## **Solution M2: Basic Services and Components**

One possible solution to the homework, following the **PowerShell** principles, could be as the one, shown below.

## **Software and Services Management**

One way to solve this challenge is:

1. Download the file from a remote URL:

wget -Uri https://zahariev.pro/files/WSA-M2-Service.zip -OutFile C:\WSAService.zip

2. Because we don't know what is inside the archive, we can extract its content to a temporary location first:

Expand-Archive -Path WSAService.zip -DestinationPath C:\temp

Then, we can enter the destination folder and inspect what is there:

Now, check what we have here:

dir

It appears that the result of the extraction process is a WSAService folder. Let's move it to C:\

Move-Item -Path WSAService -Destination C:\

3. Install the service by creating a definition for a new service:

New-Service -Name WSAService -BinaryPathName C:\WSAService\WSAService.exe

4. Start the service:

Start-Service WSAService

5. Check if there is **C:\WSA.log** file and what it contains:

Get-Content C:\WSA.log

## Disk Management

One way to solve this challenge is:

1. After we created and attached the virtual hard disk and the machine is up and running, we could start PowerShell and check the disks that the OS sees:

Get-Disk

2. Then we can initialize the newly added disk:

Initialize-Disk -Number 1 -PartitionStyle GPT

3. Next, we can create a 6GB partition:

New-Partition -DiskNumber 1 -Size 6GB

4. And assign a drive letter:

Set-Partition -DiskNumber 1 -PartitionNumber 2 -NewDriveLetter X

5. As final step we must format it:

Format-Volume -DriveLetter X -FileSystem NTFS -NewFileSystemLabel Disk-NTFS

6. Now we can create one more partition:

New-Partition -DiskNumber 1 -UseMaximumSize

7. Then assign a letter:

Set-Partition -DiskNumber 1 -PartitionNumber 3 -NewDriveLetter Y

8. And finally, we can format it:

Format-Volume -DriveLetter Y -FileSystem FAT32 -NewFileSystemLabel Disk-FAT32

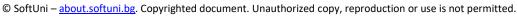
As usual, there is a shorter solution:

1. Disk initialization:

Initialize-Disk -Number 1 -PartitionStyle GPT

2. Handle the first set of tasks:















New-Partition -DiskNumber 1 -DriveLetter X -Size 6GB | Format-Volume -FileSystem NTFS -NewFileSystemLabel Disk-NTFS

3. And then the second one:

New-Partition -DiskNumber 1 -DriveLetter Y -UseMaximumSize | Format-Volume -FileSystem FAT32 -NewFileSystemLabel Disk-FAT32

## **Network Management**

One possible way to solve the challenge is:

- 1. As very first step we can check installed network adapters:
  - Get-NetAdapter
- 2. Then we can continue with renaming of the first adapter:

Rename-NetAdapter -Name "Ethernet" -NewName "NET-Internet"

3. Now the second one:

Rename-NetAdapter -Name "Ethernet 2" -NewName "NET-Local"

4. Change profile of the first adapter\*:

Set-NetConnectionProfile -InterfaceAlias "NET-Internet" -NetworkCategory Public

5. Then on the second\*:

Set-NetConnectionProfile -InterfaceAlias "NET-Local" -NetworkCategory Private

6. Set IP address:

New-NetIPAddress -InterfaceAlias "NET-Local" -IPAddress 192.168.220.1 -PrefixLength 24

7. Change MAC address:

Set-NetAdapter -Name "NET-Local" -MacAddress AA-BB-CC-DD-EE-FF

8. Enable firewall rule:

Enable-NetFirewallRule -Name FPS-ICMP4-ERQ-In

9. Reset MAC address:

Set-NetAdapter -Name "NET-Local" -MacAddress ""













<sup>\*</sup> Note that when the connection profile of an adapter that is in "unidentified network" state is changed, this change is applied to all adapters in "unidentified network" state.