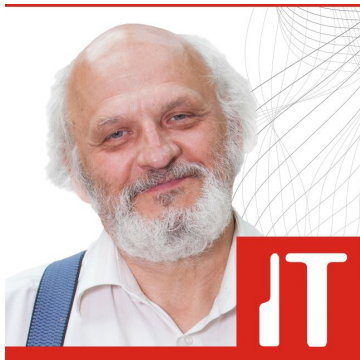


# AZ-040T00: Automating Administration with PowerShell



**Kestus:** 40 akadeemilist tundi

Vana-Lõuna 39/1

[Vaata kõiki toimumiskuupäevi](#)

The main purpose of this course is to provide students with the fundamental knowledge and skills to use PowerShell for administering and automating administration of Windows servers.

**Antud kursused asendavad varasemad MOC-10961 ja MOC-10962 kursused!**



**During this five-days course students will** gain 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.

#### **Target audience:**

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.

**Job role:** Administrator

**Features:** none

#### **After completing this course, students will be able to:**

- 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.

#### **Prerequisites to the course (recommended):**

Before attending this course, students must have:

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

#### **Training Principles:**

**The training is held in Estonian!**

Each learning module is supported by practical exercises with hands-on laboratories.

The prerequisite for issuing the certificate is full participation in training.

Length: 40 academic hours

**Access to the standalone exercise environment Microsoft Labs Online (MLO) for an additional fee.**

**Choose the Microsoft exam that suits you and buy it through IT Training 10% cheaper.**

**Koolituse läbiviimise põhimõtted:**

**Koolitus toimub eesti keeles!**

Koolituse osad on toetatud praktiliste harjutustega õpilaborites.

Tunnistuse väljastamise eelduseks on koolitusel osalemine terves mahus.

Maht: 40 akadeemilist tundi

**Lisatasu eest ligipääs iseseisvale harjutuskeskkonnale Microsoft Labs Online (MLO).**

**Vali endale sobiv Microsofti eksam ja osta see läbi IT Koolituse 10% soodsamalt.**

**Continuing Education Curriculum Group:** 0688 Information and Communication Technology Interdisciplinary curriculum group

**The training topics and description:**

**Module 1: Getting started with Windows PowerShell**

This module will introduce you to Windows PowerShell and provide an overview of the product's functionality. The module explains how to open and configure Windows PowerShell. It also explains how to run commands and use the built-in Help system in Windows PowerShell.

**Module 2: Windows PowerShell for local systems administration**

This module introduces you to the different types of cmdlets commonly used for system administration. While you can search for cmdlets each time you need to accomplish a task, it is more efficient to have at least a basic understanding of these cmdlets. This module also explains how to manage Windows 10 by using PowerShell.

**Module 3: Working with the Windows PowerShell pipeline**

This module introduces the pipeline feature of Windows PowerShell. The pipeline feature is included in several command-line shells such as the command prompt in the Windows operating system. However, the pipeline feature in Windows PowerShell provides more complex, flexible, and capable functionalities compared to other shells. This module provides you with the skills and knowledge that will help you use Windows PowerShell more effectively and efficiently.

**Module 4: Using PSProviders and PSDrives**

This module introduces the PSProviders and PSDrives adapters. A PSProvider is basically a Windows PowerShell adapter that makes some form of storage resemble a hard drive. A PSDrive is an actual connection to a form of storage. You can use these two technologies to work with various forms of storage by using the same commands and techniques that you use to manage the file system.

**Module 5: Querying management information by using CIM and WMI**

This module introduces you to two parallel technologies: Windows Management Instrumentation (WMI) and Common Information Model (CIM). Both these technologies provide local and remote access to a repository of management information including access to robust information available from the operating system, computer hardware, and installed software.

**Module 6: Working with variables, arrays, and hash tables**

Variables are an essential component of scripts. You can use variables to accomplish complex tasks that you can't complete by using a single command. This module explains how to work with variables, arrays, and hash tables as steps in learning how to create Windows PowerShell scripts.

**Module 7: Windows PowerShell scripting**

This module explains how to package a Windows PowerShell command in a script. Scripts allow you to perform repetitive tasks and more complex tasks than cannot be accomplished in a single command.

**Module 8: Administering remote computers with Windows PowerShell**

This module introduces you to the Windows PowerShell remoting technology that enables you to connect to one or more remote computers and instruct them to run commands on your behalf.

