

# Introduction

Welcome to *CCNA Exam Cram!* Whether this is your first or your fifteenth *Exam Cram* series book, you'll find information here that will help ensure your success as you pursue knowledge, experience, and certification. This introduction explains Cisco's certification programs in general and talks about how the *Exam Cram* series can help you prepare for The Cisco CCNA Exams, whether you choose the dual- or single-exam path. The materials in this book have been prepared with a very clear focus on testable concepts, configurations, and skills. As much extraneous material as possible, beyond what is needed for background comprehension, has been eliminated so that the book is a distillation of the necessary knowledge to take—and pass—the Cisco CCNA exam(s). The two sample tests with answer keys (Chapters 13–16) at the end of the book should give you a reasonably accurate assessment of your knowledge. We have also included challenge labs to give you the critical hands-on practice you will need to master the simulator questions on the CCNA exam(s). Read the book, understand the material, practice the labs, and you'll stand a very good chance of passing the test.

*Exam Cram* books help you understand and appreciate the subjects and materials you need to pass Cisco certification exams. *Exam Cram 2* books are aimed strictly at test preparation and review. They do not teach you everything you need to know about a topic. Instead, we present and dissect the topics and key points we've found that you're likely to encounter on a test. We've worked to bring together as much accurate information as possible about the latest CCNA exams.

Nevertheless, to completely prepare yourself for any Cisco test, we recommend that you begin by taking the Self-Assessment that is included in this book, immediately following this introduction. The Self-Assessment tool will help you evaluate your knowledge base against the requirements for a CCNA under both ideal and real circumstances.

Based on what you learn from the Self-Assessment, you might decide to begin your studies with some classroom training, some practice with the Cisco IOS, or some background reading. On the other hand, you might decide to pick up and read one of the many study guides available from Cisco or third-party vendors on certain topics, including the *CCNA Exam Prep* from Que Publishing. We also recommend that you supplement your study program with visits to [www.examcram2.com](http://www.examcram2.com) to receive additional practice questions, get advice, and track the CCNA program.

We also strongly recommend that you practice configuring the Cisco devices that you'll be tested on because nothing beats hands-on experience and familiarity when it comes to understanding the questions you're likely to encounter on a certification test. Book learning is essential, but without a doubt, hands-on experience is the best teacher of all! This book includes a CD with a router and switch simulator and lab challenges that you can use to practice your skills.

## Taking a Certification Exam

After you've prepared for your exam, you need to register with a testing center. The CCNA exam can be taken in either one or two steps: The single-exam option is the 640-801 exam, and costs \$125. The two-exam option requires you to take both the 640-821 INTRO and 640-811 ICND exams, at a cost of \$100 each. In the United States and Canada, tests are administered by Prometric and by VUE. Here's how you can contact them:

- ▶ **Prometric**—You can sign up for a test through the company's website, at [www.prometric.com](http://www.prometric.com). Within the United States and Canada, you can register by phone at 800-755-3926. If you live outside this region, you should check the Prometric website for the appropriate phone number.
- ▶ **VUE**—You can sign up for a test or get the phone numbers for local testing centers through the Web at [www.vue.com/ms](http://www.vue.com/ms).

To sign up for a test, you must possess a valid credit card or contact either Prometric or VUE for mailing instructions to send a check (in the United States). Only when payment is verified or your check has cleared can you actually register for the test.

To schedule an exam, you need to call the number or visit either of the web pages at least one day in advance. To cancel or reschedule an exam, you must call before 7 p.m. Pacific standard time the day before the scheduled test time (or you might be charged, even if you don't show up to take the test). When you want to schedule a test, you should have the following information ready:

- ▶ Your name, organization, and mailing address
- ▶ Your Cisco test ID
- ▶ The name and number of the exam you want to take
- ▶ A method of payment (As mentioned previously, a credit card is the most convenient method, but alternative means can be arranged in advance, if necessary.)

After you sign up for a test, you are told when and where the test is scheduled. You should try to arrive at least 15 minutes early. You must supply two forms of identification—one of which must be a photo ID—and sign a nondisclosure agreement to be admitted into the testing room.

All Cisco exams are completely closed book. In fact, you are not permitted to take anything with you into the testing area, but you are given a blank sheet of paper and a pen (or in some cases, an erasable plastic sheet and an erasable pen). We suggest that you immediately write down on that sheet of paper all the information you've memorized for the test. In *Exam Cram 2* books, this information appears on a tear-out sheet inside the front cover of each book. You are given some time to compose yourself, record this information, and take a sample orientation exam before you begin the real thing. We suggest that you take the orientation test before taking your first exam, but because all the certification exams are more or less identical in layout, behavior, and controls, you probably don't need to do this more than once.

When you complete a Cisco certification exam, the software tells you immediately whether you've passed or failed. If you need to retake an exam, you have to schedule a new test with Prometric or VUE and pay another \$100 or \$125.

