

CCNA Summary

CCNA Routing & Switching *200-120* Understanding Networks and their Building Blocks

TODO

This chapter is not yet complete!

IP Addressing and Subnets

TODO

This chapter is not yet complete!

Introduction to Cisco Routers, Switches and IOS

TODO

This chapter is not yet complete!

Introduction to IP Routing

TODO

This chapter is not yet complete!

Routing Protocols

TODO

This chapter is not yet complete!

Switching and Spanning Tree Protocol

TODO

This chapter is not yet complete!

VLANs and VTP

TODO

This chapter is not yet complete!

Network Security

TODO

This chapter is not yet complete!

Access Lists

TODO

This chapter is not yet complete!

Network Address Translation (NAT)

TODO

This chapter is not yet complete!

Wide Area Networks

TODO

This chapter is not yet complete!

Virtual Private Networks

TODO

This chapter is not yet complete!

IPv6

IPv6 Introduction

Due to the shortcomings of IPv4, the Internet Protocol version 6 (IPv6) has been created. The main reason for migratig TCP/IP networks from IPv4 to IPv6 is the avaiable address space. While IPv4 uses a 32-bit address, IPv6 uses a 128-bit address. The change from IPv4 to IPv6 also impacts other protocols as well (*OSPFv3*, *EIGRPv6*, *etc.*).

Just like IPv4, the main objective of IPv6 is to enable devices to forward packets through multiple routers so they arrive at the correct destination. However, IPv6 contains a number of differences over IPv4:

- Larger address space;
- Auto-configuration;

- The IPv6 header is *not* similar to the IPv4 header;
- Extension headers/options;
- Authentication and privacy;
- Flow labels (*QoS*).

There are thee types of IPv6 addresses:

Unicast Unique address for each interface.

Anycast Multiple interfaces, packets are send to one (*nearest*).

Multicast Multiple interfaces, packets are send to all.

Key Concept

IPv6 broadcast addresses are special case of multicast addresses.

IPv6 Address Configuration

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This chapter is not yet complete!

OSPF version 3

TODO

This chapter is not yet complete!

EIGRP for IPv6

TODO

This chapter is not yet complete!

IP Services

TODO

This chapter is not yet complete!

<https://github.com/roaldnefs/ccna>