

## **Exam Description**

The Implementing Cisco IP Routing (ROUTE 642-902) is a qualifying exam for the Cisco Certified Network Professional CCNP®, Cisco Certified Internetwork Professional CCIP®, and Cisco Certified Design Professional CCDP® certifications. The ROUTE 642-902 exam will certify that the successful candidate has the knowledge and skills necessary to use advanced IP addressing and routing in implementing scalable and secure Cisco ISR routers connected to LANs and WANs. The exam also covers configuration of secure routing solutions to support branch offices and mobile workers.

## **Exam Topics**

The following information provides 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.

### **Implement an EIGRP based solution, given a network design and a set of requirements**

- Determine network resources needed for implementing EIGRP on a network
- Create an EIGRP implementation plan
- Create an EIGRP verification plan
- Configure EIGRP routing
- Verify EIGRP solution was implemented properly using show and debug commands
- Document results of EIGRP implementation and verification

### **Implement a multi-area OSPF Network, given a network design and a set of requirements**

- Determine network resources needed for implementing OSPF on a network
- Create an OSPF implementation plan(642-902) ROUTE Exam Topics
- Create an OSPF verification plan
- Configure OSPF routing
- Verify OSPF solution was implemented properly using show and debug commands
- Document results of OSPF implementation and verification plan

### **Implement an eBGP based solution, given a network design and a set of requirements**

- Determine network resources needed for implementing eBGP on a network
- Create an eBGP implementation plan
- Create an eBGP verification plan
- Configure eBGP routing
- Verify eBGP solution was implemented properly using show and debug commands

- Document results of eBGP implementation and verification plan

**Implement an IPv6 based solution, given a network design and a set of requirements**

- Determine network resources needed for implementing IPv6 on a network
- Create an IPv6 implementation plan
- Create an IPv6 verification plan
- Configure IPv6 routing
- Configure IPv6 interoperation with IPv4
- Verify IPv6 solution was implemented properly using show and debug commands
- Document results of IPv6 implementation and verification plan

**Implement an IPv4 or IPv6 based redistribution solution, given a network design and a set of requirements**

- Create a redistribution implementation plan based upon the results of the redistribution analysis
- Create a redistribution verification plan
- Configure a redistribution solution
- Verify that a redistribution was implemented
- Document results of a redistribution implementation and verification plan
- Identify the differences between implementing an IPv4 and IPv6 redistribution solution(642-902)

ROUTE Exam Topics

**Implement Layer 3 Path Control Solution**

- Create a Layer 3 path control implementation plan based upon the results of the redistribution analysis
- Create a Layer 3 path control verification plan
- Configure Layer 3 path control
- Verify that a Layer 3 path control was implemented
- Document results of a Layer 3 path control implementation and verification plan
- Implement basic teleworker and branch services
- Describe broadband technologies
- Configure basic broadband connections
- Describe basic VPN technologies
- Configure GRE
- Describe branch access technologies