



**SENAC-SP Unidade Tatuapé**  
**IT Technician Course**

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ISSUING AREA: INFORMATION TECHNOLOGY

**SUBJECT: WINDOWS AND UBUNTU SERVER IMPLEMENTATION**

This document has only educational purposes.

It was part of a project done on June 2022 in the IT Technician Course at SENAC Tatuapé during the classes ministered by Leandro Ramos and Robson Vaamonde where we have learned about Windows and Linux Server.

Ce document n'a que des objectifs éducatifs.

Il faisait partie d'un projet réalisé en juin 2022 dans le cadre du cours de technicien informatique au SENAC Tatuapé lors des cours dirigés par Leandro Ramos et Robson Vaamonde où nous avons appris sur Windows et Linux Serveur.



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## 1. General Information

1.1. Operation System: Microsoft Windows Server 2022 Standard

1.2. Server Roles: Domain Controller, DNS, DHCP, File Server, Print Server, Backup, IIS

## 2. Windows Server Installation

Language to install: English (United States)

Time and currency format: Portuguese (Brazil)

Keyboard or input method: ABNT2

Install Now

Install Windows Server 2022 Standard (Desktop Experience)

Custom: Install Microsoft Server Operating System only (advanced)

Create the partitions according to your needs

Password: Xtr3m3!

Reenter password: Xtr3m3!

## 3. Initial Settings

Open Server Manager e click on Local Server

Computer name: srvgrupo2

Remote management: Enable remote management of this server from other computers

Ethernet

IP: 172.16.2.10

Subnet mask: 255.255.255.0

Gateway: 172.16.2.254

DNS: 172.20.2.10

Disable IPv6

IE Enhanced Security Configuration: Administrators: Off, Users: On

Time zone: (UTC-03:00) Brasilia

UAC: Never notify

Last checked for updates

Rename administrator account to Thanos

Install the softwares: Firefox, 7Zip, Google Chrome, Microsoft Edge

The settings above can be done automatically using the Powershell script 00-config.ps1 located on C:\Scripts\00-config

Computer name	srvgrupo2	Last installed updates	Never
Domain	grupo2.intra	Windows Update	Download updates only, using Windows Update
		Last checked for updates	Yesterday at 19:24
Microsoft Defender Firewall	Public: On	Microsoft Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Enabled	IE Enhanced Security Configuration	Off
NIC Teaming	Disabled	Time zone	(UTC-03:00) Brasilia
Ethernet	172.16.2.10	Product ID	Not activated
Operating system version	Microsoft Windows Server 2022 Datacenter	Processors	Intel(R) Core(TM) i5-7500 CPU @ 3.40GHz
Hardware information	innotek GmbH VirtualBox	Installed memory (RAM)	4 GB
		Total disk space	49.39 GB



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## 4. Active Directory

Open Server Manager, Manage, Add Roles and Features

Add Function: Active Directory Domain Services

Promote this server to a domain controller

Add a new forest: grupo2.intra

Forest Functional Level: Windows Server 2016

Domain Functional Level: Windows Server 2016

DNS Server

Global Catalog

Directory Services Restore Mode Administrator Password: 123@grupo2

NetBIOS name: GRUPO2

After you have install Active Directory, the server will reboot.

It will be necessary to change DNS address on the NIC card from 127.0.0.1 to 172.16.2.10

The settings above can be done automatically using the Powershell scripts 01-ad.ps1 and 02-dns.ps1 located on C:\Scripts\00-config

## 5. DNS

Open Server Manager, Tools, DNS

Reverse Lookup Zones

New Zone

Primary Zone

Store the zone in Active Directory

To all DNS server running on domain controllers in this domain: grupo2.intra

IPv4 Reverse Lookup Zone

172.16.2

Allow only secure dynamic updates

Forward Lookup Zones

Grupo2.intra

Right click on srvgrupo2 and select Properties

Set Update associated pointer (PTR) record

Right click on the Server srvgrupo2 and after click on Launch nslookup and check if the information of Default Server and Address show up.

Right click on the Server srvgrupo2 and after click on Properties

Click on Forwarders and insert the following addresses below:

1.1.1.1

8.8.8.8

208.67.222.222

1.0.0.1

8.8.4.4



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DNS Manager

File Action View Help

Back Forward Home Search Filter Refresh

**DNS**

SRVGRUPO2

Forward Lookup Zones

- \_msdcs.grupo2.intra
- grupo2.intra
- souadmlinux.com.br
- souadmlwindows.com.br

Reverse Lookup Zones

- 2.16.172.in-addr.arpa

Trust Points

Conditional Forwarders

Name	Type	Data	Timestamp	
_msdcs	(same as parent folder)	Start of Authority (SOA)	[39], srvgrupo2.grupo2.int...	static
_sites	(same as parent folder)	Name Server (NS)	srvgrupo2.grupo2.intra.	static
_tcp	(same as parent folder)	Host (A)	172.16.2.10	23/05/2022 23:00:00
_udp	(same as parent folder)	Host (A)	172.16.2.10	static
DomainDnsZones				
ForestDnsZones				
srvgrupo2				

**SRVGRUPO2 Properties**

Forwarders are DNS servers that this server can use to resolve DNS queries for records that this server cannot resolve.

IP Address	Server FQDN
1.1.1.1	<Attempting to resolve...>
8.8.8.8	<Attempting to resolve...>
208.67.222.222	<Attempting to resolve...>
1.0.0.1	<Attempting to resolve...>
8.8.4.4	<Attempting to resolve...>

Use root hints if no forwarders are available [Edit...](#)

Note: If conditional forwarders are defined for a given domain, they will be used instead of server-level forwarders. To create or view conditional forwarders, navigate to the Conditional Forwarders node in the scope tree.

OK Cancel Apply Help

## 6. Sites and Services

Open the Server Manager, Tools, Active Directory Sites and Services

Rename Default-First-Site-Name to GRUPO2

Right click on Subnets, New Subnet

Prefix: 172.16.2.0/24

Site Name: GRUPO2

Active Directory Sites and Services

File Action View Help

Back Forward Home Search Filter Refresh

**Active Directory Sites and Services**

Sites

Inter-Site Transports

Subnets

- 172.16.2.0/24
- GRUPO2

Servers

SRVGRUPO2

Name	Type	Description
DNS Settings	msDNS-ServerSettings	
NTDS Settings	Domain Controller Settings	



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## 7. DHCP Server

### 7.1. Install

Open Server Manager, Manage, Add Roles and Features

Add Function: DHCP Server

Set the option "Use the following user's credentials"

On user name type Core\Thanos

### 7.2. Setup

Open Server Manager, Tools, DHCP

Right click on IPv4 and select the option New Scope

Scope name: GRUPO2

Description: Rede Corporativa da GRUPO2

Start IP address: 172.16.2.100

End IP address: 172.16.2.200

Exclusion Range

Start IP address: 172.16.2.130

End IP address: 172.16.2.136

Subnet mask: 255.255.255.0

Lease Duration: 8 dias

Gateway: 172.16.2.254

Parent domain: grupo2.intra

DNS: 172.16.2.10

The settings above can be done automatically using the Powershell script03-dhcp.ps1 located on C:\Scripts\00-config

The screenshot shows the Windows Server 2012 DHCP Management Console. On the left, the navigation pane shows the hierarchy: DHCP > srvgrupo2.grupo2.intra > IPv4 > Scope [172.16.2.0] GRUPO2. Under this scope, there are several sub-options: Address Pool, Address Leases, Reservations, Scope Options, Policies, and Filters. On the right, a table displays the configuration for this scope:

Start IP Address	End IP Address	Description
172.16.2.100	172.16.2.200	Address range for distribution
172.16.2.130	172.16.2.136	IP Addresses excluded from distribution



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## 7.3. IP Address Reservation

The screenshot shows the Windows Server DHCP Management Console. On the left, the navigation pane shows the structure: DHCP > srvgrupo2.grupo2.intra > IPv4 > Reservations. A specific reservation is selected: [172.16.2.100] wsgrupo2.grupo2.intra. On the right, a table displays configuration details for this reservation:

Option Name	Vendor	Value	Class / Policy Name
003 Router	Standard	172.16.2.254	None
006 DNS Servers	Standard	172.16.2.10	None

## 8. Folder, Files and Scripts

Copy the folder **Scripts** to **C:\** on the server **srvgrupo2**

Copy the folder **PolicyDefinitions** para **C:\Windows** on the server **srvgrupo2**

Copy the folder **srvgrupo2** para **\grupo2.intra\Netlogon** on the server **srvgrupo2**

Copy the folder **GPO** para **C:\** on the server **srvgrupo2**

Copy the folder **printers** para **C:\** on the server **srvgrupo2**

Copy the folder **TI** para **C:\** on the server **srvgrupo2**

Copy the folder **Softwares** para **C:\** on the server **srvgrupo2**

## 9. Populating Active Directory

Run the script **01-cria\_ou.bat** located on **C:\Scripts\01-ou** to create the Organizational Units

Run the script **cria\_usuarios.bat** located on **C:\Scripts\02-usuarios** to create the users

Run the **cria\_grupos\_ad.cmd** located on **C:\Scripts\03-groups** to create the groups

Run the Powershell script **adiciona-usuario-a-grupo.ps1** located on **C:\Scripts\03-groups** to add the users to the corresponding groups

The screenshot shows the Active Directory Users and Computers Management Console. On the left, the navigation pane shows the structure: Active Directory Users and Computers [srvgrupo2.grupo2.intra] > GRUPO2 > GROUPS. A table on the right lists the security groups created in this container:

Name	Type
Alunos	Security Group - Domain Local
Coordenadores	Security Group - Domain Local
Diretoria	Security Group - Domain Local
Pedagogico	Security Group - Domain Local
Professores	Security Group - Domain Local
Suporte	Security Group - Domain Local



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The screenshot shows the Windows Active Directory Users and Computers management console. The left pane displays a tree view of the directory structure under 'Active Directory Users and Computers [srvgrupo2.gr]'. The 'USERS' node is expanded, showing a list of user accounts. The right pane is a grid view with columns for 'Name', 'Type...', and 'Job Title'. The 'Name' column lists 30 users, each with a small profile icon. The 'Type...' column shows all entries as 'User', and the 'Job Title' column indicates their roles, such as 'Administrador', 'Aluna', 'Aluno', 'Coordenador', 'Diretor', 'Professor', and 'Coordenadora'. The users listed include ADM SENAC, Catarina Matos, Gabriela Ludovicco, Giovanna Gil, Karen Silva, Paula Fernandez, Teresa Lima, Adilson Santos, Allan Gomes, Bruno Silva, Celso Kuteken, Diego Cornelio, Diego Fernandes, Fagner Braga, Felipe Cachuf, Guilherme Silva, Heder Silva, Heitor Martins, Igor Oliveira, Lucas Santos, Luiz Pereira, Matheus Silva, Nicolas Araujo, Otavio Cirico, Pedro Goncalves, Samuel Silva, Jefferson Costa, Noemi Pinheiro, Anderson Mendonca, Edilson Silva, Leandro Ramos, Milton Santos, and Robson Vaamonde.

## 10. File Server

### 10.1. Preparing the disks

Press the keys Winkey + R, type diskmgmt.msc and press Enter

On the screen Initialize Disk, set Disk 1 and Disk 2

Select the option MBR (Master Boot Record)

Click OK

Right click on disk 1 and click on New Simple Volume...

Next

Next

Assign the following drive letter:, select F

Next

Format this volume with the following settings:

File system: NTFS

Allocation unit size: Default

Volume label: DADOS

Perform a quick format

Next

Finish

Right click on disk 2 and click on New Simple Volume...

Next

Next

Assign the following drive letter:, select G

Next



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Format this volume with the following settings:

File system: NTFS

Allocation unit size: Default

Volume label: BACKUP

Perform a quick format

Next

Finish

## 10.2. File Server Role Install

Open Server Manager

Click on Manage

Add Roles and Features

Next

Next

Next

File and Storage Services

File and iSCSI Services

File Server Resource Manager

Next

Next

Install

## 10.3. Removing Inheritance from the volumes

Right click on disk F: and click on Properties

Click on Security and after on Edit...

Remove the groups Users and Everyone, so you don't need to remove inheritance on the child folders.

Right click on disk G: and click on Properties

Click on Security and after on Edit...

Remove the groups Users and Everyone, so you don't need to remove inheritance on the child folders.

