CCNA Routing and Switching
Frequently Asked Questions

Last updated 2 July 2013

The new Cisco CCNA® Routing and Switching curriculum is currently in development. The CCNA Routing and Switching courses are designed to take advantage of the improved flexibility and course management capabilities in the Cisco NetSpace™ learning environment.

Please visit the NetSpace™ CCNA Routing and Switching Instructor Resource Spotlight area and the CCNA instructor community for the latest updates and additional information.

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Cisco Redesign of Associate-Level Certification Programs

Q1. What changes has Cisco made to the associate-level certification programs?
A. On 26 March 2013, Cisco announced the redesign of the Cisco associate-level certification programs, including the Cisco CCENT® and CCNA certifications. Cisco has evolved its associate-level certifications to align with changing industry job roles in routing and switching, and advanced technologies such as security, wireless, and voice. The certification formerly known as CCNA has evolved into a new CCNA Routing and Switching certification.

In addition, CCENT is now a foundational certification that replaces CCNA as the prerequisite for associate-level advanced technology certifications, including CCNA Security, CCNA Voice, CCNA Wireless, and CCNA SP Operations. To learn more about the redesign of the associate-level certifications, and changes to the CCENT and CCNA Routing and Switching certification exams, please visit the Cisco Learning Network.

Q2. Are the Cisco CCNA Routing and Switching certification exams changing?
A. Yes. Cisco has introduced new exams for ICND1, ICND2, and CCNA Composite. The updates include comprehensive troubleshooting, IPv6, and the latest Cisco routing and switching technology and software. The exams are changing to reflect the evolution of industry job roles. Exam 640-822 ICND1 is being replaced by 100-101 ICND1, exam 640-816 ICND2 is being replaced by 200-101 ICND2, and exam 640-802 CCNA is being replaced by 200-120 CCNA.

Q3. Why did Cisco add so many new technical topics to the CCENT and CCNA Routing and Switching exams?
A. Many of Cisco’s global customers have reported that they expect their CCNA-certified employees to have a higher level of knowledge and skills when hired. To address this requirement, Cisco has shifted some topics previously featured in the ICND2 certification exam to the ICND1 certification exam. Students passing the ICND1 exam leading to the CCENT certification will now have more knowledge and skills than what was required for the previous exam.

We recognize that these changes may be challenging for current Cisco Networking Academy® students, but acquiring the new skills featured in these exams will help students be better prepared for employment in the global job market.

Q4. When are the current CCNA exams being retired?
A. The end-of-life date for current CCNA certification exams is 30 September 2013. For the current exams to apply toward the CCNA Routing and Switching certification, you must take and pass the exams on or before 30 September 2013, as shown in Table 1.
Table 1. Current and New CCNA Certification Exams

<table>
<thead>
<tr>
<th>Current Exam</th>
<th>Current Exam End-of-Life Date</th>
<th>New Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>640-822 ICND1</td>
<td>30-SEP-2013</td>
<td>100-101 ICND1</td>
</tr>
<tr>
<td>640-816 ICND2</td>
<td>30-SEP-2013</td>
<td>200-101 ICND2</td>
</tr>
<tr>
<td>640-802 CCNA</td>
<td>30-SEP-2013</td>
<td>200-120 CCNA</td>
</tr>
</tbody>
</table>

Q5. Will Cisco extend the current CCNA certification exam end-of-life dates for Cisco Networking Academy students?

A. No. In the past, we have been able to negotiate an extension of certification exams for NetAcad™ students. However, to conform to new standards established by the American National Standards Institute (ANSI), coordinator of the U.S. voluntary standardization system and a global leader in conformity assessment, Cisco must now set the same certification end-of-life date for everyone, including Cisco Academies.

In January 2013, ANSI announced the accreditation of several Cisco career certifications under ANSI’s internationally recognized Accreditation Program for Personnel Certification Bodies. This accreditation serves as third-party confirmation that Cisco certifications are developed to rigorous standards and best practices recognized throughout the world, providing additional confidence to our certification holders and their employers that Cisco certifications continue to meet and exceed industry standards.

Q6. Will Cisco continue to offer certification exam discount vouchers to NetAcad students completing the CCNA Routing and Switching courses?

