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ALL ■ IN ■ ONE

# CompTIA<sup>TM</sup> Strata IT Fundamentals

EXAM GUIDE

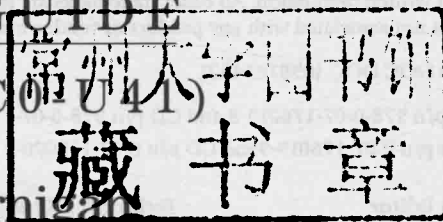
(Exam FC0-U41)

Scott Jernigan  
Mike Meyers



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**CompTIA Strata™ IT Fundamentals All-in-One Exam Guide (Exam FC0-U41)**

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## ABOUT THE AUTHOR

**Scott Jernigan** wields a mighty red pen as Editor in Chief for Total Seminars. With a Master of Arts degree in Medieval History, Scott feels as much at home in the musty archives of London as he does in the warm computer glow of Total Seminars' Houston headquarters. After fleeing a purely academic life, he dove headfirst into IT, working as an instructor, editor, and writer.

Scott has written, edited, and contributed to dozens of books on computer literacy, hardware, operating systems, networking, and certification, including *Computer Literacy—Your Ticket to IC<sup>3</sup> Certification*, and co-authoring the best-selling *All-in-One A+ Certification Exam Guide*, 5th edition, and the *A+ Guide to Managing and Troubleshooting PCs* (both with Mike Meyers).

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## CompTIA Strata IT Fundamentals

CompTIA Strata IT Fundamentals is designed for

- Individuals seeking a new career in IT
- Students new to the IT and technology job market
- Professionals in technology sales careers
- Individuals considering CompTIA A+ or other IT industry certifications
- Certified or seasoned IT career professionals who want to enhance their credentials

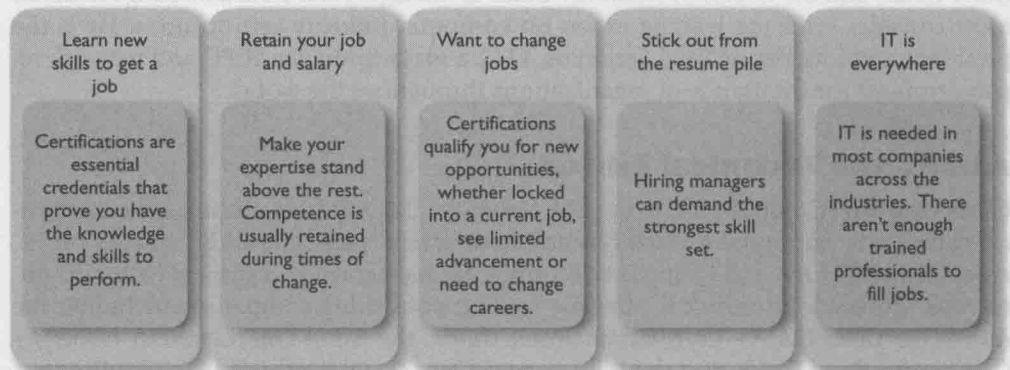


## It Pays to Get Certified

In a digital world, digital literacy is an essential survival skill. Certification proves you have the knowledge and skill to solve business problems in virtually any business environment.

Certification makes you more competitive and employable. Research has shown that people who study technology get hired. In the competition for entry-level jobs, applicants with high-school diplomas or college degrees who included IT coursework in their academic load fared consistently better in job interviews—and were hired in significantly higher numbers. If considered a compulsory part of a technology education, testing for certification can be an invaluable competitive distinction for professionals.