Run the Powershell script pastas.ps1 located on C:\Scripts\04-file-server to run the following tasks:

Install Resource Manager

Create and Share folders

Grant permission on the folders to the correct groups

On the Disk F:\ create the following folders

Aulas, Provas, Alunos, Trabalhos, Coordenacao, Diretoria\$, Suporte, Softwares\$, Publica, Turmas, Ex-Alunos2, Projeto2, Financeiro2, Relatorios2, Auditoria\$

## 10.4. Granting Folder Share permission to all folders

Right click on the folder that will be shared and click Properties

Click on the tab Sharing and after on Advanced Sharing

Set the option Share this folder and click on Permissions

Remove the group Everyone and add the group Domain Users



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Set the option Change and click OK

## 10.5. Security Permissions

### 10.5.1. Folder Aulas

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Professores: Modify, Coordenadores: Read & Execute, Suporte: Read & Execute e  
Alunos: Read & Execute

Click OK

### 10.5.2. Folder Provas

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Professores: Modify, Coordenadores: Modify, Suporte: Read & Execute

Click OK

### 10.5.3. Folder Alunos

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Professores: Modify, Coordenadores: Read & Execute, Suporte: Modify e Alunos:

Modify

Click OK

### 10.5.4. Folder Trabalhos

Clique com o botão direito na pasta a ser compartilhada e clique em Properties

Clique na aba Security e depois em Edit

Remova os grupos Everyone e Grupo2\Users

Adicione os seguintes grupos com a seguintes permissões:

Professores: Modify, Coordenadores: Read & Execute, Suporte: Read & Execute e

Alunos: Modify

Clique em OK

### 10.5.5. Folder Coordenacao

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Coordenadores: Modify, Suporte: Read & Execute

Click OK



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### **10.5.6. Folder Diretoria\$**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Diretoria: Modify

Click OK

### **10.5.7. Folder Suporte**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Suporte: Modify

Click OK

### **10.5.8. Folder Softwares\$**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Suporte: Modify

Click OK

### **10.5.9. Folder Publica**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Professores: Modify, Coordenadores: Modify, Suporte: Modify, Alunos: Modify,

Diretoria: Modify

Click OK

### **10.5.10. Folder Turmas**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Professores: Read & Execute, Coordenadores: Read & Execute, Suporte: Read &

Execute, Alunos: Modify

Click OK

### **10.5.11. Folder Ex-Alunos2**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:



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Coordenadores: Modify, Diretoria: Modify  
Click OK

#### **10.5.12. Folder Projeto2**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Coordenadores: Modify

Click OK

#### **10.5.13. Folder Financeiro2**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Coordenadores: Modify, Jefferson.Costa: Deny - Modify

Click OK

#### **10.5.14. Folder Relatorios2**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Professores: Modify, Kelly.Cristina: Deny - Modify

Click OK

#### **10.5.15. Folder Auditoria\$**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Domain Users: Modify

Click OK

#### **10.5.16. Folder NotasFinais**

Right click on the folder you will share and click on Properties

Click on the tab Security and after on Edit

Remove the groups Everyone e Grupo2\Users

Add the following groups with the permissions below:

Professores: Modify, Coordenadores: Modify

Click OK

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DADOS (F:)			
	Name	Date modified	Type
Quick access			
Desktop	Alunos	24/05/2022 09:21	File folder
Downloads	Auditoria\$	24/05/2022 09:21	File folder
Documents	Aulas	24/05/2022 09:21	File folder
Pictures	Coordenacao	24/05/2022 09:21	File folder
Local Disk (C:)	Diretoria\$	24/05/2022 09:21	File folder
DADOS (F:)	Ex-Alunos2	24/05/2022 09:25	File folder
	Financeiro2	24/05/2022 09:21	File folder
G:\	Home\$	24/05/2022 09:23	File folder
00-config	NotasFinais	26/05/2022 09:03	File folder
03-groups	Projeto2	24/05/2022 20:20	File folder
filescreening	Provas	24/05/2022 09:21	File folder
System32	Publica	24/05/2022 09:21	File folder
This PC	Relatorios2	24/05/2022 09:21	File folder
Network	Softwares\$	24/05/2022 09:21	File folder
	Suporte	24/05/2022 09:21	File folder
	Trabalhos	24/05/2022 09:21	File folder
	Turmas	24/05/2022 09:21	File folder

## 11. Home Folder

This folder has been already created when you ran the script `pastas.ps1`

Arquivo Máquina Visualizar Entrada Dispositivos Ajuda			
Home\$			
File Home Share View			
< This PC > DADOS (F:) > Home\$ >			
Quick access	Name	Date modified	Type
Desktop	Adilson.Santos	24/05/2022 09:23	File folder
Downloads	ADMSENA	24/05/2022 09:23	File folder
Documents	Allan.Gomes	24/05/2022 09:23	File folder
Pictures	Anderson.Mendonca	24/05/2022 09:23	File folder
Local Disk (C:)	Bruno.Silva	24/05/2022 09:23	File folder
DADOS (F:)	Catarina.Matos	24/05/2022 09:23	File folder
	Celso.Kuteken	24/05/2022 09:23	File folder
G:\	Diego.Cornelio	24/05/2022 09:23	File folder
00-config	Diego.Fernandes	24/05/2022 09:23	File folder
03-groups	Edison.Silva	24/05/2022 09:23	File folder
filescreening	Fagner.Braga	24/05/2022 09:23	File folder
System32	Felipe.Cachuf	24/05/2022 09:23	File folder
This PC	Gabriela.Ludovico	24/05/2022 09:23	File folder
Network	Giovanna.Gil	24/05/2022 09:23	File folder
	Guilherme.Silva	24/05/2022 09:23	File folder
	Heder.Silva	24/05/2022 09:23	File folder
	Heitor.Martins	24/05/2022 09:23	File folder
	Igor.Oliveira	24/05/2022 09:23	File folder
	Jefferson.Costa	24/05/2022 09:23	File folder
	Karen.Silva	24/05/2022 09:23	File folder
	Kelly.Cristina	24/05/2022 09:23	File folder
	Leandro.Ramos	24/05/2022 09:23	File folder
	Lucas.Santos	24/05/2022 09:23	File folder
	Luiz.Pereira	24/05/2022 09:23	File folder
	Matheus.Silva	24/05/2022 09:23	File folder
	Milton.Santos	24/05/2022 09:23	File folder
	Nicolas.Araujo	24/05/2022 09:23	File folder
	Noemi.Pinheiro	24/05/2022 09:23	File folder
	Otavio.Cirico	24/05/2022 09:23	File folder
	Paula.Fernandez	24/05/2022 09:23	File folder

36 items State: Shared



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## 12. Granting Security Permissions on the Home Folder

Right click on the folder Home\$ and click on Properties

Click on the tab Security

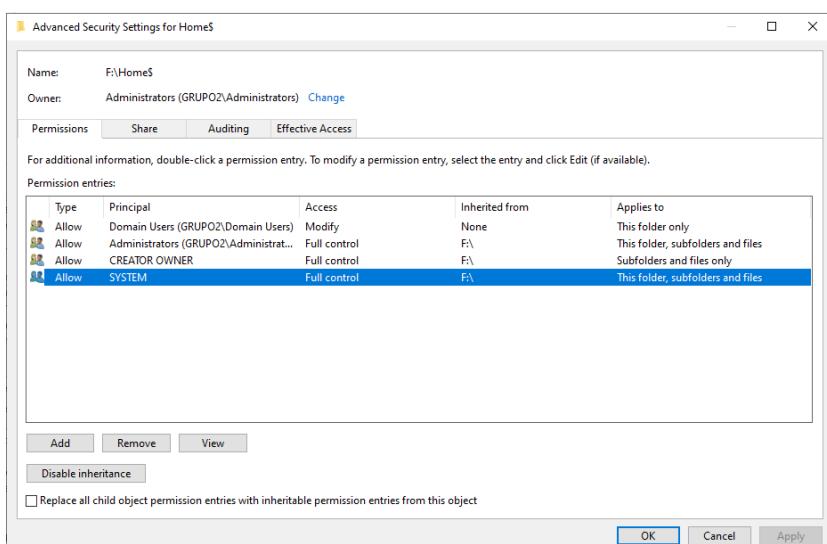
Click on Advanced

On the tab Permissions, click on ADD

Select domain users

Applies to: This folder only

Basic permissions: Modify



Open the ADDS, go to the OU grupo2.intra/GRUPO2/USERS and select all users

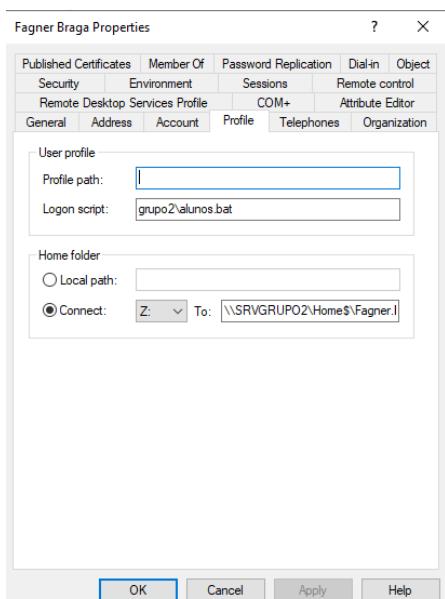
Right click and select Properties

Click on the tab Profile

Click on Home Folder

Select Connect, choose Z:

Type [\\SRVGRUPO2\Home\\$\%username%](\\SRVGRUPO2\Home$\%username%)





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## 13. Home Folder enumeration

Open Server Manager

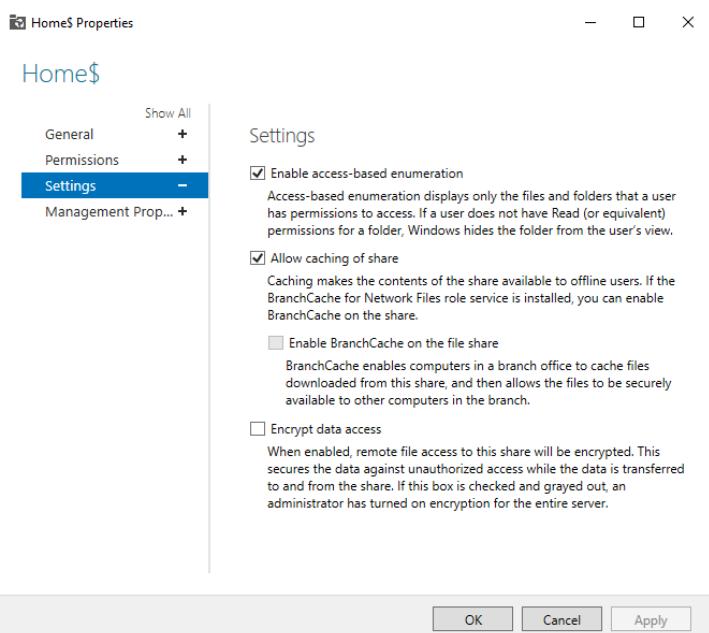
Click on File and Storage Services

Click on Shares

Select the HOME\$ share and right click on Properties

Click on Settings

Select the option Enable access-based enumeration

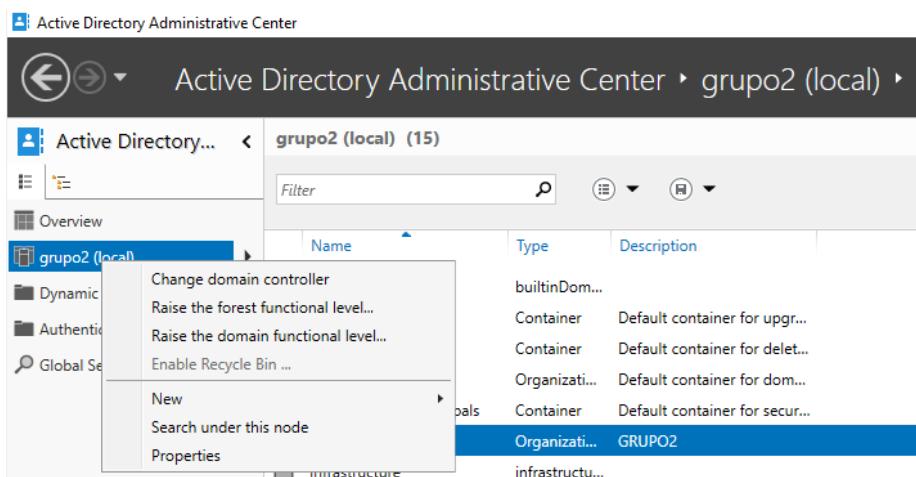


## 14. Enable ADDS Recycle Bin

Open Server Manager, click on Tools and after on Active Directory Administrative Center  
Right click on grupo2(local) and after click on Enable Recycle Bin...

