



Network configuration

Task 1

- Use the *Get-NetAdapter* cmdlet to get information about the network adapters. Find out which interface has which interface index (ifIndex) and which MAC address by means of appropriate filtering. Format only the required properties as a list.
- Research which members of the *NetAdapter* cmdlet family can be used to enable and disable network adapters. Test these cmdlets on an adapter.
- (Bonus) When disabling, suppress the query with an appropriate Common parameter.
- View your DNS server configuration. Also find out which cmdlet you can use to set a preferred DNS server manually.

Task 2

- Use the *Get-NetIPConfiguration* cmdlet to view the IP configurations of all network interfaces on your computer. Write down the *interfacealias* of the wired LAN interface.
- Use appropriate cmdlets to disable the Wi-Fi adapter and enable the appropriate Ethernet interface.¹²
- Use *New-NetIPAddress* to assign the following IPv4 configuration to the Ethernet interface:³

Property	Value
IPv4-Address	172.29.0.10
Subnet	255.255.0.0

- If the interface is already occupied by an IPv4 address, remove it with *Remove-NetIPAddress* to avoid address conflicts.

¹ To do this, use *Get-Command* with the keyword *NetAdapter*.

² If available.

³ You can set the appropriate parameters with the help of *Get-Help* find out. If necessary, you can also use the *-example* to understand the use of the Cmdlets View.



Task 3 (Bonus)

- a. On the Ethernet interface of the exercise, assign the following IPv6 configuration in parallel with the IPv4 configuration that has been completed.

Property	Value
Global Unicast Address	DB7:2022:15A::1
Präfixlänge	64
Link-local address	FE80::1

- b. Check your results by viewing the configuration of the adapter afterwards.

Task 4

- a. List all services on the *localhost* system sorted by status and name.
- b. Execute the above query as an (anonymous) job in the background. What is the difference?
- c. Run the above query as a named job *servJob* in the background. Pick up the results with *Receive-Job* and view them. What is the role of the *-Keep* parameter in *Receive-Job*?