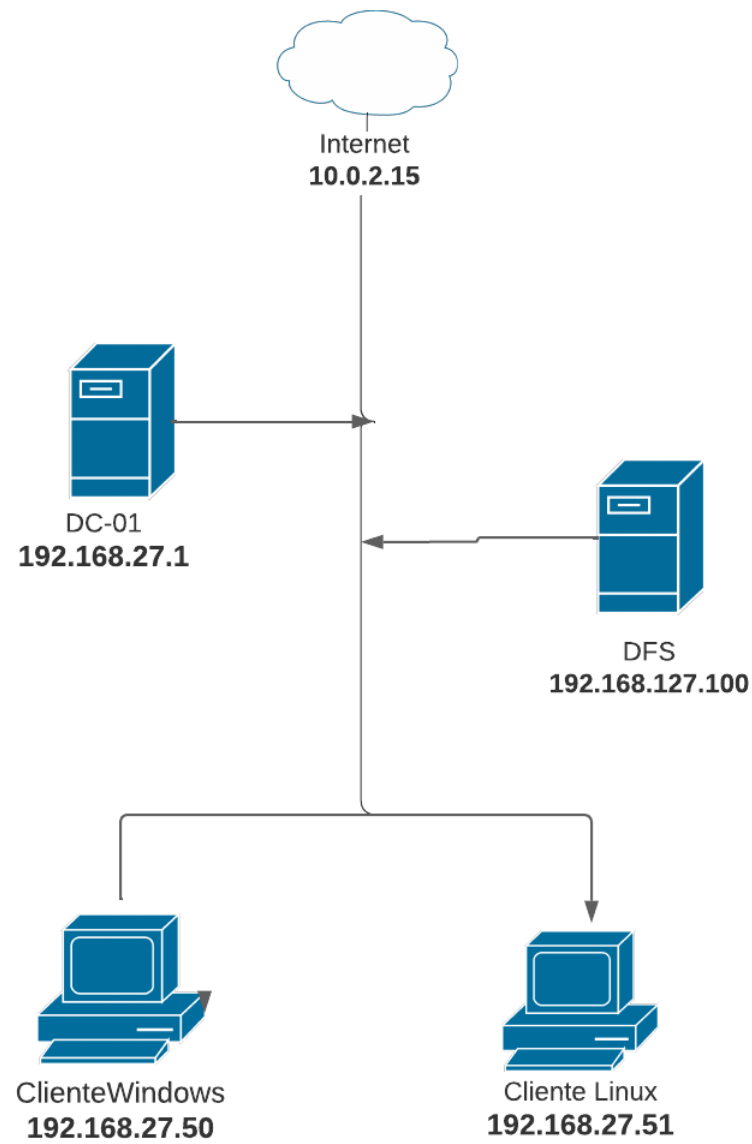


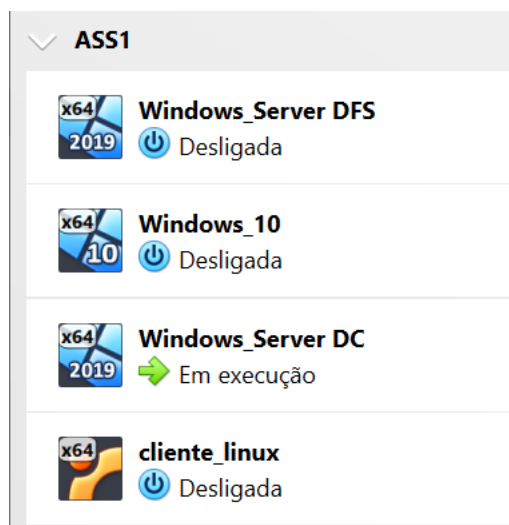
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A minha rede e os devidos IP's de cada máquina



Nome da VM	CPU	RAM	Disco	SO	Serviços Instalados
Windows_Server DFS	2	4GB	35GB	Windows Server 2019	DFS NameSpace, DFS Replication
Windows_Server DC	2	4GB	40GB	Windows Server 2019	Active Directory, DNS.DHCP
CLIENTE LINUX	2	2GB	25GB	Ubuntu Desktop 22.04.1 LTS	TESTES
CLIENTE WINDOWS	2	2GB	25GB	Ubuntu Desktop 22.04.1 LTS	TESTES



Endereçamento da rede

- Servidor DC-01

```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.17763.3650]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : wifi.ipb.pt
    IPv6 Address. . . . . : fd00::a0a9:ddcc:5623:ec50
    Link-local IPv6 Address . . . . . : fe80::b042:3d5a:eca9:c22%16
    IPv4 Address. . . . . : 10.0.2.15
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : fe80::2%16
                               10.0.2.2

Ethernet adapter Ethernet 2:

    Connection-specific DNS Suffix  . :
    Link-local IPv6 Address . . . . . : fe80::a114:f42d:1f56:4766%7
    IPv4 Address. . . . . : 192.168.27.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :

C:\Users\Administrator>
```

- Servidor DFS

```
C:\A. Administrator: Command Prompt
Microsoft Windows [Version 10.0.17763.3650]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::2fb5:2b8e:a30:5b2c%4
    IPv4 Address. . . . . : 192.168.27.100
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.27.1

C:\Users\Administrator>
```

- Cliente Windows

```
C:\A. Command Prompt
Microsoft Windows [Version 10.0.19045.2006]
(c) Microsoft Corporation. All rights reserved.

C:\Users\aluno10>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : dominiomt.local
    Link-local IPv6 Address . . . . . : fe80::95d:bec4:b4c2:2c5c%9
    IPv4 Address. . . . . : 192.168.27.50
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.27.1

C:\Users\aluno10>
```

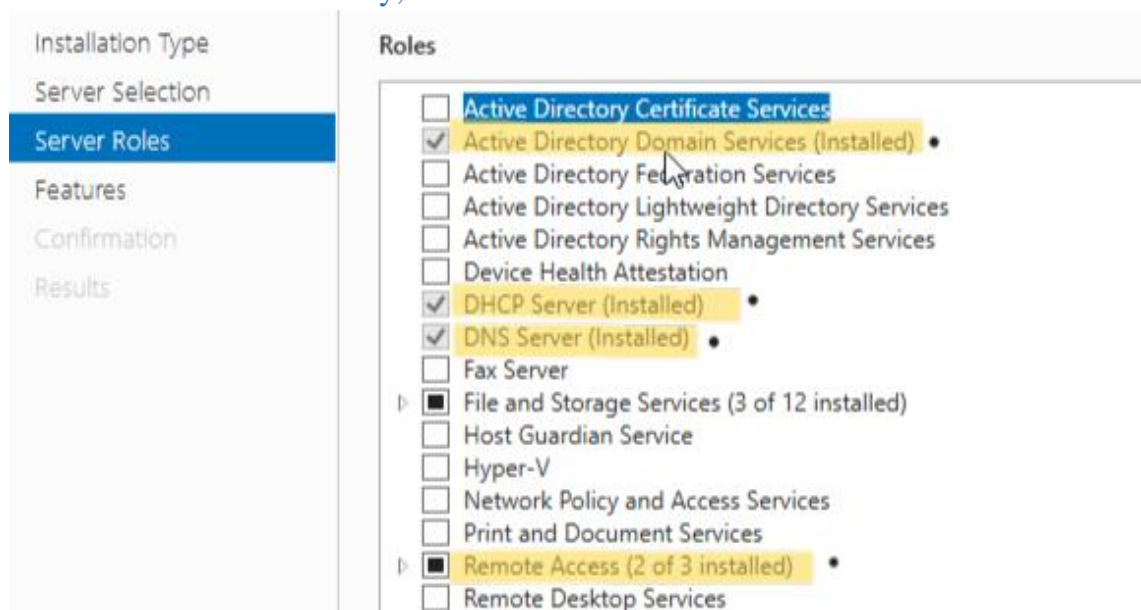
- Cliente Linux

```
marcio@cliente-ubuntu:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:c1:a7:dc brd ff:ff:ff:ff:ff:ff
    inet 192.168.27.51/24 brd 192.168.27.255 scope global dynamic noprefixroute enp0s3
        valid_lft 1727601sec preferred_lft 1727601sec
    inet6 fe80::aba3:cd2f:2cc1:143d/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
marcio@cliente-ubuntu:~$
```

