

PowerShell Fundamentals with Labs

Course Duration: 16 Hours (2 Days)

Overview

The "PowerShell Fundamentals with Labs (2 Days)" course is a comprehensive training program designed to introduce learners to the essential concepts and practices of PowerShell, Microsoft's Task automation and configuration management framework. Through a combination of theoretical lessons and practical PowerShell labs, the course covers the basics of PowerShell and PowerShell Core, Command syntax, and Cmdlet usage for system administration. Starting with an overview of PowerShell's background, the course quickly moves into hands-on experiences with PowerShell labs online, where learners can practice Configuring PowerShell, finding, and running commands. Module 2 delves into cmdlets for various administrative tasks, including Active Directory, Network configuration, and other server administration functions. In Module 3, participants will master the PowerShell pipeline, learning to filter, sort, and enumerate objects, and practice sending output to files. Finally, Module 4 introduces learners to the fundamentals of Scripting within PowerShell. This course is ideal for IT professionals who wish to automate tasks and manage systems efficiently using PowerShell. The practical labs ensure that learners gain hands-on experience, which is critical for applying PowerShell knowledge in real-world scenarios.

Audience Profile

PowerShell Fundamentals with Labs is designed for IT professionals aiming to master automation and configuration management using PowerShell.

- Systems Administrators
- Network Administrators
- Database Administrators
- IT Professionals involved in Windows Server management
- DevOps Engineers
- Technical Support Personnel
- Security Analysts with a focus on Microsoft environments
- Infrastructure Architects
- Software Developers who integrate with Windows environments
- Help Desk Technicians seeking to automate routine tasks
- Professionals preparing for Microsoft certification exams related to PowerShell
- Cloud Engineers working with Azure or other Windows-based cloud platforms

Course Syllabus

Module 1: Getting started with PowerShell

- Module Overview
- Lesson 1: Overview and background of Windows PowerShell and PowerShell core
- Lab A: Configuring Windows PowerShell
- Lesson 2: Understanding command syntax
- Lesson 3: Finding commands
- Lab B: Finding and running basic commands
- Module Review and Takeaways

Module 2: Cmdlets for administration

- Module Overview
- Lesson 1: Active Directory administration cmdlets
- Lesson 2: Network configuration cmdlets
- Lesson 3: Other server administration cmdlets
- Lab: Windows administration
- Module Review and Takeaways

Module 3: Working with the Windows PowerShell pipeline

- Module Overview
- Lesson 1: Understanding the pipeline
- Lesson 2: Selecting, sorting, and measuring objects
- Lab A: Using the pipeline
- Lesson 3: Filtering objects out of the pipeline
- Lab B: Filtering objects
- Lesson 4: Enumerating objects in the pipeline
- Lab C: Enumerating objects
- Lesson 5: Sending pipeline data as output
- Lab D: Sending output to a file
- Module Review and Takeaways

Module 3: Basic Scripting

- Lesson 1: Introduction to scripting
- Lesson 2: Scripting constructs
- Module Review and Takeaways