A. Yes. Cisco will continue to offer exam vouchers to students completing the CCNA Routing and Switching courses with the same guidelines:

- Score at least 75 percent on first attempt of final exam in a qualifying course (CCNA Discovery 2 or 4, CCNA Exploration 4, CCNA Security, CCNA R&S Routing and Switching Essentials, and CCNA R&S Connecting Networks)
- Receive a passing mark in the course grade book
- Click the link to request a voucher on the Cisco NetSpace homepage

Students need to request exam vouchers at least 30 days before their planned test date because it may take up to 30 days to process the exam voucher request.

Q7. Will students have the option to specify if they want a voucher to take the old CCNA certification exam(s) or the new CCNA Routing and Switching exam(s)?

A. Due to the retirement of the old CCNA certification exams on 30 September 2013, and the time required to process discount exam voucher requests, students will not have the option to request vouchers for the old CCNA certification exams after 30 August 2013.

After 30 August, qualified students will only be able to request vouchers for the new CCNA Routing and Switching certification exams.

Q8. What is NetAcad’s recommendation for students who are qualified to take the old CCENT or CCNA certification exams now?

A. For students who are completing CCNA Discovery 2 or 4, or CCNA Exploration 4, NetAcad recommends that they take the old CCENT or CCNA certification exams by 30 September, since this will reduce the study requirements for students.
Note that as students renew their CCENT or CCNA certifications in three years, they will be required to take the new CCENT or CCNA Routing and Switching certification exams.

Students who cannot take the old CCENT or CCNA certification exams by 30 September 2013 will be able to address gaps in their technical knowledge with self-study bridging resources that will be available to students on Cisco NetSpace in August 2013.

CCNA Routing and Switching Curriculum

Q9. Does the CCNA Routing and Switching curriculum align with the Cisco CCENT and CCNA Routing and Switching certification exams?
A. Yes, the new CCNA Routing and Switching (CCNA R&S) curriculum will be fully aligned with the new CCENT and CCNA Routing and Switching certification exams:
   - Students who complete a set of four CCNA R&S courses will be prepared to take the new CCNA Routing and Switching certification exam.
   - Students who complete two CCNA R&S courses; one of the CCNA introductory courses (Introduction to Networks or Network Basics) and the Routing and Switching Essentials course, will be prepared to take the new CCENT certification exam.

As a result of the changes to the certification exams, students will be able to pursue advanced technology certifications after achieving the CCENT certification. The new exams also help ensure that students are prepared to fill the demand for entry-level specialized networking roles.

Q10. What are the new topics covered in the NetAcad CCNA Routing and Switching curriculum?
A. We have added and revised many topics in the CCNA R&S curriculum to align with the new CCNA certification exams and to enable students to acquire career-readiness skills. Major topics include:
   - IPv6
   - Multi-area OSPF
   - Cisco IOS® 15 & IOS 15 Licensing
   - Layer 3 Redundancy (HSRP)
   - Link Aggregation (EtherChannel)
   - Network Management: NTP, Syslog, SNMP, and NetFlow

We encourage academies to transition to the new curriculum quickly so they can benefit from the many new and updated features.

Q11. How many courses are there in the new CCNA R&S curriculum?
A. The CCNA Routing and Switching curriculum consists of seven courses, with four courses that make up the recommended learning path and three additional courses that support the transition of CCNA Exploration instructors and students to the new CCNA Routing and Switching curriculum. No transitional courses are needed for CCNA Discovery instructors and students.

Students will be prepared to take the Cisco CCENT certification exam after completing a set of two courses or the CCNA Routing and Switching certification exam after completing a set of four courses. The curriculum also helps students develop workforce readiness skills and builds a foundation for success in networking-related careers and degree programs.
Q12. What are the recommended CCNA R&S courses?
A. Figure 1 shows the four courses that make up the recommended CCNA Routing and Switching curriculum, Introduction to Networks, Routing and Switching Essentials, Scaling Networks, and Connecting Networks. Cisco Networking Academy strongly encourages all academies to teach the four recommended courses, since this course flow may significantly enhance employment opportunities by enabling students to acquire skills they can immediately use in their jobs, and may accelerate their ability to pursue advanced technology certifications.

