# AZ-040T00 Automate Administration with PowerShell

**Category:** Infrastructure & IT Operations | **Vendor:** Microsoft Technical

**Duration:** 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

## Course Information

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| **Delivery Format:** | Instructor Led - Online |
| **Certification:** | Microsoft Certified: Azure Administrator Associate |
| **Related Exam:** | AZ-040 |

## Course Overview

This course provides students with the fundamental knowledge and skills to use PowerShell for administering and automating administration of Windows servers. This course provides students the skills to identify and build the command they require to perform a specific task. In addition, students learn how to build scripts to accomplish advanced tasks such as automating repetitive tasks and generating reports. This course provides prerequisite skills supporting a broad range of Microsoft products, including Windows Server, Windows Client, Microsoft Azure, and Microsoft 365. In keeping with that goal, this course will not focus on any one of those products, although Windows Server, which is the common platform for all of those products, will serve as the example for the techniques this course teaches.

## About This Course

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## Who Should Attend

This course is intended for IT Professionals who are already experienced in general Windows Server, Windows client, Azure, and Microsoft 365 administration, and who want to learn more about using Windows PowerShell for administration. No prior experience with any version of PowerShell or any scripting language is assumed. This course is also suitable for IT Professionals already experienced in server administration, including Microsoft Exchange Server, Microsoft SharePoint Server, and Microsoft SQL Server.

### Prerequisites & Entry Requirements

**General Prerequisites:**

Before attending this course, students must have:

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

# Learning Outcomes

**Upon successful completion of this course, participants will be able to:**

Course ObjectivesDescribe 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., Course ObjectivesDescribe 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., Course ObjectivesDescribe 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., Course ObjectivesDescribe 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., Course ObjectivesDescribe 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., Course ObjectivesDescribe 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., Course ObjectivesDescribe 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

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## Detailed Course Outline

### 1 - Review Windows PowerShell

- Learn about Windows PowerShell
- Get familiar with Windows PowerShell applications
- Identify factors to install and use Windows PowerShell
- Configure the Windows PowerShell console
- Configure the Windows PowerShell Integrated Scripting Environment (ISE)
- Use Visual Studio Code with PowerShell
- Module assessment

### 2 - Understand the command syntax in Windows PowerShell

- Discover the structure of PowerShell cmdlets
- Discover the parameters for using PowerShell cmdlets
- Review the tab completion feature in PowerShell
- Display the About files content in PowerShell
- Module assessment

## 3 - Find commands and Get-Help in Windows PowerShell

- Define modules in PowerShell
- Find cmdlets in PowerShell
- Use command aliases in PowerShell
- Use Show-Command and Get-Help in PowerShell
- Interpret the help file contents and update the local help content in PowerShell
- Module assessment

## 4 - Manage Active Directory Domain Services using PowerShell cmdlets

- Manage user accounts in PowerShell
- Manage groups and group memberships in PowerShell
- Manage computer accounts in PowerShell
- Manage organizational units and Active Directory objects in PowerShell
- Module assessment

## 5 - Manage network service settings for Windows devices using PowerShell cmdlets

- Manage IP addresses in PowerShell
- Manage IP routing in PowerShell
- Manage DNS clients in PowerShell
- Manage Windows Firewall settings in PowerShell
- Module assessment

## 6 - Manage Windows Server settings using PowerShell cmdlets

- Automate management tasks using the Group Policy management cmdlets
- Manage server roles and services using PowerShell cmdlets
- Manage Hyper-V Virtual Machines using PowerShell cmdlets
- Manage Internet Information Services using PowerShell cmdlets
- Module assessment

## 7 - Manage settings for a local Windows machine using PowerShell cmdlets

- Manage Windows 10 using PowerShell
- Manage permissions with PowerShell
- Module assessment

## 8 - Understand the Windows PowerShell pipeline

- Review Windows PowerShell pipeline and its output
- Discover object members in PowerShell
- Control the formatting of pipeline output
- Module assessment

## 9 - Select, sort, and measure objects using the pipeline

- Sort and group objects by property in the pipeline
- Measure objects in the pipeline
- Select a set of objects in the pipeline
- Select object properties in the pipeline
- Create and format calculated properties in the pipeline
- Module assessment

## 10 - Filter objects out of the pipeline

- Learn about the comparison operators in PowerShell
- Review basic filter syntax in the pipeline
- Review advanced filter syntax in the pipeline
- Optimize the filter performance in the pipeline
- Module assessment