## How Certification Helps Your Career

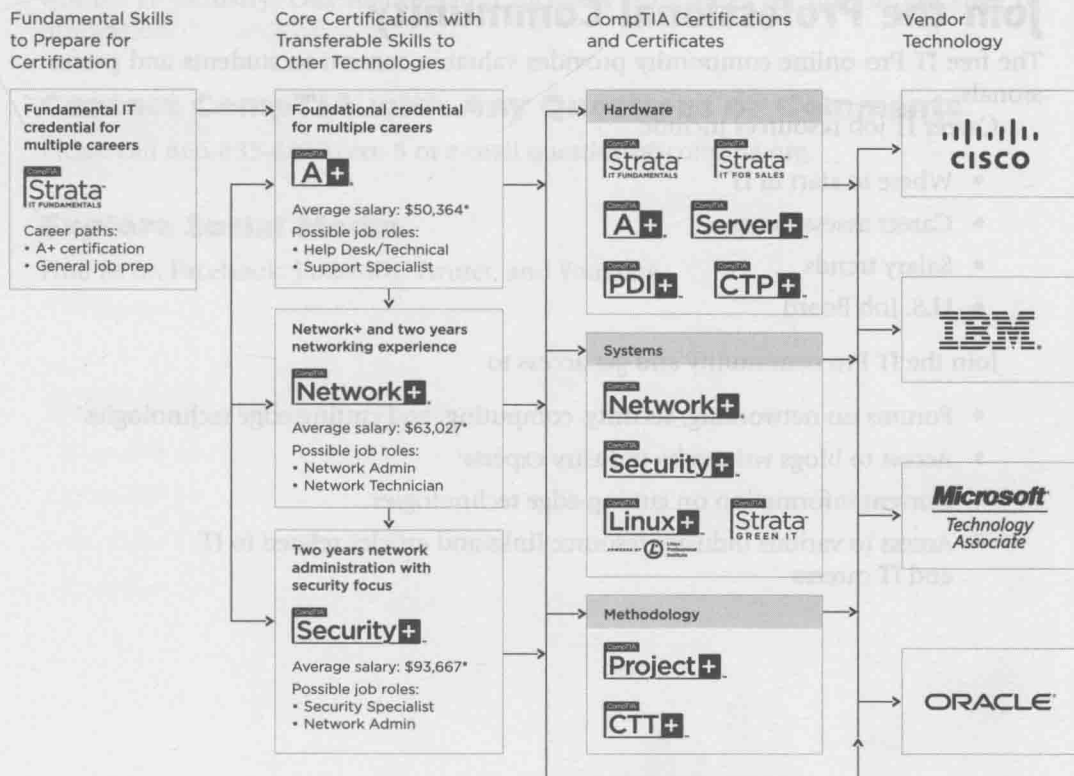


## Why CompTIA?

- **Global recognition** CompTIA is recognized globally as the leading IT nonprofit trade association and has enormous credibility. Plus, CompTIA's certifications are vendor neutral and offer proof of foundational knowledge that translates across technologies.
- **Valued by hiring managers** Hiring managers value CompTIA certification because it is vendor- and technology-independent validation of your technical skills.
- **Recommended or required by government and businesses** Many government organizations and corporations either recommend or require technical staff to be CompTIA certified (e.g., Dell, Sharp, Ricoh, the U.S. Department of Defense, and many more).
- **Three CompTIA certifications ranked in the top ten** In a study by DICE of 17,000 technology professionals, certifications helped command higher salaries at all experience levels.

## CompTIA Career Pathway

CompTIA offers a number of credentials that form a foundation for your career in technology and allow you to pursue specific areas of concentration. Depending on the path you choose to take, CompTIA certifications help you build upon your skills and knowledge, supporting learning throughout your entire career.



\*Source: Computerworld Salary Survey 2010—U.S. salaries only

## Four Steps to Getting Certified

1. **Review exam objectives.** Review the certification objectives to make sure you know what is covered in the exam:

[www.comptia.org/certifications/testprep/examobjectives.aspx](http://www.comptia.org/certifications/testprep/examobjectives.aspx)

2. **Practice for the exam.** After you have studied for the certification, take a free assessment and sample test to get an idea of the type of questions that might be on the exam:

[www.comptia.org/certifications/testprep/practicetests.aspx](http://www.comptia.org/certifications/testprep/practicetests.aspx)

3. **Purchase an exam voucher.** Purchase exam vouchers on the CompTIA Marketplace:

[www.comptiastore.com](http://www.comptiastore.com)

4. **Take the test!** Select a certification exam provider and schedule a time to take your exam:

[www.comptia.org/certifications/testprep/testingcenters.aspx](http://www.comptia.org/certifications/testprep/testingcenters.aspx)

## Join the Professional Community

The free IT Pro online community provides valuable content to students and professionals.