OK

OK





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## 15. Disk Quotas

Open Server Manager

Click on Tools

File Server Resource Manager

### 15.1. Quota Management

Quota Templates

Create Quota Template

Template Name: 20MB

Description: Cota de 20MB

Limit: 20MB

Hard quota: Do not allow users to exceed limit

### 15.2. Publica Folder quota

Quotas

Create Quota

Quota path: F:\Home\$

Create quota on path

Derive properties from this quota template (recommended):

2 GB Limit

Create

### 15.3. Apply Home Folder quota

Quotas

Create Quota

Quota path: F:\Home\$

Auto apply template and create quotas on existing and new subfolders

Derive properties from this quota template (recommended):

10MB

Create

The screenshot shows the Windows File Server Resource Manager interface. The left sidebar has a tree view with 'File Server Resource Manager (Local)' expanded, showing 'Quota Management' and 'Quota Templates'. The main pane displays a table titled 'Source Template: 2 GB Limit (1 item)' with one entry: 'F:\Publica'. Below it is another section titled 'Source Template: 20MB (37 items)' listing 37 user home folders (e.g., Adilson.Santos, ADMSENAC, Allan.Gomes, Anderson.Mendonca, Bruno.Silva, Catarina.Matos, Celso.Kuteken, Diego.Cornelio, Diego.Fernandes, Edilson.Silva, Fagner.Bragg, Felipe.Cachuf, Gabriela.Ludovico, Giovanna.Gil, Guilherme.Silva, Heder.Silva) all set to 20MB Hard quota.

Quota Path	% Used	Limit	Quota Type	Source Template	/	Match Template	Description
F:\Publica	0%	2,00 GB	Hard	2 GB Limit			Yes

Quota Path	% Used	Limit	Quota Type	Source Template	/	Match Template	Description
F:\Home\\$*	---	20,0 MB	Hard (Auto Apply)	20MB			Yes
F:\Home\\$Adilson.Santos	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$ADMSENAC	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Allan.Gomes	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Anderson.Mendonca	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Bruno.Silva	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Catarina.Matos	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Celso.Kuteken	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Diego.Cornelio	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Diego.Fernandes	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Edilson.Silva	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Fagner.Bragg	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Felipe.Cachuf	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Gabriela.Ludovico	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Giovanna.Gil	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Guilherme.Silva	0%	20,0 MB	Hard	20MB			Yes
F:\Home\\$Heder.Silva	0%	20,0 MB	Hard	20MB			Yes



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## 16. File Screening

Abra o Server Manager

Clique em Tools

File Server Resource Manager

File Screening Management

### 16.1. File Screen Templates

Create File Screen Template

Template name: Block Audio Video Executable and Images Files

Active screening: Do not allow users to save unauthorized files

Select file groups to block:

Audio Video Files

Executable Files

Image Files

Create

### 16.2. File Screens Publica Folder

Create File Screen

File Screen path: F:\Publica

Derive properties from this file screen template (recommended): Block Executable Files

Create

### 16.3. File Screens Home Folder

Create File Screen

File Screen path: F:\Home\$

Derive properties from this file screen template (recommended): Block Audio Video Executable and Images Files

Create

The screenshot shows the Windows File Server Resource Manager interface. The left sidebar has a tree view with nodes like 'File Server Resource Manager (Local)', 'Quota Management', 'File Screening Management' (which is expanded to show 'File Screens', 'File Screen Templates', and 'File Groups'), 'Storage Reports Management', 'Classification Management', and 'File Management Tasks'. The main pane displays a table titled 'File Screens' with two items listed:

File Screen Path	Screening Type	File Groups	Source Template	Match Tem...
F:\Home\$	Active	Block: Audio and Video Files, Executable ...	Block Audio Video Executable and I...	Yes
F:\Publica	Active	Block: Executable Files	Block Executable Files	Yes



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## 17. Auditing Exclusion of Files and Folders

Right click on the folder F:\Trabalhos and select Properties

Click on the tab Auditing and after on ADD

Principal: Domain Users

Type: Success

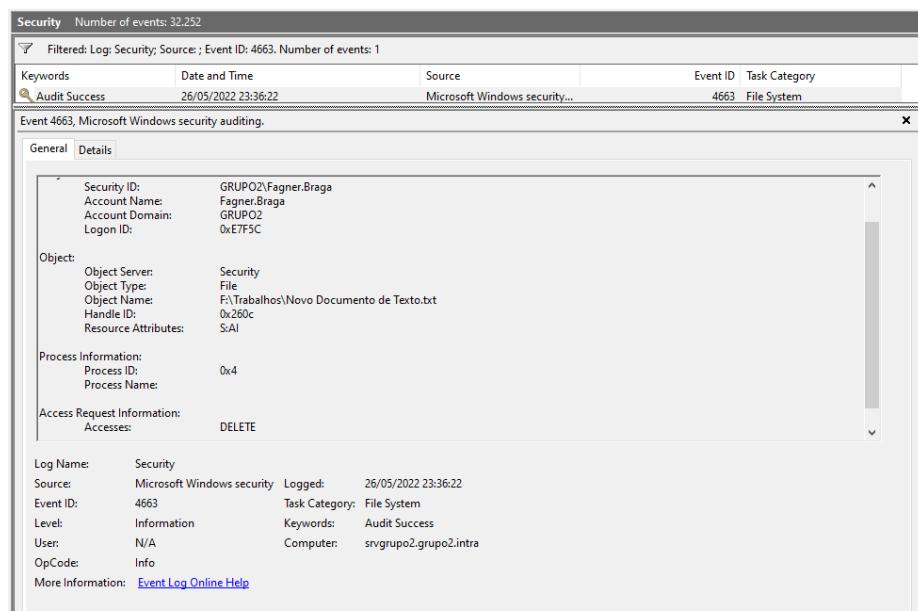
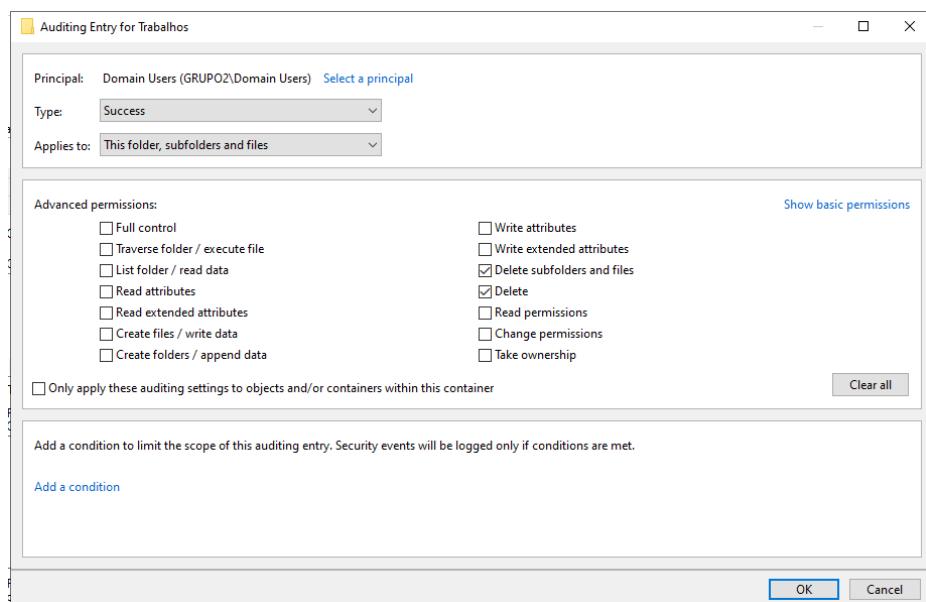
Applies to: This folder, subfolders and files

Show Advanced permissions

Set the options below:

Delete subfolders and files

Delete





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## 18. GPO

### 18.1. GPO-COMP-MOTD

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Windows Settings/Security Settings/Local Policies/Security Options

Interactive logon: Message text for users attempting to log on: Este sistema é restrito a usuários autorizados.

Os indivíduos que tentarem acesso não autorizado poderão ser processados.

Se você não estiver autorizado, termine o acesso agora.

Clique em OK para indicar que aceita estas informações.

Interactive logon: Message title for users attempting to log on: Bem-vindo a Rede Corporativa da Grupo2

### 18.2. GPO-COMP-ENERGIA

GPO Status: User configuration settings disabled

Computer Configuration/Preferences/Control Panel Settings/Power Options/  
New, Power Plan (At least Windows 7)

Action: Update

High performance

Set as the active power plan

When computer is:	Plugged in	Running on
batteries		
Require a password on wakeup:	Yes	Yes
Turn off hard disk after:	Never	Never
Sleep after:	Never	Never
Allow hybrid sleep:	Off	Off
Hibernate after:	Never	Never
Lid close action:	Do nothing	Do nothing
Power button action:	Shutdown	Shutdown
Start menu power button:	Do nothing	Do nothing
Link State Power Management:	Off	Off
Minimum processor state:	100%	5%
Maximum processor state:	100%	100%
Turn off display after:	15	5
Adaptive display:	On	On
Critical battery action:	Do nothing	Shutdown
Low battery level:	10	10
Critical battery level:	5	5
Low battery notification:	Off	Off
Low battery action:	Do nothing	Do nothing



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### 18.3. GPO-COMP-FIREWALL

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Windows Settings/Security Settings/Windows Firewall with Advanced Security

Properties

Domain Profile

Firewall state: On (recommended)

Inbound connections: Block (default)

Outbound connections: Allow (default)

Private Profile

Firewall state: On (recommended)

Inbound connections: Block (default)

Outbound connections: Allow (default)

Public Profile

Firewall state: On (recommended)

Inbound connections: Block (default)

Outbound connections: Allow (default)

Inbound Rules, New Rule

Custom, Next

All Programs, Next

Protcol type: ICMPv4, Next

Next

Allow the connection, Next

Domain, Next

Name: PERMITE-PING

Description: PERMITE-PING, Finish

### 18.4. GPO-USERS-BLOQUEIA-MIDIA-REMOVIVEL

GPO Status: Computer configuration settings disabled

User Configuration/Policies/Administrative Templates/System/Removable Storage Access

All Removable Storage classes: Deny all access: Enabled

### 18.5. GPO-COMP-REMOTE-DESKTOP

GPO Status: User configuration settings disabled

Computer Configuration/Preferences/Control Panel Settings/Local Users and Groups

New Local Group

Action Update

Group Name: Remote Desktop Users (built-in)

Add

Suporte

Computer Configuration/Policies/Administrative Templates/Windows Components/Remote Desktop Services/Remote Desktop Session Host/Connections

Allow users to connect remotely by using Remote Desktop Services: Enabled

Computer Configuration/Policies/Administrative Templates/Windows Components/Remote Desktop Services/Remote Desktop Session Host/Security



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Require user authentication for remote connections by using Network-level authentication:  
Enabled

## 18.6. GPO-COMP-DESABILITA-IPV6

GPO Status: User configuration settings disabled

Computer Configuration/Preferences/Windows Settings/Registry/

Action: Update

Hive: HKEY\_LOCAL\_MACHINE

Key path: System\CurrentControlSet\Services\Tcpip6\Parameters

Value name: DisabledComponents

Value type: REG\_DWORD

Value data: 0xFF

## 18.7. GPO-COMP-CERT-FIREFOX

GPO Status: User configuration settings disabled

Computer Configuration/Preferences/Windows Settings/Files

Action: Update

Source file(s): \\grupo2.intra\netlogon\grupo2\umbrella.cfg

Destination file C:\Program Files\Mozilla Firefox\umbrella.cfg

Action: Update

Source file(s): \\grupo2.intra\netlogon\grupo2\umbrella.cfg

Destination file C:\Program Files (x86)\Mozilla Firefox\umbrella.cfg

Action: Update

Source file(s): \\grupo2.intra\netlogon\grupo2\local-settings.js

Destination file C:\Program Files\Mozilla Firefox\defaults\pref\local-settings.js

Action: Update

Source file(s): \\grupo2.intra\netlogon\grupo2\local-settings.js

Destination file C:\Program Files (x86)\Mozilla Firefox\defaults\pref\local-settings.js

## 18.8. GPO-USERS-NAVEGADORES

GPO Status: Computer configuration settings disabled

Edge

User Configuration/Policies/Administrative Templates/Microsoft Edge

Microsoft Edge/Startup, home page and new tab page

Configure the home page URL: Enabled

Home page URL: <http://www.souadmwindows.com.br>

Show Home button on toolbar: Enabled

Action to take on startup: Enabled

Open a list of URLs

Sites to open when the browser starts



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Value: <http://www.souadmwindows.com.br>

Set the new tab page as the home page: Enabled

Configure the new tab page URL: Enabled

New tab page URL: <http://www.souadmwindows.com.br>

Firefox

User Configuration/Policies/Administrative Templates/Mozilla/Firefox/Home page

URL for Home page: Enabled

URL: <http://www.souadmwindows.com.br>

Don't allow the homepage to be changed

Show Home button on toolbar: Enabled

Start Page: Enabled

Homepage (Locked)

Chrome

User Configuration/Policies/Administrative Templates/Google/Google Chrome

Startup, home page and new tab page

Action on startup: Enabled

Open a list of URLs

URLs to open on startup: Enabled

Show: <http://www.souadmwindows.com.br>

Show Home button on toolbar: Enabled

Configure the home page URL: Enabled

Home page URL: <http://www.souadmwindows.com.br>

Use New Tab Page as homepage: Disabled

## 18.9. GPO-USERS-PROXY

GPO Status: Computer configuration settings disabled

IE

User Configuration/Preferences/Control Panel Settings/Internet Settings

New

Internet Explorer 10

Connections

LAN Settings

Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).

