Solution M5: Additional Techniques in AD

One possible solution of the homework could be:

- 1. In order to solve this task, you could do the following steps:
 - a. Download the software from here: https://github.com/microsoft/XmlNotepad
 - b. Copy the software on a place reachable by everyone, usually a shared folder on a server. In my case this will be reachable via (\\DC\Shared\XmlNotepad.msi)

Same can be achieved by executing the following PowerShell commands:

Create a folder

New-Item -Name "Shared" -Path "C:\" -ItemType Directory

Create a share

New-SmbShare -Name "Shared" -Path "C:\Shared" -ReadAccess "Everyone"

- c. Create a WMI filter Server Only that returns only computers running a Server class OS. Not that there is no PowerShell way, but it is a complicated one. So, it is easier to do it in the **Group Policy** Management Tool. There we must click on the WMI Filters node and choose New from the context menu. For name enter Server Only. Then click the Add button. For the query we can use the select * from Win32_Operatingsystem where caption like '%Server%' statement
- d. Create a GPO XmlNotepad Install to install the required software Graphically we can do this by:
 - selecting the node Group Policy Objects and then select New from the context menu
 - for name enter XmlNotepad Install and click OK
 - then select the GPO and click on Edit
 - select Software Installation in Computer Configuration > Policies > Software Settings
 - select New > Package from its context menu
 - navigate to the file, for example \\DC\Shared\XmlNotepad.msi and click on Open
 - leave the default selection in the deployment method to Assigned and click OK
 - close the Group Policy Management Editor

The PowerShell way to do this is:

create the GPO

New-GPO -Name "XmlNotepad Install"

- set the content of the GPO because of the nature of this one, we will stick to the GUI way of doing things
- e. In WMI filtering section of the GPO select the filter you created earlier

Graphically we can do this by:

- select the GPO created earlier
- in the WMI Filtering section select Sever Only

The PowerShell way is:

select the GPO

\$g = Get-GPO -Name "XmlNotepad Install"

select the filter

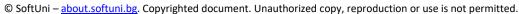
\$f = Get-ADObject -Filter 'objectClass -eq "msWMI-Som"' -Properties "msWMI-Name", "msWMI-Parm1", "msWMI-Parm2" | Where -Property "msWMI-Name" -Eq "Server Only"

create a helper domain object

\$d = New-Object -Type Microsoft.GroupPolicy.GPDomain

build the path to the filter



















\$p = 'MSFT_SomFilter.Domain="' + \$d.DomainName + "",ID="' + \$f.Name + ""

modify the GPO

\$g.WmiFilter=\$d.GetWmiFilter(\$p)

f. Link the GPO to the Managed Computers OU

Graphically we can do this by dragging the GPO over the Managed Computers OU Linking with PowerShell can be done like this:

New-GPLink -Name "XmlNotepad Install" -Target "ou=Managed Computers,dc=wsa,dc=lab" -LinkFnabled Yes

- 2. In order to solve this task, you could do the following steps:
 - a. Depending on the wallpaper used (available on each PC locally or remotely) we can place it on a shared folder or copy it on each machine (for example with a GPO). Let's use a wallpaper available on a shared resource. We will reuse the one used in the first part (\\DC\Shared) and the file there will be cat.ipg
 - b. Define the corresponding GPO

Graphically this can be done:

- Create new GPO with name **Desktop Wallpaper** and open it for editing
- Go to User Configuration > Policies > Administrative Templates > Desktop > Desktop
- There edit the **Desktop Wallpaper** setting
- Select **Enabled** and for **Wallpaper Name** enter **\\DC\Shared\cat.jpg**
- Click **OK** and close the **Group Policy Management Editor**

The PowerShell way is:

Create new GPO

New-GPO -Name "Desktop Wallpaper"

Set the setting

Set-GPRegistryValue -Name "Desktop Wallpaper" -Key

"HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Policies\System "-ValueName "Wallpaper" -Type string -Value "\\DC\Shared\cat.jpg"

c. Apply security filter for GS IT

Graphically this can be done:

- Select the policy, switch to the **Delegation** tab, and click on **Advanced**
- Select Authenticated Users and remove the selection against Apply group policy
- Click on Add and select GS IT
- Ensure that Read and Apply group policy are Enabled for GS IT
- Click OK

The PowerShell way is:

Select the GPO

\$gpo = Get-GPO -Name "Desktop Wallpaper"

Change the **Authenticated Users** permissions

\$gpo | Set-GPPermissions -Replace -PermissionLevel GpoRead -TargetName 'Authenticated Users' -TargetType group

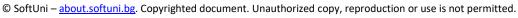
Add GS IT

\$gpo | Set-GPPermissions -PermissionLevel gpoapply -TargetName 'GS-IT' -TargetType group

d. Link the GPO to Managed Users OU

Graphically we can do this by dragging the GPO over the Managed Users OU Linking with PowerShell can be done like this:















