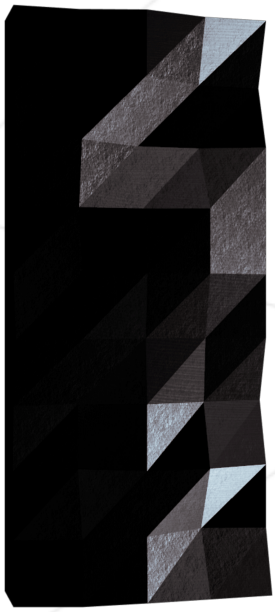


Active Discovery - Formation ActiveDirectory

Initiation

Summary: This Project will introduce you to the basics of system administration under the MicrosoftServer operating system.

Version: 1.00

Contents

Chapter I

Preamble

Active Directory (AD) is Microsoft's implementation of LDAP directory services for Windows operating systems.

The main purpose of Active Directory is to provide centralized identification and authentication services to a network of computers using Windows, macOS and Linux. It also allows the assignment and enforcement of policies and the installation of critical updates by administrators.
Active Directory lists the elements of a managed network such as user accounts, servers, workstations, shared folders, printers, etc. A user can easily find shared resources, and administrators can control their use through distribution, replication, partitioning and secure access to listed resources.

In this subject, you will introduce yourself to this system !

Chapter II

Mandatory part

II.1 VMs creation

In this part, you will have to install and configure the computer park of the company "Domolia", selling home automation tools.

This company is separated in two buildings :

- A workshop, with a manager and several workers
- An office, with the company manager

The company wishes to have two MicrosoftServer, one in each building, and a Windows10 workstation that will connect to the server of its building.

In view of the organization desired by the company, you have to install virtual machines that represent the desired network as closely as possible.

Don't forget: you're a team of two students, it's probably not just for the power of friendship!

II.2 Forest creation

In this part, you will have to install and configure the server located in the administration building.

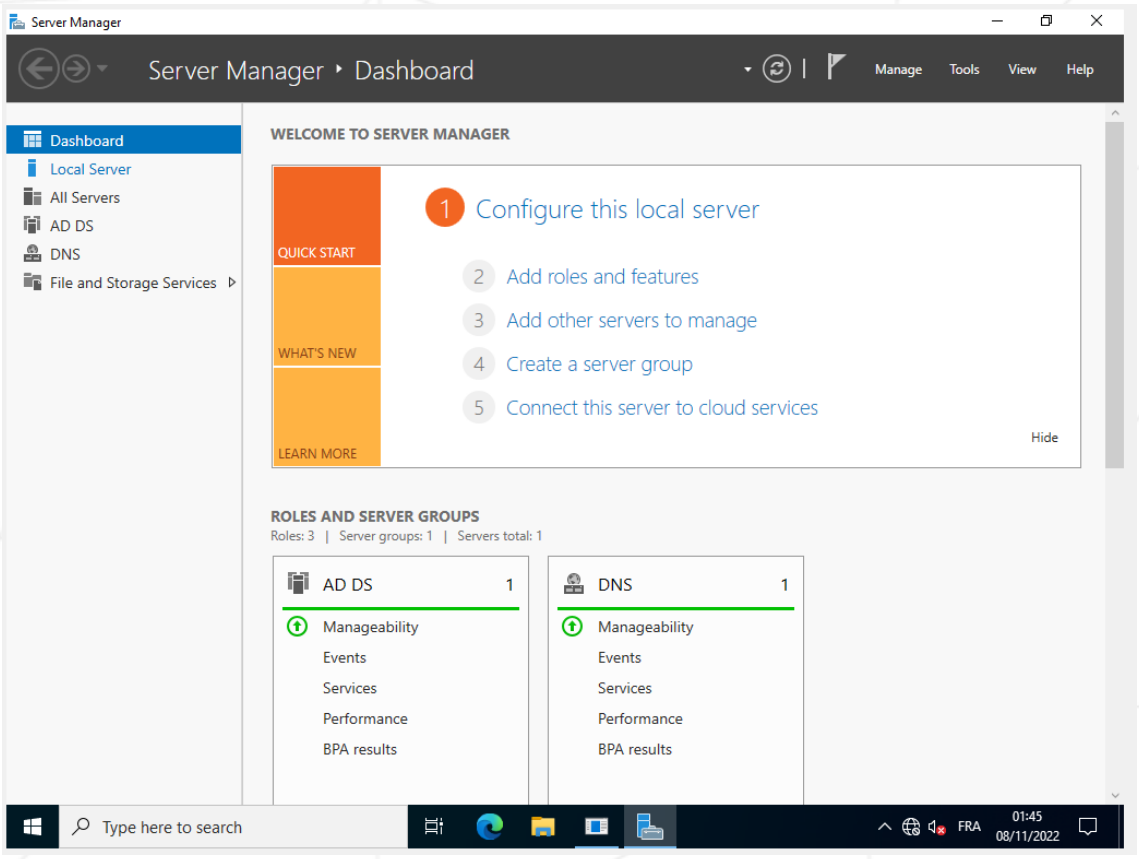
The server must have ActiveDirectory Domain Controller service installed and configured. You must add every needed modules you think that is needed for this service.

The server must have a suitable name, allowing it to be easily identified on the network.

It should contain a forest, whose name you will choose intelligently. If you don't know what a forest is, here's a hint: we're not REALLY talking about a actual forest.

Unless ...

Maybe we are...



When you finished this part of the subject, you should have something like this on your screen

II.3 Domain controller configuration

In this part, you will have to connect the second server to the first one, to allow it to join the existing forest.

This server will have to host a domain controller of his own.