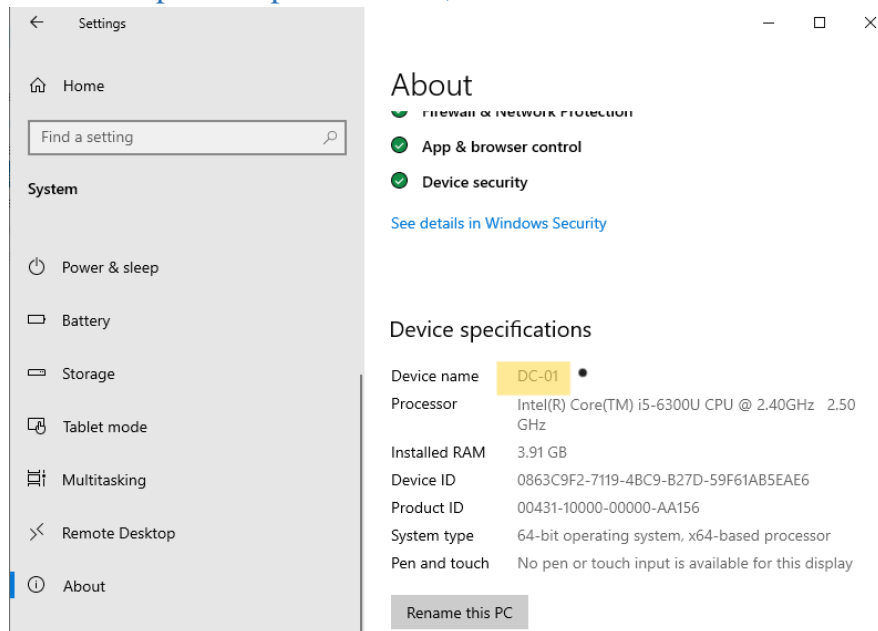
Servidor DC-01

Instalação e configuração dos serviços

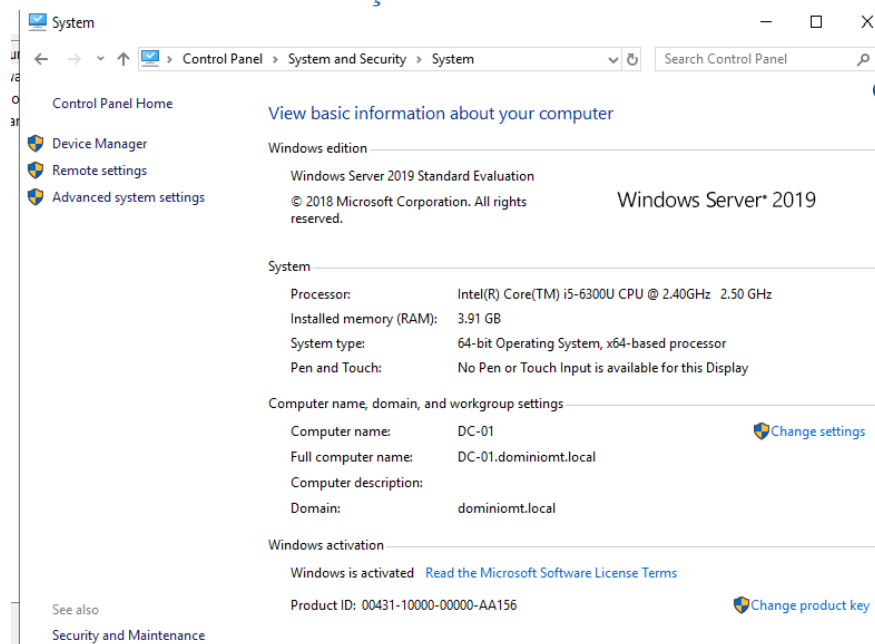
- Active Directory, DNS e DHCP e Remote Access instalado

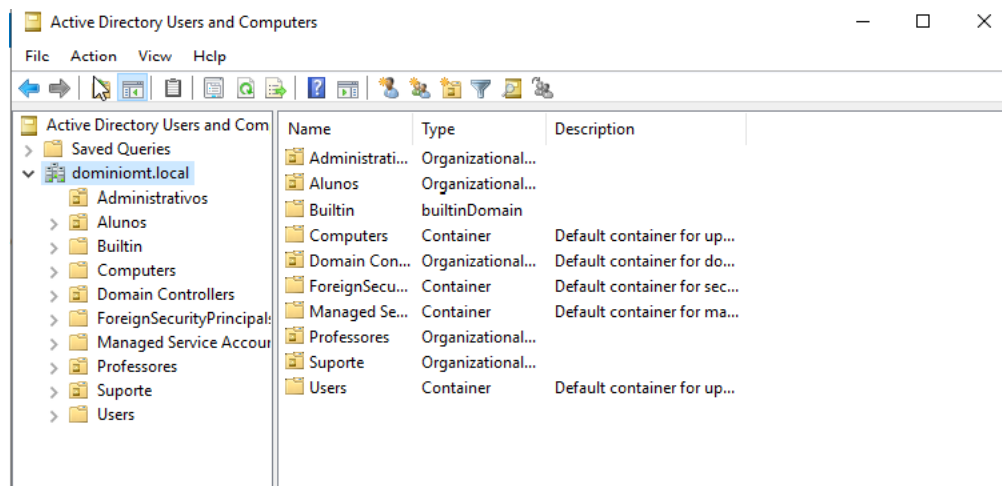


Alteração do nome do computador para: DC-01;

