CCIE Routing and Switching

CCIE Routing and Switching Written Exam (400-101)

The Cisco CCIE® Routing and Switching Written Exam will validate that professionals have the expertise to: configure, validate, and troubleshoot complex enterprise network infrastructure; understand how infrastructure components interoperate; and translate functional requirements into specific device configurations.

An Evolving Technologies section is included in the Written exam only. It will enable candidates to bridge their core technology expertise with knowledge of the evolving technologies that are being adopted at an accelerated pace, such as cloud, IoT, and network programmability.

It has been recalibrated and will consist of three subdomains and a total of five tasks for which the expected depth of knowledge will be focused on conceptual comprehension. The Evolving Technologies section will account for 10 percent of the total score while the remaining core technologies will account for 90 percent.

The following topics are general guidelines for the content likely to be included on the exam. However, other related topics may also appear on any specific delivery of the exam. In order to better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

1.0 Network Principles	**10%**
2.0 Layer 2 Technologies	**13%**
3.0 Layer 3 Technologies	**37%**
4.0 VPN Technologies	**13%**
5.0 Infrastructure Security	**5%**
6.0 Infrastructure Services	**12%**
7.0 Evolving Technologies v1.1	

CCIE Routing and Switching Lab Exam

About the CCIE Lab Exam

The CCIE lab exam is an eight-hour, hands-on exam which requires you to configure and troubleshoot a series of complex networks to given specifications. Knowledge of troubleshooting is an important skill and candidates are expected to diagnose and solve issues as part of the CCIE lab exam. You will not configure end-user systems, but are responsible for all devices residing in the network (hubs, etc.). Point values and testing criteria are provided. More detail is found on the Routing and Switching Lab Exam Blueprint and the list of Lab Equipment and IOS Versions.

Lab Environment

The Cisco documentation is available in the lab room, but the exam assumes knowledge of the more common protocols and technologies. The documentation can be navigated using the index. No outside reference materials are permitted in the lab room. You must report any suspected

equipment issues to the proctor during the exam; adjustments cannot be made once the exam is over.

Lab Exam Grading

The labs are graded by proctors who ensure that all the criteria have been met. They will use automatic tools to gather data from the routers in order to perform preliminary evaluations. Candidates must reach a minimum threshold in all three sections and achieve an overall passing score.

Lab Format

The Troubleshooting module is 2 hours. If desired, candidates can extent the Troubleshooting module's time by borrowing up to 30 min from the Configuration module. Note, the total Configuration module time will be reduced by the extra time spend in the Troubleshooting module (if any, up to 30 min). If candidates finish the Troubleshooting module early, the unused Troubleshooting module's time will be added to the Configuration module's time, ensuring a total lab exam time of 8 hours. The Diagnostic module is fixed in duration (30 minutes).