td>1 exam, 2 hours</td>
<td>1 exam, 180 minutes</td>
</tr>
<tr>
<td><strong>Experience Level</strong></td>
<td>Early-career</td>
<td>Beginner</td>
<td>Beginner</td>
<td>Beginner</td>
</tr>
<tr>
<td><strong>Exam Focus</strong></td>
<td>Transform business requirements in support of data-driven decisions</td>
<td>Data analysts using SAS® Visual Analytics to analyze data and design reports</td>
<td>Comprehensive functionality and Tableau expertise</td>
<td>Designing and building data models and enabling analytic capabilities with Microsoft Power BI</td>
</tr>
<tr>
<td><strong>Prerequisites</strong></td>
<td>18-24 months of experience in a report/business analyst role</td>
<td>Experience or training using either version, including VA on SAS Viya 8.3 or later</td>
<td>None, but suggest 6+ months product experience</td>
<td>Passed the Analyzing Data with Microsoft Power BI exam</td>
</tr>
</tbody>
</table>
CompTIA Project+ Intro

CompTIA Project+ gives business professionals the basic concepts to successfully manage small-to medium-sized projects. It is appropriate for both technical and non-technical staff.

VALUE Prop 1 (Career Changers/Student)

Project+ is ideal for professionals who need to manage smaller, less complex projects.

VALUE Prop 2 (Employers)

Project+ certifies the business, interpersonal and technical project management skills required to successfully manage projects and business initiatives.

Skills and Competencies Acquired:

- 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 throughout the project and explain the importance of risk strategies and activities
- Understand appropriate communication methods of influence and use change control process within the context of a project
- Compare and contrast various project management tools and analyze project and partner-centric documentation

Key Differentiators:

- Project+ is ideal for professionals who need to manage smaller, less complex projects as part of their other job duties but still need foundational project management skills.
- Project+ is more versatile than other certifications because it covers essential project management concepts beyond the scope of just one methodology or framework.

Renewal:

The CompTIA Project+ certification is considered good for life and does not need to be renewed.

By the Numbers:

- **15.7** million new project management roles will be added globally across seven project-intensive industries by 2020, according to PMI's Industry Growth Forecast.
- **97%** of organizations believe project management is critical to business performance and organizational success.
- Over **58K** and growing Project+ certified professionals.

Project Management is one of the most in-demand skill sets.

Competitors

<table>
<thead>
<tr>
<th>Competitors</th>
<th>Talking Points / Project+ Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMI CAPM</td>
<td>• CAPM is intended for entry-level project managers or those starting a project management career.</td>
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<td></td>
<td>• Follows specific PMI management methodology.</td>
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<td></td>
<td>• Leads into the more rigorous PMP exam.</td>
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<tr>
<td>PMI PMP</td>
<td>• PMP follows one specific methodology.</td>
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<td></td>
<td>• PMP is designed for full-time project managers managing medium to large scale projects, whereas Project+ is for business professionals (in IT and other functions) who manage small to medium sized projects.</td>
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<td></td>
<td>• Unlike Project+, PMP has extensive requirements, including:</td>
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<td></td>
<td>• 4,500 hours leading and directing projects,</td>
</tr>
<tr>
<td></td>
<td>• a post-secondary degree and</td>
</tr>
<tr>
<td></td>
<td>• 35 hours of project management education</td>
</tr>
<tr>
<td>Axelos PRINCE2 Foundation</td>
<td>• PRINCE2 confirms understanding of only PRINCE2 specific framework.</td>
</tr>
</tbody>
</table>

Compared to Other Certifications:

1. Project+ covers a high-level introduction to Agile as part of one of the objectives. If a candidate would like to focus on Scrum, he/she would take Scrum Alliance's Certified Scrum Master certification.
2. Project+ is cost and time-efficient given its exam length.

Talking Points / Project+ Advantages:

<table>
<thead>
<tr>
<th>Companies that Endorse Project+</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accenture</td>
</tr>
<tr>
<td>• Canon</td>
</tr>
<tr>
<td>• Dell</td>
</tr>
<tr>
<td>• EY</td>
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<tr>
<td>• Fuji Xerox</td>
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<td>• General Dynamics Information Technology</td>
</tr>
<tr>
<td>• HP</td>
</tr>
<tr>
<td>• U.S. Army</td>
</tr>
<tr>
<td>• U.S. Navy</td>
</tr>
</tbody>
</table>

Companies that Endorse Project+:

Job Roles:

- Project Coordinator/Manager
- Project Team Member
- Business Analyst
- Manager
- Director
- Team Leader
<table>
<thead>
<tr>
<th>Certification</th>
<th>CompTIA Project+</th>
<th>PMI CAPM</th>
<th>Axelos PRINCE2 Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam Length</td>
<td>1 exam, 90 questions, 90 min</td>
<td>1 exam, 150 questions, 3 hrs</td>
<td>1 exam, 75 questions, 60 min</td>
</tr>
<tr>
<td>Experience Level</td>
<td>Entry</td>
<td>Entry, Intermediate</td>
<td>Entry</td>
</tr>
<tr>
<td>Exam Focus</td>
<td>Small- to medium-sized projects</td>
<td>Medium- to large projects following PMI methodology</td>
<td>Medium- to large projects following PRINCE2 framework</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>No prerequisite, but at least 12 months of cumulative project management experience or equivalent education is recommended</td>
<td>Application plus 1,500 hours of experience across 3 years OR high school diploma and 23 hours of project management education</td>
<td>No pre-requisite</td>
</tr>
</tbody>
</table>
CompTIA Cloud Essentials+ ensures that IT Professionals and other business decision makers who either work for cloud service providers - or who may need to guide their organization in the utilization of cloud services – have the skills they need.