Same this as the previous one, think of a correct name for the server !

II.4 Resources creation

In this part, you will have to create three differents folders, where user will be able to place importants files.

- A folder hosted on the Administration server to store administrative files
- A folder hosted on the Administration server to store generic datas and files
- A folder hosted on the Workshop server to store working project files

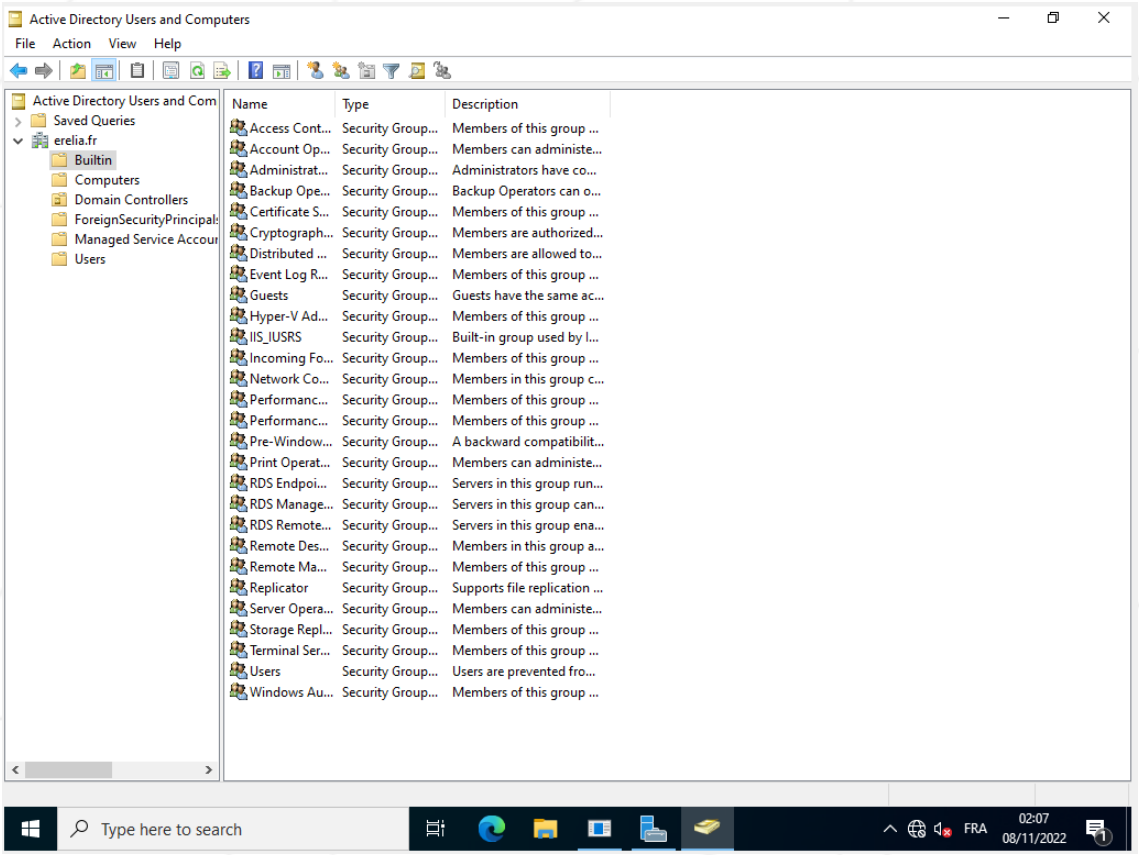
Don't forget to name your resources with clear name, to allow you to identify what the resource contain.

II.5 User account creation

In this part, you will have to create a user account on each of the controller you create previously.

The account on the administration server must been able to see/edit the administration resources folder and the generic resources folder.

The account on the workshop server, on the other hand, must been able to see/edit the working resources folder and the generic resources folder.



You should work on a screen looking like this !

Chapter III

Submission and peer-evaluation

You only have to turn in a `signatures.txt` file at the root of your `Git` repository. It must contain the signature of each of your machine's virtual disk, following this format :

```
> cat signatures.txt
# VM AD 1
6e657c4619944be17df3c31faa030c25e43e40af
# VM AD 2
6e657c4619944be17df3c31faa030c25e43e40af
# VM USER 1
6e657c4619944be17df3c31faa030c25e43e40af
# VM USER 2
```

To get a signature of one of your VM, you first have to open the default installation folder (it is the folder where your VMs are saved):

- Windows: `%HOMEDRIVE%%HOMEPATH%\VirtualBox VMs\`
- Linux: `~/VirtualBox VMs/`
- MacM1: `~/Library/Containers/com.utmapp.UTM/Data/Documents/`
- MacOS: `~/VirtualBox VMs/`

Then, retrieve the signature from the `".vdi"` file (or `".qcow2` for `UTM`'users) of your virtual machine in `sha1` format. Below are 4 command examples for a `centos_serv.vdi` file:

- Windows: `certUtil -hashfile centos_serv.vdi sha1`
- Linux: `sha1sum centos_serv.vdi`
- For Mac M1: `shasum Centos.utm/Images/disk-0.qcow2`
- MacOS: `shasum centos_serv.vdi`

This is an example of what kind of output you will get:

- `6e657c4619944be17df3c31faa030c25e43e40af`

Please note that your virtual machine's signature may be altered after your first evaluation. To solve this problem, you can duplicate your virtual machine or use save state.

It is of course FORBIDDEN to turn in your virtual machine in your Git repository. During the defense, the signature of the signature.txt file will be compared with the one of your virtual machine. If the two of them are not identical, your grade will be 0.

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The evaluation process will happen on the computer of each student of the evaluated group.