## 11 - Enumerate objects in the pipeline

- Learn about enumerations in the pipeline
- Review basic syntax to enumerate objects in the pipeline
- Review advanced syntax to enumerate objects in the pipeline
- Module assessment

## 12 - Send and pass data as output from the pipeline

- Write pipeline data to a file
- Convert pipeline objects to other forms of data representation in PowerShell
- Control additional output options in PowerShell
- Module assessment

## 13 - Pass pipeline objects

- Pipeline parameter binding
- Identify ByValue parameters
- Pass data by using ByValue
- Pass data by using ByPropertyName
- Identify ByPropertyName parameters
- Use manual parameters to override the pipeline
- Use parenthetical commands
- Expand property values
- Module assessment

## 14 - Connect with data stores using PowerShell providers

- Define Windows PowerShell providers
- Review the built-in providers in PowerShell
- Access provider help in PowerShell
- Module assessment

## 15 - Use PowerShell drives in PowerShell

- Explain PowerShell drives in PowerShell
- Use PowerShell drive cmdlets in PowerShell
- Manage the file system in PowerShell
- Manage the registry in PowerShell
- Work with certificates in PowerShell
- Work with other PowerShell drives in PowerShell
- Module assessment

## 16 - Review CIM and WMI

- Review architecture of CIM and WMI
- Review repositories in CIM and WMI
- Locate online class documentation by using CIM and WMI cmdlets
- Module assessment

## 17 - Query configuration information by using CIM and WMI

- List local repository namespaces and classes by using CIM and WMI
- Query instances by using commands and WMI Query Language
- Connect to remote computers by using CIM and WMI cmdlets
- Query repository classes from remote computers by using CIMSession objects
- Module assessment

## 18 - Query and manipulate repository objects by using CIM and WMI methods

- Discover methods of repository objects by using CIM and WMI
- Locate class methods and documentation by using CIM and WMI
- Invoke methods of repository objects by using CIM and WMI
- Module assessment

## 19 - Manage variables in Windows PowerShell scripts

- Define variables in Windows PowerShell scripts
- Create variable names in Windows PowerShell scripts
- Assign values and types to variables in Windows PowerShell scripts
- Identify the methods and properties of variables in Windows PowerShell scripts
- Use string variables and methods in Windows PowerShell scripts
- Use date variables and methods in Windows PowerShell scripts
- Module assessment

## 20 - Work with arrays and hash tables in Windows PowerShell scripts

- Define an array in Windows PowerShell scripts
- Work with array lists in Windows PowerShell scripts
- Define hash tables in Windows PowerShell Scripts
- Work with hash tables in Windows PowerShell scripts
- Module assessment

## 21 - Create and run scripts by using Windows PowerShell

- Review Windows PowerShell scripts
- Modify scripts in the PowerShell Gallery
- Create scripts using Windows PowerShell
- Review the PowerShellGet module in Windows PowerShell
- Run scripts and set the execution policy in Windows PowerShell
- Review Windows PowerShell and AppLocker
- Sign the scripts digitally in Windows PowerShell
- Module assessment

## 22 - Work with scripting constructs in Windows PowerShell

- Review and use the ForEach loop in Windows PowerShell scripts
- Review and use the If construct in Windows PowerShell scripts
- Review and use the Switch construct in Windows PowerShell scripts
- Review the For construct in Windows PowerShell scripts
- Review other loop constructs in Windows PowerShell scripts
- Review Break and Continue in Windows PowerShell scripts
- Module assessment

## 23 - Import data in different formats for use in scripts by using Windows PowerShell cmdlets

- Use the Get-Content command in Windows PowerShell scripts
- Use the Import-Csv cmdlet in Windows PowerShell scripts
- Use the Import-Clixml cmdlet in Windows PowerShell scripts
- Use the ConvertFrom-Json cmdlet in Windows PowerShell scripts
- Module assessment

## 24 - Use methods to accept user inputs in Windows PowerShell scripts

- Identify values that might change in Windows PowerShell scripts
- Use the Read-Host cmdlet in Windows PowerShell scripts
- Use the Get-Credential cmdlet in Windows PowerShell scripts
- Use the Out-GridView cmdlet in Windows PowerShell scripts
- Pass parameters to a Windows PowerShell script
- Module assessment