**VALUE Prop 1 (Career Changer/Student)**
Cloud Essentials+ demonstrates learners ability to function within any company, regardless of what cloud platform they are using, in order to participate in creating assessments and make business decisions regarding cloud products and services.

**VALUE Prop 2 (Employer)**
Cloud Essentials+ certification validates that both technical and none technical staff are prepared to evaluate and make decisions related to the cloud that will ultimately increase efficiency, manage costs, and reduce security risks.

**Cloud Essentials+ Advantages:**
- Cloud Essentials+ is the ONLY vendor-neutral cloud business certification.
- It’s job-focused and aligned with employers needs.
- It’s current with today’s cloud environment- the technology and how it works.
- Cloud Essentials+ should be viewed as a foundation to vendor specific certifications such as:
  - AWS Certified Cloud Practitioner
  - MTA Cloud Fundamentals
  - Azure Fundamentals

Cloud Essentials+ ensures the fundamental principles of business decisions are well understood within any cloud platform.

**Skills and Competencies Acquired:**
- 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 relationships 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

**Key Differentiators:**
- It ensures an ability to analyze information using business principles to make cloud product and service decisions.
- It has strong coverage of business principles including creating cloud assessments based on financial and business aspects.
- Covers a broad range of technology options, setting a solid foundation for vendor-specific certifications.

**By the Numbers:**
- #1 concern of today’s organizations regarding their IT Pros is a lack of business acumen, according to Quartz.
  - **Solution**: Cloud Essentials+ helps fill this unmet need in the market.
- 90% of all companies have moved at least some work to the cloud and need decision makers, analysts, and process owners who understand cloud principles from a business and operations perspective.

**Objection**
**Response**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Candidate</strong>: I don’t think I want to be in management.</td>
<td>Whether or not you choose to manage people, understanding how cloud business decisions are made gives you perspective, a potential “voice at the table” on the decisions that impact your job, and makes you more valuable to employers.</td>
</tr>
<tr>
<td><strong>Candidate</strong>: It isn’t listed in the job role.</td>
<td>Business skills are a benefit in any job and certifying in those skills demonstrates a pro-active desire and competency for professional growth and upward-moving positions.</td>
</tr>
<tr>
<td><strong>Employer</strong>: I think my people already make good business decisions.</td>
<td>The benefit to Cloud Essentials is that it ensures your staff is solid in their cloud-specific business decisions, as opposed to having general business acumen. It is also ideal for employees who may have a very strong technical background, but do not have a business degree.</td>
</tr>
</tbody>
</table>

**Renewal:**
The CompTIA Cloud Essentials+ certification is considered good for life and does not need to be renewed.
CompTIA CTT+ certification provides comprehensive training standards to validate instructor skills in a traditional or virtual classroom environment and ensures that the instructor can teach effectively and step up to the front of the class with confidence. CTT+ Certified professionals can demonstrate that they have the necessary skills and knowledge to prepare, present, facilitate and evaluate a training session.

**VALUE Prop 1 (Career Changer/Student)**
Certified Technical Trainer (CTT+) confirms the skills required to be an affective IT instructor, providing an avenue to advance toward a rewarding career as an IT instructor in face-to-face and virtual learning environments.

**VALUE Prop 2 (Employer)**
CTT+ equips instructors with technical skills and best-practices necessary for an engaging and successful IT learning environment including face-to-face and virtual learning.

**Key Differentiators:**
- CompTIA CTT+ is the only industry-recognized credential that requires a performance-based video submission that is reviewed and scored by unbiased scorers.
- CTT+ is included as a requirement to prove instruction skills by many of the vendor specific programs like MCT.

**Companies that Endorse CTT+:**
- Booz Allen Hamilton
- Dell
- Microsoft
- Network Solutions
- U.S. Army
- Verizon

**Earning the CompTIA CTT+ Designation:**
Candidates must pass both a computer-based test (CTT+ Essentials TK0-201) that assesses knowledge and a performance-based exam (TK0-202 or TK0-203) in which the candidate is required to submit a video recording, demonstrating the prescribed skills.

**Job Roles:**
- Training Consultant
- Training Developer/Instructor
- Career Technical Training Instructor
- Academic Instructor

**CTT+ Advantages:**

**For the candidate:**
- Labor estimates predict technology fields will grow 12% from 2018-2028, according to the Bureau of Labor Statistics. Your future of instructing IT professionals starts with CTT+ certification.
- Dell, Microsoft, Novell and Ricoh accept CompTIA CTT+ as proof that instructors are qualified to teach their programs.
- More than 20,000 trainers are CompTIA CTT+ certified.

**For Corporate/Government:**
- CompTIA CTT+ is a prerequisite for the Microsoft Certified Trainer credential.
- Over 20,000 trainers worldwide have become CompTIA CTT+ certified.
- Certified Technical Trainers personify excellence in preparation, presentation, communication and facilitation, and are sought after by organizations.
- The Training Associates also look for the CompTIA CTT+ certification when hiring trainers.

**Objections**

<table>
<thead>
<tr>
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<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I already have experience as an instructor, why do I need CTT+?</td>
<td>Employers look to CTT+ during the screening process to verify that instructors have the skills and knowledge required to instruct in a classroom or virtual learning environment. It’s an ideal way to confirm mastery of core skills.</td>
</tr>
<tr>
<td>Why do I have to submit a video?</td>
<td>Requiring a video provides candidates with the opportunity to showcase their teaching and facilitation skills. Scored by unbiased judges, video submissions validate the use of tools and techniques necessary to successfully teach in any learning environment.</td>
</tr>
</tbody>
</table>