Address: 172.16.2.254 Port: 3128

Bypass proxy server for local addresses

Do not use proxy servers for addresses beginning with:



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172.16.2.; .grupo2.intra; .souadmwindows.com.br; .souadmlinux.com.br

Firefox

User Configuration/Policies/Administrative Templates/Mozilla/Firefox/Proxy Settings

Don't allow proxy settings to be changed: Enabled

Connection Type: Manual proxy configuration

HTTP Proxy: 172.16.2.254:3128

Use this proxy server for all protocols: Enabled

SOCKS Version: SOCKS v5

No proxy for: 172.16.2.0/24, .grupo2.intra, .souadmwindows.com.br,  
.souadmlinux.com.br

Prevent changing proxy settings

User Configuration/Policies/Administrative Templates/Windows Components/Internet Explorer

Prevent changing proxy settings: Enabled

## 18.10. GPO-COMP-AVISO-TROCA-DE-SENHA

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Windows Settings/Security Settings/Local Policies/Security Options

Interactive logon: Prompt user to change password before expiration

Define this policy setting

Begin prompting this many days before passwords expires: 90 days

## 18.11. GPO-COMP-COPIA-ARQUIVOS

GPO Status: User configuration settings disabled

Computer Configuration/Preferences/Windows Settings/Folders

Action: Update

Path: C:\TI

Computer Configuration/Preferences/Windows Settings/Files

Action: Update

Source file(s): \\grupo2.intra\NETLOGON\grupo2\Bginfo.exe

Destination File: C:\TI\Bginfo.exe

Action: Update

Source file(s): \\grupo2.intra\NETLOGON\grupo2\desktops.bgi

Destination File: C:\TI\desktops.bgi

Action: Update

Source file(s): \\grupo2.intra\NETLOGON\grupo2\logo1.jpg

Destination File: C:\TI\logo1.jpg

Action: Update

Source file(s): \\grupo2.intra\NETLOGON\grupo2\logon-desktop.vbs

Destination File: C:\TI\logon-desktop.vbs



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## 18.12. GPO-USERS-BGINFO-DESKTOPS

GPO Status: Computer User configuration settings disabled  
User Configuration/Policies/Windows Settings/Scripts/Logon  
Add  
Script Name: C:\TI\logon-desktop.vbs

## 18.13. Default Domain Policy

Computer Configuration/Policies/Windows Settings/Security Settings/Account Policies/Password Policy  
Enforce password history 10 passwords remembered  
Maximum password age 90 days  
Minimum password age 7 days  
Minimum password length 7 characters  
Password must meet complexity requirements Enabled  
Store passwords using reversible encryption Disabled

## 18.14. GPO-COMP-POWERSHELL-EXECUTION-POLICY

GPO Status: User configuration settings disabled  
Computer Configuration/Policies/Administrative Templates/Windows Components/Windows PowerShell  
Turn on script execution: Enabled  
Execution Policy: Allow all scripts

## 18.15. GPO-COMP-FIREFOX-PADRAO

GPO Status: User configuration settings disabled  
Computer Configuration/Policies/Administrative Templates/Windows Components/File Explorer/  
Set a default associations configuration file: Enabled  
Default associations configuration file: \\grupo2.intra\NETLOGON\grupo2\firefox.xml

## 18.16. GPO-USERS-MOSTRA-EXTENSAO-DE-ARQUIVO

GPO Status: Computer configuration settings disabled  
User Configuration/Preferences/Control Panel Settings/Folder Options  
New  
Folder Options (At least Windows Vista)  
Unset Hide extensions for known file types

## 18.17. GPO-USERS-REGISTRA-LOGON-LOGOFF

GPO Status: Computer configuration settings disabled  
User Configuration/Policies/Windows Settings/Scripts/Logon  
\\grupo2.intra\NETLOGON\grupo2\logon.exe  
User Configuration/Policies/Windows Settings/Scripts/Logoff  
\\grupo2.intra\NETLOGON\grupo2\logoff.exe

Settings to NTP clients GPO  
WMI Filters, New  
Name: LOCALIZA-PDC



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ADD

Query: Select \* from Win32\_ComputerSystem where DomainRole = 5

OK

## 18.18. GPO-SRV-NTP

Details: This GPO is linked to the following WMI filter:

LOCALIZA-PDC

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Administrative Templates/System/Windows Time Service/Time Providers

Configure Windows NTP Client: Enabled

NtpServer a.st1.ntp.br,0x9 b.st1.ntp.br,0x9 c.st1.ntp.br,0x9

Type NT5DS

CrossSiteSyncFlags 2

ResolvePeerBackoffMinutes 15

ResolvePeerBackoffMaxTimes 7

SpecialPollInterval 1024

EventLogFlags 0

Enable Windows NTP Client: Enabled

Aplicar na OU Domain Controllers

## 18.19. GPO-COMP-VNC

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Windows Settings/Scripts/Startup

\grupo2.intra\NETLOGON\grupo2\ultravnc.exe

Computer Configuration/Policies/Windows Settings/Security Settings/Local Policies/Security Options

User Account Control: Detect application installations and prompt for elevation: Disabled

User Account Control: Run all administrators in Admin Approval Mode: Disabled

User Account Control: Behavior of the elevation prompt for administrators in Admin Approval Mode: Elevate without prompting

## 18.20. GPO-COMP-AUDITORIA

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Windows Settings/Security Settings/ Local Policies/Audit Policy

Audit object access: Success, Failure

## 18.21. GPO-USERS-BLOQUEIA-PROMPT

GPO Status: Computer configuration settings disabled

User Configuration/Administrative Templates/System

Prevent access to the command prompt: Enabled

Disable the command prompt script processing also? No



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### 18.22. GPO-USERS-BLOQUEIA-PAINEL-DE-CONTROLE

GPO Status: Computer User configuration settings disabled

User Configuration/Administrative Templates/Control Panel

Prohibit access to Control Panel and PC settings: Enabled

### 18.23. GPO-USERS-BLOQUEIA-REGISTRO

GPO Status: Computer configuration settings disabled

User Configuration/Administrative Templates/System

Prevent access to registry editing tools: Enabled

Disable regedit from running silently? Yes

### 18.24. GPO-USERS-BLOQUEIA-UNIDADES-DE-DISCO

GPO Status: Computer configuration settings disabled

User Configuration/Administrative Templates/Windows Components/File Explorer

Hide these specified driver in My Computer: Enabled

Pick one of the following combinations:

Restrict A, B and C drives only

### 18.25. GPO-COMP-INSTALA-CHROME

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Software Settings/Software installation

<\\grupo2intra\\netlogon\\grupo2\\softwares\\chrome.msi>

Assigned

### 18.26. GPO-COMP-INSTALA-FIREFOX

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Software Settings/Software installation

<\\grupo2intra\\netlogon\\grupo2\\softwares\\firefox.msi>

Assigned

### 18.27. GPO-USERS-BLOQUEIA-SW-POR-HASH

GPO Status: Computer configuration settings disabled

User Configuration/Policies/Windows Settings/Security Settings/

Right click on Software Restriction Policies and after on New Hash Rule

Click on Browse and after C:\\Softwares\\ultrasurf-21-32.exe.

Em Security Level select Disallowed



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The screenshot shows the Windows Group Policy Management console. On the left, the navigation pane displays a tree structure of domains and group policies under 'grup02.intra'. A specific policy named 'GPO-USER5-BLOQUEIA-SW-POR-HASH' is selected. The main pane shows the 'Scope' tab of this policy's properties. It lists 'Links' to 'grup02.intra' and indicates that no sites, domains, or OUs are linked to this GPO. Below this, the 'Security Filtering' section shows that the settings apply to 'Authenticated Users'. At the bottom, there is a 'WMI Filtering' section stating 'This GPO is linked to the following WMI filter: <none>'.

### 18.28. GPO-COMP-CERTIFICADOS

GPO Status: User configuration settings disabled

Computer Configuration/Policies/Windows Settings/Security Settings/Public Key Policies  
Certificate Services Client - Auto-Enrollment

Configuration Model: Enabled

Renew expired certificates, update pending certificates, and remove revoked certificates  
Update certificates that use certificate templates

Trusted Root Certification Authorities

Import

Next

File name: <\\grupo2.intra\NETLOGON\grupo2\grupo2.crt>

GPO-USERS-FAVORITOS-FIREFOX

GPO Status: Computer configuration settings disabled

User Configuration/Policies/Administrative Templates/Mozilla/Firefox/Bookmarks

Bookmark 01 – Enabled

Title: pfSense

URL: <https://172.16.2.254:10443>

Placement: Toolbar

Bookmark 02 – Enabled

Title: ADM-LINUX

URL: <http://www.souadmlinux.com.br/>

Placement: Toolbar

Bookmark 03 – Enabled

Title: ADM-WINDOWS

URL: <http://www.souadmwindows.com.br/>

Placement: Toolbar



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Bookmark 04 – Enabled

Title: Netdata

URL: <http://172.16.2.20:19999>

Placement: Toolbar

Bookmark 05 – Enabled

Title: Agenda

URL: <http://172.16.2.20:8080/agendaVaamonde/>

Placement: Toolbar

Bookmark 06 – Enabled

Title: Tomcat

URL: <http://172.16.2.20:8080/>

Placement: Toolbar

Bookmark 07 – Enabled

Title: Apache

URL: <http://172.16.2.20/>

Placement: Toolbar

Bookmark 08 – Enabled

Title: WordPress-Intranet

URL: <http://172.16.2.20/wordpress/>

Placement: Toolbar

Bookmark 09 – Enabled

Title: WordPress-Administracao

URL: <http://172.16.2.20/wordpress/wp-admin>

Placement: Toolbar

Bookmark 10 – Enabled

Title: Webmin

URL: <https://172.16.2.20:10000/>

Placement: Toolbar

Bookmark 11 – Enabled

Title: PHPINFO

URL: <http://172.16.2.20/phpinfo.php>

Placement: Toolbar

User Configuration/Policies/Administrative Templates/Mozilla/Firefox

Display Bookmarks Toolbar – Enabled

No Default Bookmarks – Enabled



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## 19. Print Server

### 19.1. Install

Open Server Manager, Manage, Add Roles and Features

Add Function: Print and Document Services

Role Services: Print Server, LPD Service

### 19.2. Adding drivers

Open Server Manager, Tools, Print Management

On srvgrupo2, right click on Drivers and click on Add Driver...

Click on Next

Set x64 and click on Next

Click on Have Disk...

Click on Browse and select the print driver to your printer and click on Open

Click on OK

Click on Next

Click on Finish

Repeat the steps above to add all necessary drivers

### 19.3. Adding ports

On srvgrupo2, right click on Ports and click on Add Port...

Standard TCP/IP Port

New Port

Next

Printer Name or IP Address: 172.16.2.130

Next

Next

Finish

Repeat the steps above to add the other ports: 172.16.2.131, 172.16.2.132,

172.16.2.133, 172.16.2.134, 172.16.2.135, 172.16.2.136

### 19.4. Adding printers

On srvgrupo2, right click on Printers and click on Add Printer...

Click on Add a new printer using an existing port and select the correct port for your printer

Next

Use an existing printer driver on the computer and select the correct driver to your printer

Next

Printer Name: Give a name to your printer

Set Share this printer

Share Name: Give a name to the printer share

Next

Next

Finish

Right below there are the printer names, printer shares, ports and driver you must configure:



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Printer: Lexmark  
Share: Lexmark  
Portas: 172.16.2.130  
Driver: Lexmark Universal v2

Printer: Epson  
Share: Epson  
Porta: 172.16.2.133  
Driver: EPSON L5290 Series  
Permission: Diretoria e Coordenadores

Printer: HPLaser1  
Share: HPLaser1  
Porta: 172.16.2.134  
Driver: HP Universal Printing PCL 6  
Permission: Professores, Coordenadores e Suporte

Printer: HPLaser2  
Share: HPLaser2  
Porta: 172.16.2.135  
Driver: HP Universal Printing PCL 6  
Permission: Professores, Alunos e Suporte

Printer: HP007  
Share: HP007  
Porta: 172.16.2.136  
Driver: HP Universal Printing PCL 6  
Permission: Everyone

Print Management					
File Action View Help					
Print Management	Printer Name	Driver Name	Driver Version	Driver Type	Share Name
Custom Filters	Epson	EPSON L5290 Series	3.1.0.0	Type 3 - User Mode	Epson
All Printers (7)	HP007	HP Universal Printing PCL 6	61.255.1.24923	Type 3 - User Mode	HP007
All Drivers (7)	HPLaser1	HP Universal Printing PCL 6	61.255.1.24923	Type 3 - User Mode	HPLaser1
Printers Not Ready	HPLaser2	HP Universal Printing PCL 6	61.255.1.24923	Type 3 - User Mode	HPLaser2
Printers With Jobs	Lexmark	Lexmark Universal v2	3.0.1.0	Type 3 - User Mode	Lexmark
Print Servers	Microsoft Print to PDF	Microsoft Print To PDF	10.0.20348.1	Type 4 - User Mode	<Not Shared>
Deployed Printers	Microsoft XPS Document Writer	Microsoft XPS Document Writer v4	10.0.20348.1	Type 4 - User Mode	<Not Shared>

## 19.5. Setting up Printer Pooling

Right click on Lexmark e click on Properties

Click on the tab Ports

Click on Enable printer pooling

Set the ports 172.16.2.131 and 172.16.2.132

Click on OK.



