

**PowerShell 5.0 and Desired State Configuration (MCC-55202)**

**Course Number:** MCC-55202
**Duration:** 2 days

**Overview**

This Microsoft community course 55202, PowerShell 5.0 and Desired State Configuration training, teaches participants how to use DSC to configure, manage, and maintain Windows-based servers using a declarative model for system configuration management.

**Prerequisites**

All students should understand the basics of PowerShell through Accelebrate's [Automating Administration with PowerShell (AZ-040)](file:////training/automating-administration-with-powershell) or have equivalent experience.

**Materials**

All Microsoft training students receive Microsoft official courseware.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computers for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will work well.

**Objectives**

* Work with Desired State Configuration (DSC)
* Create MOF file workflows
* Use different methods for configuring data
* Create and use configuration files
* Use DSC Resources
* Implement parameters, push and pull models, configurations, and debugging techniques

**Outline**

* Introduction
* 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
* 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
* DSC Configuration Files
	+ Preparing the Environment
	+ Defining a DSC Configuration Script
	+ Configuration Keyword
* 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
* 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
* PowerShell 5.0 Basics
	+ Introduction to PowerShell
	+ Utilizing PowerShell
	+ The Pipeline
	+ Processing Data with Loops
	+ Scripting and Functions
* Conclusion