

Advanced Windows PowerShell and DevOps Course 4117 - 24 Hours

Overview

This three days course provides focuses on leveraging Windows PowerShell for practical DevOps, giving student's depth knowledge and skills on how to use Windows PowerShell 4.0 and 5.0 for advanced automation of administration of Windows based servers and clients.

On Completion, Delegates will be able to

- Understanding Windows PowerShell architecture & considerations
- Working with Pipeline - review alternatives, and their Pros and Cons
- Desired State Configuration - Deploying and maintaining configuration
- Working with the .NET framework extensively, using COM objects etc
- Performance Tips
- Taking background jobs to the next level
- Controlling who can do what - custom security with session configurations
- Security in depth - password strings, execution policies tweaks and more
- Controlling PowerShell session variables for high demanding tasks
- Creating advanced functions and script modules
- Remoting considerations - Performance and Architecture factors
- Working with Azure and Office 365
- Using PowerShell Get and PowerShell gallery with Pshell v5.0

Who Should Attend

This course is intended for IT/QA/Dev Professionals who have to manage configurations and automate tasks across multiple computers in their daily routine. If you know PowerShell well, yet want to go beyond the basics and get some practical tips, - then this course is for you. This course will bring you the answers to anything you wanted to know about PowerShell in the field, in the real world. Also, if you work with other scripting languages (KSH, Bash, Pearl and Python etc.) then this will be helpful for you.

Prerequisites

Before attending this course, students must have:

- Previous Windows Server and Windows Client management knowledge and hands on experience.
- Experience Installing and Configuring Windows Server into existing enterprise environments, or as standalone installations.
- Knowledge and experience of network adapter configuration, basic Active Directory user administration, and basic disk configuration.
- Prior scripting or programming experience, good level of PowerShell and/or good knowledge of equivalent technologies (e.g. Bash, KSH, Pearl, Python etc.)

Course Contents

Module 1: Windows PowerShell - Architecture & Considerations

- Understand the deep concepts behind Windows PowerShell
- How PowerShell works exactly behind the scenes
- Working with Pipeline - review alternatives, and their Pros and Cons

Module 2: Going beyond the obvious tasks - Troubleshooting & Performance

- Getting to job done - know your options (.NET framework, COM objects etc.)
- How to locate the best approach - from cmdlet to wmi to .Net.
- Working with Reflection assemblies (Math, character manipulation etc.)
- Performance Tips
- Controlling PowerShell session variables for high demanding tasks
- Creating filters, advanced functions and script modules

Module 3: Security and Remoting

- Controlling who can do what - custom security with session configurations
- Security in depth - password strings, execution policies tweaks and more
- Remoting - all the considerations - Performance and Architecture factors

Module 4: PowerShell v5.0 - What's worth to look into?

- In depth look into the latest version of PowerShell, new features etc.
- Using PowerShell Get and PowerShell gallery with Pshell v5.0

Module 5: Desired State Configuration

- Deploying and maintaining configuration
- Testing configurations
- Deployment methods - push and pull servers

Module 6: Best Practices working with PowerShell

- Working with html & websites, requests and responses, uploads etc.
- Working with Web-Services (WSDL etc.)
- SQL functions
- Regular expressions, file comparisons etc.

Module 7: One Console to rule them all

- Extending PowerShell into the cloud - working with Azure and Office 365
- Taking background jobs to the next level
- Overview of 200+ scripts with drill down explanation

Module 8: Create your custom task - Advanced Lab

- Hands-on lab to address the student's organizational needs