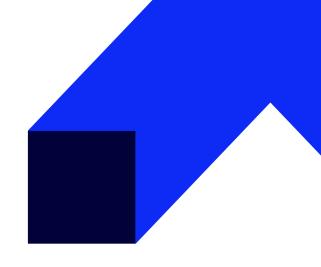


training code: MS 55202 / ENG DL 2d / EN

# PowerShell 5.0 and Desired State Configuration





## Purpose of the training

This is considered a skillset that all operations team need to master, and all developers should be familiar with the technology so they can develop DSC Resources to be used in deploying their software.



## Benefits of completing the training

After completing this course, students will be able to:

- Understand Desired State Configuration.
- Understand that PowerShell handles both imperative and declarative language.
- Understand DSC requirements.
- Understand features added to version 4 of PowerShell.
- Understand features added to version 5 of PowerShell.
- Understand and execute updating the Help System.
- Understand management models.
- Understand and utilize MOF file creation workflow.
- Understand methodologies of configuration data.
- Understand functions and cmdlets available for DSC with WMF 5.0.
- Understand the basics of a DSC Pull Server.
- Understand how to get the parameters working for IntelliSense.
- Understand how to define a DSC configuration script.
- Understand how to utilize resources.
- Understand and utilize the Configuration keyword.
- Understand node filtering.
- Understand and utilize the DSC File Resource.
- Understand and utilize the DSC Archive Resource.
- Understand and utilize the DSC Environment Resource.
- Understand and utilize the DSC Group Resource.
- Understand and enable the Analytic Log.



- Understand and utilize the DSC Log Resource.
- Understand and utilize the DSC Registry Resource.
- Understand and utilize the DSC Script Resource.
- Understand and utilize the DSC Service Resource.
- Understand and utilize the DSC User Resource.
- Understand and utilize the DSC WindowsFeature Resource.
- Understand and utilize parameters.
- Understand both Push and Pull modes.
- Understand and utilize the LCM.
- Understand placing configurations and resources for distribution.
- Understand configuration drift.
- Understand and utilize the debugging feature.
- Understand how to utilize PowerShell.
- Understand and utilize the pipeline.
- Understand and utilize loops.
- Understand and utilize scripting.
- Understand and utilize functions.



### **Expected Listener Preparation**

The students are expected to understand the basics of PowerShell either through attending the introductory courses by BlueBuffaloPress or having gained the experience through some other method.



#### Training Language

• Training: English

· Materials: English



## Training Includes

- manual in electronic form available on the platform: <a href="https://www.altkomakademia.pl/">https://www.altkomakademia.pl/</a>
- access to Altkom Akademia's student portal





#### Duration

2 days / 14 hours

#### Training agenda

- 1. Module 1: Course Overview
  - Introduction
  - Course Materials
  - Facilities
  - Prerequisites
  - What We'll Be Discussing
- 2. Module 2: PowerShell 5.0 Desired State Configuration Introduction
  - Understanding Desired State Configuration
  - Understanding DSC Metaphor
  - PowerShell is Imperative, or Declarative, or Both?
  - Exploring DSC from 30,000 Feet!
  - Examining Why to Put Effort into DSC (Or Inspire Me Dude)?
  - Understanding DSC Requirements
  - Examining PowerShell Version 4: DSC Features Added
  - Exploring PowerShell Version 5: DSC Improvements
- 3. Module 3: DSC Architecture
  - Taking a Preliminary Look
  - Updating the Help System
  - Exploring Management Models
  - Reviewing the MOF File Creation Workflow
  - Examining Methodologies of Configuration Data
  - Exploring Functions and Cmdlets Available for DSC with WMF 5.0
  - Understanding DSC Pull Server
- 4. Module 4: DSC Configuration Files
  - Preparing the Environment
  - Defining a DSC Configuration Script
  - Configuration Keyword
- 5. Module 5: DSC Resources
  - Examining File Resource
  - Exploring Archive Resource



- Examining Environment Resource
- Exploring Group Resource
- Examining Log Resource
- Understanding Package Resource
- Examining Registry Resource
- Exploring Script Resource
- Examining Service Resource
- Exploring User Resource
- Examining WindowsFeature Resource
- Understanding PsDscRunAsCredential
- 6. Module 6: DSC Pull and Push Servers
  - Discussing Parameters
  - Examining a Push Mode Example
  - Exploring the Pull Mode
  - Reviewing the Local Configuration Manager (LCM)
  - Placing Configurations and Resources for Distribution by the Pull Server
  - Discussing Configuration Drift
  - Debugging DSC in Version 5
- 7. Module 7: Appendix: 752552 PowerShell 5.0 Basics
  - Introduction to PowerShell
  - Utilizing PowerShell
  - The Pipeline
  - Processing Data with Loops
  - Scripting and Functions