Figure 1. Recommended CCNA Routing and Switching Course Flow

Q13. What are the plans for the three additional courses supporting transition: Network Basics, Routing Protocols, and Switched Networks?
A. The three additional courses shown in Figure 2 are designed to support the transition of CCNA Exploration instructors and students to the new CCNA Routing and Switching curriculum.

Figure 2. Additional CCNA Routing and Switching Courses to Support Transition

The three courses supporting transition, Network Basics, Routing Protocols, and Switched Networks, will be offered with the following conditions:

- The courses are being developed and released to support institutions that are not able to transition immediately to the recommended four courses.
- The courses will be retired one year after all of the new courses are released. Target retirement date for the three additional courses is December 2014.
- The courses will be offered in English only and will not be translated.
- The fourth course in this sequence is the same Connecting Networks course used in the recommended flow shown in Figure 1.

Q14. What are the end-of-life plans for CCNA Discovery and CCNA Exploration?
A. The end-of-life plans for all CCNA Discovery and CCNA Exploration courses are as follows:

- The target retirement date for the English versions of all CCNA Discovery and CCNA Exploration courses is December 2014.
• The target retirement date for translated versions of all CCNA Discovery and CCNA Exploration courses is one year after all four recommended CCNA Routing and Switching courses are available in each language. We will communicate detailed end-of-life milestones as we make further progress in the release of the new CCNA Routing and Switching curriculum.

We encourage academies to plan to transition to the new curriculum as soon as possible to enjoy the many benefits offered, including:

- New technologies such as IOS 15, IPv6, HSRP
- Features and functionality available only in the Cisco NetSpace learning environment
- Updated content
- Certification alignment
- Instructional flexibility
- Exam validity and security
- Support for mobile devices

Q15. Are students advised to complete four CCNA Routing and Switching courses before enrolling in the CCNA Security course?
A. It is not necessary to complete four courses. Students who complete two CCNA R&S courses; one of the CCNA introductory courses (Introduction to Networks or Network Basics) and the Routing and Switching Essentials course, will be prepared to take the CCNA Security course.

Q16. When will the CCNA Routing and Switching curriculum be available?
A. The Introduction to Networks and Network Basics courses were released on 6 June 2013. The Routing and Switching Essentials and Routing Protocols courses will be released in August 2013 and the remaining three courses (Scaling Networks, Switched Networks, and Connecting Networks) will be released in November 2013.

Q17. Will CCNA alumni have access to the new CCNA R&S courses?
A. Yes. Alumni can be granted access to the new CCNA R&S courses by sending an email request to the Global Support Desk as soon as possible at academy-alumni@netacad.net. Please include your full name and Academy Connection or Cisco NetSpace ID or username in your request. The Global Support Desk will add the CCNA R&S courses to your Cisco NetSpace account. This process may take up to one month, so please plan accordingly.

Transition Plans

Q18. How will NetAcad support instructors during the transition to the new curriculum?
A. To help instructors transition to CCNA Routing and Switching from CCNA Discovery or CCNA Exploration, we are offering the following resources:

- An “Are You Ready for CCNA R&S?” self-paced activity to help you prepare for the new topics and technologies included in the new curriculum can be accessed through the Instructor Resource Spotlight page.
- Instructors can preview the Routing and Switching Essentials course from the recommended course flow, and the Routing Protocols course from the additional course flow on the Professional Development Opportunities page.
• Knowledge transfer sessions on the six major new topics in the CCNA Routing and Switching curriculum will be offered during the Global Academy Virtual Conference 16-18 July 2013.
• A comprehensive set of supplemental materials to address technical gaps in student knowledge will be packaged as a bridging offering available on Cisco NetSpace in August 2013.

Q19. Will instructors have the ability to preview the courses prior to their official release?
A. Yes. Instructors will have the ability to preview the courses prior to their official release. Preview versions of the Routing and Switching Essentials and Routing Protocols courses are currently available on the Professional Development Opportunities page.

Q20. What is the “Are You Ready for CCNA R&S?” activity?
A. “Are You Ready for CCNA R&S?” is a self-assessment tool designed to help instructors gauge their technical readiness to teach the new CCNA R&S curriculum. This activity is available in the NetSpace Professional Development Opportunities area.