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## 19.6. Setting up the time schedule to the printer

Right click on HPLaser1 and click on Properties

Click on the tab Advanced

Click on Available from 08:00 to 18:00

Click on OK

Right click on HPLaser2 and click on Properties

Click on the tab Advanced

Click on Available from 08:00 to 23:00

Click OK

## 20. Backup Server

### 20.1. Install

Open Server Manager and click on Manage

Click on Add Roles and Features

Next

Next

Next

Next

Click on Windows Server Backup

Next

Install

Close

### 20.2. Performing Backup

Click on Tools and after on Windows Server Backup

Click on Local Backup and after on Backup Schedule...

Next

Custom

Next

Add Items

Set Disk F:

Set all the folders

Click on OK

Next

Set More than once a day

On Scheduled time:

19:00

19:30

20:30

21:30

Next

Backup to a hard disk that is dedicated for backups (recommended)

Next

Show All Available Disks...

Disk 2 (G:)

OK



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Disk 2

Next

Yes

Finish

Close

### 20.3. Restoring a Backup

Click on Tools and after on Windows Server Backup

Click on Local Backup and after on Recover...

This server (srvgrupo2)

Next

Select the backup time and date to be restored.

Next

Files and folders

Next

Select F:\Alunos

Next

Recovery destination: Original location

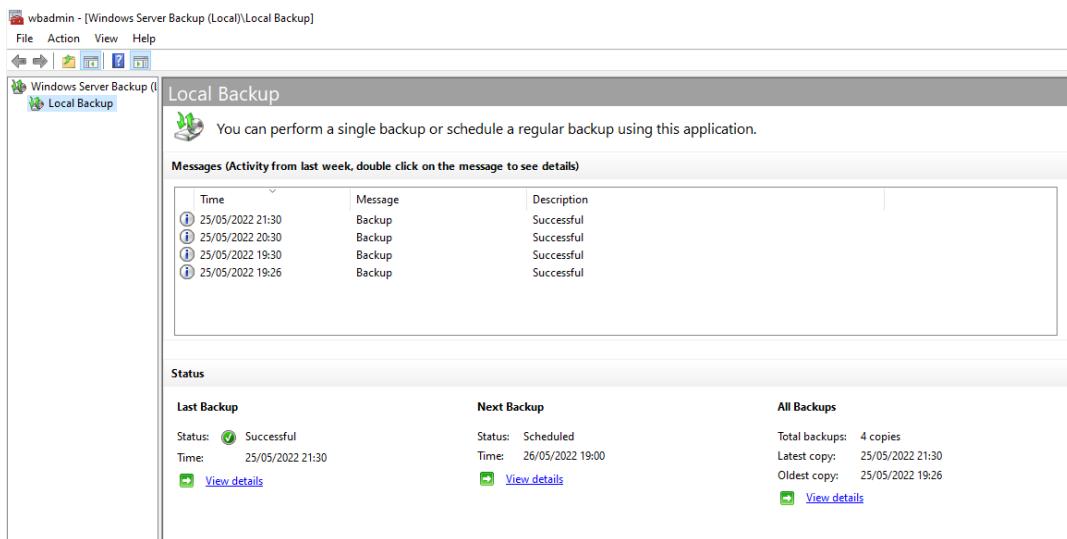
Create copies so that you have both versions

Restore access control list (ACL) permissions to the file or folder being recovered

Next

Recover

Close



### 20.4. Performing Bare Metal Backup

Click on Tools and after on Windows Server Backup

Click on Local Backup and after on Backup Once...

Different options

Next

Custom

Next



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Add Items  
Bare metal Recovery  
OK  
Next  
Local drives  
Next  
Backup destination: (G:)  
Next  
Backup  
Close

## 20.5. Restoring the Bare Metal Backup

Boot the Server with Windows Server Media  
Next  
Repair your computer  
Troubleshoot  
System Image Recovery  
Use the latest available system image (recommended)  
Next  
Next  
Finish  
Yes

# 21. Web Servidor (IIS)

## 21.1. IIS Install and Setup

Open Server Manager  
Click on Manage and after on Add Roles and Features  
Next  
Next  
Next  
Web Server (IIS)  
Add Features  
Next  
Next  
Next  
Install  
Close

Copy the folders souadmlinux and souadmwindows located on C:\Web to the folder C:\inetpub\wwwroot

## 21.2. Creating a new DNS primary zone

Open Server Manager  
Click on Tools and select DNS  
Click on SRVGRUPO2, Forward Lookup Zones  
Right click on New Zone  
Next



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Primary Zone

Next

To all DNS server running on domain controllers in this domain: grupo2.intra

Zone name: souadmlinux.com.br

Next

Allow only secure dynamic updates

Next

Finish

Open the zone souadmlinux.com.br

Right click and select New Host (A or AAAA)

Name: www

IP address: 172.16.2.10

Add Host

OK

Done

### 21.3. Creating a DNS primary zone

Open Server Manager

Click on Tools and Select DNS

Click on SRVGRUPO2, Forward Lookup Zones

Right click and select New Zone

Next

Primary Zone

Next

To all DNS server running on domain controllers in this domain: grupo2.intra

Zone name: souadmwindows.com.br

Next

Allow only secure dynamic updates

Next

Finish

Open the zone souadmwindows.com.br

Right click and select New Host (A or AAAA)

Name: www

IP address: 172.16.2.10

Add Host

OK

Done

Open Server Manager

Click on Tools and select Internet Information Services

Click on SRVGRUPO2

Right click on Sites and after on Add Website...

Site name: Linux

Physical path: C:\inetpub\wwwroot\souadmlinux

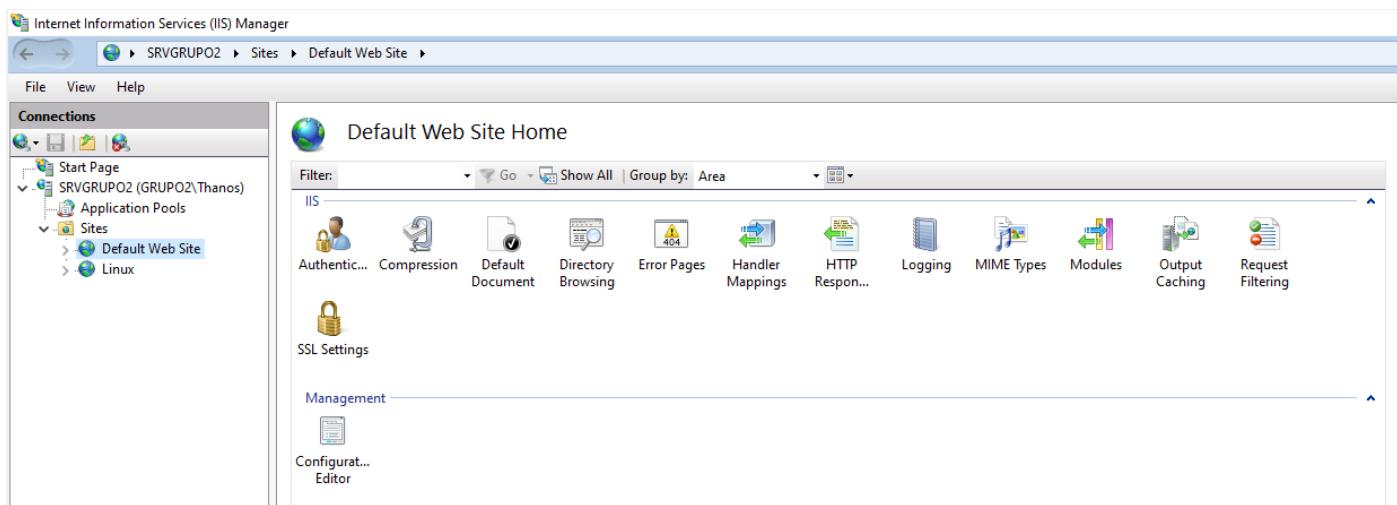
Hostname: www.souadmlinux.com.br

Click on Default Web Site and after on Basic Settings

On Physical path: C:\inetpub\wwwroot\souadmwindows

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## 22. Scripts

### 22.1. 00-config.ps1

```
# Open PowerShell as Administrator
# Run the instruction below to install Chocolatey
Set-ExecutionPolicy Bypass -Scope Process -Force;
[System.Net.ServicePointManager]::SecurityProtocol =
[System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object
System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))

#Install basic softwares on the Server
choco install -Y firefox 7zip.install googlechrome microsoft-edge

#Searching and Installing Updates
#Install-PackageProvider -Name NuGet -MinimumVersion 2.8.5.201 -Force
Install-Module -Name PSWindowsUpdate -Force
Get-Package -Name PSWindowsUpdate
Get-WindowsUpdate –Download -ForceDownload -Confirm
Get-WindowsUpdate –Install

<#List all the networks adapters available#>
Get-NetAdapter -Name *

<#Remove any IP address from the network adapter#>
Remove-NetIPAddress -InterfaceIndex 6 -Confirm:$false

<#Remove any DNS address from the network adapter.#>
Remove-NetRoute -InterfaceIndex 6 -Confirm:$false

<#Set a Static IP on the network adapter.#>
New-NetIPAddress -InterfaceIndex 6 -IPAddress 172.16.2.10 -AddressFamily IPv4 -
PrefixLength 24 -DefaultGateway 172.16.2.254

<#Set DNS servers addresses on the network.#>
```



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Set-DnsClientServerAddress -InterfaceIndex 6 -ServerAddresses ("172.16.2.10")

```
<#List all network adapters with IPv6 support.#>
Get-NetAdapterBinding -ComponentID ms_tcpip6
```

```
<#Disable IPV6 on the network adapter.#>
Disable-NetAdapterBinding -InterfaceAlias "Ethernet" -ComponentID ms_tcpip6
```

```
<#Enable Remote Management #>
<#Enable-PSRemoting –force#>
```

```
<#Changing the time zone #>
Set-TimeZone -Name "E. South America Standard Time"
```

```
<#Disable IE Enhanced Security Configuration for Administrators #>
```

```
function Disable-IEESC {
$AdminKey = "HKLM:\SOFTWARE\Microsoft\Active Setup\Installed Components\{A509B1A7-37EF-4b3f-8CFC-4F3A74704073}"
$userKey = "HKLM:\SOFTWARE\Microsoft\Active Setup\Installed Components\{A509B1A8-37EF-4b3f-8CFC-4F3A74704073}"
Set-ItemProperty -Path $AdminKey -Name "IsInstalled" -Value 0
Set-ItemProperty -Path $userKey -Name "IsInstalled" -Value 1
Stop-Process -Name Explorer
Write-Host "IE Enhanced Security Configuration (ESC) has been disabled." -
ForegroundColor Green
}
Disable-IEESC
```

```
<#Disable UAC #>
```

```
$path = "HKLM:\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System"
New-ItemProperty -Path $path -Name 'ConsentPromptBehaviorAdmin' -Value 0 -
PropertyType DWORD -Force | Out-Null
New-ItemProperty -Path $path -Name 'ConsentPromptBehaviorUser' -Value 3 -
PropertyType DWORD -Force | Out-Null
New-ItemProperty -Path $path -Name 'EnableInstallerDetection' -Value 1 -PropertyType
DWORD -Force | Out-Null
New-ItemProperty -Path $path -Name 'EnableLUA' -Value 1 -PropertyType DWORD -Force
| Out-Null
New-ItemProperty -Path $path -Name 'EnableVirtualization' -Value 1 -PropertyType
DWORD -Force | Out-Null
New-ItemProperty -Path $path -Name 'PromptOnSecureDesktop' -Value 0 -PropertyType
DWORD -Force | Out-Null
New-ItemProperty -Path $path -Name 'ValidateAdminCodeSignatures' -Value 0 -
PropertyType DWORD -Force | Out-Null
New-ItemProperty -Path $path -Name 'FilterAdministratorToken' -Value 0 -PropertyType
DWORD -Force | Out-Null
```

```
<#Rename the user Administrator #>
```

```
Rename-LocalUser -Name "administrator" -NewName "Thanos"
```



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```
<#Enable Remote Desktop #>
Set-ItemProperty 'HKLM:\SYSTEM\CurrentControlSet\Control\Terminal Server\' -Name "fDenyTSConnections" -Value 0
Set-ItemProperty 'HKLM:\SYSTEM\CurrentControlSet\Control\Terminal Server\WinStations\RDP-Tcp\' -Name "UserAuthentication" -Value 1
Enable-NetFirewallRule -DisplayGroup "Remote Desktop"

