

MICROSOFT WINDOWS POWERSHELL ULTIMATE BOOTCAMP



Course Introduction:

Learn to master real-world applications of Microsoft Windows Powershell from our experienced IT gurus in our five-day comprehensive bootcamp! We've extracted the most important and useful information from the official Microsoft curriculum into one concise, knowledge packed 5-day hands-on course, taught by experienced real-world consultants!

The Powershell Ultimate Boot Camp is perfect for anyone who is looking to master the real world application of Windows Powershell. Our experienced trainers are IT gurus who will teach you the fundamental knowledge and skills to use Windows Powershell for administering and automating Windows-based servers. This boot camp focuses on primary Windows PowerShell command-line features and techniques. You will learn the necessary prerequisite skills supporting many different Microsoft products, including Windows Server, Windows Client, Exchange Server, SharePoint Server, SQL Server, System Center, and more. Windows Server will serve as the example for the techniques taught in this course.

This five-day comprehensive boot camp will teach you to execute and monitor scripts more efficiently through more robust session connectivity, workflow capabilities, improved job scheduling, and Windows PowerShell Web Access. Learn Windows Powershell with greater ease through improved cmdlet discovery and simplified, consistent syntax across all cmdlets. Write Windows PowerShell scripts quicker and more intuitively through the new Integrated Scripting Environment (ISE) that enables script sharing, which connects IT pros to a larger Windows PowerShell user community.

ULTIMATE Bootcamps!

The instructional design of an Ultimate Bootcamp ensures that you, the student, get the maximum benefit from the course delivery. Students are able to learn more, faster, and have higher retention of knowledge through a combination of highly experienced instructors, quality coaching, hands-on experience, attention to detail, and intuitive courseware.

What You'll Learn:

- Understand the basic concepts behind Windows PowerShell
- Work with the Pipeline
- Understand How the Pipeline Works
- Use PSProviders and PSDrives
- Format Output
- Use WMI and CIM
- Prepare for Scripting
- Moving From a Command to a Script to a Module
- Administer Remote Computers
- Put the various Windows PowerShell components together
- Use Background Jobs and Scheduled Jobs
- Use Advanced PowerShell Techniques and Profiles

Prerequisites:

Before attending this course, students are expected to 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
- Knowledge and hands-on experience specifically with Windows Server 2012 and Windows 8 would be of benefit but is not essential

Who Should Attend:

This course is intended for IT Professionals already experienced in general Windows Server and Windows Client administration or already experienced in administering and supporting Application servers and services including applications like Exchange, SharePoint, and SQL. It is broadly intended for students who want to use Windows PowerShell to automate administrative tasks from the command line, using any Microsoft or independent software vendor (ISV) product that supports Windows PowerShell manageability.

This course includes basic coverage of scripting and programming topics. Students are not expected to have prior scripting or programming experience and are not expected to have prior Windows PowerShell experience.



Ready to Advance Your Career?
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Microsoft PowerShell Ultimate Bootcamp

Course Outline:

Module 1: Getting Started with Windows PowerShell

- Lesson 1: Overview and background of Windows PowerShell
- Lesson 2: Understanding command syntax
- Lesson 3: Finding commands
- Module Review and Takeaways

Module 2: Cmdlets for Administration

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

Module 3: Working with the Windows PowerShell Pipeline

- Lesson 1: Understanding the pipeline
- Lesson 2: Selecting, sorting, and measuring objects
- Lesson 3: Filtering objects out of the pipeline
- Lesson 4: Enumerating objects in the pipeline
- Lesson 5: Sending pipeline data as output
- Module Review and Takeaways

Module 4: Understanding How the Pipeline Works

- Lesson 1: Passing pipeline data
- Lesson 2: Advanced techniques for passing pipeline data
- Module Review and Takeaways

Module 5: Using PSProviders and PSDrives

- Lesson 1: Using PSProviders
- Lesson 2: Using PSDrives
- Module Review and Takeaways