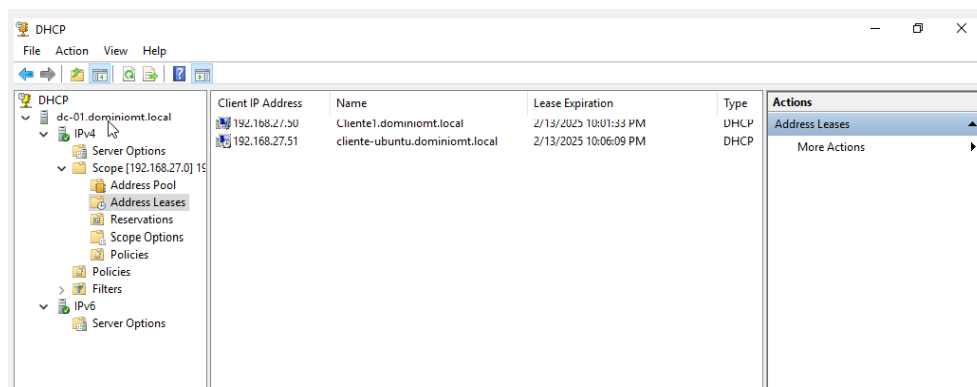


Criação do domínio

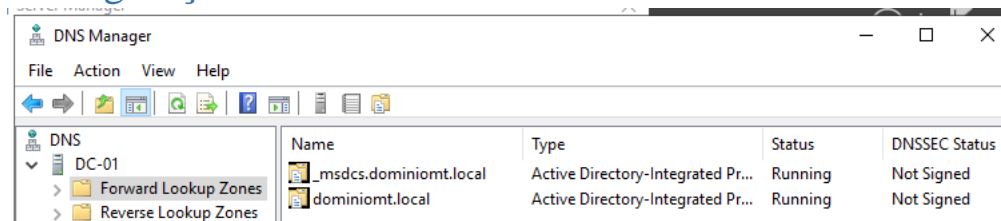




Configuração do DHCP

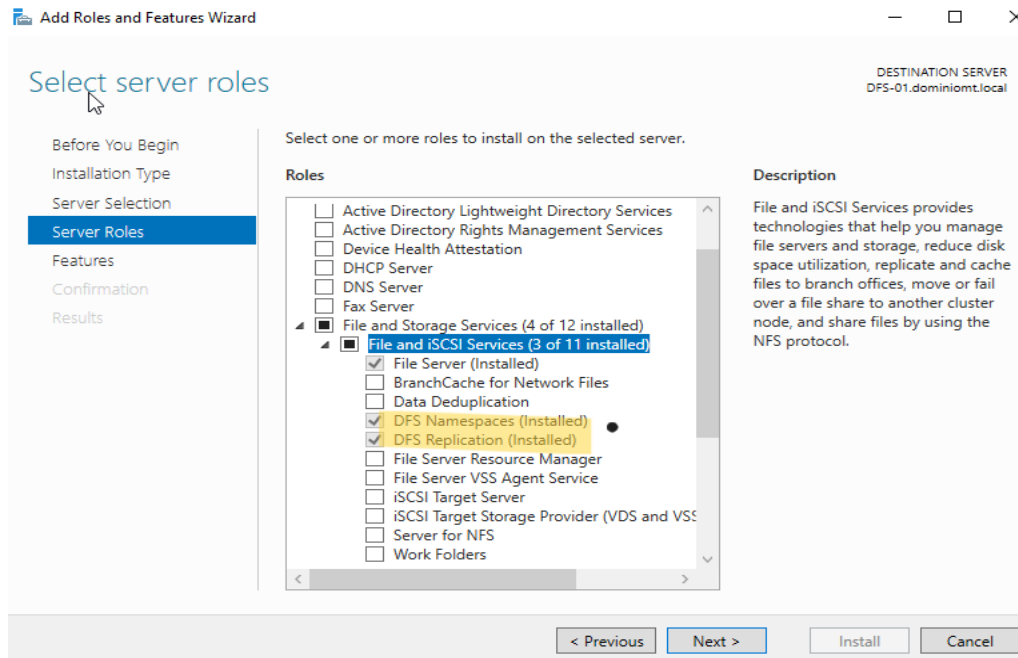


Configuração do DNS

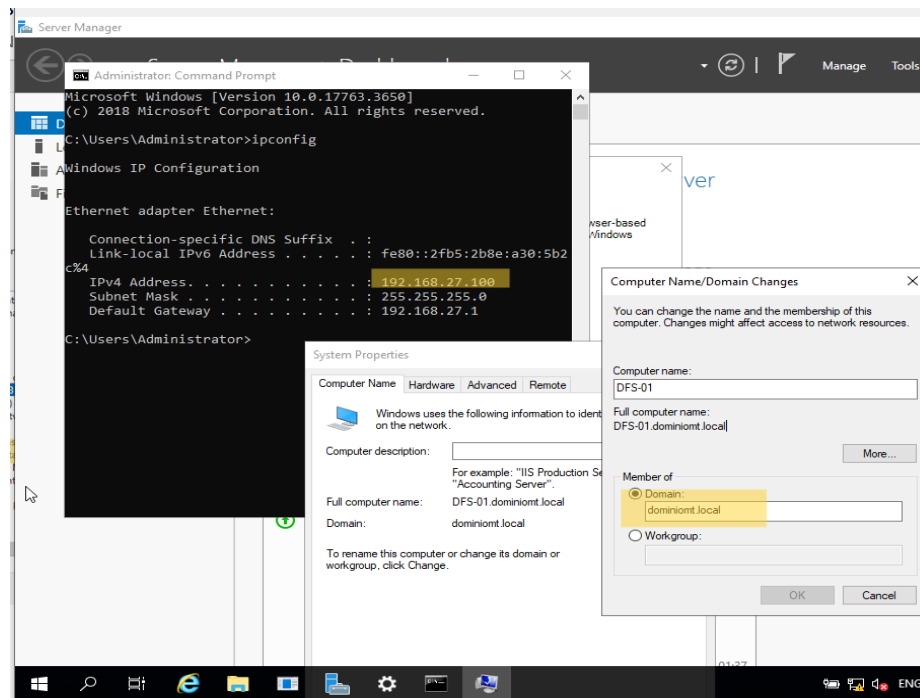


Servidor DFS

Instalação de serviços DFS E replicação no servidor



DFS no domínio



Validação da conectividade do cliente Windows

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.2006]
(c) Microsoft Corporation. All rights reserved.

C:\Users\aluno10>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : dominiomt.local
    Link-local IPv6 Address . . . . . : fe80::95d:bec4:b4c2:2c5c%9
    IPv4 Address. . . . . : 192.168.27.50
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.27.1

C:\Users\aluno10>ping 192.168.27.1

Pinging 192.168.27.1 with 32 bytes of data:
Reply from 192.168.27.1: bytes=32 time=1ms TTL=128
Reply from 192.168.27.1: bytes=32 time=5ms TTL=128

Ping statistics for 192.168.27.1:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 5ms, Average = 3ms
Control-C
^C
C:\Users\aluno10>ping 192.168.27.100

Pinging 192.168.27.100 with 32 bytes of data:
Reply from 192.168.27.100: bytes=32 time=2ms TTL=128
Reply from 192.168.27.100: bytes=32 time<1ms TTL=128
Reply from 192.168.27.100:
Ping statistics for 192.168.27.100:
    Packets: Sent = 3, Received = 2, Lost = 1 (33% loss),
    bytes=32 Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

Windows 10 Enterprise Evaluation
Windows License valid for 62 days
Build 19041.vb_release.191206-1401

