### Advanced Scripting with PowerShell for Administrators

Course code: GOC179

This five-days course builds on the basic scripting knowledge that students receive on the official GOC216 and extends their skills in advanced scripting concepts. Students will learn deep details about the PowerShell language syntax, constructs and its internal parsing mechanisms. They will obtain hands on experience developing complex administrative scripts combining various technologies such as ADSI, WMI, .NET Framework and few PowerShell extensions of different application platforms such as Exchange, SharePoint, System Center or those included with Windows Server 2012 and higher.

#### Who is the course for

The course is primarily designed for IT administrators who already use PowerShell or who have gained its working knowledge (e.g. at MOC10325 course). It is designed for those who want to learn advanced techniques of programming in PowerShell and learn the possibilities of Windows operating system administration both via the interface of PowerShell command line and Power Shell language scripts into the details.

#### What we teach you

The participants in this course will be able to administer Windows operating systems using modern techniques via a command line and related scripting technologies. They will learn basic principles of working in PowerShell environment and familiarize themselves with other tools for setting the automatic administrator's tasks. The students will get besides other things the total overview of up to date possibilities of administration outsider a graphical user interface.

#### Required skills

The knowledge of courses listed in Previous Courses and Related Courses section Good knowledge of TCP/IP and DNS technologies

#### Course outline

Possibilities of scripting in Windows overview

Traditional command line External extension WSH and WMI

Basic operation in PowerShell environment

Starting up and initial setting
Commandlets
Saving and starting up your own scripts
Use of Help

Data flow in a script

The principle and using of pipeline
Data entry
Formatting of data output
Managing variables and operators

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## Advanced Scripting with PowerShell for Administrators

Basic structure of the language

Operating the remote devices

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Conditions

Cycles Blocks Function Objects and .NET platform Advanced features of objects .NET Framework thoroughly Text processing Object pipeline Advanced techniques Regular expressions and their use Processing of fault states Work with XML format Operation system administration Log reading, sorting them out and recording Interactive handling of operating system Real time tracking Work with PS objects File system Registry database Certificate repository Use of traditional interfaces and technologies Establishing COM cooperation Coexistence with WSH word WMI technology in PowerShell environment Advanced administration

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# Advanced Scripting with PowerShell for Administrators

Planned and automated tasks
MS Exchange 2007 server administration

Other Windows technologies

Windows Remote Management
WMIC console
WSH and Perl,Python and Ruby languages
LogParser

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