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CompTIA: Updates to A+ Certification Exams

What you need to know before
you take the new exams

CompTIA: Updates to A+ Certification Exams

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Introduction

CompTIA's A+ vendor-neutral certification concentrates on knowledge of and proficiency with PC maintenance, mobile devices – especially iOS – and Android-based devices, laptops, operating systems, and printers. The key, even with proprietary systems being covered, is the use of such software and systems in a standardized environment.

There are currently two series of exams available to students. The first is the 700 Series, which is available until August 31, 2013 and the second is the 800 Series, which just came out in October 2012.

- **The 700 Series**
 - **220-701, Essentials:** Tests for knowledge and understanding in the areas of computer technology, networking, security, communication skills, and professionalism.
 - **220-702, Practical Application:** Positioned as an extension of the Essentials exam objectives, with more of a “hands-on” orientation.
- **The 800 Series**
 - **220-801:** From the CompTIA website, “...covers the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking.”
 - **220-802:** “...covers the skills required to install and configure PC operating systems, as well as configuring common features (e.g., network connectivity and e-mail) for mobile operating systems Android and Apple iOS.”

For certification, candidates are required to pass two separate exams, and they may pass them in either order. Note that you cannot become certified by passing one exam from each of the two series. You must pass both exams from either series. If you take both tests and only pass one, you only need to retake the exam you didn't pass. Regardless of which series you choose, your certification is valid for a period of three years from the date you pass the second exam.

CompTIA updates exams every three years, based on long-standing policies, to keep content current. This retest is not unusual for the industry. Both the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO) update their exams periodically and certificate holders must retake the new version of the exam(s) to keep their accreditation. CompTIA A+ is certified by ISO and accredited by ANSI.

You have two choices when it comes to recertifying. The more expensive route requires you to pay for the exams again and pass them both. The less expensive alternative is to submit proof of activities that qualify for continuing-education (CE) credits. Certain activities count for a limited number of credits, ensuring that your CE credits come from a variety of sources. Proof for credits can be as simple as your supervisor vouching for you on company letterhead, as long as the activity qualifies for such proof. For more information, consult CompTIA's web page for [continuing education](http://certification.comptia.org/getCertified/stayCertified.aspx). (<http://certification.comptia.org/getCertified/stayCertified.aspx>)

Unlike past exam series, the 800-Series exams have no names associated with them. However, you can see that they are roughly separated into hardware, networking, and operational procedure for the 220-801 exam, and operating systems, security, troubleshooting, and mobile devices for the 220-802 exam. Currently, entry-level IT technicians are required to integrate ever-increasing lines of smartphones and tablets into new and established networks. This requires testing related knowledge and skills at all levels.

The A+ Certification: Value in the Industry

The A+ certification is a testament to the readiness of a technician to begin a career in the following areas:

- Technical-support specialist
- IT-support technician, administrator, or specialist
- PC technician
- Helpdesk technician
- Field-support technician
- Bench technician
- Technical writer

Note: Proficiency in the areas of server and back-office administration are not the domain of the A+ technician.

For the 600 Series, CompTIA produced four separate exams, including the required Essentials and the elective IT Technician, Remote Support Technician, and Depot Technician exams. To become certified, the candidate, who was advised to have 500 or more hours of hands-on lab or field experience, and was required to pass the Essentials exam and one of the elective exams. Industrious candidates could pass all four exams and attain three separate A+ certifications. Although the 700 and 800 Series offer only two exams, both of which are required for certification, the base skills tested in the 600 Series are still present as a subset of modern objectives.

CompTIA has historically positioned its A+ certification as an entry-level certification for individuals interested in proving their value as beginning desktop-support technicians. Employers of such professionals could be assured the holders of these certifications were capable as entry-level technicians who knew how to treat their customers in such a way as to foster continued and additional business. Employers could also count on A+-certified technicians to be willing and able to pursue additional education and certification as their job roles demanded. Increasingly, more certification sponsors credit A+-certified candidates with having completed the initial requirements for the sponsor's own follow-on certification.

As the A+ exam series evolved, however, the A+ certification has steadily morphed into a respected standalone certification. Although it still covers the breadth of the computing, networking, security, and professionalism topics, today's A+ certification requires a comfort level with the topics at a depth not seen before. The addition of expiring certifications for those who attain them after 2010 has also helped increase the value of top-level CompTIA certifications, such as A+.

A+ Certification: Preparing Professionals for the Security and Cybersecurity Path

Recent A+ certification exams still cover objectives ancillary to core PC hardware and software maintenance and support, but have concentrated more on skills, such as networking and security. This additional knowledge has catapulted the A+ certification from a "general college" certification, seen as a stepping stone to major courses of study (e.g., Network+ and Security+), to a specialization in its own right.

