

# Programa analitica curs “CCNA Switching and Routing”

## Modul 1. Introduction to Networks

### 1.0 Introduction

- 1.1 Globally Connected
  - 1.1.1 Networking Today
  - 1.1.2 Providing Resources in a Network
- 1.2 LANs, WANs, and the Internet
  - 1.2.1 Components of a Network
  - 1.2.2 LANs and WANs
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- 2.0.1 Introduction
- 2.1 IOS Bootcamp
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  - 3.2.3 Standards Organizations
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- 3.3 Moving Data in the Network
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  - 4.1.3 Fundamental Principles of Layer 1
- 4.2 Network Media
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  - 5.2.1 ARP
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- 5.3 LAN Switches
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- 6.2.2 Router Routing Tables
- 6.3 Routers
  - 6.3.1 Anatomy of a Router
  - 6.3.2 Router Boot-up
- 6.4 Configuring a Cisco Router
  - 6.4.1 Configure Initial Settings
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  - 5.1.3 Configure Router-on-a-Stick Inter-VLAN Routing
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  - 6.1.2 Types of Static Routes
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9.4.1 Processing Packets with ACLs

9.4.2 Common ACLs Errors

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10.2 Dynamic Host Configuration Protocol v6

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11.1.1 NAT Characteristics

11.1.2 Types of NAT

11.1.3 Benefits of NAT

11.2 Configuring NAT

11.2.1 Configuring Static NAT

11.2.2 Configuring Dynamic NAT

11.2.3 Configuring Port Address Translation

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11.2.5 Configuring NAT and IPv6

11.3 Troubleshooting NAT

11.3.1 Troubleshooting NAT

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1.2 Selecting Network Devices

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- 4.3 Wireless LAN Security
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- 4.4 Wireless LAN Configuration
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- 5.2 Troubleshooting Single-Area OSPF Implementations
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- 5.2.2 Troubleshoot Single-Area OSPFv2 Routing Issues
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  - 6.1.2 Multiarea OSPF LSA Operation
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##### 1.1.2 Hierarchical Network Design

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##### 3.2.3 PPP Sessions

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##### 4.1.1 Benefits Frame Relay

##### 4.1.2 Frame Relay Operation

##### 4.1.3 Advanced Frame Relay Concepts

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##### 4.2.1 Configure Basic Frame Relay

##### 4.2.2 Configure Subinterfaces

##### 4.3 Troubleshoot Connectivity

#### 4.3.1 Troubleshoot Frame Relay

### **5.0 Network Address Translation for IPv4**

#### 5.1 NAT Operation

##### 5.1.1 NAT Characteristics

##### 5.1.2 Types of NAT

##### 5.1.3 Benefits of NAT

#### 5.2 Configuring NAT

##### 5.2.1 Configuring Static NAT

##### 5.2.2 Configuring Dynamic NAT

##### 5.2.3 Configuring Port Address Translation (PAT)

##### 5.2.4 Port Forwarding

##### 5.2.5 Configuring NAT and IPv6

#### 5.3 Troubleshooting NAT

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##### 7.1.2 Types of VPNs

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##### 7.2.1 Fundamentals of Generic Routing Encapsulation

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##### 7.3.1 Internet Protocol Security

##### 7.3.2 IPsec Framework

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#### 8.1 Syslog

##### 8.1.1 Syslog Operation

##### 8.1.2 Configuring Syslog

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##### 8.2.1 SNMP Operation

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8.3.1 NetFlow Operation

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9.2.3 Troubleshooting IP Connectivity