## 25 - Troubleshoot scripts and handle errors in Windows PowerShell

- Interpret error messages generated for Windows PowerShell commands
- Add output to Windows PowerShell scripts
- Use breakpoints in Windows PowerShell scripts
- Interpret error actions for Windows PowerShell commands
- Module assessment

## 26 - Use functions and modules in Windows PowerShell scripts

- Review functions in Windows PowerShell scripts
- Use variable scope in Windows PowerShell scripts
- Create modules in Windows PowerShell scripts
- Use the dot sourcing feature in Windows PowerShell
- Module assessment

## 27 - Manage single and multiple computers by using Windows PowerShell remoting

- Review the remoting feature of Windows PowerShell
- Compare remoting with remote connectivity
- Review the remoting security feature of Windows PowerShell
- Enable remoting by using Windows PowerShell
- Use one-to-one remoting by using Windows PowerShell
- Use one-to-many remoting by using Windows PowerShell
- Compare remoting output with local output
- Module assessment

## 28 - Use advanced Windows PowerShell remoting techniques

- Review common remoting techniques of Windows PowerShell
- Send parameters to remote computers in Windows PowerShell
- Set access protection to variables, aliases, and functions by using the scope modifier
- Enable multi-hop remoting in Windows PowerShell
- Module assessment

## 29 - Manage persistent connections to remote computers by using Windows PowerShell sessions

- Review persistent connections in Windows PowerShell
- Create and manage persistent PSSessions by using Windows PowerShell
- Disconnect PSSessions by using Windows PowerShell
- Review the feature of implicit remoting in Windows PowerShell
- Module assessment

## 30 - Review Azure PowerShell module

- Review Azure PowerShell
- Review the benefits of the Azure PowerShell module
- Install the Azure PowerShell module
- Migrate Azure PowerShell from AzureRM to Azure
- Review Microsoft Azure Active Directory module for Windows PowerShell and Azure Active Directory PowerShell for Graph modules
- Module assessment

## 31 - Review the features and tools for Azure Cloud Shell

- Review the characteristics of Azure Cloud Shell
- Review the features and tools of Azure Cloud Shell
- Configure and experiment with Azure Cloud Shell
- Module assessment

## 32 - Manage Azure resources with Windows PowerShell

- Create a new Azure virtual machine by using Windows PowerShell commands
- Manage Azure virtual machines by using Windows PowerShell commands
- Manage Azure related storage by using Azure PowerShell
- Manage Azure subscriptions by using Azure PowerShell
- Module assessment

## 33 - Manage users, groups, and licenses in Microsoft Entra ID by using Windows PowerShell

- Review benefits to manage Microsoft 365 services by using Windows PowerShell
- Connect to the Microsoft 365 tenant by using Windows PowerShell
- Manage users in Microsoft 365 by using Windows PowerShell
- Manage groups in Microsoft 365 by using Windows PowerShell
- Manage roles in Microsoft 365 by using Windows PowerShell
- Manage licenses in Microsoft 365 by using Windows PowerShell
- Module assessment

## 34 - Manage Exchange Online by using Windows PowerShell

- Connect to Exchange Online by using Windows PowerShell
- Manage mailboxes in Exchange Online by using Windows PowerShell
- Manage resources in Exchange Online by using Windows PowerShell
- Manage admin roles in Exchange Online by using Windows PowerShell
- Module assessment

## 35 - Manage SharePoint Online by using Windows PowerShell

- Install and connect to SharePoint Online Management Shell by using Windows PowerShell
- Manage SharePoint Online users and groups by using Windows PowerShell
- Manage SharePoint sites by using Windows PowerShell
- Manage SharePoint Online external user sharing by using Windows PowerShell
- Module assessment

## 36 - Manage Microsoft Teams by using Windows PowerShell

- Review Microsoft Teams PowerShell module
- Install the Microsoft Teams PowerShell module
- Manage teams with Microsoft Teams PowerShell module
- Module assessment

## 37 - Create and manage background jobs using Windows PowerShell

- Define the types of background jobs in Windows PowerShell
- Start remote jobs and CIM/WMI jobs in Windows PowerShell
- Monitor jobs in Windows PowerShell
- Retrieve results for running jobs in Windows PowerShell
- Module assessment

## 38 - Create and manage scheduled jobs using Windows PowerShell

- Create and run Windows PowerShell scripts as scheduled tasks
- Define scheduled jobs in Windows PowerShell
- Create job option and job trigger objects in Windows PowerShell
- Create and register a scheduled job in Windows PowerShell
- Retrieve the results from a scheduled job in Windows PowerShell
- Module assessment