Today, the certified A+ technician is knowledgeable not only in the area of enterprise security, but also in the loosely related field of small-office/home-office (SOHO) security, a sector overlooked by many security technicians. Even technicians interested in the field of Cybersecurity find that the security principles required for A+ certification are directly in line with what they need to know as they expand their education and certifications. Consequently, many professionals now consider an A+ certification to be the first step to becoming a well-rounded security technician.

Overview of the Exams

The 700 Series

The structure of the 700 Series exams is fairly straightforward. The objectives will be discussed shortly, but each of the two exams gives you 90 minutes to answer 100 questions. For the 701 exam, you must score 675 points on a scale from 100-900. For the 702 exam, the passing score is 700 points on the same scale. Don't let this intimidate you. If you are prepared, it is likely you will have no less than 20 minutes remaining at the end of your exams. This is because many of the questions can be answered in only a few seconds.

The 800 Series

For the 801 exam, you must score 675 points on a scale from 100-900. For the 802 exam, the passing score is 700 points on the same scale. As with the 700 series, don't let this intimidate you. If you are prepared, you will probably have time to review at the end of your exams, because many of the questions can be answered in a matter of seconds, not minutes.

The 800 Series still gives you 90 minutes per exam, but the number of questions varies, up to a maximum of 90 per exam.

The total number of questions varies in the 800 Series but you will be told in the beginning of your exam exactly how many questions your exam contains. The variability stems from the presence of performance-based questions in the 800 Series.

What to Expect in the 800 Series of Exams

Performance-Based Questions

Performance-based questions require you to perform a task or solve a problem in a simulation. You will be prompted to complete a task after the test engine launches a simulated environment in which you have to perform the steps. CompTIA has created a [video](http://www.youtube.com/watch?v=ONsbJLkHuu0&feature=youtu.be) [http://www.youtube.com/watch?v=ONsbJLkHuu0&feature=youtu.be] to introduce you to the concept of performance-based questions to help acclimate you prior to encountering them on the exam.

CompTIA added performance-based questions to the A+ exam to show that candidates can actually do some of the tasks that had previously only been tested for knowledge. In fact, CompTIA now recommends a minimum of 12 months of experience in a desktop-support field to ensure readiness for certification. This not only emphasizes the importance of experience in addition to knowledge; and it also makes CompTIA certification more valuable to the candidate and prospective employers.

Personally, I feel the new exam format is more challenging than past exams. In addition to the performance-based questions, the new exams are based on objectives relevant to the modern world of computing and networking. There should be little chance of these exams becoming stale before the "900 Series" is released. I expect others to join the ranks of the United States Department of Defense, Dell, Intel, and Lenovo to recognize and require A+ certification for their personnel.

Don't discount the value of education in preparing for certification, however. I was in the industry for 14 years before attempting my first A+ certification in the late '90s. Although I passed both exams, I know I could have done better than I did by relying on experience alone. I also passed the Network+ exam for the first time that same, long day. Nevertheless, with training, I would have been able to exceed my scores.

Best Practices

CompTIA allows you to move freely throughout all its exams. You should avoid going back through all of the questions a second time (Review All link at the final screen) because any of us can talk ourselves into changing an answer.

In fact, one piece of advice I always give my classes is to use the Mark for Review link on the questions that you feel you need to look at a second time. Sometimes, coming back later, when most of the other questions are answered, allows you to relax and concentrate a bit more. In other cases, you might find that a later question can help answer an earlier one that you marked for review. In any event, the Review Marked link at the end of the exam shows you only those questions you marked, avoiding the temptation to change all the rest. Just revisit the questions you were unsure of the first time through. You can even leave some of them marked on subsequent passes and click the Review Marked again and again until you have unmarked them all. There is no penalty for ending your exam with marked questions remaining. The mark is for your convenience only.

You should also use the other link, Review Incomplete, when you have items highlighted in yellow at the end of your exam. This means you left questions unanswered or only partially answered. For example, a multiple choice question that wants two answers will let you choose only one and move on. Note that you cannot choose a

third option without deselecting one of the other two, but partially answering questions is allowed. Keep in mind that you lose as many points for leaving an answer blank as you do for answering it incorrectly. You know leaving it blank is incorrect, so take a shot at an answer; it might be right.

Exam Domains and Objectives

CompTIA breaks its exams into domains, or groups of objectives. The 700 Series has a total of ten widely overlapping domains, six on 220-701 and four on 220-702. The 800 Series features five domains on 220-801 and four on 220-802. The only objectives that might overlap are the networking objectives of 220-801 with the security objectives of 220-802. The vast majority of topics present in the objectives for the 700 Series remain in the 800 Series (including troubleshooting theory, and surprises such as the perennial floppy drives and floppy diskette capacities), but some key topics have been written out of the new objectives, while a host of others are new. The 220-801 exam has a more hardware-centric slant, while the 220-802 exam leans toward operating systems.