**Module 9: Managing Azure resources with PowerShell**

This module provides information about installing the necessary modules for cloud services management. It explains how to use PowerShell commands to perform some simple administrative tasks on cloud resources such as Azure virtual machines (VMs), Azure storage accounts, and Azure subscriptions. This module also describes how to use the Azure Cloud Shell environment to perform PowerShell-based or Bash-based administration directly from the Azure portal.

**Module 10: Managing Microsoft 365 services with PowerShell**

This module describes how to use PowerShell to manage Microsoft 365 user accounts, licenses, and groups, Exchange Online, SharePoint Online, and Microsoft Teams.

**Module 11: Using background jobs and scheduled jobs**

This module describes how to use background jobs and scheduled jobs. It also explains how to create scheduled jobs and retrieve job results.

**More detailed information about the training/ Täpsemat infot koolituse kohta saad:**

<https://docs.microsoft.com/en-us/learn/certifications/courses/az-040t00>

**The training price also includes:**

- study materials;
- a trainer's consultation on the topics learned, by e-mail after the training;
- certificate.

**As an added value, we offer:**

- free parking;
- lunch;
- hot drinks with cookies;
- fresh fruits.

You can participate in the training also with the Unemployment Insurance Fund training card.

See you at the training!

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## AJAKAVA

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### Every day

09:15 - 09:30 ○ Gathering

The training takes place at Vana-Lõuna 39/1, Tallinn, IT Training premises. You can park in the Europark car park at Veerenni 36, EP63. Parking is free by registering at the IT Training on the first floor.

09:30 - 11:00 ○ I module

11:00 - 11:15 ○ **Coffee break**

11:15 - 12:45 ○ II module

12:45 - 13:30 ○ **Lunch**

13:30 - 15:00 ○ III module

15:00 - 15:15 ○ **Coffee break**

15:15 - 16:45 ○ IV module

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## LISAINFO

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### **Osalemise tingimused**

Registreerudes e-poe, e-kirja või telefoni teel, saadame Teile arve ja täpsema info osalemise kohta.

Üksteist päeva enne koolitust saadame Teile e-kirjaga meenutuse osalemise infoga.

Koolitusel osamine on nimeline, kuid saate osalejat tasuta muuta kuni koolituse alguseni.

Koolituse eest tasumine toimub arvel viidatud arveldusarvele. Arve saadetakse maksja aadressile e-postiga. Arve tuleb tasuda enne koolituse algust arvel märgitud maksetähtajaks.

Kui Te ei saa mingil põhjusel osaleda, palun andke sellest kindlasti teada e-posti aadressil [info@koolitus.ee](mailto:info@koolitus.ee) või telefonil 618

1727 . Kui teatate koolitusel mitteosalemisest kuni 10 tööpäeva enne algust, pakume mõnd muud samaväärset koolitust või tagastame 100% tasutud koolituse maksumusest. Mitteosalemisest vähemalt 5 tööpäeva varem teatades, tagastame 50%. Muul juhul kuulub arve tasumisele. Raha tagastame ette antud summas juhul, kui pole tehtud koolituse korraldamisega seotud kulutusi (ostetud õppematerjale jms). Koolitusele mitteilmumisel, sellest mitteteatamisel või koolituse poolelühendamisel õppetasu ei tagastata.

IT Koolitusel on õigus koolitusgrupi mitte täitumisel koolituse toimumine edasi lükata või koolitus ära jätta. Koolitusele registreerunud teavitatakse kursuse edasi lükkumisest või ära jätmisest telefoni või e-posti teel. Koolituse ära jäämisel korraldajatest tulenevatel põhjustel makstakse õppetasu tagasi. .

IT Koolitus on Eesti Töötukassa koolituskaardi koostööpartner. Tutvuge koolituskaardi infoga **SIIN**. Täpsema info saamiseks võtke meiega ühendust telefonil 618 1727 või [info@koolitus.ee](mailto:info@koolitus.ee).

## **COVID-19**

### **Klassikoolitusel osalemise tingimused**

- Klassikoolitusel osalemiseks on vajalik esitada Covid-19 tõend kas digitaalsel kujul või väljatrükkina paberil.
- Tõendit ja isikusamasust kontrollitakse enne koolitusklassi sisenemist.
- Covid 19 tõend on [digilugu.ee](http://digilugu.ee) kodulehel saadaval vaksineeritud või COVID-19 haiguse läbi põdenud inimestel.
  
- Klassikoolitusel on **maski kandmine kohustuslik**.