

# PowerShell: Automating Windows administration official course 10961

**Hands-on course of 5 days - 35h**

**Ref.: PWV - Price 2024: €3 100 (excl. taxes)**

## EDUCATIONAL OBJECTIVES

At the end of the training, the trainee will be able to:

Use and execute basic Windows PowerShell commands

Identify and execute cmdlets for server administration

Working with the Windows PowerShell pipeline

Describe techniques for using the Windows PowerShell pipeline

Use PSProviders and PSDrives

Query system information using WMI and CIM

Work with variables, arrays and hash tables

Write basic and advanced scripts in Windows PowerShell

Administer computers remotely

Use background and scheduled tasks

Use advanced Windows PowerShell techniques

## TEACHING METHODS

Training delivered in French. Official Microsoft course materials (digital MOC) in English.

## TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

## ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

## TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

## TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

## ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at [psh-accueil@ORSYS.fr](mailto:psh-accueil@ORSYS.fr) to review your request and its feasibility.

## THE PROGRAMME

last updated: 06/2022

### 1) Getting started with Windows PowerShell

- Overview of Windows PowerShell.
- Understanding the syntax of the commands.
- Identifying and executing commands.

*Hands-on work* : Configuring Windows PowerShell. Searching for and executing basic commands.

### 2) Cmdlets for administration

- Active Directory administration cmdlets.
- Network configuration cmdlets.
- Other server administration cmdlets.

*Hands-on work* : Create and manage Active Directory objects and configure network settings on Windows Server.

### 3) Working with the Windows PowerShell pipeline

- Understanding the pipeline.
- Selection, sorting and measurement of objects.
- Filtering objects outside the pipeline.
- Identifying objects in the pipeline.
- Sending pipeline data as output.

*Hands-on work* : Selection, sorting and display of data. Object filtering and object enumeration. Export user information to a file.

#### 4) PSProviders and PSDrives

- The use of PSProviders.
- The use of PSDrives.

*Hands-on work : Hands-on work*

#### 5) Create files and folders on a remote computer. Create a registry key and an Active Directory group.

- WMI (windows management instrumentation) and CIM (common information model)
- Understanding WMI and CIM.
- Data querying using WMI and CIM.

*Hands-on work : Hands-on work*

#### 6) Querying information using WMI, CIM and method calls.

- Variables, arrays and hash tables (dictionaries)
- The use of variables.
- Working with variables.

*Hands-on work : Hands-on work*

#### 7) Work with variable types, using arrays and hash tables.

- Basic scripts
- Scripts: instructions and use.
- Scripting constructs.

*Hands-on work : Hands-on work*

#### 8) Script creation. Create a random password and users based on a CSV file.

- Advanced scripts
- Accepting a user input.
- Overview of script documentation.

*Hands-on work : Functions and modules.*

#### 9) Hands-on work

- Query disk information from remote computers. Implement functions and modules.
- Administering computers remotely
- Using basic remote Windows PowerShell commands.
- Using Windows PowerShell remote communication techniques.

*Hands-on work : Hands-on work*

#### 10) Create and manage remote access sessions.

- Advanced Windows PowerShell techniques
- Creating profile scripts.
- Using advanced techniques.

*Hands-on work : Create a profile script. Check the validity of an IP address. Report information about the disk. Create user accounts with passwords from a CSV file.*

#### 11) Understanding how the pipeline works

- Processing pipeline data.
- Advanced processing of pipeline data.

*Hands-on work : Pass data using the ByVal technique.*

#### 12) Background tasks and scheduled tasks (job)

- Using background tasks.
- Using scheduled tasks.

*Hands-on work : Create and manage tasks in the background. Create and manage scheduled tasks.*

# DATES

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## REMOTE CLASS

2024 : 24 Jun, 23 Sep, 16 Dec