, Get started with Windows PowerShell, Maintain system administration tasks in Windows PowerShell, Work with the Windows PowerShell pipeline, Work with PowerShell providers and PowerShell drives in Windows PowerShell, Query management information by using Common Information Model and Windows Management Instrumentation, Use variables, arrays, and hash tables in Windows PowerShell scripts, Create and modify scripts by using Windows PowerShell, Administer remote computers by using Windows PowerShell, Manage cloud resources by using Windows PowerShell, Manage Microsoft 365 services by using Windows PowerShell, Create and manage background jobs and scheduled jobs

in Windows PowerShell, LAB Outline, Use advanced Windows PowerShell remoting techniques, Manage single and multiple computers by using Windows PowerShell remoting, Use functions and modules in Windows PowerShell scripts, Review Azure PowerShell module, Review the features and tools for Azure Cloud Shell, Manage persistent connections to remote computers by using Windows PowerShell sessions, Manage Azure resources with Windows PowerShell, Manage Exchange Online by using Windows PowerShell, Manage users, and licenses in Microsoft Entra ID by using Windows PowerShell, Manage SharePoint Online by using Windows PowerShell, Create and manage background jobs using Windows PowerShell, Manage Microsoft Teams by using Windows PowerShell, Create and manage scheduled jobs using Windows PowerShell, Manage Windows Server settings using PowerShell cmdlets, Manage network service settings for Windows devices using PowerShell cmdlets, Select, and measure objects using the pipeline, Manage settings for a local Windows machine using PowerShell cmdlets, Understand the Windows PowerShell pipeline, Manage variables in Windows PowerShell scripts, Work with arrays and hash tables in Windows PowerShell scripts, Query and manipulate repository objects by using CIM and WMI methods, Query configuration information by using CIM and WMI, Create and run scripts by using Windows PowerShell, Use methods to accept user inputs in Windows PowerShell scripts, Troubleshoot scripts and handle errors in Windows PowerShell, Work with scripting constructs in Windows PowerShell, Import data in different formats for use in scripts by using Windows PowerShell cmdlets, Review CIM and WMI, Use PowerShell drives in PowerShell, Connect with data stores using PowerShell providers, Send and pass data as output from the pipeline, Enumerate objects in the pipeline, Pass pipeline objects, Filter objects out of the pipeline, Manage Active Directory Domain Services using PowerShell cmdlets, Find commands and Get-Help in Windows PowerShell, Understand the command syntax in Windows PowerShell, Review Windows PowerShell

### □□ Certification Path

Microsoft Certified: Azure Administrator Associate

Exam: AZ-040

# Upcoming Schedule

**Available training dates for AZ-040T00 Automate Administration with PowerShell:**

| Start Date | End Date | Location | Delivery | Price |
|---|---|---|---|---|
| 16 Nov 2026 | 20 Nov 2026 | Online | Virtual | €2,995.00 |
| 07 Dec 2026 | 11 Dec 2026 | Online | Virtual | €2,995.00 |
| 11 Jan 2027 | 15 Jan 2027 | Online | Virtual | €2,995.00 |

# Frequently Asked Questions

### Q: What delivery options are available for AZ-040T00 Automate Administration with PowerShell?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

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### Q: What certification does this course prepare me for?

The AZ-040T00 Automate Administration with PowerShell course helps prepare you for the Microsoft Certified: Azure Administrator Associate certification path.

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### Q: Which exam does this course prepare me for?

This course prepares you for the AZ-040 official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

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### Q: How many CPD hours does this course provide?

The 5-day AZ-040T00 Automate Administration with PowerShell course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

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### Q: What is the duration of the AZ-040T00 Automate Administration with PowerShell training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

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### Q: Do you provide corporate training for AZ-040T00 Automate Administration with PowerShell?

Yes, we provide corporate training, dedicated training, and closed classes for AZ-040T00 Automate Administration with PowerShell. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

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### Q: What related terms do people search for?

Popular related searches include: AZ-040T00: Automate Administration with PowerShell, Microsoft, vILT, AZ-040T00

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### Q: Why choose Nexus Human for AZ-040T00 Automate Administration with PowerShell?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

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### Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your AZ-040T00 Automate Administration with PowerShell training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.


## Nexus Human

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