1:52 AM
1/25/2025

```
C:\Windows\system32\cmd.exe

IPv4 Address. . . . . : 192.168.27.50
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.27.1

C:\Users\aluno10>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=158ms TTL=254

Ping statistics for 8.8.8.8:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 158ms, Maximum = 158ms, Average = 158ms
Control-C
^C
C:\Users\aluno10>ping DC-01

Pinging dc-01.dominiomt.local [10.0.2.15] with 32 bytes of data:
Reply from 10.0.2.15: bytes=32 time=82ms TTL=127
Reply from 10.0.2.15: bytes=32 time=1ms TTL=127

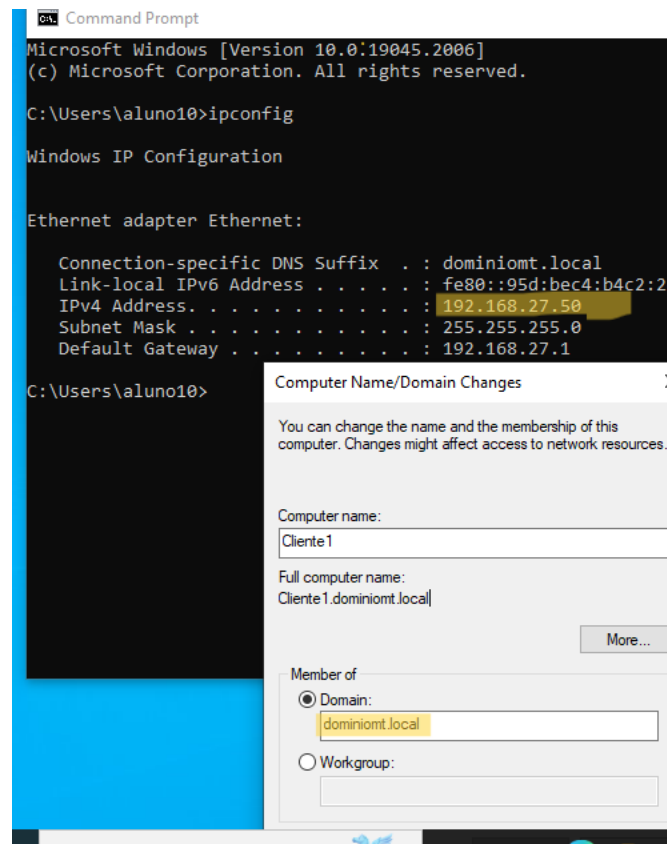
Ping statistics for 10.0.2.15:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 82ms, Average = 41ms
Control-C
^C
C:\Users\aluno10>ping 8.8.8.8

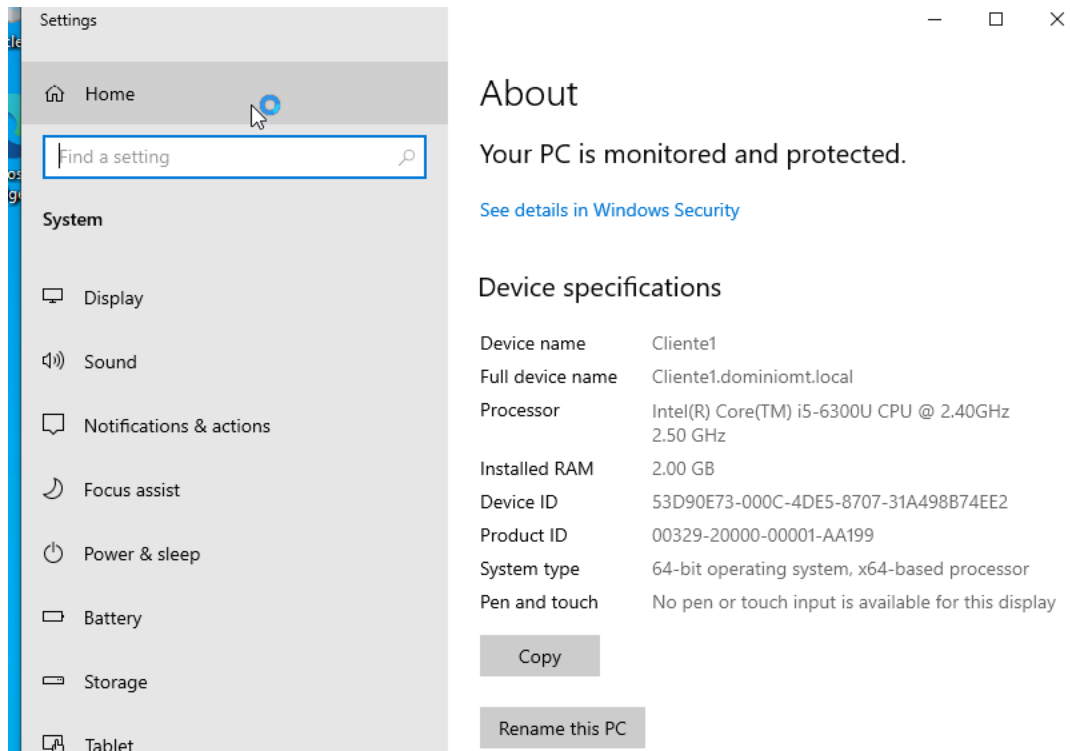
Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=250ms TTL=254

Ping statistics for 8.8.8.8:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 250ms, Maximum = 250ms, Average = 250ms
Control-C
^C
C:\Users\aluno10>ping DFS-01

Pinging DFS-01.dominiomt.local [192.168.27.100] with 32 bytes of data:
Reply from 192.168.27.100: bytes=32 time=1ms TTL=128
Reply from 192.168.27.100: bytes=32 time<1ms TTL=128
```

Cliente Windows no domínio

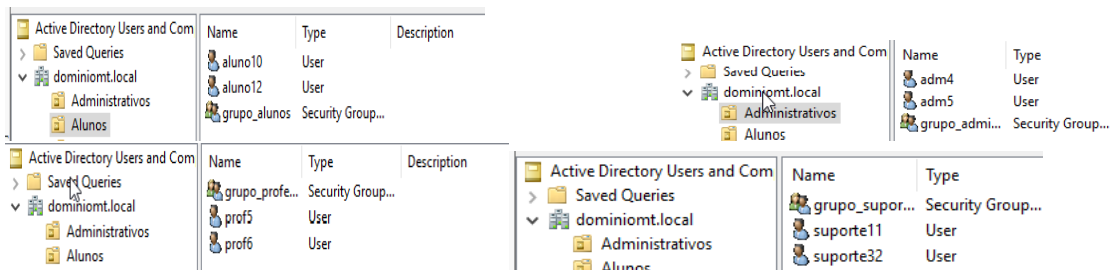
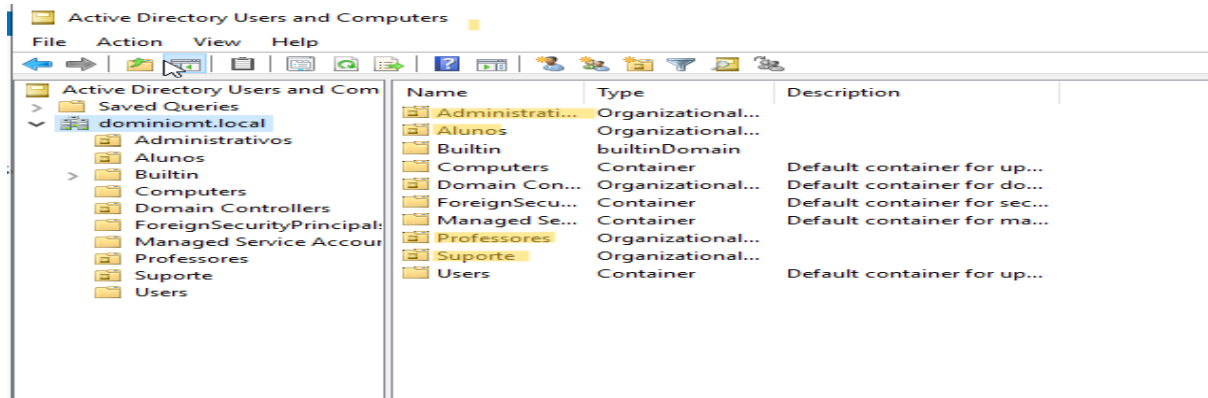