Exam Domains and Topics

The following tables detail the domains present in both series of exams. CompTIA publishes objectives documents, available on their website, that list the current weighting of each domain. A more detailed differentiation between the exam Series follows these broad comparisons. Nevertheless, you can see that the hardware topic in the 700 series was split into many domains in the 800 Series, including Laptops and Printers. Approximately the same percentage of security questions remains in the newer exams; they've just been consolidated into the 220-802 exam. Troubleshooting has been beefed up a bit in the newer exams. The percentage of questions on operating systems has lessened, and a new, small domain, Mobile Devices, has emerged. PC Hardware in the 220-801 exam has a new section that focuses on custom configurations.

220-801

Domain	Percentage of Examination
PC Hardware	40%
Networking	27%
Laptops	11%
Printers	11%
Operational Procedures	11%
Total	100%

220-802

Domain	Percentage of Examination
Operating Systems	33%
Security	22%
Mobile Devices	9%
Troubleshooting	36%
Total	100%

You can compare the domains and topics to the 700 Exam Series shown below.

220-701

Domain	Percentage of Examination
Hardware	27%
Troubleshooting, Repair and Maintenance	20%
Operating System and Software	20%
Networking	15%
Security	8%
Operational Procedure	10%
Total	100%

220-702

Domain	Percentage of Examination
Hardware	38%
Operating Systems	34%
Networking	15%
Security	13%
Total	100%

Topics Deleted from the 800 Series

The following list outlines some of the 700-Series objectives missing from the 800 Series.

- BTX and NLX motherboards
- AMR slots
- SIMMs
- Windows 2000

Topics Added to the 800 Series

The 700 Series held the candidate responsible for knowledge of the Windows 2000 operating system. In the 800 Series, only Windows XP and higher OSs are tested. However, the exam's objectives were finalized before the release of Windows 8 and iOS 6. Barring a mid-cycle introduction, the 800 Series will have no Windows 8 questions.

More topics were added to the 800 Series than were removed. The major changes are as follows.

- Inclusion of Windows 7 Enterprise
- New domain for mobile devices (Android and iOS 5)
- Virtualization added as a major objective
- Wireless troubleshooting
- SOHO security and expanded security troubleshooting

Additional Add-ons and Changed to the 800 Series

The following list contains the majority of additional add-ons and changes in the 800 Series exams.

- ITX motherboards
- USB 3.0 and specific mention of USB connector types
- PCI-X slots

- MiniPCI slots
- Front-panel connectors
- BIOS and CPU virtualization support
- HDD revolution speeds
- RAID 10
- Integrated GPU in CPUs
- SATA2 (SATA 3Gb/s) and SATA3 (SATA 6Gb/s)
- LED, OLED, and plasma display devices
- Projector brightness in lumens
- Privacy/antiglare filters
- New display connectors (DisplayPort, RCA, BNC, miniHDMI, RJ-45, miniDIN-6)
- Display cable types
- Gamepads and joysticks
- Differentiation between ExpressCard/34 and ExpressCard/54
- Mini PCI and Mini PCIe
- Explicit list of special laptop function keys
- Port replicators (with docking stations retained from 700 Series)
- Expanded topics on laptop hardware placement
- Physical laptop lock and cable lock
- Changed names for stages of the laser printing process
- Expanded printer sharing objectives
- Notable expansion of networking objectives (more Network+ than 700 Series)
- Security topics are also more on par with those for Network+
 - Expanded physical security topics
 - Principle of least privilege
 - Extensive SOHO security objectives
- Prohibited content and chain of custody
- Expanded troubleshooting consolidated into one place and organized by topic

Conclusion

It's clear that if you have been studying for the 700 Series, you are in reasonably good shape for the 800 Series, but you still need to work on additional topics to be completely comfortable and successful with the 800-Series exams. Enough has changed that you may not be able to coast by on a mastery of the objectives for the 700 Series alone.

At a minimum, you should increase your comfort level with Windows 7 and virtualization, both of which are prominent in the 800 Exam Series. The inclusion of mobile devices and custom configurations in the 800 Series

threaten to eat into your score enough to affect success. My advice is to immerse yourself in these important areas.

For More Information

Be sure to check out the A+ certification area of CompTIA's website for the [800 Series](#) and for the [700 Series](#).

Learn More

To learn more about how you can improve productivity, enhance efficiency, and sharpen your competitive edge, Global Knowledge suggests the following courses:

- A+ Certification Prep Course
- Introduction to Information Technology
- Understanding Networking Fundamentals
- Network+ Prep Course
- TCP/IP Networking
- Introduction to IPv6: Protocols, Services, and Migration
- Security+ Prep Course

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About the Author

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