Q21. What percentage of change should academies anticipate with CCNA Routing and Switching?
A. As the courses become available, the release notes will provide details regarding the extent of topic changes in the new courses. The new CCNA R&S curriculum has undergone significant restructuring to include many new topics and accommodate greater flexibility in teaching, including the ability to add content.

Q22. How do students transition from CCNA Discovery and CCNA Exploration to CCNA Routing and Switching?
A. NetAcad will provide a comprehensive set of supplemental materials to help students transition from CCNA Discovery and CCNA Exploration to the new CCNA R&S curriculum and the new CCENT and CCNA certification exams. These materials will be packaged as a self-study bridging offering on NetSpace in August 2013.

Table 2. CCNA R&S Supplemental Materials to Help Bridge Technical Gaps

<table>
<thead>
<tr>
<th>Topics</th>
<th>Concepts</th>
<th>Practice &amp; Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PPTs, Docs</td>
<td>Videos / Recorded Sessions</td>
</tr>
<tr>
<td>IPv6</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Multi-Area OSPF</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>IOS 15 &amp; IOS 15 Licensing</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Layer 3 Redundancy (HSRP)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Link Aggregation (EtherChannel)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Network Management: NTP, Syslog, SNMP, and NetFlow</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

With more than 700,000 students enrolled in CCNA courses annually, it is a top priority for us to minimize impact during the transition phase. We appreciate your feedback and efforts to address the knowledge gap and help ensure students are not only prepared for the new certification exams, but also learn new skills that will help them be successful in their careers.
Q23. What should instructors do if they cannot teach the new CCNA R&S courses immediately?

A. We understand that some instructors may not be able to teach the new CCNA R&S courses due to one or more of the following reasons:

- The new course is not yet available.
- Instructor has not had adequate time to prepare.
- The administrative process required to integrate the new course into an academy has not been finalized.

If you are unable to teach the new CCNA R&S curriculum immediately, we recommend that you open and teach CCNA Discovery or CCNA Exploration courses, leverage the supplemental materials to address the technical gaps between the old and the new courses, and then adopt the new curriculum as soon as possible.

Equipment

Q24. What are the CCNA Routing and Switching lab equipment requirements?

A. Please refer to the requirements specified in the current CCNA Discovery and CCNA Exploration equipment list, which supports Cisco IOS 15 as well as the CCNA Routing and Switching curriculum. We encourage all Cisco Academies to upgrade their equipment as needed to enjoy the full benefits of the new curriculum:

- 3 CISCO1941/K9 Integrated Services Routers Generation 2 (ISR-G2)
- 3 HWIC-2T Serial WAN Interface Cards
- 3 WS-C2960-24TT-L Cisco Catalyst switches
- Cisco SMARTnet 8x5xNBD for Cisco 1941 Router and Catalyst switch
- 2 Linksys EA Series routers (2700, 3500, 4500) or equivalent

Please note that ISR-G1 routers (1841, 2801, and 2811) can run IOS 15 and can be used for CCNA R&S labs; however, they may require a memory upgrade.

To upgrade IOS software versions and activate feature sets required for Cisco Networking Academy courses, academies can sign up for the Networking Academy™ Maintenance Service, which is available to them at no cost.

For more information, refer to the following resources:

- Networking Academy Maintenance Service Datasheet for program details and sign-up information
- Networking Academy Maintenance – Image & Hardware Support for details including recommended IOS15 images for ISRs
- The NetSpace Equipment Information site, which can be accessed from the Program menu

Q25. My academy is using the 1921 ISR, do I need to upgrade?

A. NetAcad specifies the use of the 1941 ISR to provide greater support for memory or network interface upgrades. However, some academies may decide to use the 1921 ISRs due to factors including lower pricing and a smaller shelf foot print (one rack unit instead of two).

CCNA Routing and Switching requires IOS 15.2, and the 1921 ISR can run IOS 15.2. However, please keep in mind that the 1921 ISRs are not upgradable should the need arise to upgrade the memory to run future IOS software versions.
Q26. What is the impact to student learning if an academy cannot upgrade lab equipment to IOS15?
A. IOS 15, which fully supports IPv6, is a critical component of the CCNA Routing and Switching curriculum. We highly encourage all academies to upgrade to IOS 15 as quickly as possible.

