

C i s c o 专 业 技 术 丛 书

CCNA 2.0

考 试 指 南 英文版

**Test Yourself CCNA Cisco
Certified Network Associate,
Second Edition (Exam 640-507)**

(考试号: 640-507)

(美) Syngress Media 公司 著



机械工业出版社
China Machine Press



Education

Cisco 专业技术丛书

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(考试号: 640-507) (英文版)

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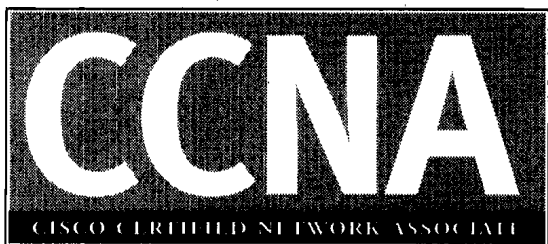
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(Exam 640-507)

Second Edition

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Bob is currently pursuing his CCDA to plan and implement an infrastructure to support these projects. Bob is also the Webmaster for six Web sites including shop-r-mall.com and ContractMCSE.com, which his wife owns. They enjoy woodworking and reading on the porch in the mountains of Maryland. He can be reached at contractmcse@mindspring.com.

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In his free time, he enjoys spending time with his family and boating. He currently lives in Raleigh, North Carolina. Mark is Series Editor for Syngress Media Cisco Certification titles.

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PREFACE

This book's primary objective is to help you prepare for and pass the CCNA Cisco Certified Network Associate exam (640-507), so you can reap the career benefits of certification. We believe that the only way to do this is to help you increase your knowledge and build your skills. After completing this book, you should feel confident that you have reviewed and practiced the necessary skills that Cisco has established for the exam.

In This Book

This book is organized in such a way as to serve as a review for the Cisco Certified Network Associate exam. Each chapter covers a major aspect of the exam, with an emphasis on the “why” as well as the “how to” of working with and supporting Cisco products.

In Every Chapter

We've created a set of chapter components that call your attention to important items, reinforce important points, and provide helpful exam-taking hints. Take a look at what you'll find in every chapter.

Test Yourself Objectives

Every chapter begins with a list of Test Yourself Objectives—what you need to know in order to pass the section on the exam dealing with the chapter topic. Each objective in this list will be discussed in the chapter and can be easily identified by the clear headings that give the name and corresponding number of the objective, so you'll always know an objective when you see it! Objectives are drilled down to the most important details—essentially what you need to know about the objectives and what to expect from the exam in relation to them. Should you find you need further review on any particular objective, you will find that the objective headings correspond to the chapters of Osborne/McGraw-Hill's *CCNA Cisco Certified Network Associate Study Guide*.

Exam Watch Notes

Exam Watch notes call attention to information about, and potential pitfalls in, the exam. These helpful hints are written by authors who have taken the exams and received their certification; who better to tell you what to worry about? They know what you're about to go through!

Practice Questions and Answers

In each chapter you will find detailed practice questions for the exam, followed by a Quick Answer Key where you can quickly check your answers. The In-Depth Answers section contains full explanations of both the correct and incorrect choices.

The Practice Exam

If you have had your fill of explanations, review questions, and answers, the time has come to test your knowledge. Turn toward the end of this book to the Test Yourself Practice Exam where you'll find a simulation exam. Lock yourself in your office or clear the kitchen table, set a timer, and jump in.

About the Web Site

Syngress Media and Osborne/McGraw-Hill invite you to download one free practice exam for the CCNA exam (640-507). Please visit www.syngress.com or www.certificationpress.com for details.

INTRODUCTION

This introduction covers the importance of your CCNA certification and prepares you for taking the actual examination. It gives you a few pointers on methods of preparing for the exam, including how to study and register, what to expect, and what to do on exam day.

CATCH THE WAVE!

Congratulations on your pursuit of Cisco certification! In this fast-paced world of networking, few certification programs are as valuable as the one offered by Cisco.

The networking industry has virtually exploded in recent years, accelerated by nonstop innovation and the Internet's popularity. Cisco has stayed at the forefront of this tidal wave, maintaining a dominant role in the industry.

The networking industry is highly competitive, and evolving technology only increases in its complexity, so the rapid growth of the networking industry has created a vacuum of qualified people. There simply aren't enough skilled networking people to meet the demand. Even the most experienced professionals must keep current with the latest technology in order to provide the skills that the industry demands. That's where Cisco certification programs can help networking professionals succeed as they pursue their careers.

Cisco started its certification program many years ago, offering only the designation Cisco Certified Internetwork Expert (CCIE). Through the CCIE program, Cisco provided a means to meet the growing demand for experts in the field of networking. However, the CCIE tests are brutal, with a failure rate of over 80 percent. (Fewer than 5 percent of candidates pass on their first attempt.) As you might imagine, very few people ever attain CCIE status.

In early 1998, Cisco recognized the need for intermediate certifications, and several new programs were created. Four intermediate certifications were added: CCNA (Cisco Certified Network Associate), CCNP (Cisco Certified Network Professional),

CCDA (Cisco Certified Design Associate), and CCDP (Cisco Certified Design Professional). In addition, several specialties were added to the CCIE certifications; currently CCIE candidates can receive their CCIE in five areas: Routing and Switching, WAN Switching, ISP-Dial, SNA/IP Integration, and Design.



