Course duration

- 5 days

Course Benefits

- Describe the functionality of Windows PowerShell and use it to run and find basic commands.
- Identify and run cmdlets for local system administration.
- Work with the Windows PowerShell pipeline.
- Use PSProviders and PSDrives to work with other forms of storage.
- Query system information by using WMI and CIM.
- Work with variables, arrays, and hash tables.
- Create basic scripts in Windows PowerShell.
- Administer remote computers with Windows PowerShell.
- Manage Azure resources with PowerShell.
- Manage Microsoft 365 services with PowerShell.
- Use background jobs and scheduled jobs.

Microsoft Certified Partner

Webucator is a Microsoft Certified Partner for Learning Solutions (CPLS). This class uses official Microsoft courseware and will be delivered by a Microsoft Certified Trainer (MCT).

Course Outline

1. Getting started with Windows PowerShell
   1. Windows PowerShell overview
   2. Understang Windows PowerShell command syntax
   3. Find commands and get help in Windows PowerShell
   4. Lab : Configuring Windows PowerShell, and finding and running commands
2. Windows PowerShell for local systems administration
   1. Active Directory Domain Services administration cmdlets
   2. Network configuration cmdlets
   3. Server administration cmdlets
   4. Windows PowerShell in Windows 10
   5. Lab : Performing local system administration with PowerShell
3. Working with the Windows PowerShell pipeline
   1. Understand the pipeline
   2. Select, sort, and measure objects

     3. Filter objects out of the pipeline
     4. Enumerate objects in the pipeline
     5. Send and pass pipeline data as output
     6. Lab : Using PowerShell pipeline

4. Using PSProviders and PSDrives
     1. Using PSProviders
     2. Using PSDrives
     3. Lab : Using PSProviders and PSDrives with PowerShell

5. Querying management information by using CIM and WMI
     1. Understand CIM and WMI
     2. Query data by using CIM and WMI
     3. Make changes by using CIM and WMI
     4. Lab : Querying information by using WMI and CIM

6. Working with variables, arrays, and hash tables
     1. Use variables
     2. Manipulate variables
     3. Manipulate arrays and hash tables
     4. Lab : Using variables, arrays, and hash tables in PowerShell

7. Windows PowerShell scripting
     1. Introduction to scripting with Windows PowerShell
     2. Script constructs
     3. Import data from files
     4. Accept user input
     5. Troubleshooting and error handling
     6. Functions and modules
     7. Lab : Using scripts with PowerShell

8. Administering remote computers with Windows PowerShell
     1. Use basic Windows PowerShell remoting
     2. Use advanced Windows PowerShell remoting techniques
     3. Use PSSessions
     4. Lab : Performing remote administration with PowerShell

9. Managing Azure resources with PowerShell
     1. Azure PowerShell
     2. Introduce Azure Cloud Shell
     3. Manage Azure VMs with PowerShell
     4. Manage storage and subscriptions
     5. Lab : Azure resource management with PowerShell

10. Managing Microsoft 365 services with PowerShell
     1. Manage Microsoft 365 user accounts, licenses, and groups with PowerShell
     2. Manage Exchange Online with PowerShell
     3. Manage SharePoint Online with PowerShell
     4. Manage Microsoft Teams with PowerShell
     5. Lab : Managing Microsoft 365 with PowerShell

11. Using background jobs and scheduled jobs
     1. Use background jobs
     2. Use scheduled jobs
     3. Lab : Jobs management with PowerShell

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

Class Prerequisites

Experience in the following *is required* for this PowerShell class:

- Experience with Windows networking technologies and implementation.
- Experience with Windows Server administration, maintenance, and troubleshooting.