Cliente Linux no domínio

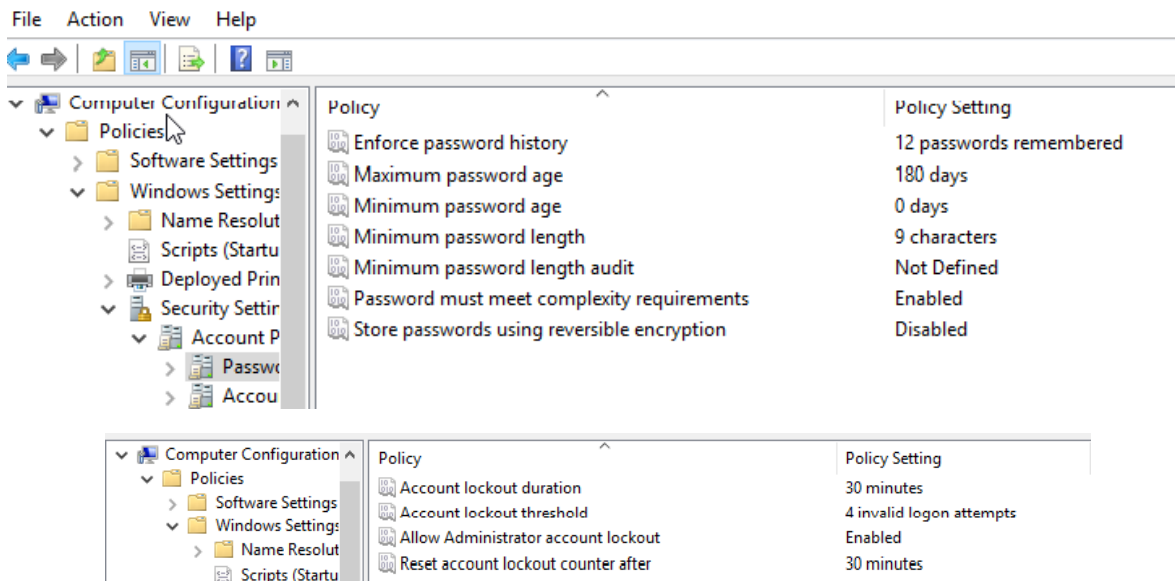
```
dominiomt.local
type: kerberos
realm-name: DOMINIOMT.LOCAL
domain-name: dominiomt.local
configured: no
server-software: active-directory
client-software: sssd
required-package: sssd-tools
required-package: sssd
required-package: libnss-sss
required-package: libpam-sss
required-package: adcli
required-package: samba-common-bin
```

OU'S e GPO's

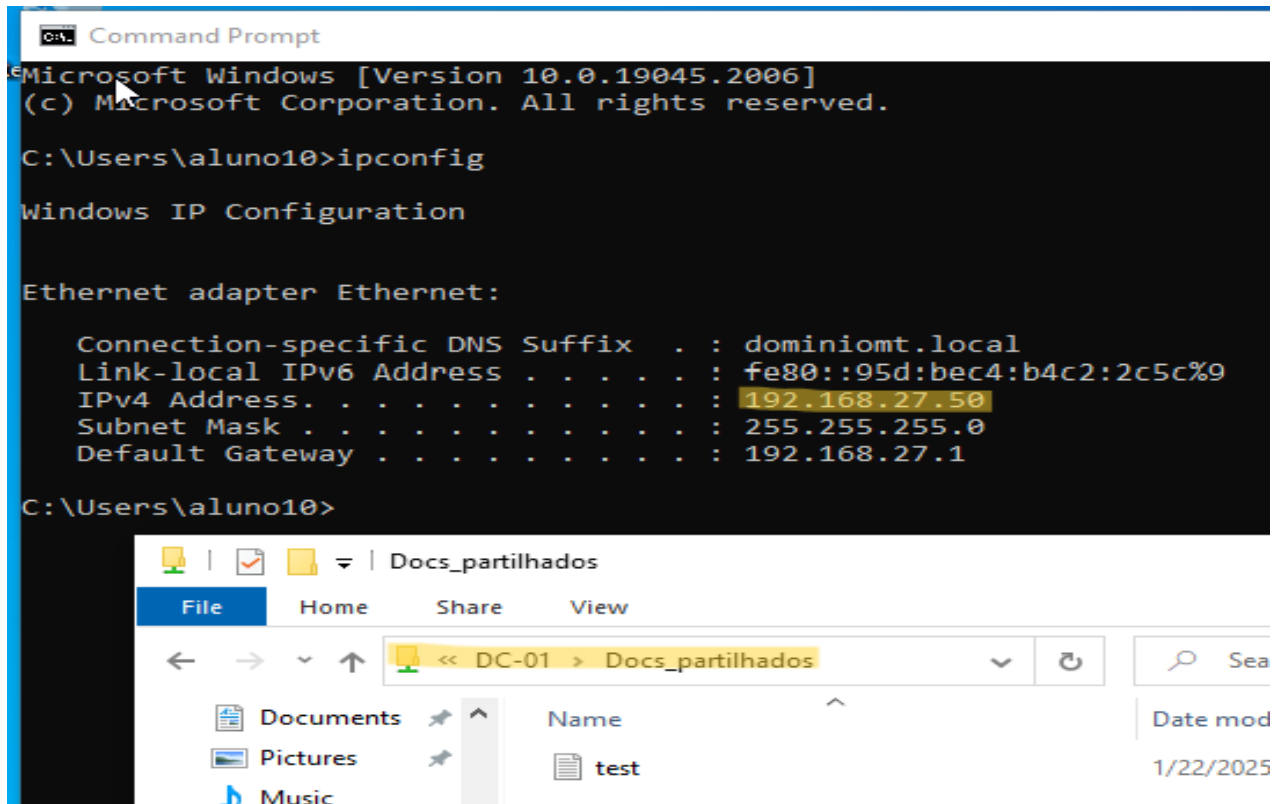


As contas dos utilizadores devem seguir os seguintes requisitos:

Group Policy Management Editor

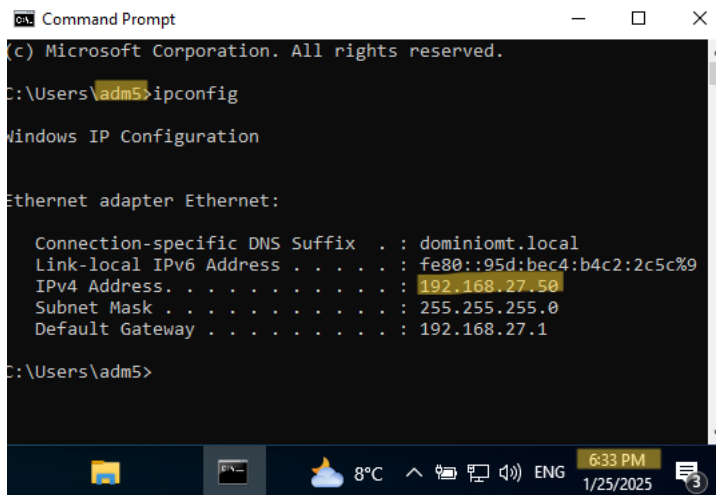
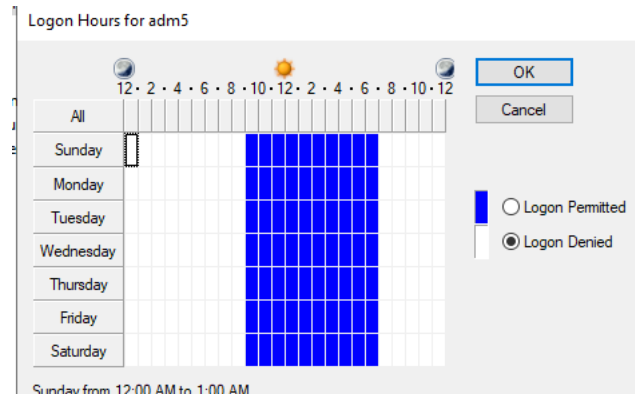