<#Rename the Server#>
Rename-Computer -NewName srvgrupo2 -Restart
```

## 22.2. 01-ad.ps1

```
Install-WindowsFeature AD-Domain-Services -IncludeManagementTools
Install-ADDSForest -CreateDnsDelegation:$false ` -DatabasePath "C:\Windows\NTDS" ` -
DomainMode "7" ` -DomainName "grupo2.intra" ` -DomainNetbiosName "GRUPO2" ` -
ForestMode "7" ` -InstallDns:$true ` -LogPath "C:\Windows\NTDS" ` -
NoRebootOnCompletion:$false ` -SysvolPath "C:\Windows\SYSVOL" ` -Force:$true
```

## 22.3. 02-dns.ps1

```
23.<#Set DNS servers addresses on the network.#>Set-DnsClientServerAddress -
InterfaceIndex 6 -ServerAddresses ("172.16.2.10")
```

## 23.1. 03-dhcp.ps1

```
<# Install and Set up DHCP #>
Install-WindowsFeature -Name 'DHCP' -IncludeManagementTools
Add-DhcpServerV4Scope -Name "GRUPO2" -Description "Rede Corporativa da GRUPO2" -
StartRange 172.16.2.100 -EndRange 172.16.2.200 -SubnetMask 255.255.255.0
Set-DhcpServerV4OptionValue -DnsServer 172.16.2.10 -Router 172.16.2.254
Set-DhcpServerv4Scope -ScopeId 172.16.2.0 -LeaseDuration 0.08:00:00
Add-Dhcpserverv4ExclusionRange -ScopeId 172.16.2.0 -StartRange 172.16.2.130 -
EndRange 172.16.2.136
Add-DhcpServerInDC -DnsName "srvgrupo2.grupo2.intra" -IPAddress 172.16.2.10
Restart-service dhcpserver
Get-DhcpServerInDC
Set-ItemProperty -Path
registry::HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\ServerManager\Roles\12 -Name
ConfigurationState -Value 2
```

## 23.2. 04-roles-and-features.ps1

```
<# IIS Install #>
Install-WindowsFeature -name Web-Server -IncludeManagementTools
Set-Service -name W3SVC -startupType Automatic
```

```
<# Print Server Install #>
Install-WindowsFeature -Name Print-Server -IncludeManagementTools
Install-WindowsFeature -Name Print-LPD-Service -IncludeManagementTools
```



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```
<# RSAT Install#>
Install-WindowsFeature -Name RSAT -IncludeManagementTools
Install-WindowsFeature -Name RSAT-Feature-Tools -IncludeManagementTools
Install-WindowsFeature -Name RSAT-SMTP -IncludeManagementTools
```

### 23.3. 01-cria\_ou.bat

:: CREATING THE MAIN OU

```
dsadd ou "OU=GRUPO2, DC=grupo2, DC=intra" -desc "GRUPO2"
```

:: CREATING SUB-OUS

```
FOR /F "EOL=; TOKENS=1,* DELIMS=," %%I IN (02-SUB-OUs.TXT) DO dsadd ou
"OU=%%I, OU=grupo2,DC=grupo2, DC=intra"
```

### 23.4. 02-sub-ous.bat

DESKTOPS  
USERS  
SERVERS  
GROUPS

### 23.5. cria\_usuarios.bat

```
; CREATING USERS ON THE ACTIVE DIRECTORY
FOR /F "EOL=; TOKENS=1,2,3,* DELIMS=;" %%I IN (grupo2.csv) DO DSADD USER
"CN=%%J %%I, OU=USERS,OU=GRUPO2,DC=GRUPO2,DC=INTRA" -SAMID "%%J.%%I"
-UPN "%%J.%%I"@GRUPO2.INTRA -FN %%J -LN %%I -DISPLAY "%%J %%I" -EMAIL
"%%J.%%I"@GRUPO2.com.br -title %%K -Company GRUPO2 -PWD 123@senac -
DISABLED NO
DSADD USER "CN=ADM SENAC, OU=USERS,OU=GRUPO2,DC=GRUPO2,DC=INTRA" -
SAMID "ADMSENAC" -UPN ADMSENAC@GRUPO2.INTRA -FN ADM -LN SENAC -DISPLAY
"ADMSENAC" -EMAIL "ADMSENAC"@GRUPO2.com.br -title Administrador -Company
GRUPO2 -PWD 123@senac -DISABLED NO -memberof "CN=Domain
Admins,CN=Users,DC=GRUPO2,DC=intra"
```

### 23.6. grupo2.csv

Cachuf;Felipe;Aluno  
Gil;Giovanna;Aluna  
Silva;Guilherme;Aluno  
Silva;Heder;Aluno  
Oliveira;Igor;Aluno  
Silva;Karen;Aluna  
Santos;Lucas;Aluno  
Pereira;Luiz;Aluno  
Silva;Matheus;Aluno  
Araujo;Nicolas;Aluno  
Cirico;Otavio;Aluno  
Goncalves;Pedro;Aluno  
Santos;Adilson;Aluno  
Gomes;Allan;Aluno  
Silva;Bruno;Aluno



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Braga;Fagner;Aluno  
Kuteken;Celso;Aluno  
Fernandes;Diego;Aluno  
Martins;Heitor;Aluno  
Silva;Samuel;Aluno  
Fernandez;Paula;Aluna  
Ludovico;Gabriela;Aluna  
Lima;Teresa;Aluna  
Matos;Catarina;Aluna  
Cornelio;Diego;Aluno  
Costa;Jefferson;Coordenador  
Pinheiro;Noemi;Coordenadora  
Mendonca;Anderson;Diretor  
Ramos;Leandro;Professor  
Silva;Edilson;Professor  
Cristina;Kelly;Professora  
Vaamonde;Robson;Professor  
Matos;Sirlene;Professora  
Santos;Milton;Professor  
Angelotti;Robson;Suporte

### 23.7. cria\_grupos\_ad.bat

```
:: CRIA GRUPOS BASEADO EM ARQUIVO
FOR /F "EOL=;" TOKENS=1,2,* DELIMS=" %%I IN (grupos.txt) DO dsadd group
"CN=%%I,OU=GROUPS,OU=GRUPO2,DC=GRUPO2,DC=INTRA" -samid %%I -secgrp yes
-scope I
```

### 23.8. GRUPOS.txt

Professores  
Coordenadores  
Suporte  
Diretoria  
Alunos  
Pedagogico

### 23.9. adiciona-usuario-a-grupo.ps1

```
Import-Module activedirectory
Import-Csv C:\Scripts\03-groups\professores.csv -Header SamAccountName | ForEach-Object {Add-AdGroupMember -Identity "Professores" -members $_.SamAccountName}
Import-Csv C:\Scripts\03-groups\coordenadores.csv -Header SamAccountName | ForEach-Object {Add-AdGroupMember -Identity "Coordenadores" -members $_.SamAccountName}
Import-Csv C:\Scripts\03-groups\suporte.csv -Header SamAccountName | ForEach-Object {Add-AdGroupMember -Identity "Suporte" -members $_.SamAccountName}
Import-Csv C:\Scripts\03-groups\diretoria.csv -Header SamAccountName | ForEach-Object {Add-AdGroupMember -Identity "Diretoria" -members $_.SamAccountName}
Import-Csv C:\Scripts\03-groups\alunos.csv -Header SamAccountName | ForEach-Object {Add-AdGroupMember -Identity "Alunos" -members $_.SamAccountName}
```



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Add-AdGroupMember -Identity "Pedagogico" -members Professores, Coordenadores

### 23.10. Alunos.csv

```
#TYPE Selected.Microsoft.ActiveDirectory.Management.ADUser
SamAccountName
Catarina.Matos
Gabriela.Ludovico
Giovanna.Gil
Karen.Silva
Paula.Fernandez
Teresa.Lima
Adilson.Santos
Allan.Gomes
Bruno.Silva
Celso.Kuteken
Diego.Cornelio
Diego.Fernandes
Fagner.Braga
Felipe.Cachuf
Guilherme.Silva
Heder.Silva
Heitor.Martins
Igor.Oliveira
Lucas.Santos
Luiz.Pereira
Matheus.Silva
Nicolas.Araujo
Otavio.Cirico
Pedro.Goncalves
Samuel.Silva
```

### 23.11. Coordenadores.csv

```
#TYPE Selected.Microsoft.ActiveDirectory.Management.ADUser
SamAccountName
Jefferson.Costa
Noemi.Pinheiro
```

### 23.12. Diretoria.csv

```
#TYPE Selected.Microsoft.ActiveDirectory.Management.ADUser
SamAccountName
Anderson.Mendonca
```

### 23.13. Pedagogico.csv

```
#TYPE Selected.Microsoft.ActiveDirectory.Management.ADUser
SamAccountName
Coordenadores
Professores
```



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## 23.14. Professors.csv

```
#TYPE Selected.Microsoft.ActiveDirectory.Management.ADUser
SamAccountName
Edilson.Silva
Leandro.Ramos
Milton.Santos
Robson.Vaamonde
Kelly.Cristina
Sirlene.Matos
```

## 23.15. Suporte.csv

```
#TYPE.Selected.Microsoft.ActiveDirectory.Management.ADUser
SamAccountName
Robson.Vaamonde
Robson.Angelotti
```

## 23.16. Pastas.ps1

```
<# Resource-Manager install#>
Install-WindowsFeature -Name FS-Resource-Manager -IncludeManagementTools

<# Creating folder and shares #>
Foreach($folder in Get-Content "C:\Scripts\04-file-server\folders.txt")
{
    New-Item "F:\$folder" -ItemType directory
    New-SMBShare -Name $folder -Path "F:\$folder" -ChangeAccess "Domain Users"

}
New-Item "F:\Home$" -ItemType directory
New-SMBShare -Name Home$ -Path "F:\Home$" -FullAccess "Domain Users"

<# Granting permissions on the folder Aulas #>
(Get-ACL -Path "F:\Aulas").Access | Format-Table IdentityReference, FileSystemRights,
AccessControlType, IsInherited, InheritanceFlags -AutoSize

$ACL = Get-ACL -Path "F:\Aulas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Professores","Modify","ContainerIn
herit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Aulas" -AclObject $ACL

$ACL = Get-ACL -Path "F:\Aulas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","ReadAndExecute",
,"ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Aulas" -AclObject $ACL
```



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```
$ACL = Get-ACL -Path "F:\Aulas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Suporte","ReadAndExecute","ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Aulas" -AclObject $ACL

$ACL = Get-ACL -Path "F:\Aulas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Alunos","ReadAndExecute","ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Aulas" -AclObject $ACL

<# Granting permissions on the folder Provas #>
(Get-ACL -Path "F:\Provas").Access | Format-Table IdentityReference, FileSystemRights,
AccessControlType, IsInherited, InheritanceFlags -AutoSize

$ACL = Get-ACL -Path "F:\Provas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Professores","Modify","ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Provas" -AclObject $ACL

$ACL = Get-ACL -Path "F:\Provas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","Modify","ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Provas" -AclObject $ACL

$ACL = Get-ACL -Path "F:\Provas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Suporte","ReadAndExecute","ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Provas" -AclObject $ACL

<# Granting permissions on the folder Alunos #>
(Get-ACL -Path "F:\Alunos").Access | Format-Table IdentityReference, FileSystemRights,
AccessControlType, IsInherited, InheritanceFlags -AutoSize

$ACL = Get-ACL -Path "F:\Alunos"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Professores","Modify","ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Alunos" -AclObject $ACL
```



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```
$ACL = Get-ACL -Path "F:\Alunos"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","ReadAndExecute"  
, "ContainerInherit, ObjectInherit", "None", "Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Alunos" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Alunos"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Suporte","Modify", "ContainerInheri  
t, ObjectInherit", "None", "Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Alunos" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Alunos"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Alunos","Modify", "ContainerInherit,  
ObjectInherit", "None", "Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Alunos" -AclObject $ACL
```

```
<# Granting permissions on the folder Trabalhos #>  
(Get-ACL -Path "F:\Trabalhos").Access | Format-Table IdentityReference,  
FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Trabalhos"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Professores","Modify", "ContainerIn  
herit, ObjectInherit", "None", "Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Trabalhos" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Trabalhos"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","ReadAndExecute"  
, "ContainerInherit, ObjectInherit", "None", "Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Trabalhos" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Trabalhos"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Suporte","ReadAndExecute", "Conta  
inerInherit, ObjectInherit", "None", "Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Trabalhos" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Trabalhos"
```



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```
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Alunos","Modify","ContainerInherit,  
ObjectInherit","None","Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Trabalhos" -AclObject $ACL
```

