

# Networking and TCP/IP Basics and preparation for Network+

Course code: GOC2

The very basic, five-days course which provides students with all the necessary knowledge to understand, deploy, operate and troubleshoot basic networking technologies based on IPv4 and TCP/UDP protocol suites. The course discusses also topics such as DNS, DHCP or IP routing and NAT.

| Affiliate  | Duration | Course price | ITB |
|------------|----------|--------------|-----|
| Praha      | 5        | 31 900 Kč    | 50  |
| Brno       | 5        | 31 900 Kč    | 50  |
| Bratislava | 5        | 1 280 €      | 50  |

The prices are without VAT.

## Course terms

|      | Date       | Duration | Course price | Type     | Course language | Location         |
|------|------------|----------|--------------|----------|-----------------|------------------|
| ☀️🛡️ | 20.07.2026 | 5        | 27 115 Kč    | Presence | CZ/SK           | GOPAS Praha      |
| ☀️🛡️ | 03.08.2026 | 5        | 1 088 €      | Presence | CZ/SK           | GOPAS Bratislava |
| ☀️   | 17.08.2026 | 5        | 27 115 Kč    | Presence | CZ/SK           | GOPAS Praha      |
| ☀️   | 24.08.2026 | 5        | 27 115 Kč    | Presence | CZ/SK           | GOPAS Brno       |
|      | 21.09.2026 | 5        | 31 900 Kč    | Presence | CZ/SK           | GOPAS Praha      |
|      | 12.10.2026 | 5        | 1 280 €      | Presence | CZ/SK           | GOPAS Bratislava |
|      | 19.10.2026 | 5        | 31 900 Kč    | Presence | CZ/SK           | GOPAS Praha      |
|      | 02.11.2026 | 5        | 31 900 Kč    | Presence | CZ/SK           | GOPAS Brno       |
|      | 23.11.2026 | 5        | 31 900 Kč    | Presence | CZ/SK           | GOPAS Praha      |
|      | 07.12.2026 | 5        | 1 280 €      | Online   | CZ/SK           | Online           |
|      | 07.12.2026 | 5        | 31 900 Kč    | Online   | CZ/SK           | Online           |
|      | 14.12.2026 | 5        | 31 900 Kč    | Presence | CZ/SK           | GOPAS Praha      |

The prices are without VAT.

## Who is the course for

This course is intended for workers responsible for service and net administration in a company.

## What we teach you

In this course students learn about nets (mainly about TCP/IP), which are necessary for every administrator.

## Required skills

OS - Windows Server

## Course Outline

Introduction, net examples, network environment formation

Net range.

Components which partake in network environment formation.

Network topology.

Network technology.

RM ISO/OSI model

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# Networking and TCP/IP Basics and preparation for Network+

Origin of ISO/OSI model

Seven layers of the model

Data transport

Kinds of service

Network protocol

Protocols and data transport.

Common protocols used in network environment.

Other communication protocols.

Protocols used in RAS connection.

Protocol TCP/IP

Set of protocol TCP/IP.

Translation of the names on TCP/IP nets.

Description of data transfer process.

Data heading accross nets.

Addressing using protocol IP

IP address classes.

Subneting.

Planning of the address area.

Configuration of the protocol TCP/IP.

Hostsearching optimalization in nets using IP address

Binary IP address entry.

Binary „subnet mask” entry.

Hostsearching process in the net and data transfer.

Possibilities of net monitoring

Network monitor

Networking analysis

Solving of network problems

Automatic allocation of Protocol (IP) addresses

DHCP summary

Installation of DHCP service

Autorization of DHCP service

DHCP "Scope" creation and configuration

DHCP functions adaptation

DHCP configuration in direction IP environment

DHCP support

Implementation of name differentiation using DNS

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Question process DNS summary  
DNS service installation  
Configuration of the name differentiation on clients  
Zone creation and configuration  
Configuration of DNS for internal use  
DNS and DHCP integration  
Support and solving of problems on DNS servers  
Configuration Windows server as a router  
Routers and routing tables summary  
Network connection configuration  
Routing and Remote Access services  
Configuration of static ways  
Configuration of Routing Information Protocol  
Access to Internet configuration  
Possibilities of network connection to Internet  
Access to Internet using Router  
Access to Internet using address translation (NAT)

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