

## CCNA Routing and Switching: Introduction to Networks

During the Cisco Networking Academy® course, administered by the undersigned instructor, the student was able to proficiently:

- Understand and describe the devices and services used to support communications in data networks and the Internet
- Understand and describe the role of protocol layers in data networks
- Understand and describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments
- Design, calculate, and apply subnet masks and addresses to fulfill given requirements in IPv4 and IPv6 networks
- Explain fundamental Ethernet concepts such as media, services, and operations
- Build a simple Ethernet network using routers and switches
- Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations
- Utilize common network utilities to verify small network operations and analyze data traffic

**Boitumelo Mosala**

Student

**Central University of Technology FS**

Academy Name

**South Africa**

Location

**Leon van der Linde**

Instructor

**20 Jul 2016**

Date

Instructor Signature

## CCNA Routing and Switching: Routing and Switching Essentials

The student has successfully achieved student level credential for completing CCNA Routing and Switching: Routing and Switching Essentials course administered by the undersigned instructor. The student was able to proficiently:

- Determine how a router will forward traffic based on the contents of a routing table.
- Explain how switching operates in a small to medium-sized business network.
- Use monitoring tools and network management protocols to troubleshoot data networks.
- Configure monitoring tools available for small to medium-sized business networks.
- Configure initial settings on a network device.
- Configure Ethernet switch ports.
- Implement VLANs.
- Implement static routing and RIPv2.
- Implement DHCP on a router.
- Implement network address translation (NAT).
- Implement access control lists (ACLs) to filter traffic.

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**Boitumelo Mosala**

Student

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**Central University of Technology FS**

Academy Name

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**South Africa**

Location

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**6 Dec 2016**

Date

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**Leon van der Linde**

Instructor

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Instructor Signature

## CCNA Routing and Switching: Scaling Networks

During the Cisco Networking Academy® course, administered by the undersigned instructor, the student was able to proficiently:

- Understand, configure, and troubleshoot enhanced switching technologies such as VLANs, Rapid Spanning Tree Protocol (RSTP), Per VLAN Spanning Tree Plus Protocol (PVST+), and EtherChannel
- Understand, configure, and troubleshoot first hop redundancy protocols (HSRP) in a switched network
- Understand, configure, and troubleshoot wireless routers and wireless clients
- Configure and troubleshoot routers in a complex routed IPv4 or IPv6 network using single-area OSPF, multiarea OSPF, and Enhanced Interior Gateway Routing Protocol (EIGRP)
- Manage Cisco IOS® Software licensing and configuration files

**Boitumelo Mosala**

Student

**Central University of Technology FS**

Academy Name

**South Africa**

Location

**Leon van der Linde**

Instructor

**12 Jan 2018**

Date

Instructor Signature