```
<# Granting permissions on the folder Coordenacao #>  
(Get-ACL -Path "F:\Coordenacao").Access | Format-Table IdentityReference,  
FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Coordenacao"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","Modify","Contain  
erInherit, ObjectInherit","None","Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Coordenacao" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Coordenacao"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Suporte","ReadAndExecute","Conta  
inerInherit, ObjectInherit","None","Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Coordenacao" -AclObject $ACL
```

```
<# Granting permissions on the folder Diretoria$ #>  
(Get-ACL -Path "F:\Diretoria$").Access | Format-Table IdentityReference,  
FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Diretoria$"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Diretoria","Modify","ContainerInher  
it, ObjectInherit","None","Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Diretoria$" -AclObject $ACL
```

```
<# Granting permissions on the folder Suporte #>  
(Get-ACL -Path "F:\Suporte").Access | Format-Table IdentityReference, FileSystemRights,  
AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Suporte"  
$ACE = New-Object  
System.Security.AccessControl.FileSystemAccessRule("Suporte","Modify","ContainerInher  
it, ObjectInherit","None","Allow")  
$ACL.SetAccessRule($ACE)  
Set-Acl -Path "F:\Suporte" -AclObject $ACL
```

```
<# Granting permissions on the folder Softwares$ #>
```



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(Get-ACL -Path "F:\Softwares\$").Access | Format-Table IdentityReference, FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize

```
$ACL = Get-ACL -Path "F:\Softwares$"
```

```
$ACE = New-Object
```

```
System.Security.AccessControl.FileSystemAccessRule("Suporte","Modify","ContainerInherit, ObjectInherit","None","Allow")
```

```
$ACL.SetAccessRule($ACE)
```

```
Set-Acl -Path "F:\Softwares$" -AclObject $ACL
```

<# Granting permissions on the folder Publica #>

(Get-ACL -Path "F:\Publica").Access | Format-Table IdentityReference, FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize

```
$ACL = Get-ACL -Path "F:\Publica"
```

```
$ACE = New-Object
```

```
System.Security.AccessControl.FileSystemAccessRule("Professores","Modify","ContainerInherit, ObjectInherit","None","Allow")
```

```
$ACL.SetAccessRule($ACE)
```

```
Set-Acl -Path "F:\Publica" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Publica"
```

```
$ACE = New-Object
```

```
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","Modify","ContainerInherit, ObjectInherit","None","Allow")
```

```
$ACL.SetAccessRule($ACE)
```

```
Set-Acl -Path "F:\Publica" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Publica"
```

```
$ACE = New-Object
```

```
System.Security.AccessControl.FileSystemAccessRule("Suporte","Modify","ContainerInherit, ObjectInherit","None","Allow")
```

```
$ACL.SetAccessRule($ACE)
```

```
Set-Acl -Path "F:\Publica" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Publica"
```

```
$ACE = New-Object
```

```
System.Security.AccessControl.FileSystemAccessRule("Alunos","Modify","ContainerInherit, ObjectInherit","None","Allow")
```

```
$ACL.SetAccessRule($ACE)
```

```
Set-Acl -Path "F:\Publica" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Publica"
```

```
$ACE = New-Object
```

```
System.Security.AccessControl.FileSystemAccessRule("Diretoria","Modify","ContainerInherit, ObjectInherit","None","Allow")
```

```
$ACL.SetAccessRule($ACE)
```

```
Set-Acl -Path "F:\Publica" -AclObject $ACL
```



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```
<# Granting permissions on the folder Turmas #>
(Get-ACL -Path "F:\Turmas").Access | Format-Table IdentityReference, FileSystemRights,
AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Turmas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Professores","ReadAndExecute","C
ontainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Turmas" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Turmas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","ReadAndExecute"
,"ContainerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Turmas" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Turmas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Suporte","ReadAndExecute","Conta
inerInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Turmas" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Turmas"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Alunos","Modify","ContainerInherit,
ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Turmas" -AclObject $ACL
```

```
<# Granting permissions on the folder Ex-Alunos2 #>
(Get-ACL -Path "F:\Ex-Alunos2").Access | Format-Table IdentityReference,
FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Ex-Alunos2"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Diretoria","Modify","ContainerInher
it, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Ex-Alunos2" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Ex-Alunos2"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","Modify","Contain
erInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Ex-Alunos2" -AclObject $ACL
```



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```
<# Granting permissions on the folder Projeto2 #>
(Get-ACL -Path "F:\Projeto2").Access | Format-Table IdentityReference, FileSystemRights,
AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Projeto2"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","Modify","Container
rInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Projeto2" -AclObject $ACL
```

```
<# Granting permissions on the folder Financeiro2 #>
(Get-ACL -Path "F:\Financeiro2").Access | Format-Table IdentityReference,
FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Financeiro2"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Coordenadores","Modify","Contain
rInherit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Financeiro2" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Financeiro2"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Jefferson.Costa","Modify","Contain
erInherit, ObjectInherit","None","Deny")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Financeiro2" -AclObject $ACL
```

```
<# Granting permissions on the folder Relatorios2 #>
(Get-ACL -Path "F:\Relatorios2").Access | Format-Table IdentityReference,
FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize
```

```
$ACL = Get-ACL -Path "F:\Relatorios2"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Professores","Modify","ContainerIn
herit, ObjectInherit","None","Allow")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Relatorios2" -AclObject $ACL
```

```
$ACL = Get-ACL -Path "F:\Relatorios2"
$ACE = New-Object
System.Security.AccessControl.FileSystemAccessRule("Kelly.Cristina","Modify","ContainerI
nherit, ObjectInherit","None","Deny")
$ACL.SetAccessRule($ACE)
Set-Acl -Path "F:\Relatorios2" -AclObject $ACL
```

```
<# Granting permissions on the folder Auditoria$ #>
```



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(Get-ACL -Path "F:\Auditoria\$").Access | Format-Table IdentityReference, FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize

\$ACL = Get-ACL -Path "F:\Auditoria\$"

\$ACE = New-Object System.Security.AccessControl.FileSystemAccessRule("Domain Users","Modify","ContainerInherit, ObjectInherit","None","Allow")

\$ACL.SetAccessRule(\$ACE)

Set-Acl -Path "F:\Auditoria\$" -AclObject \$ACL

<# Granting permissions on the folder NotasFinais #>

(Get-ACL -Path "F:\NotasFinais").Access | Format-Table IdentityReference, FileSystemRights, AccessControlType, IsInherited, InheritanceFlags -AutoSize

\$ACL = Get-ACL -Path "F:\NotasFinais"

\$ACE = New-Object System.Security.AccessControl.FileSystemAccessRule("Domain Users","Modify","ContainerInherit, ObjectInherit","None","Allow")

\$ACL.SetAccessRule(\$ACE)

Set-Acl -Path "F:\NotasFinais" -AclObject \$ACL

## 23.17. Folders.txt

Aulas  
Provas  
Alunos  
Trabalhos  
Coordenacao  
Diretoria\$  
Suporte  
Softwares\$  
Publica  
Turmas  
Ex-Alunos2  
Projeto2  
Financeiro2  
Relatorios2  
Auditoria\$  
NotasFinais

## 23.18. Alunos.vbs

'Logon Script

'=====

'Avoiding show up error messages on the screen

On error Resume Next

Err.clear 0

'=====

'=====

'Mapping Disk Volumes

Set WshNetwork = Wscript.CreateObject("Wscript.Network")

WshNetwork.MapNetworkDrive "O:", "\srvgrupo2\aulas", "true"



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```
WshNetwork.MapNetworkDrive "V:","\srvgrupo2\alunos","true"
WshNetwork.MapNetworkDrive "P:","\srvgrupo2\publica","true"
WshNetwork.MapNetworkDrive "T:","\srvgrupo2\trabalhos","true"
'=====
=====
'Mapping Printers
Set WshNetwork = Wscript.CreateObject("Wscript.Network")
WshNetwork.AddWindowsPrinterConnection "\srvgrupo2\HPLaser2"
WshNetwork.SetDefaultPrinter "\srvgrupo2\HPLaser2", "HPLaser2"
'=====
=====
'Creating a shortcut of a network share on the desktop
strAppPath = "V:\"
Set wshShell = CreateObject("WScript.Shell")
objDesktop = wshShell.SpecialFolders("Desktop")
set oShellLink = WshShell.CreateShortcut(objDesktop & "\Alunos.lnk")
oShellLink.TargetPath = strAppPath
oShellLink.WindowStyle = "1"
oShellLink.Description = "Alunos"
oShellLink.Save

'SEND THE COMMAND TO PRESS THE F5 KEY TO UPDATE THE ICONS ON THE DESKTOP
WshShell.SendKeys "{F5}"
'=====
=====
SYNCHRONIZE TIME BETWEEN STATION AND SERVER
Set wshShell = CreateObject("WScript.Shell")
wshShell.Run "NET TIME \srvgrupo2 /SET /Y", 0, True
'=====
=====
'Welcome message to the user

Set objUser = WScript.CreateObject("WScript.Network")
wuser=objUser.UserName
If Time <= "12:00:00" Then
    MsgBox ("Bom Dia "+wuser+", bem-vindo a rede corporativa Grupo2. Respeite as politicas de seguranca e bom trabalho!")
ElseIf Time >= "12:00:01" And Time <= "18:00:00" Then
    MsgBox ("Boa Tarde "+wuser+", bem-vindo a rede corporativa Grupo2. Respeite as politicas de seguranca e bom trabalho!")
Else
    MsgBox ("Boa Noite "+wuser+", bem-vindo a rede corporativa Grupo2. Respeite as politicas de seguranca e bom trabalho!")
End If
Wscript.Quit
```

## 23.19. Professors.vbs

'Logon Script



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```
'=====
=====
'Avoiding show up error messages on the screen
On error Resume Next
Err.clear 0
'=====
=====
'Mapping disk volumes
Set WshNetwork = Wscript.CreateObject("Wscript.Network")
WshNetwork.MapNetworkDrive "O:","\srvgrupo2\aulas","true"
WshNetwork.MapNetworkDrive "V:","\srvgrupo2\alunos","true"
WshNetwork.MapNetworkDrive "P:","\srvgrupo2\publica","true"
WshNetwork.MapNetworkDrive "T:","\srvgrupo2\trabalhos","true"
WshNetwork.MapNetworkDrive "T:","\srvgrupo2\provas","true"
'=====
=====
'Mapping printers
Set WshNetwork = Wscript.CreateObject("Wscript.Network")
WshNetwork.AddWindowsPrinterConnection "\srvgrupo2\HPLaser1"
WshNetwork.AddWindowsPrinterConnection "\srvgrupo2\HPLaser2"
WshNetwork.SetDefaultPrinter "\srvgrupo2\HPLaser1", "HPLaser1"
'=====
=====
'Creating a shortcut of a network share on the desktop
strAppPath = "V:\"
Set wshShell = CreateObject("WScript.Shell")
objDesktop = wshShell.SpecialFolders("Desktop")
set oShellLink = WshShell.CreateShortcut(objDesktop & "\Alunos.lnk")
oShellLink.TargetPath = strAppPath
oShellLink.WindowStyle = "1"
oShellLink.Description = "Alunos"
oShellLink.Save

'SEND THE COMMAND TO PRESS THE F5 KEY TO UPDATE THE ICONS ON THE DESKTOP
WshShell.SendKeys "{F5}"
'=====
=====
'SYNCHRONIZE TIME BETWEEN STATION AND SERVER
Set wshShell = CreateObject("WScript.Shell")
wshShell.Run "NET TIME \srvgrupo2 /SET /Y", 0, True
'=====
```

## 23.20. logon-desktop.vbs

```
Set WshShell=Wscript.CreateObject("Wscript.Shell")
WshShell.Run "C:\TI\Bginfo.exe C:\TI\desktops.bgi /timer:0 /NOLICPROMPT"
```



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### 23.21. Logon.bat

```
@ECHO OFF
echo %username% ; %computername% ; %date% ; %time% ;"Logon" >>
\\srvgrupo2\auditoria$\%USERNAME%.txt
EXIT
```

### 23.22. Logoff.bat

```
@ECHO OFF
echo %username% ; %computername% ; %date% ; %time% ;"Logoff" >>
\\srvgrupo2\auditoria$\%USERNAME%.txt
EXIT
```

### 23.23. Ultravnc.cmd

```
::::::::::::::::::
:: CREATED BY LEONARDO DUARTE :::::
:: MODIFIED BY FAGNER GERALDES BRAGA :::::
:: EMAIL: info@comoaprenderwindows.com.br :::::
:: CREATION DATE: 07/22/17 :::::
:: MODIFICATION DATE: 05/15/22 :::::
:: GOAL: INSTALL ULTRAVNC ON THE COMPUTERS :::::
::::::::::::::::::
```

```
@echo off
```

```
REM Server name where ULTRAVNC is located
set DeployServer=\\grupo2.intra\\netlogon\\grupo2\\softwares\\ULTRAVNC\\
```