Exemplo de uma pasta partilhada onde podia ser acessível a todos os clientes:

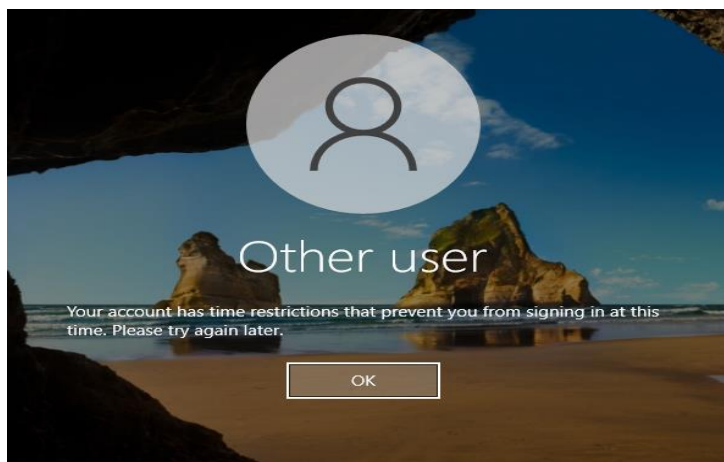


Os utilizadores do grupo administrativos deverão ter algumas configurações especiais nas suas contas, nomeadamente:

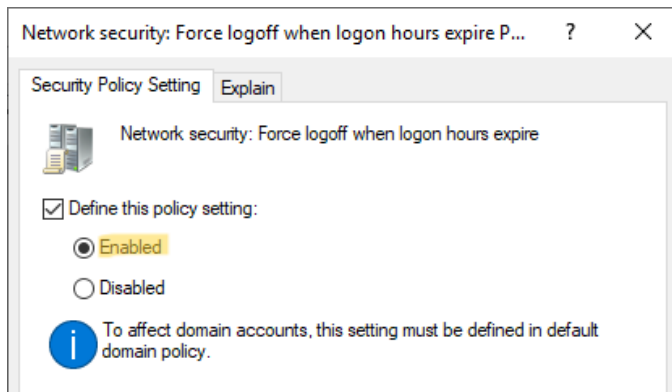
Apenas estão autorizados a utilizar os computadores das 09h00 às 19h00, findo esse período a sessão deverá ser terminada automaticamente



Aqui nota-se que é possível estar logado sem nenhum problema no período entre as 09h até as 19h.

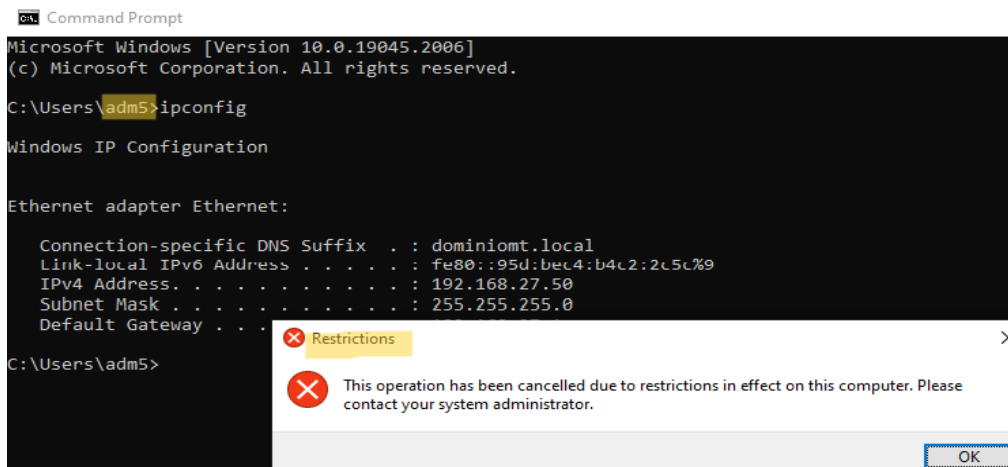
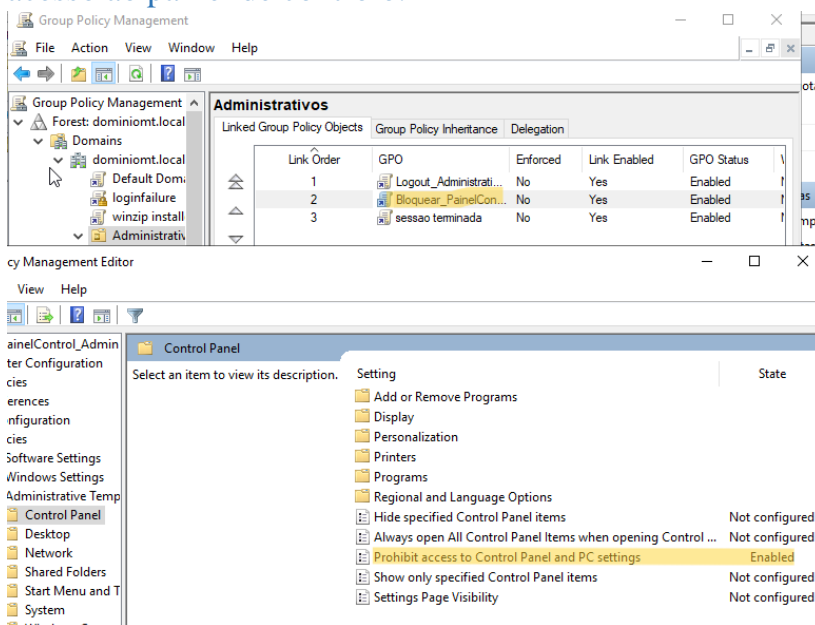


Já fora desse período não é possível aceder a contas administrativas.



Logout automático após atingir o horário.

Neste exemplo o utilizador adm5 (um dos utilizadores do grupo administrativos) não tem acesso ao painel de controlo.



Deverá existir limitação no espaço ocupado por cada utilizador no servidor, tendo em conta os seguintes requisitos:

Quota Properties of C:\TestUsersData

Copy properties from quota template (optional):

250 mb limite

Copy

Settings

Quota path:

C:\TestUsersData

Description (optional):

Limite imposto de 250MB

Space limit

Limit:

250.000

MB

☒ Hard quota: Do not allow users to exceed limit

☐ Soft quota: Allow users to exceed limit (use for monitoring)

Notification thresholds

Threshold	E-mail	Event Log	Command	Report
Warning (85%)		<input checked="" type="checkbox"/>		

Add...

Edit...

Remove

☐ Disable quota

OK

Cancel

Source Template

Match Temp...

