

Windows Server - Active Directory Internals and Troubleshooting

Course code: GOC171

This five-days instructor led course presents advanced and troubleshooting topics in the Active Directory. Students will learn internals of Active Directory operation, logical structure of domains and forests, FSMO roles, LDAP objects and attributes, their security and searches, details about client and logon interactions, how to optimize DNS, the internals behind RODC technology as well as everything about AD replication and database maintainance. Students will obtain hands-on experience how to (not)create and repair both common as well as exceptional issues and their causes, such as the lingering objects, USN rollback, corrupted authentication or how will perform several disaster recovery operations including direct NTDS.DIT editing. The course assumes previous knowledge based on the content of MOC 6425 course. The course is taught by trainers who are certified on Microsoft Certified Master Directory Services (MCM: Directory).

Affiliate	Duration	Course price	ITB
Praha	5	37 000 Kč	50
Brno	5	37 000 Kč	50
Bratislava	5	1 500 €	50

The prices are without VAT.

Course terms

Date	Duration	Course price	Type	Course language	Location
  20.04.2026	5	37 000 Kč	Telepresence	CZ/SK	GOPAS Brno
  20.04.2026	5	1 500 €	Telepresence	CZ/SK	GOPAS Bratislava
  20.04.2026	5	37 000 Kč	Telepresence	CZ/SK	GOPAS Praha
   20.07.2026	5	37 000 Kč	Telepresence	CZ/SK	GOPAS Praha
   20.07.2026	5	37 000 Kč	Telepresence	CZ/SK	GOPAS Brno

The prices are without VAT.

At course completion students will be able

Understand Active Directory database and operational internals

Troubleshoot various AD replication, attribute, security and client interactions issues

Plan, design and deploy complex Active Directory environments under high secure concerns

Prerequisites

Knowledge in extent of the courses which are listed in the bellow sections **Previous Courses** and **Related Courses**

Good understanding of Active Directory and Group Policy

Good understanding of TCP/IP and DNS technologies

Course outline

Active Directory network services such as LDAP, Kerberos, NTLM, SMB, DCOM and GC

Design considerations for multimaster replication

Supported, not-supported and/or not-recommended scenarios and role combinations

Storage and attribute capacity limits and data planning

Domains, forests, schema and global catalogue

Schema master and domain naming master

GOPAS Praha

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

GOPAS Brno

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

GOPAS Bratislava

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



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Attribute types and values, secure attributes and logon related attributes
Schema extensions and corruption
Security principals such as users, groups, computers, trusts and managed service accounts
Complex attribute LDAP searches and detailed search syntax
Object and attribute permissions, permission delegation and scripting
Delete operations, tombstones, recycle bin, reanimation and restore
Client interactions, finding DC, protocol transports and constraints
Optimizing DC location and resolving temporary issues or design errors
AD DNS integration, dynamic update and security, aging and scavenging
Optimizing DNS name resolution for clients and DCs
RODC principles, operation and troubleshooting
Planning for secure AD deployments
Replication principles, attribute changes and conflicts
Sites, IP subnets, replication and client DC location
Planning FSMO roles, sites, subnets for optimal replication and client DC location
Detecting and resolving USN rollback, tombstone lifetime and Kerberos authentication issues
AD database internals and structure, tables and indexes
Database maintainance, backup, restore, autoritative restore and virtual environments

Preparation for Microsoft certification

Most Microsoft certification exams do not require students to attend an official MOC course in order to pass the exam.

This applies to all certifications except for MCM

Official Microsoft MOC courses as well as our own GOC courses are good ways of preparation for Microsoft certifications such as MCP, MTA, MCSA, MCSE or MCM

This does not mean that official MOC courses would serve as the only necessary preparation. The primary goal of an MOC course is to provide for sufficient theoretical knowledge and practical experience to effectively work with the related product

MOC courses usually cover most of the topics required by their respective certification exams, but often do not give every topic the same amount of time and emphasis as may be required to completely pass the exam

GOPAS Praha
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Tel.: +420 234 064 900-3
info@gopas.cz

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