

# Implementing and Oper. Enterprise Network Core Technologies

Course code: ENCOR

The goal of this course is to develop the core networking skills needed to configure, operate, troubleshoot and manage Enterprise wired and wireless networks. It also requires you to understand and implement security principles within the Enterprise network and introduces you to overlay network design by using solutions like SD-Access and SD-WAN. The course also lays focus on implementing automation and programmability in Enterprise networks.

Affiliate	Duration	Course price	ITB
Praha	5	65 000 Kč	0
Bratislava	5	2 690 €	0

The prices are without VAT.

## Course terms

Date	Duration	Course price	Type	Course language	Location
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The prices are without VAT.

### Who is the course for

The goal of this course is to develop the core networking skills needed to configure, operate, troubleshoot and manage Enterprise wired and wireless networks.

### What we teach you

It requires you to understand and implement security principles within the Enterprise network and introduces you to overlay network design by using solutions like SD-Access and SD-WAN. The course also lays focus on implementing automation and programmability in Enterprise networks.

### Required skills

Implementation of Enterprise LAN networks. Basic understanding of Enterprise routing and wireless connectivity "

Basic understanding of Python scripting

### Teaching materials

Course material is provided in electronic format.

### Course outline

- Cisco Enterprise Architecture Model
- Campus LAN Design Fundamentals
- Understanding Cisco Switching Paths
- Implementing Campus LAN Connectivity o VLANs, 802.1Q o InterVLAN Routing
- Bulding Redundant Switched Topology o Spanning-Tree o RSTP, MSTP
- Implementing Layer 2 Port Aggregation
- Understanding EIGRP
- Implementing OSPF
- Optimizing OSPF
- Exploring BGP
- Implementing Network Redundancy o FHRP o HSRP, VRRP
- Implementing NAT
- Introducing Virtualization Protocols and Techniques o GRE, VRF
- Understanding VPN
- Understanding Wireless Principles o Explain RF Principles o IEEE Standards, Antenna Characteristics o Examining Wireless Deployment Options o Enderstanding Wireless Roaming and Location Services o Examining Wireless AP

**GOPAS Praha**  
Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

**GOPAS Brno**  
Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

**GOPAS Bratislava**  
Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



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# Implementing and Oper. Enterprise Network Core Technologies

Operation o Troubleshooting Wireless Client Connectivity

- Implementing Network Services o NTP, SNMP, IP SLA, NetFlow, EEM
- Using Network Analysis Tools o Ping, Traceroute, Debug o IP SLA o SPAN, RSPAN, ERSPAN
- Implementing Infrastructure Security o ACL o Control Plane Policing

3-day selfstudy:

- Introducing Multicast Protocols
- Introducing QoS
- Understanding Enterprise Network Security Architecture
- Exploring Automation and Assurance Using Cisco DNA Center
- Examining Cisco SD-Access Solution
- Understanding Working Principles of the Cisco SD-WAN Solution
- Understanding the Basics of Python Programming
- Introducing Network Programmability Protocols

## **GOPAS Praha**

Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

## **GOPAS Brno**

Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

## **GOPAS Bratislava**

Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



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