Module 6: Querying Management Information by Using CIM and WMI

- Lesson 1: Understanding CIM and WMI
- Lesson 2: Querying data by using CIM and WMI
- Lesson 3: Making changes by using CIM and WMI
- Module Review and Takeaways

Module 7: Working with Variables, Arrays, and Hash Tables

- Lesson 1: Using variables
- Lesson 2: Manipulating variables
- Lesson 3: Manipulating arrays and hash tables
- Module Review and Takeaways

Module 8: Advanced Scripting

- Lesson 1: Accepting user input
- Lesson 2: Overview of script documentation
- Lesson 3: Troubleshooting and error handling
- Lesson 4: Functions and modules
- Module Review and Takeaways

Labs:

- Lab 1:** Configuring Windows PowerShell
- Lab 2:** Finding and running basic commands
- Lab 3:** Windows administration
- Lab 4:** Using the pipeline
- Lab 5:** Filtering objects
- Lab 6:** Enumerating objects
- Lab 7:** Sending output to a file
- Lab 8:** Working with pipeline parameter binding
- Lab 9:** Using PSProviders and PSDrives
- Lab 10:** Working with CIM and WMI
- Lab 11:** Working with variables
- Lab 12:** Accepting data from users
- Lab 13:** Implementing functions and modules
- Lab 14:** Using basic remoting
- Lab 15:** Using PSSessions

Module 9: Administering Remote Computers

- Lesson 1: Using basic Windows PowerShell remoting
- Lesson 2: Advanced Windows PowerShell remoting techniques
- Lesson 3: Using PSSessions
- Module Review and Takeaways

Module 10: Using Background Jobs and Scheduled Jobs

- Lesson 1: Using background jobs
- Lesson 2: Using scheduled jobs
- Module Review and Takeaways

Module 11: Using Advanced Windows PowerShell Techniques

- Lesson 1: Creating profile scripts
- Lesson 2: Using advanced techniques
- Module Review and Takeaways

Module 12: Creating Advanced Functions

- Lesson 1: Converting a Command Into an Advanced Function
- Lesson 2: Creating a script module
- Lesson 3: Defining parameter attributes and input validation
- Lesson 4: Writing functions that accept pipeline input
- Lesson 5: Producing complex function output
- Lesson 6: Documenting functions by using comment-based Help
- Lesson 7: Supporting -WhatIf and -Confirm
- Module Review and Takeaways

Module 13: Using Microsoft .NET Framework and REST API in Windows PowerShell

- Lesson 1: Using .NET Framework in Windows PowerShell
- Lesson 2: Using REST API in Windows PowerShell
- Module Review and Takeaways

Module 14: Writing Controller Scripts

- Lesson 1: Understanding controller scripts
- Lesson 2: Writing controller scripts that show a user interface
- Lesson 3: Writing controller scripts that produce reports
- Module Review and Takeaways

Module 15: Handling Script Errors

- Lesson 1: Understanding error handling
- Lesson 2: Handling errors in a script
- Module Review and Takeaways

Module 16: Implementing Powershell Scripting with other technologies (VMware, Exchange, Sharepoint, SQL, Active Directory, Hyper V)

- Lab 16:** Using background jobs and scheduled jobs
- Lab 17:** Practicing advanced techniques
- Lab 18:** Converting a command into an advanced function
- Lab 19:** Creating a script module
- Lab 20:** Defining parameter attributes and input validation
- Lab 21:** Writing functions that use multiple objects
- Lab 22:** Writing functions that accept pipeline input
- Lab 23:** Producing complex function output
- Lab 24:** Documenting functions by using comment-based Help
- Lab 25:** Supporting -WhatIf and -Confirm
- Lab 26:** Using .NET Framework in Windows PowerShell
- Lab 27:** REST API in Windows PowerShell to manage IIS websites
- Lab 28:** Writing controller scripts that display a user interface
- Lab 29:** Writing controller scripts that produce HTML reports
- Lab 30:** Handling errors that occur when running a script