CCNA Advice: We would encourage you to take beta tests when they are available. Not only are the beta exams less expensive than the final exams (some are even free!), but also, if you pass the beta, you will receive credit for passing the exam. If you don't pass the beta, you will have seen every question in the pool of available questions and can use this information when you prepare to take the exam for the second time. Remember to jot down important information immediately after the exam if you didn't pass. You will have to do this after leaving the exam area, since materials written during the exam are retained by the testing center. This information can be helpful when you need to determine which areas of the exam were most challenging for you as you study for the subsequent test.

WHY VENDOR CERTIFICATION?

Over the years, vendors have created their own certification programs because of industry demand. This demand arises when the marketplace needs skilled professionals and an easy way to identify them. Vendors benefit because it promotes people skilled in their product. Professionals benefit because it boosts their careers. Employers benefit because it helps them identify qualified people.

In the networking industry, technology changes too often and too quickly to rely on traditional means of certification, such as universities and trade associations. Because of the investment and effort required to keep network certification programs current, vendors are the only organizations suited to keep pace with the changes. In general, such vendor certification programs are excellent, with most of them requiring a solid foundation in the essentials, as well as their particular product line.

Corporate America has come to appreciate these vendor certification programs and the value they provide. Employers recognize that certifications, like university degrees, do not guarantee a level of knowledge, experience, or performance; rather, they

establish a baseline for comparison. By seeking to hire vendor-certified employees, a company can assure itself that not only has it found a person skilled in networking, but also it has hired a person skilled in the specific products the company uses.

Technical professionals have also begun to recognize the value of certification and the impact it can have on their careers. By completing a certification program, professionals gain an endorsement of their skills from a major industry source. This endorsement can boost their current position, and it makes finding the next job even easier. Often a certification determines whether a first interview is even granted.

Today a certification may place you ahead of the pack. Tomorrow it will be a necessity to keep from being left in the dust.



CCNA Advice: Signing up for an exam has become easier with a Web-based test registration system. To sign up for the CCNA exams, access <http://www.2test.com> and register for the Cisco Career Certification path. You will need to get an Internet account and password if you do not already have one for 2test.com. Just select the option for first-time registration, and the Web site will walk you through that process. The registration wizard even provides maps to the testing centers, something that is not available when you call Sylvan Prometric on the telephone.

CISCO'S CERTIFICATION PROGRAM

Cisco now has a number of certifications for the Routing and Switching career track, as well as for the WAN Switching career track. While Cisco recommends a series of courses for each of these certifications, they are not required. Ultimately, certification is dependent upon a candidate's passing a series of exams. With the right experience and study materials, you can pass each of these exams without taking the associated class.

Cisco has recently changed the certification track for the CCNA and CCNP exams. They have updated the exam tracks to accommodate changes in Cisco technology. The new tracks are called "CCNA 2.0" and "CCNP 2.0" and it replaces the former tracks, called "CCNA 1.0" and "CCNP 1.0." Table 1 shows the Cisco CCNP 1.0 track. Table 2 shows the Cisco CCNP 2.0 exam track.

TABLE 1

CCNP 1.0 Track

Exam Name	Exam Number
CCNA 1.0 or CCNA 2.0	640-407 or 640-507
Advanced Cisco Router Configuration (ACRC)*	640-403
Cisco LAN Switch Configuration (CLSC)*	640-404
Configuring, Managing, and Troubleshooting Dialup Services (CMTD)*	640-405
Cisco Internetwork Troubleshooting (CIT)	640-440
* The Foundation Routing and Switching exam (640-409) can be taken in place of the ACRC, CLSC, and CMTD exams.	

TABLE 2

CCNP 2.0 Track

Exam Name	Exam Number
CCNA 1.0 or CCNA 2.0	640-407 or 640-507
Routing*	640-503
Switching*	640-504
Remote Access*	640-505
Support	640-506
* The new Foundation Routing and Switching exam (640-509) can be taken in place of the Routing, Switching, and Remote Access exams.	

As you can see, the CCNA is the foundation of the Routing and Switching track, after which candidates can pursue the Network Support path to CCNP and CCIE, or the Network Design path to CCDA, CCDP, and to CCIE Design.

Cisco recommends that any new candidate planning to achieve Cisco certification follow the 2.0 exam track. Cisco retired the 1.0 exam track on July 31, 2000.



CCNA Online: *In addition to the technical objectives that are being tested for each exam, you will find much more useful information on Cisco's Web site at <http://www.cisco.com/warp/public/10/wwtraining/certprog>. You will find information on becoming certified, exam-specific information, sample test questions, and the latest news on Cisco certification. This is the most important site you will find on your journey to becoming Cisco certified.*



CCNA Advice: *When I find myself stumped answering multiple-choice questions, I use my scratch paper to write down the two or three answers I consider the strongest, and then underline the answer I feel is most likely correct. Here is an example of what my scratch paper looks like when I've gone through the test once:*

21. B or C

33. A or C

It is extremely helpful to mark the question and then continue. You can return to the question and immediately pick up your thought process where you left off. Use this technique to avoid having to re-read and re-think questions.

You will also need to use your scratch paper during complex, text-based scenario questions to create visual images to help you understand the question. For example, during the CCNA exam you will need to draw multiple networks and the connections between them or calculate a subnet mask for a given network. By drawing the layout or working the calculation while you are interpreting the question, you may find a hint that you would not have found without your own visual aid. This technique is especially helpful if you are a visual learner.