New-GPLink -Name "Desktop Wallpaper" -Target "ou=Managed Users,dc=wsa,dc=lab" -LinkEnabled Yes

- 3. In order to solve this task, you could do the following steps:
 - a. Create GPO with the stated requirements

Graphically this can be done:

- Create new GPO with name Desktop Shortcut and open it for editing
- Go to User Configuration > Preferences > Windows Settings > Shortcuts
- There from the context menu choose New > Shortcut
- Leave the **Action** field to **Update**
- For Name enter SoftUni
- For Target type select URL
- For Location select Desktop
- For Target URL enter http://softuni.bg
- Click **OK** and close the **Group Policy Management Editor**

The PowerShell way is:

Create new GPO

New-GPO -Name "Desktop Shortcut"

- Set the setting because of the content of this one, we will stick to the GUI way
- b. Change the delegation settings add **GS IT** and turn on **Deny** for **Apply group policy** permission Graphically this can be done:
 - Select the policy, switch to the **Delegation** tab, and click on **Advanced**
 - Click on Add and select GS IT
 - Ensure that **Deny** is selected for **GS IT** under **Apply group policy**
 - Click OK

The PowerShell way is:

Select the GPO

\$gpo = Get-GPO -Name "Desktop Shortcut"

Create helper object

\$adgpo =

[ADSI]"LDAP://CN=`{\$(\$gpo.Id.guid)`},CN=Policies,CN=System,DC=wsa,DC=lab"

Create the **Deny** rule for **Apply group policy**

\$rule = New-Object

System.DirectoryServices.ActiveDirectoryAccessRule([System.Security.Principal.NTAcco unt]"WSA\GS-IT", "ExtendedRight", "Deny", [Guid] "edacfd8f-ffb3-11d1-b41d-00a0c968f939")

Create object security object

\$acl = \$adgpo.ObjectSecurity

Add the rule

\$acl.AddAccessRule(\$rule)

Commit changes

\$adgpo.CommitChanges()

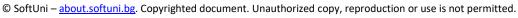
c. Link the GPO to Managed Users OU

Graphically we can do this by dragging the GPO over the Managed Users OU Linking with PowerShell can be done like this:

New-GPLink -Name "Desktop Shortcut" -Target "ou=Managed Users,dc=wsa,dc=lab" -LinkEnabled Yes

4. In order to solve this task, you could do the following steps:















- a. Create GPO with the stated requirements Graphically this can be done:
 - Create new GPO with name Home Page and open it for editing
 - Go to User Configuration > Preferences > Control Panel Settings > Internet Settings
 - There from the context menu choose New > Internet Explorer 10
 - In the Home page field enter http://google.com
 - Then, while the field is still on focus, hit F5 key to enable it (you will notice that the red line at the bottom is now green)
 - In the **Startup** section select the **Start with home page**
 - Click **OK** and close the **Group Policy Management Editor**

The PowerShell way is:

Create new GPO

New-GPO -Name "Home Page"

- Set the setting because of the content of this one, we will stick to the GUI way
- b. Link the GPO to Managed Users OU

Graphically we can do this by dragging the GPO over the Managed Users OU Linking with PowerShell can be done like this:

New-GPLink -Name "Home Page" -Target "ou=Managed Users,dc=wsa,dc=lab" -LinkEnabled Yes

NOTE (1): Task 3 could be solved via policy (User Configuration > Policies > Administrative Templates > Desktop > Desktop > Add/Delete items) but this would be applicable if the Active Desktop technology is available and active

Please note that it will work on Windows Server 2003, Windows XP, and Windows 2000 only

NOTE (2): Task 4 can be solved via policy instead of preference. This way we can forbid our user to change their home page. We can do it by:

a. Create a GPO

Graphically this can be done:

- Create new GPO with name Home Page and open it for editing
- Go to User Configuration > Policies > Administrative Templates > Windows Components > Internet **Explorer**
- Double-click on Disable changing home page
- Select Enabled
- In the **Home page** field enter http://google.com
- Click OK and close the Group Policy Management Editor

The PowerShell way is:

Create new GPO

New-GPO -Name "Home Page"

Set the setting (disallow to change)

Set-GPRegistryValue -Name "Home Page" -Key

"HKEY_CURRENT_USER\Software\Policies\Microsoft\Internet Explorer\Control Panel" -ValueName "HomePage" -Type DWord -Value 1

Set the setting (home page)

Set-GPRegistryValue -Name "Home Page" -Key

"HKEY_CURRENT_USER\Software\Policies\Microsoft\Internet Explorer\Main" -ValueName "Start Page" -Type String -Value "http://google.com"



















b. Link the GPO to Managed Users OU

Graphically we can do this by dragging the GPO over the Managed Users OU Linking with PowerShell can be done like this:

New-GPLink -Name "Home Page" -Target "ou=Managed Users,dc=wsa,dc=lab" -LinkEnabled Yes

Of course, there are even more ways to solve this task.













