Windows PowerShell: Desired State Configuration

WorkshopPLUS

Duration: 3 Days [Remote / Onsite]
Difficulty Level: 300 - Advanced

Description

The WorkshopPLUS: Windows PowerShell Desired State Configuration is the essential Infrastructure-as-Code offering for Windows servers running on-premises and in the cloud. This workshop enables you to manage small to large environments with ease, all within PowerShell.

This offering will help you meet the challenge – to help your organization increase IT productivity and efficiency and drive down the time and cost required to manage the infrastructure. The offering provides a unified management approach to IaaS workloads running in your private and public cloud environments.

Objectives

After attending this engagement, you will be able to:

- Deploy and troubleshoot server configurations using Desired State Configuration
- Understand the Feature Architecture
- Write Simple to Advanced Configurations
- Implement Push and Pull Servers
- Secure Configuration Data
- Use and Write Resources
- Integrate with Azure Virtual Machines
- Leverage Best Practices
- Troubleshoot and Report Configurations

Outcomes

- Agile processes require a DevOps mindset and a robust approach.
- From Development to Production in record time, without compromising compliance and security requirements
- Bring Dev and Ops closer together through policy-driven infrastructure.

Methodology

Learn by example

You will participate in demonstrations, presentations, and discussion to learn key steps to deploy and troubleshoot DSC.

Hands On

You will work directly with a Microsoft engineer to learn many of the key DSC concepts during hands-on labs and demonstrations.

Scope

The Desired State Configuration Course is intended to help Developers and Operators get their boots on the ground fast. Besides the foundations of Desired State Configuration, participants will learn about advanced concepts like automated testing, build and release pipelines and scalable configuration data for policy-driven infrastructure. This course concentrates on hybrid environments running Windows Server. Attendees can expect to see how on-premises as well as cloud IaaS workloads can be managed using the same set of tools and principles, using a single control plane.

Agenda

Day 1-3
Explore knowledge transfer for modules 1-9

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Delivery Outline

Requirements	
Participants ▪ IT staff **Delivery requirements** ▪ It is recommended that participants have: ▪ Attended Windows PowerShell Foundation Skills ▪ Attended Windows PowerShell IT Management ▪ Experience in PowerShell scripting ▪ Knowledge of Windows Server	**Time commitment** ▪ A three full-day commitment for relevant roles **Technical requirements** ▪ Internet access with at least 1 Mbps bandwidth per participant

Knowledge Transfer			
Module 1	DevOps Introduction	▪ DevOps Big Picture ▪ How DevOps works ▪ Azure DevOps Fundamentals	▪ DevOps at Microsoft ▪ Putting it all together with PowerShell DSC
Module 2	Source Code Management	▪ Source Control ▪ Git Keywords ▪ Commits ▪ History	▪ Remote Repositories ▪ Logging into git ▪ Visual Studio Code ▪ Branching
Module 3	DSC Introduction	▪ DSC Overview ▪ DSC Components ▪ DSC Configurations	▪ MOF Files ▪ Resources ▪ Workflow
Module 4	Configurations and Configuration Data	▪ Scripting Inside Configurations ▪ Using DSC Resource Modules	▪ Dependencies ▪ Configuration Data ▪ Composite Resources
Module 5	DSC Push	▪ What is Push Mode ▪ LCM settings for Push	▪ Invoking Push ▪ Checking state after Push
Module 6	DSC Pull	▪ Self Hosting Pull Server ▪ Pulling configurations	▪ Pull Server Reporting
Module 7	DSC on Azure	▪ Azure Automation	▪ Azure Guest Configuration
Module 8	Building a Release Pipeline	▪ Automated MOF compilation	▪ Automated Testing ▪ Automated Publishing
Module 9	Final Words	▪ Where to go from here? ▪ Future of DSC	▪ Further reading

For more information: Please contact your Microsoft Representative for more details.

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