Academies that cannot upgrade to IOS 15 immediately may leverage Cisco Packet Tracer to supplement the hands-on labs and enable students to be adequately exposed to IOS 15 commands and other features, especially IPv6.

Q27. Will the Eagle server be required with the new CCNA R&S curriculum?
A. No. Labs and activities in the new CCNA R&S curriculum have been designed to use real equipment or Packet Tracer. There is no requirement to use the Eagle Server to support labs, activities, or instructional processes.

Instructor Training

Q28. What are the CCNA Routing and Switching training requirements for current instructors?
A. Current CCNA Discovery and CCNA Exploration instructors will be qualified to teach the equivalent CCNA Routing and Switching courses. However we highly recommend completing CCNA R&S and other applicable training offered through your local Instructor Training Center (ITC), and reviewing instructor professional development courses offered by the NetAcad Technical Advocacy team.

The mapping of qualifications needed to teach CCNA Routing and Switching courses for CCNA Discovery and CCNA Exploration instructors is shown in Table 3.

Table 3. Current and New CCNA Course Mapping

<table>
<thead>
<tr>
<th>CCNA Discovery and CCNA Exploration Courses</th>
<th>CCNA Routing and Switching Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduction to Networks</td>
</tr>
<tr>
<td></td>
<td>Routing and Switching Essentials</td>
</tr>
<tr>
<td></td>
<td>Scaling Networks</td>
</tr>
<tr>
<td></td>
<td>Connecting Networks</td>
</tr>
<tr>
<td>CCNA D1 or E1</td>
<td>X</td>
</tr>
<tr>
<td>CCNA D2 or E2</td>
<td>X</td>
</tr>
<tr>
<td>CCNA D3 or E3</td>
<td>X</td>
</tr>
<tr>
<td>CCNA D4 or E4</td>
<td>X</td>
</tr>
</tbody>
</table>

Q29. What are the CCNA Routing and Switching training requirements for new instructors?
A. New instructors will need to follow the new instructor qualification process, which includes completing training offered through an Instructor Training Center (ITC).

Additional Information

Q30. When will the Cisco Press® books for the CCNA Routing and Switching courses be available?
The CCNA Routing and Switching course booklets, which contain the exact text from the online courses, are scheduled for release two months after the release of the courses.

The lab manuals, containing a complete collection of all the course lab exercises, are also scheduled for release two months after the release of the courses.

The Companion Guides (text books) are scheduled for release five months after the release of the courses.
We will communicate exact availability dates as we make further progress in developing the CCNA Routing and Switching curriculum. You may also visit the Cisco Press Networking Academy Resource Center for more details, including the ISBNs and updated availability dates.

**Q31. What are the translation plans for CCNA Routing and Switching courses?**

**A.** The four recommended courses will be translated into multiple languages. The priority of global student needs and extent of community involvement will determine the language versions to be made available for each course.

Target availability for the translated course versions is six to nine months after the English course versions are available. Please note that the new Cisco CCENT (ICND1) and CCNA Routing and Switching (ICND2) exams are only available in English and Simplified Chinese.

The three additional courses supporting transition will be released in English only and will not be translated.

As announced on 6 June 2013, the English versions of Introduction to Networks and Network Basics are available now for immediate use on Cisco NetSpace. Translated versions of Introduction to Networks in Arabic, Simplified Chinese, French, Spanish, Russian, Br. Portuguese, Japanese, and Turkish will be available in six to nine months. The investments required to provide additional language translations are being considered and prioritized. Network Basics will not be translated, per the policy listed in Q13.

**Q32. Where can I find more information about CCNA Routing and Switching?**

**A.** Please visit the CCNA area on NetSpace ([Offerings > CCNA](https://www.cisco.com/go/offerings)) and the CCNA instructor community ([Communities > CCNA](https://www.cisco.com/go/ccna)) for the latest updates and information on the CCNA Routing and Switching curriculum. We will continue to communicate new information as it becomes available. Documents and links to other resources such as the “Are You Ready for CCNA R&S?” activity are available on the [CCNA Routing and Switching Instructor Resource Spotlight](https://www.cisco.com/go/ccnaresource) page.