CCNA Exploration 1 – Network Fundamentals v4.0 – Structura cursului (Course Outline)

Chapter 1. Living in a Network-Centric World
Chapter 2. Communicating Over the Network
Chapter 3. Application Layer Functionality and Protocols
Chapter 4. OSI Transport Layer
Chapter 5. OSI Network Layer
Chapter 6. Addressing the Network – IPv4
Chapter 7. Data Link Layer
Chapter 8. OSI Physical Layer
Chapter 9. Ethernet
Chapter 10. Planning and Cabling Networks
Chapter 11. Configuring and Testing Your Network

Chapter 1. Living in a Network-Centric World

1.0 Chapter Introduction

1.1 Communicating in a Network-Centric World

1.2 Communication – An Essential Part of Our Lives

1.3 The Network as a Platform

1.4 The Architecture of the Internet

1.5 Trends in Networking

1.6 Chapter Labs

1.7 Chapter Summary

1.8 Chapter Quiz

Chapter 2. Communicating Over the Network

2.0 Chapter Introduction

2.1 The Platform for Communications

2.2 LANs, WANs, and Internetworks

2.3 Protocols

2.4 Using Layered Models

2.5 Network Addressing

2.6 Chapter Labs

2.7 Chapter Summary

2.8 Chapter Quiz

Chapter 3. Application Layer Functionality and Protocols

- 3.0 Chapter Introduction
- 3.1 Applications – The Interface Between the Networks
- 3.2 Making Provisions for Applications and Services
- 3.3 Application Layer Protocols and Services Examples
- 3.4 Chapter Labs
- 3.5 Chapter Summary
- 3.6 Chapter Quiz

Chapter 4. OSI Transport Layer

- 4.0 Chapter Introduction
- 4.1 Roles of the Transport Layer
- 4.2 The TCP Protocol – Communicating with Reliability
- 4.3 Managing TCP Sessions
- 4.4 The UDP Protocol – Communicating with Low Overhead
- 4.5 Chapter Labs
- 4.6 Chapter Summary
- 4.7 Chapter Quiz

Chapter 5. OSI Network Layer

- 5.0 Chapter Introduction
- 5.1 IPv4
- 5.2 Networks – Dividing Devices into Groups
- 5.3 Routing – How Our Data Packets are Handled
- 5.4 Routing Processes: How Routes are Learned
- 5.5 Chapter Labs
- 5.6 Chapter Summary
- 5.7 Chapter Quiz

Chapter 6. Addressing the Network – IPv4

- 6.0 Chapter Introduction
- 6.1 IPv4 Addresses
- 6.2 Addresses for Different Purposes
- 6.3 Assigning Addresses
- 6.4 Is It On My Network?
- 6.5 Calculating Addresses
- 6.6 Testing the Network Layer
- 6.7 Chapter Labs
- 6.8 Chapter Summaries
- 6.9 Chapter Quiz

Chapter 7. Data Link Layer

- 7.0 Chapter Introduction
- 7.1 Data Link Layer – Accessing the Media
- 7.2 Media Access Control Techniques
- 7.3 Media Access Control Addressing and Framing Data
- 7.4 Putting It All Together
- 7.5 Chapter Labs
- 7.6 Chapter Summary
- 7.7 Chapter Quiz

Chapter 8. OSI Physical Layer

- 8.0 Chapter Introduction
- 8.1 The Physical Layer – Communication Signals
- 8.2 Physical Signaling and Encoding: Representing
- 8.3 Physical Media – Connecting Communication
- 8.4 Chapter Labs
- 8.5 Chapter Summary
- 8.6 Chapter Quiz

Chapter 9. Ethernet

- 9.0 Chapter Introduction

9.1 Overview of Ethernet

9.2 Ethernet – Communication through the LAN

9.3 The Ethernet Frame

9.4 Ethernet Media Access Control

9.5 Ethernet Physical Layer

9.6 Hubs and Switches

9.7 Address Resolution Protocol (ARP)

9.8 Chapter Labs

9.9 Chapter Summary

9.10 Chapter Quiz

Chapter 10. Planning and Cabling Networks

10.0 Chapter Introduction

10.1 LANs – Making the Physical Connection

10.2 Device Interconnections

10.3 Developing an Addressing Scheme

10.4 Calculating the Subnets

10.5 Device Interconnections

10.6 Chapter Labs

10.7 Chapter Summary

10.8 Chapter Quiz

Chapter 11. Configuring and Testing Your Network

11.0 Chapter Introduction

11.1 Configuring Cisco Devices – IOS Basics

11.2 Applying a Basic Configuration Using Cisco IOS

11.3 Verifying Connectivity

11.4 Monitoring and Documenting Networks

11.5 Chapter Labs

11.6 Chapter Summary

11.7 Chapter Quiz