Career IT job resources include

- Where to start in IT
- Career assessments
- Salary trends
- U.S. Job Board

Join the IT Pro community and get access to

- Forums on networking, security, computing, and cutting-edge technologies
- Access to blogs written by industry experts
- Current information on cutting-edge technologies
- Access to various industry resource links and articles related to IT and IT careers



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## **Content Seal of Quality**

This text bears the seal of CompTIA Approved Quality Content. This seal signifies this content covers 100 percent of the exam objectives and implements important instructional design principles. CompTIA recommends multiple learning tools to help increase coverage of the learning objectives. Look for this seal on other materials you use to prepare for your certification exam.

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To the copy editor, Bob Campbell, proofreader, Paul Tyler, indexer, Jack Lewis, and layout folks at Apollo Publishing—superb work in every facet. Thank you for being the best.

# INTRODUCTION

The people who build and fix personal computers and the computer networks most of us have used—the *techs*—have many specific skills. To become a good tech takes time, thought, hard work, and a handy screwdriver.

To prove his or her skills, a tech earns industry certifications. This generally means that the tech takes and passes a certification exam and then gets to add credentials to his or her name. The most important general certifying body is called CompTIA.

## Who Is CompTIA?

The *Computer Technology Industry Association* (CompTIA) is a nonprofit industry trade association based in Oakbrook Terrace, Illinois. It consists of over 20,000 members in 102 countries. You'll find CompTIA offices in such diverse locales as Amsterdam, Dubai, Johannesburg, Tokyo, and São Paulo.

Virtually every company of consequence in the information technology (IT) industry is a member of CompTIA. Here are a few of the biggies:

Adobe Systems	AMD	Best Buy	Brother International
Canon	Cisco Systems	CompUSA	Fujitsu
Gateway	Hewlett-Packard	IBM	Intel
Kyocera	McAfee	Microsoft	NCR
Novell	Panasonic	Sharp Electronics	Siemens
Symantec	Toshiba	Total Seminars, LLC (that's my company)	Plus many thousands more

CompTIA provides a forum for people in these industries to network (as in meeting people), represents the interests of its members to the government, and provides certifications for many aspects of the computer industry. CompTIA watches the IT industry closely and provides new and updated certifications to meet the ongoing demand from its membership.

## CompTIA Certifications

CompTIA certifications enable techs to offer proof of competency in a variety of technology fields. Attaining the CompTIA A+ certification, for example, proves that you're a PC technician of some skill. You know how to build and fix PCs; you know the basics of networking, because modern PCs almost always connect to some network. The CompTIA Network+ certification, in contrast, goes pretty deep into networking. It's designed for network technicians.

To attain CompTIA A+ or CompTIA Network+ certifications takes time and commitment. Most commonly, the successful candidate is a working tech already and wants to prove his or her merit to an employer. But what about people who might want to become a tech but aren't there already?

## CompTIA Strata

The CompTIA Strata Certificate Program is a collection of three U.S. exams and two UK exams that cover entry-level IT subjects. The U.S. exams include:

- CompTIA Strata IT Fundamentals, which covers technology and computer hardware basics
- CompTIA Strata IT for Sales, which covers knowledge of technology useful for those entering a sales position
- CompTIA Strata Green IT, which covers the emerging technologies that make up the green IT industry

For the UK, the CompTIA Strata IT Fundamentals exam is split into two exams, though they both cover the same set of competencies:

- CompTIA Strata—Fundamentals of PC Functionality, which covers basic PC components and vocabulary
- CompTIA Strata—Fundamentals of PC Technology, which covers PC characteristics and operational problems

This book is primarily concerned with the CompTIA Strata IT Fundamentals exam, which creates an entry point for people who think they might want to become a tech. To take the exam successfully, you'll need to understand the concepts and terminology that go with PCs and networks. You'll need a working knowledge of computer components and operating systems.

Because success on the exam requires a solid knowledge of computer and networking terminology, the CompTIA Strata certificate serves *another* audience as well: those who need to interface with techs. Techs often speak in their own technical jargon, using words and concepts unfamiliar to most office workers, even skilled computer users. You might be a master of Microsoft Word, for example, but not understand when a tech says that your computer is running slowly because it only has one gigabyte of RAM.