**TIP**

If you fail a Cisco test, you must wait five full days before you can take it again. For example, if you failed on Tuesday, you would have to wait until Monday to take it again.

## Tracking Your Certification Status

As soon as you pass the Cisco CCNA single exam, or both the INTRO and ICND CCNA test, you are a CCNA. Cisco generates transcripts that indicate which exams you have passed. You can view a copy of your transcript at any time by going to the Cisco website and going to the certifications tracking tool. This tool enables you to print a copy of your current transcript and confirm your certification status.

After you pass the necessary set of exams, you are certified. Official certification is normally granted after three to six weeks, so you shouldn't expect to get your credentials overnight. The package for official certification that arrives includes

- ▶ A certificate that is suitable for framing, along with a wallet card.
- ▶ A license to use the applicable logo, which means that you can use the logo in advertisements, promotions, and documents, as well as on letterhead, business cards, and so on. Along with the license comes information on how to legally and appropriately use the logos.

Many people believe that the benefits of Cisco certification are among the most powerful in the industry. We're starting to see more job listings that request or require applicants to have CCNA, CCDA, CCNP, and other certifications, and many individuals who complete Cisco certification programs can qualify for increases in pay and/or responsibility. As an official recognition of hard work and broad knowledge, one of the Cisco credentials is a badge of honor in many IT organizations.

## How to Prepare for an Exam

Preparing for the CCNA test requires that you obtain and study materials designed to provide comprehensive information about the product and its capabilities that will appear on the specific exam for which you are preparing. The following list of materials can help you study and prepare:

- ▶ The official Cisco study guides by Cisco Press.
- ▶ Practicing with real equipment or simulators.
- ▶ The CCNA Prep Center on Cisco's website, which features articles, sample questions, games and discussions to focus and clarify your studies.
- ▶ The exam-preparation advice, practice tests, questions of the day, and discussion groups on the [www.examcram.com](http://www.examcram.com) e-learning and certification destination website.
- ▶ *The CCNA Exam Cram*—This book gives you information about the material you need to know to pass the tests. Seriously, this is a great book.
- ▶ The *CCNA Exam Prep* book, also from Que publishing, goes into more detail on topics that are summarized in the Exam Cram.

Together, these two books make a perfect pair.

- ▶ **Classroom training**—Cisco training partners and third-party training companies (such as The Training Camp) offer classroom training for CCNA. These companies aim to help you prepare to pass the CCNA exam. Although such training can be expensive, most of the individuals lucky enough to partake find this training to be very worthwhile.
- ▶ **Other publications**—There's no shortage of materials available about CCNA. The "Need to Know More?" resource sections at the end of each chapter in this book give you an idea of where we think you should look for further discussion.

This set of required and recommended materials represents a good collection of sources and resources about the CCNA exam and related topics. We hope that you'll find that this book belongs in this company.

## What This Book Will Not Do

This book will *not* teach you everything you need to know about networking with Cisco devices, or even about a given topic. Nor is this book an introduction to computer technology. If you're new to networking and looking for an initial preparation guide, check out [www.quepublishing.com](http://www.quepublishing.com), where you will find a whole section dedicated to Cisco certifications and networking in general. This book will review what you need to know before you take the test, with the fundamental purpose dedicated to reviewing the information needed on the Cisco CCNA exam(s).

This book uses a variety of teaching and memorization techniques to analyze the exam-related topics and to provide you with ways to input, index, and retrieve everything you'll need to know in order to pass the test. Once again, it is *not* a comprehensive treatise on Cisco networking.

## What This Book Is Designed To Do

This book is designed to be read as a pointer to the areas of knowledge you will be tested on. In other words, you might want to read the book one time, just to get an insight into how comprehensive your knowledge of networking with Cisco is. The book is also designed to be read shortly before you go for the actual test and to give you a distillation of the entire field of CCNA knowledge in as few pages as possible. We think you can use this book to get a sense of the underlying context of any topic in the chapters—or to skim read for Exam Alerts, bulleted points, summaries, and topic headings.

We've drawn on material from The Cisco listing of knowledge requirements, from other preparation guides, and from the exams themselves. We've also drawn from a battery of third-party test-preparation tools and technical websites, as well as from our own experience with Cisco equipment and the exam. Our aim is to walk you through the knowledge you will need—looking over your shoulder, so to speak—and point out those things that are important for the exam (Exam Alerts, practice questions, and so on).

The CCNA exam(s) make a basic assumption that you already have a strong background of experience with the general networking and its terminology. On the other hand, because the CCNA is an introductory-level test, we've tried to demystify the jargon, acronyms, terms, and concepts.

# About This Book

If you're preparing for the CCNA exam for the first time, we've structured the topics in this book to build upon one another. Therefore, the topics covered in later chapters might refer to previous discussions in earlier chapters.

We suggest that you read this book from front to back. You won't be wasting your time because nothing we've written is a guess about an unknown exam. We've had to explain certain underlying information on such a regular basis those explanations are included here.

