



CCNA Network Communication 🕒 13 hours of content | 110 hours of practice | Final Project

1. Introduction to the World of Communication

- Communication Standards
- TCP/IP Model
- ISO Model
- UDP/TCP
- Data Packet Structure
- MAC Address
- IP Addresses
- Communication Equipment
- Types of Networks
- Lab Environment Setup

2. Working with Switches

- Access Modes
- General Commands for Switch Configuration
- ARP Table
- MAC Address Table
- Network Communication Testing
- Password Setup and Password Recovery
- Remote Switch Management
- VLAN Logical Network Segmentation
- Communication in a Switch-Based Network
- Native VLAN
- Trunk & DTP
- VTP
- Spanning Tree
- Rapid Spanning Tree
- IIDP & CDP
- EtherChannel

3. Working with Routers in a Network

- IP Addresses
- IP Address Calculation Based on Subnet Mask
- Private and Public Addresses
- VSLM (Variable Length Subnet Masking)
- Virtual Interface for Communication Between VLANs
- Router Configuration
- DHCP
- LAP and WLC in the WiFi Environment
- WiFi Network Configuration
- Routing Protocols
 - EIGRP
 - OSPF
- Improving Network Performance Using HSRP

4. Network Services and Security

- NAT
- SYSLOG
- SSH
- Attacks on Switches
- Attacks on Network Services
- Using Access Lists
- Working with Port Security
- Network Security

5. IPV6 and Automation

- Introduction to IPV6
- Setting Up an IPV6-Based Network
- Configuring IPV6 Routing
- Performing Actions Using Automation
- Fast Configuration of Switches and Routers
- Working with API Interface
- Working with JSON