The CompTIA Strata certificate, therefore, applies to two different groups:

- Those thinking about becoming a tech
- People who need to communicate with techs knowledgeably

## About the Book

I designed the *CompTIA Strata™ IT Fundamentals All-in-One Exam Guide* to address the needs of both sets of people who need to get the CompTIA Strata certificate. The book approaches topics in plain language, gradually introducing you to terminology and technology.

The book is split into five sections:

- I. The Simple PC
- II. Maintaining and Upgrading the Simple PC
- III. The Complex PC
- IV. Networks of PCs
- V. Securing PCs

“The Simple PC” covers what you might expect: the basic components and workings of the personal computer. Chapters 1–5 teach you how computers work. I cover important jargon, tools, and concepts. You’ll learn about the basic hardware and software and how everything works together.

“Maintaining and Upgrading the Simple PC” covers topics as diverse as cleaning supplies that work best to teaching you how to upgrade the programs on the computer. Chapters 6–8 describe important topics that every user, not just techs, should understand.

“The Complex PC” adds more pieces to the basic computer described in the first two sections of the book. *Complex*, in this context, does not mean *difficult*. Chapters 9–12 introduce components like wireless keyboards and mice. You’ll learn about printers, including how to set them up and keep them working. These chapters enable me to talk about portable computers, from the standard clamshell-style laptop to the latest iPad slate.

“Networks of PCs” teaches you the terminology of networks. You’ll learn how networks work, both wired and wireless. Chapters 13–16 take you the whole way, from a simple network to the Internet. You’ll also learn how companies and individuals work to reduce the amount of electricity and other resources used in computing.

“Securing PCs” covers the process of making sure your machines and data are safe. The safety comes from avoiding mistakes, accidents, and so on. Plus, Chapters 17–18 tell the tales of viruses, hackers, and thieves, and what you need to do to protect yourself and others.

## Getting the CompTIA Strata Certificate

To get a CompTIA Strata certificate, you need to take and pass one 100-question exam. That’s it. Whether you are in Boston or Los Angeles, you can sign up for the exam online, where you will schedule a time and place to take it. The two Web sites you can use are those for VUE and Prometric, the two test-administering bodies.

[www.vue.com](http://www.vue.com)

[www.prometric.com](http://www.prometric.com)

VUE and Prometric have testing sites all over the world, in cities large and small. You should be able to find one that’s convenient to you.

As of this writing, the CompTIA Strata exam costs US\$102 for non-CompTIA members, although you can purchase discount vouchers from several companies, including

my own. Do a Google search for “CompTIA Strata discount voucher” or go to my company’s site:

[www.totalsem.com/vouchers](http://www.totalsem.com/vouchers)

Once you succeed on the exam, you’ll have a CompTIA Strata certificate. You can make decisions on pursuing a career in IT. If so, your next step should be pursuing the CompTIA A+ certification. That’s the industry standard entry point for techs.

If you’ve studied Strata for knowledge and language and want more user-oriented training, then a lot of other options emerge. Certiport offers an excellent Computer Literacy certification, for example, called IC<sup>3</sup>. Microsoft has certifications for each of its Office products, such as Word, Excel, and PowerPoint. You can find many other application-specific certifications as well.

Here’s a good starting point with explanations about tech certifications and some of the suggested pathways to take:

[www.totalsem.com/certifications](http://www.totalsem.com/certifications)

## Studying for the Exam

I wrote the *CompTIA Strata™ IT Fundamentals All-in-One Exam Guide* thematically, grouping topics together that made the most sense to me for learning. I didn’t write a guide that followed the CompTIA Strata competencies in order. (It would have made for a very strange and repetitious book.)

With that in mind, I suggest you read the book twice. The first time, just read it through like a novel. Enjoy the new terms and Ford’s fun illustrations. Don’t try to memorize things yet. The second read through, make sure you have a copy of the CompTIA Strata competencies printed out or on screen. Read carefully, and check off topics as you cover them.



**NOTE** There’s a map in Appendix B so you know where I cover each competency in the book.

If you have questions or comments, good or bad, feel free to contact me. Here’s my e-mail address:

[scottj@totalsem.com](mailto:scottj@totalsem.com)

Good luck with your studies and with the CompTIA Strata exam!

—Scott

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