Description

Actions

Quotas

Create Quot

Refresh

View

85% Threshold Properties

Generate notifications when usage reaches (%):

85

E-mail Message

Event Log

Command

Report

☐ Send e-mail to the following administrators:

[Admin Email]

Format: account@domain. Use semicolons to separate accounts.

☒ Send e-mail to the user who exceeded the threshold

E-mail message

Type the text to use for the Subject line and message.

To identify the quota, limit, usage, or other information about the current thresh can use Insert Variable to insert a variable in your text.

Subject:

Attention

Message body:

85% do limite foi atingido.

Select variable to insert:

[Admin Email]

Insert Variable

Inserts the e-mail addresses of the administrators who receive the e-mail.

Quota onde cada utilizador têm no máximo 250MB para utilizar:

Source Template: 250 mb limite (1 item)					
C:\TestUsersData	0%	250 MB	Hard	250 mb limite	Yes

Aviso que o utilizador excedeu 85% do limite imposto:

Event Viewer

File

Action

View

Help

Event Viewer (Local)

Custom Views

Server Roles

Administrative Events

Windows Logs

Applications and Services Lo

Subscriptions

Administrative Events

Number of events: 1,401 (!) New events availa

Number of events: 1,401

Level	Date and Time	Source	Event ID
Error	1/25/2025 3:57:14 PM	Applic...	103
Warning	1/25/2025 3:57:14 PM	Applic...	101
Warning	1/25/2025 3:56:42 PM	SRMSVC	12325
Warning	1/25/2025 3:52:14 PM	Group...	1112
Warning	1/25/2025 3:52:14 PM	Applic...	108
Error	1/25/2025 3:52:14 PM	Applic...	103

Event 12325, SRMSVC

General

Details

as exceeded the 85% quota threshold for the quota on C:
ie quota limit is 250.00 MB, and 217.01 MB currently is in use

Apenas os professores têm acesso a pasta partilhada Docs_Profs

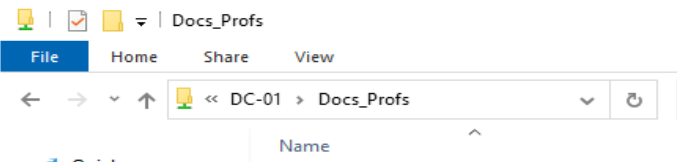
```
C:\Users\prof5>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

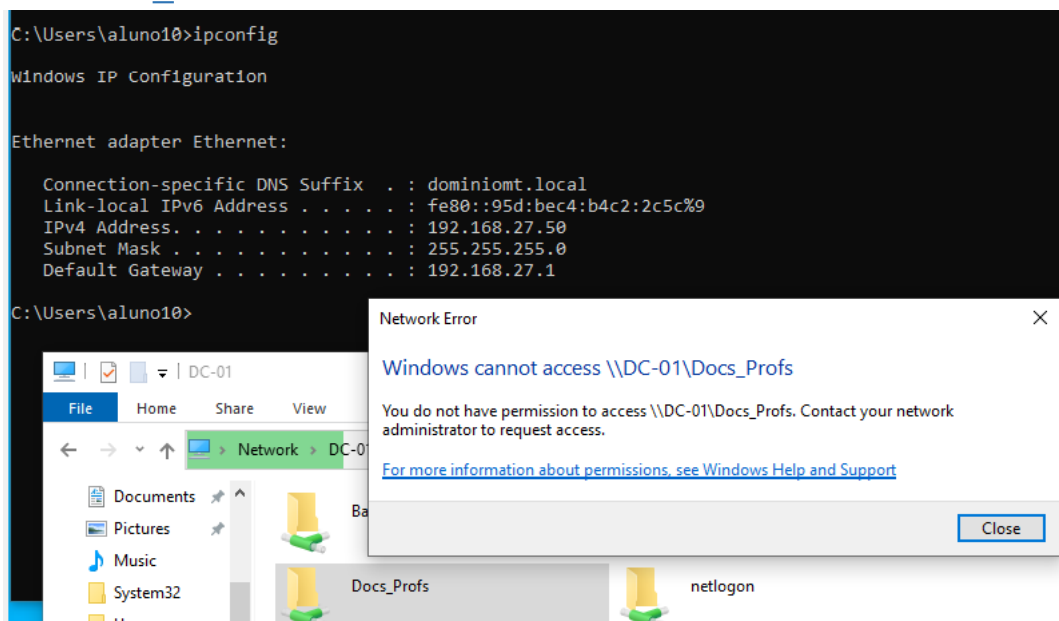
    Connection-specific DNS Suffix  . : dominiomt.local
    Link-local IPv6 Address . . . . . : fe80::95d:bec4:b
    IPv4 Address. . . . . : 192.168.27.50
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.27.1

C:\Users\prof5>
```



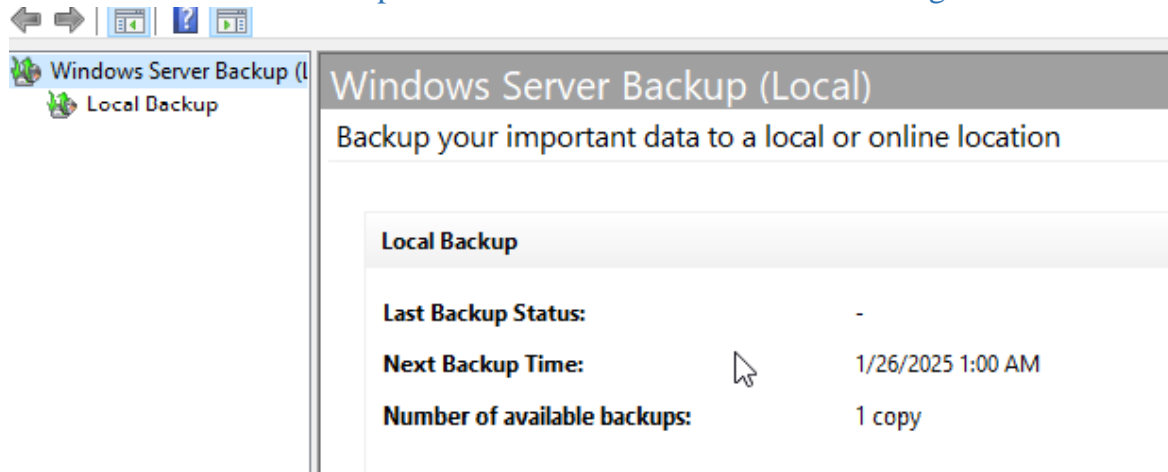
The screenshot shows a Windows File Explorer window with the address bar set to <DC-01> Docs_Profs. The window displays the standard ribbon (File, Home, Share, View) and a list of files and folders. The 'Name' column is visible, and the folder 'Docs_Profs' is highlighted.

