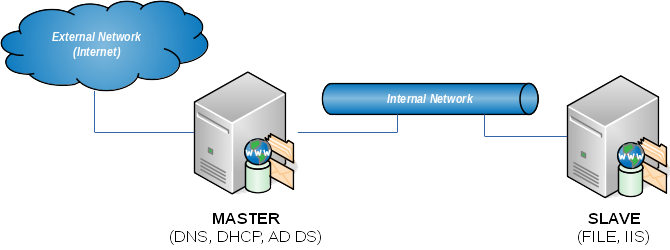
# Exam: WSA – 2019.02.03

### Main goal

You are expected to create a small network with two VMs each one configured according to the specifications:



External virtual network adapter of the MASTER should **NOT** be set to **Bridge** or **External**, because it will interfere with others

Project URL: [**https://tinyurl.com/yae68vao**](https://tinyurl.com/yae68vao)

### Rules

Be sure to **follow** the **naming** **conventions** specified in the checklist and in the project source files.

The tasks execution order should not be derived from the order in which they are listed below. Please note that there are tasks that depend on the successful completion of one or more other tasks. At the same time there are tasks which goal could be achieved as part of other tasks and actions.

Usually all steps could be achieved following different paths and using different tools. At the end not the means, but the **end results** are being **measured**.

Please note that during the examination process a script will be executed on the **MASTER** host, so the infrastructure **should allow** **remote** **PowerShell** execution.

### Tasks checklist

#### Infrastructure [14pts]

* (T101 / 3pts) Deploy **one virtual** machine and name it **MASTER**
* (T102 / 1pts) On **MASTER** set the **external network** to be with **dynamic** address and name it **NIC-EXT**
* (T103 / 1pts) On **MASTER** set the **internal network** with address **192.168.240.1/24** and name it **NIC-INT**
* (T104 / 2pts) On **MASTER** install and configure **DHCP** role to listen on **NIC-INT** and with pool starting from **192.168.240.100** to **192.168.240.200** named **Lab Pool**
* (T105 / 3pts) On **MASTER** install **Active Directory DS** role and configure the server to be a domain controller for **WSA.LAB** domain
* (T106 / 1pts) On **MASTER** install and configure **DNS** feature for correct forward lookup zone
* (T107 / 3pts) Deploy **second** virtual machine, name it **SLAVE**, and **join** it to the **domain**

#### Users and Groups (on MASTER) [15pts]

* (T201 / 2pts) Create OU **Lab Users** and then create two nested OUs - **IT** and **Finance**
* (T202 / 1pts) Change the **default container** for new users to **Lab Users**. All users created during the exam, should be under this OU
* (T203 / 2pts) Create OU **Lab Computers** and then create two nested OUs - **IT** and **Finance**
* (T204 / 1pts) Change the **default container** for new computers to **Lab Computers**. All computers created or joined during the exam should be children of this OU
* (T205 / 1pts) Create new user **Ivan Petkov** in **IT** OU with account name **ivan.petkov**
* (T206 / 1pts) Create new user **Mariana Parusheva** in **Finance** OU with account name **mariana.parusheva**
* (T207 / 1pts) Create new OU **Lab Groups** which will contain all security groups created during the exam
* (T208 / 2pts) Create new global security group **GS IT** and add user **Ivan** as a member
* (T209 / 2pts) Create new global security group **GS Finance** and add user **Mariana** as a member
* (T210 / 2pts) Create new global security group **GS Servers** and add computer **SLAVE** as a member

#### Additional Services (on SLAVE) [13pts]

* (T301 / 2pts) On **SLAVE** install **IIS** role
* (T302 / 3pts) On **SLAVE** create **second site** that will be listening on port **8000**. For the site use the files provided as a link in the beginning of the document
* (T303 / 4pts) On **SLAVE**, install **File Server** role if needed, so you can create and manage file shares. Then create folder **C:\Common** and share it as **Common** with both **Share** and **NTFS** permissions set to **Full** for **Everyone**
* (T304 / 2pts) Create folder **C:\Common\IT** and set **NTFS** permissions to **Full** for **GS IT** and **deny** access for **GS Finance**
* (T305 / 2pts) Create folder **C:\Common\Finance** and set **NTFS** permissions to **Full** for **GS Finance** and **deny** access for **GS IT**

#### GPO and Security (on MASTER) [10pts]

* (T401 / 3pts) Create **GPO-Remote** that enables remote management (windows service and firewall rule(s))
* (T402 / 3pts) Create **GPO-IIS** that enables port **8000/tcp** and make it applicable **only** to **SLAVE**
* (T403 / 2pts) Create **GPO-Drive** that maps [**\\SLAVE\Common**](file:///\\SLAVE\Common) as local drive **Z:**
* (T404 / 2pts) Create **GPO-Wallpaper** that changes the wallpaper with the one provided in the beginning of the document (first it must be placed on a shared resource)

*\* Link all GPOs on Domain level*

#### Scripting (on MASTER) [8pts]

* (T501 / 5pts) Create PowerShell script named **C:\Scripts\Track-Resources.ps1** that extracts **available memory** and **free disk space** counters and **appends** the results to the **C:\Temp\Resources.log** file. Data should be formatted like **TIMESTAMP / TYPE : VALUE** where TYPE is either RAM or HDD, and TIMESTAMP and VALUE are the ones coming from the corresponding counter
* (T502 / 3pts) Create a new **schedule** **Track-Resources** for the script and set it to execute **every 5 minutes**

### Tasks checklist

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **T101** | **3** | **T102** | **1** | **T103** | **1** | **T104** | **2** | **T105** | **3** | **T106** | **1** | **T107** | **3** |
| **T201** | **2** | **T202** | **1** | **T203** | **2** | **T204** | **1** | **T205** | **1** | **T206** | **1** | **T207** | **1** |
| **T208** | **2** | **T209** | **2** | **T210** | **2** | **T301** | **2** | **T302** | **3** | **T303** | **4** | **T304** | **2** |
| **T305** | **2** | **T401** | **3** | **T402** | **3** | **T403** | **2** | **T404** | **2** | **T501** | **5** | **T502** | **3** |

|  |  |
| --- | --- |
| Total (max 60) |  |

### Summary

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