After you've read the book, you can brush up on a certain area by using the Index or the Table of Contents to go straight to the topics and questions you want to reexamine. We've tried to use the headings and subheadings to provide outline information about each given topic. After you've been certified, we think you'll find this book useful as a tightly focused reference and an essential foundation of CCNA knowledge.

## Chapter Formats

Each *Exam Cram* chapter follows a regular structure, along with graphical cues about especially important or useful material. The structure of a typical chapter is as follows:

- ▶ **Opening hotlists**—Each chapter begins with lists of the terms you'll need to understand and the concepts you'll need to master before you can be fully conversant with the chapter's subject matter. We follow the hotlists with a few introductory paragraphs, setting the stage for the rest of the chapter.
- ▶ **Topical coverage**—After the opening hotlists, each chapter covers the topics related to the chapter's subject.
- ▶ **Alerts**—Throughout the topical coverage section, we highlight material most likely to appear on the exam by using a special Exam Alert layout that looks like this:

### EXAM ALERT

This is what an Exam Alert looks like. An Exam Alert stresses concepts, terms, software, or activities that will most likely appear in one or more certification exam question. For that reason, we think any information found offset in Exam Alert format is worthy of unusual attentiveness on your part.

Even if material isn't flagged as an Exam Alert, *all* the content in this book is associated in some way with test-related material. What appears in the chapter content is critical knowledge.

- ▶ **Notes**—This book is an overall examination of basic Cisco networking. As such, we'll dip into many aspects of .NET application development. Where a body of knowledge is deeper than the scope of the book, we use notes to indicate areas of concern or specialty training, or refer you to other resources.

**NOTE**

Cramming for an exam will get you through a test, but it won't make you a competent IT professional. Although you can memorize just the facts you need in order to become certified, your daily work in the field will rapidly put you in water over your head if you don't know the underlying principles of networking with Cisco gear.

- ▶ **Tips**—We provide tips that will help you to build a better foundation of knowledge or to focus your attention on an important concept that will reappear later in the book. Tips provide a helpful way to remind you of the context surrounding a particular area of a topic under discussion.
- ▶ **Practice questions**—This section presents a short list of test questions related to the specific chapter topic. Each question has a following explanation of both correct and incorrect answers. The practice questions highlight the areas we found to be most important on the exam.

The bulk of the book follows this chapter structure, but there are a few other elements that we would like to point out:

- ▶ **Practice Exams**—The Practice exams are very close approximations of the types of questions you are likely to see on the current CCNA exam(s). The Answer Key for each Practice Exam will help you determine which areas you have mastered and which areas you need to study further.
- ▶ **Answer keys**—These provide the answers to the sample tests, complete with explanations of both the correct responses and the incorrect responses.
- ▶ **Glossary**—This is an extensive glossary of important terms used in this book.
- ▶ **The Cram Sheet**—This appears as a tearaway sheet, inside the front cover of this *Exam Cram* book. It is a valuable tool that represents a collection of the most difficult-to-remember facts and numbers we think you should memorize before taking the test. Remember, you can dump this information out of your head onto a piece of paper as soon as you enter the testing room.

These are usually facts that we've found require brute-force memorization. You only need to remember this information long enough to write it down when you walk into the test room. Be advised that you will be asked to surrender all personal belongings before you enter the exam room itself.

You might want to look at the Cram Sheet in your car or in the lobby of the testing center just before you walk into the testing center. The Cram Sheet is divided under headings, so you can review the appropriate parts just before each test.

- ▶ **The CD**—The CD features an innovative practice test engine powered by MeasureUp, including a full practice exam and two router simulations, giving you the opportunity to assess your readiness for the exam. Cisco simulations validate a person's hands-on skills in addition to knowledge. MeasureUp's Cisco simulations model real-life networking scenarios by requiring the user to perform tasks on simulated Cisco networking devices, measuring troubleshooting and problem-solving skills to address realistic networking problems.

## Contacting the Authors

We've tried to create a real-world tool that you can use to prepare for and pass the CCNA certification exams. We're interested in any feedback you would care to share about the book, especially if you have ideas about how we can improve it for future test takers. We'll consider everything you say carefully and will respond to all reasonable suggestions and comments. You can reach us via email at [mvalentine@trainingcamp.com](mailto:mvalentine@trainingcamp.com) and [awhitaker@trainingcamp.com](mailto:awhitaker@trainingcamp.com).

Let us know if you found this book to be helpful in your preparation efforts. We'd also like to know how you felt about your chances of passing the exam *before* you read the book and then *after* you read the book. Of course, we'd love to hear that you passed the exam—and even if you just want to share your triumph, we'd be happy to hear from you.

Thanks for choosing us as your personal trainers, and enjoy the book. We would wish you luck on the exam, but we know that if you read through all the chapters and work with the product, you won't need luck—you'll pass the test on the strength of real knowledge!