Course Outline

PTR

People, Training, Results

PowerShell for Microsoft Windows

Course Description:

This instructor led course will introduce students to the Microsoft Windows PowerShell environment. Providing the skills and knowledge to navigate and leverage the capabilities of this increasingly powerful and important Windows Command Line environment. Delegates will learn to install and configure the PowerShell environment, and explore the scripting language and automation possibilities using PowerShell in Windows. This course will also provide a solid platform for developing PowerShell skills further in other parts of the Microsoft Ecosystem, such as Exchange, SharePoint and SQL Server.

Pre-requisites:

This course is designed for System Administrators with experience administering the Windows Platform that are looking to extend their skills, particularly with regards to automating administrative tasks, performing network based administration and configuration and for managing a Windows environment at scale. Delegates should be familiar with the Windows environment, though this course may also appeal to experienced Unix/Linux administrators looking to transfer their skills to the Windows world. Prior experience of scripting would be beneficial but not essential.

Course Content:

- **Introduction to PowerShell – the Basics**

  - What is PowerShell?
  - PowerShell Cmdlets
  - PowerShell Snapins
  - PowerShell Modules
  - PowerShell Remoting
  - Navigating in PowerShell
  - PowerShell Profiles

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- **The PowerShell Pipeline, Scripts and Syntax**
  - Pipelines
  - Scripts
  - Syntax, Output and Script Blocks

- **Variables and Data Types, Variable Scopes, and Collections**
  - Variables and Data Types
  - Variable Scopes
  - Collections

- **Security**
  - Script Execution
  - Signing Scripts
  - Requesting Credentials and Using Secure Strings
  - Securing Remote Sessions

- **Remote Management**
  - Configuring Remote Management
  - Using PowerShell Remoting
  - Using Jobs

- **Script Flow Control Statements**
  - Foreach and For
  - While / Do While / Do Until
  - If / Switch
  - Break /Continue

- **Functions, Filters and Modules**
  - Functions and Filters
  - Scripting with Functions and Parameters
  - Modules

- **Error Handling**
  - Error Handling
  - Script Debugging

Course Outline

- **Administrative Uses**
  - Manipulating files and folders
  - Modifying Registry Data
  - Working with Events
  - Working with Active Directory Objects
  - Advanced Scripting

Course Duration: 3 Days