Aqui dá pa ver que qualquer utilizador que não seja professor já não têm acesso a Docs_Profs:

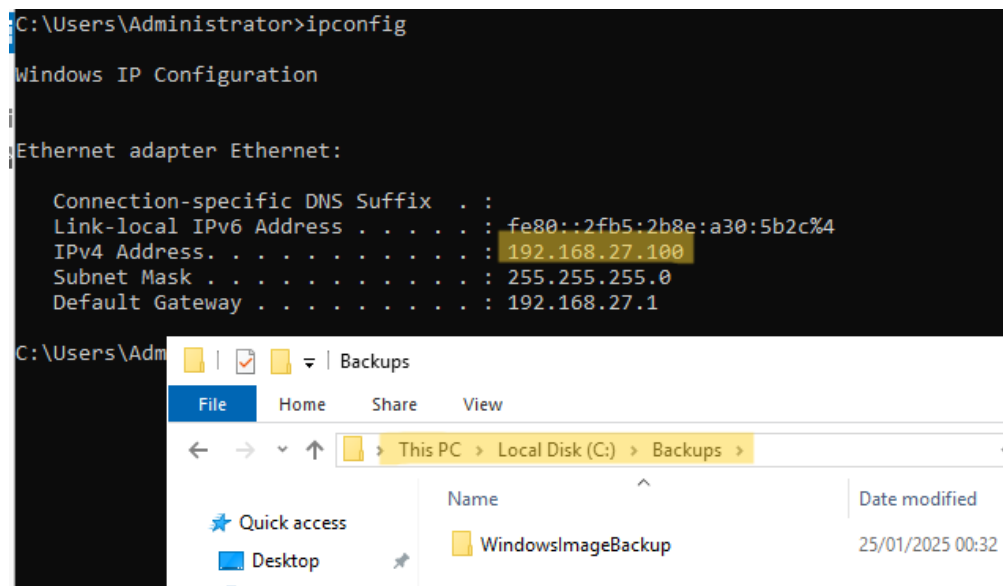


Backup

O backup é feito todos os dias a 01:00 da madrugada:

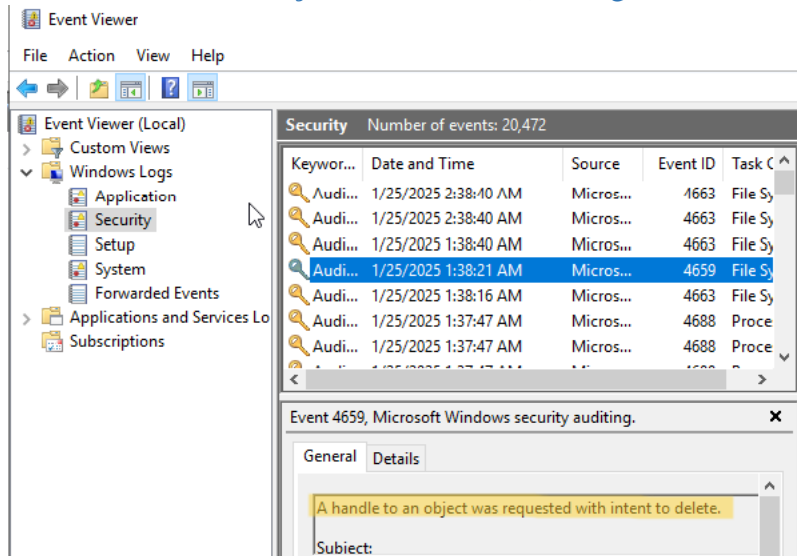


Aqui pode se notar que os backups ficam armazenados numa pasta chamada backup localizada no DFS:

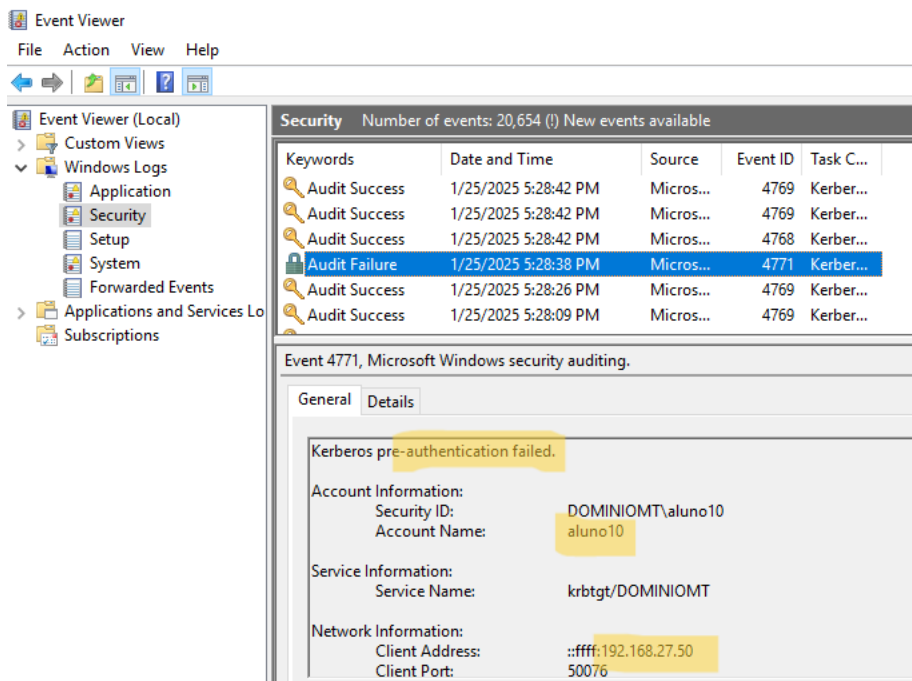


O administrador também pode ver os eventos que ocorrem no sistema

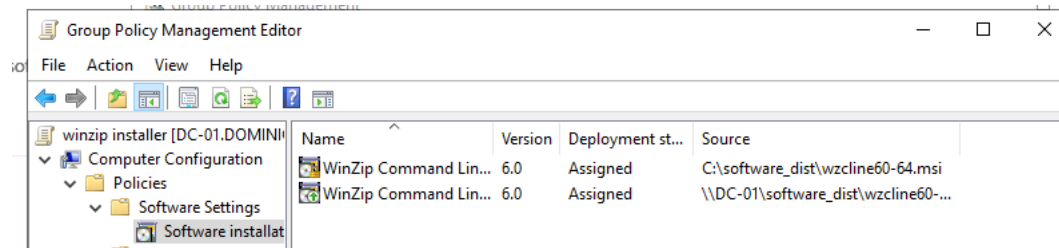
Tentativa de eliminação de ficheiros (conseguidas ou falhadas):



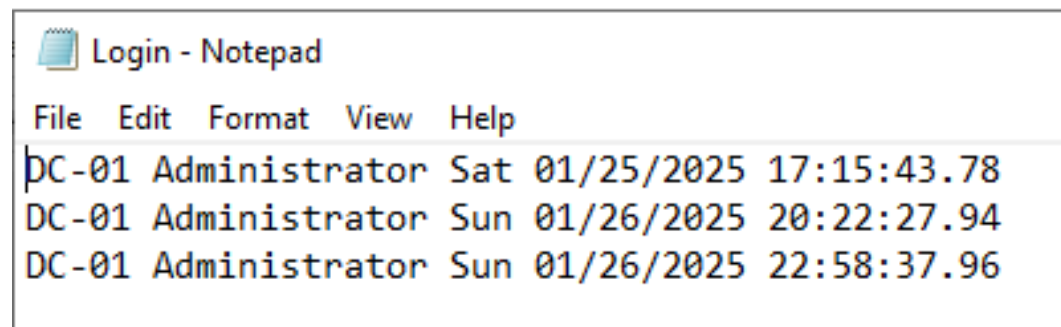
Tentativas falhadas de entrada no sistema



Distribuição e disponibilização de software pelos postos de trabalho:



Também implementei uma configuração extra onde é só aceder a um ficheiro no DC-01 nominado login onde mostra a hora e data que qualquer cliente logou na rede:



Esse ficheiro é preenchido automaticamente após cada login no sistema.