```
REM Check if ULTRAVNC is installed
```

```
if exist "C:\\Program Files\\uvnc bvba\\UltraVNC" GOTO SAIR
```

```
if not exist "C:\\Program Files\\uvnc bvba\\UltraVNC" (
mkdir "C:\\Program Files\\uvnc bvba\\UltraVNC"
)
```

```
REM
```

```
*****
```

```
REM CHECK IF THE OS IS x86 ou x64
IF NOT "%ProgramFiles(x86)%"=="" (goto X64) else (goto X86)
```

```
:X64
```

```
copy /Y "%DeployServer%SCHook.dll" "C:\\Program Files\\uvnc bvba\\UltraVNC\\SCHook.dll"
copy /Y "%DeployServer%SCHook64.dll" "C:\\Program Files\\uvnc
bvba\\UltraVNC\\SCHook64.dll"
copy /Y "%DeployServer%acl.txt" "C:\\Program Files\\uvnc bvba\\UltraVNC\\acl.txt"
```



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```
start /wait %DeployServer%UltraVNC_1_2_12_X64_Setup.exe /verysilent
/loadinf=%DeployServer%vncserver.inf /norestart
copy /Y "%DeployServer%ultravnc.ini" "C:\Program Files\uvnc
bvba\UltraVNC\ultravnc.ini"
"%ProgramFiles%\uvnc bvba\UltraVNC\MSLogonACL.exe" /i /o "C:\Program Files\uvnc
bvba\UltraVNC\acl.txt"
```

```
net stop uvnc_service
net start uvnc_service
rd /s /q "C:\ProgramData\Microsoft\Windows\Start Menu\Programs\UltraVNC\
exit
```

:X86

```
copy /Y "%DeployServer%SCHook.dll" "C:\Program Files\uvnc bvba\UltraVNC\SCHook.dll"
copy /Y "%DeployServer%SCHook64.dll" "C:\Program Files\uvnc
bvba\UltraVNC\SCHook64.dll"
copy /Y "%DeployServer%acl.txt" "C:\Program Files\uvnc bvba\UltraVNC\acl.txt"
```

```
start /wait %DeployServer%UltraVNC_1_2_12_X86_Setup.exe /verysilent
/loadinf=%DeployServer%vncserver.inf /norestart
copy /Y "%DeployServer%ultravnc.ini" "C:\Program Files\uvnc
bvba\UltraVNC\ultravnc.ini"
"%ProgramFiles%\uvnc bvba\UltraVNC\MSLogonACL.exe" /i /o "C:\Program Files\uvnc
bvba\UltraVNC\acl.txt"
```

```
net stop uvnc_service
net start uvnc_service
rd /s /q "C:\ProgramData\Microsoft\Windows\Start Menu\Programs\UltraVNC\
exit
```

:SAIR
exit



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## 24. General Information

24.1. **Operating System:** FreeBSD-pfSense

24.2. **Server Roles:** Firewall, Proxy, VPN-Site-to-Site, OpenVPN

## 25. pfSense install

Copyright and distribution notice:

Accept - <Enter>

Welcome to pfSense!

Install (Install pfSense) - <Enter>

Keymap Selection

Brazilian (accent keys) - <Enter>

Continue with br.kdb keymap - <Enter>

Partitioning

Auto (ZFS) Guided Root-on-ZFS - <Enter>

Configure Options:

>>> Install (Proceed with Installation) - <Enter>

T Pool Type/Disks: stripe: 0 disks

- Rescan Devices \*

- Disk Info \*

N Pool Name pfsense

4 Force 4K Sectores? YES

E Encrypt Disks? NO

P Partition Scheme GPT (BIOS)

S Swap Size 1g

M Mirror Swap? NO

W Encrypt Swap? NO

Select Virtual Device type:

stripe Stripe - No Redundancy <Enter>

Hard Disk Selection

[\*] ada0 - <Space-Bar> - <Enter>

Last Chance! - <Yes> - <Enter>

Manual Configuration: <No> - <Enter>

Complete: <Reboot> - <Enter>

## 26. pfSense Interfaces addresses

Configurando o endereçamento IPv4 ou IPv6 das Interfaces de WAN e LAN

Enter the number of the interface you wish to configure: 2 <Enter>

Enter the new LAN IPv4 address.

> 172.16.10.254 <Enter>

Enter the new LAN IPv4 subnet.

> 24 <Enter>

For a WAN, enter the new LAN IPv4 upstream gateway address

For a LAN, press <Enter> for nome:

> <Enter>

Enter the new LAN IPv6 address.

> <Enter>

Do you want to enable the DHCP server on LAN? (y/n): y <Enter>



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Enter the start address of the IPv4 client address range: 172.16.10.100 <Enter>

Enter the end address fo the IPv4 client address range: 172.16.10.150 <Enter>

Do you want to revert to HTTP as the WebConfigurator protocol? (y/n): y <Enter>

Press <Enter> to continue.

## 27. General Settings

General Information

Hostname: fwgrupo2

Domain: grupo2.intra

Primary DNS Server: 8.8.8.8

Secondary DNS Server: 8.8.4.4

Override DNS: Uncheck

<Next>

Time Server Information

Time server hostname: a.st1.ntp.br

Timezone: America/Sao\_Paulo

Configure WAN Interface

SelectedType: DHCP

Block RFC1918 Private Networks: Uncheck

Block bogon networks: Uncheck

Configure LAN Interface

<Next>

Set Admin WebGUI Password

123@grupo2

123@grupo2

<Next>

Reload configuration

<Reload>

Wizard completed.

<Finish>

Copyright and Trademark Notices.

<Accept>

Thank you!

<Close>

System/General Setup

webConfigurator

Theme:pfSense-dark

Top Navigation: Fixed

Hostname in Menu: FQDN

Dashboard Columns: 3



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Interfaces: Sort Alphabetically

Associated Panels Show/Hide: Available Widgets, Log Filter, Manage Log,

Monitoring Settings

Login hostname: Show hostname on login banner

Save

Disable update verification on the Dashboard

System/Update/Update Settings

Updates

Dashboard check: ON

Save

## 28. pfSense Dashboard Settings

Dashboard

Available Widgets

#Widgets on the Left

Picture - Left-01

New pictures: image.png

Save

System Information: ON - Left-02

#Widgets on the center

Interfaces: ON - Center-01

Gateways: ON - Center-02

Interface Statistics: ON - Center-03

Traffic Graphs: ON - Center-04

Service Status: ON - Center-05

#Widgets on the right

NTP Status: ON - Right-01

Dynamic DNS Status: ON - Right-02

IPSec: ON - Right-03

OpenVPN: ON - Right-04

Firewall Logs: ON - Right-05

Edit

Widgets: Firewall Logs

Number of entries: 20

Filter actions: ON Pass, ON Block and ON Reject

Filter interface: ALL

Update interval: 1 Seconds

Save

Save

## 29. Migrating to pfSense Plus+ 22.01

1- Create na account on the pfSense Store: <https://shop.netgate.com/account/register>

2- Subscribe to pfSense Plus: <https://shop.netgate.com/products/pfsense-software-subscription>

pfSense+ Software Subscription \$0.00



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Subscription Type: Lab (Non-commercial use)

ADD TO CART

CART

CHECKOUT

Fill the information of billing address

CONTINUE TO PAYMENT

COMPLETE ORDER

3- Copy the token sent to your e-mail after you have subscribed pfSense+

4- Active the Token on pfSense 2.6.0

System/Register/Register pfSense

Activation token: (colar o Token do pfSense Plus)

Register

5- Update to pfSense Plus version

System/Update/System Update

Confirmation Required to update pfSense System

Branch: pfSense Plus Upgrade

Confirm

## 30. Access Security

### SSH

System, Advanced, Secure Shell

Secure Shell Server: Check Enable Secure Shell

### Login Protection

Threshold 30

Blocktime 120

Detection time 1800

### Console Options

Console menu

Check Password protect the console menu

### Setting up SSH key on Pfsense

System, User Manager, Users

admin, edit

Keys

Authorized SSH Keys

ssh-rsa

AAAAB3NzaC1yc2EAAAQABAAQgQC8A/INDjikPJZV0e/sHb/UBC31z3Fm7AbtKSI0QbkzGP+T3+xJXILEULrIuc3q01aqSTLITsougrtHcWKHfNscrPhkNr9URKI835Sqe6x807nCdu9EOe+ca1pg9XcoyVHtPJodApbgmXYurNamahApL5OTgE73orgN1u0ky+ApBLR5pwC2rsoy6hHKjBk8kHK7O+D7LQmnZ8794yIjxeFHMd8FVXjQck1yfbm1rpnf9o4mbtT6HFbUF49KAI+35mwBbr/BUuxudas3XPHN+EBLiGsjskNFG46c29RIAKYRWV3F0Q06x12XWGfH50Pj7LcdaDthpe1IF8IPUjBr/udl6YpsduyfDFQuBUUjmfv9QbaSyW+QtG+MfJJW3zVc+k/1CbaC3ZXH6M1G0FbuZN+UOJsmVEVzALhlWtqbVI1Kcv1ni5IGOP4kRHquEcU3xm0TJBkNyJS3h4HNtA+c7/H7Ehy2YLbk+se2Qr0VIZNFcaK/QpEJpPOPkFudCPJ1c=



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### **Use Public Key and Password to Authentication**

System, Advanced, Secure Shell

SSHd Key Only: RequireBoth Password and Public Key

## **31. Setting up the CA**

System/Certificate Manager/CAs

Add

Descriptive name: grupo2

Method: Create an internal Certificate Authority

Trust Store: Add this Certificate Authority to the Operating System Trust Store

Key type: RSA

Length: 2048

Digest Algorithm: sha256

Lifetime (days): 3650

Common Name: grupo2-ca

Country Code: BR

State or Province: Sao Paulo

City: Sao Paulo

Organization: Grupo2

Organizational Unit Firewall: pfSense da Matriz

### **Exporting the CA**

System/Certificate Manager/CAs

Export CAs

### **Installing the CA on Firefox (Implemented via GPO)**

about:preferences#privacy

Certificates

Show Certificates

Authorities

Import

Trust this CA to identify sites

Trust this CA to identify e-mail users

### **Installing the CA on Chrome (Implemented via GPO)**

chrome://settings/certificates

Authority

Import

Trust this CA to identify sites

Trust this CA to identify e-mail users

Trust this CA to identify software manufactures

<OK>

Type the URL: chrome://restart



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## 32. Generating the certificate

System/Certificate Manager/Certificates

Add

Descriptive name: certificado do pfSense

Common Name: fwgrupo2.grupo2.intra

Certificate Type: Server Certificate

Alternative Names:

IP address: 172.16.2.254

FQDN or Hostname: fwgrupo2

FQDN or Hostname: fwgrupo2.grupo2.intra

### **System/Advanced/Admin Access**

SSL/TLS Certificate: certificado do pfSense

## 33. Setting NTP Server on pfSense

Services/NTP/Settings

NTP Server Configuration

Interface: LAN

Time Services: a.st1.ntp.br is a Pool

Time Services: a.ntp.br is a Pool

Orphan Mode: DEFAULT

NTP Graphs: ON

Logging: ON

Statistics Logging: ON

Leap seconds: DEFAULT

Save

## 34. Firewall Rules

### **Firewall/Rules/LAN**

Desativar as regras IPv4, IPv6

Edit, Disable this rule, save

Apply

### **Create a Separator**

Standard pfSense rules disabled (Red)

Attempt to ping external addresses

ping google.com

ping 8.8.8.8

### **DNS Release**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: UDP

Source: LAN net

Destination: any



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Destination Port Range: DNS(53)

Log

Description: Liberando o protocolo DNS

**Create a Separator**

Rules to release external networks

nslookup google.com

**ICMP protocol release**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: ICMP

ICMP subtypes: any

Source: LAN net

Destination: any

Log

Description: Liberando o protocolo ICMP

ping google.com

ping 8.8.8.8

**HTTP protocol release**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: TCP

Source: LAN net

Destination: any

Destination Port Range: HTTP

Log

Description: Liberando o protocolo HTTP

**HTTPS protocol release**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: TCP

Source: LAN net

Destination: any

Destination Port Range: HTTPS

Log

Description: Liberando o protocolo HTTPS

**FTP protocol release – Ports 20 and 21**

Action: Pass

Interface: LAN

Address Family: IPv4



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Protocol: TCP  
Source: LAN net  
Destination: any  
Destination Port Range: From:(other) Custom: 20 To: (other) Custom: 21  
Log  
Description: Liberando o protocolo FTP

**SSH protocol release**

Action: Pass  
Interface: LAN  
Address Family: IPv4  
Protocol: TCP  
Source: LAN net  
Destination: any  
Destination Port Range: From:(other) Custom: 22 To: (other) Custom: 22  
Log  
Description: Liberando o protocolo SSH

**VNC protocol release**

Action: Pass  
Interface: LAN  
Address Family: IPv4  
Protocol: TCP  
Source: LAN net  
Destination: any  
Destination Port Range: From:(other) Custom: 5900 To: (other) Custom: 5900  
Log  
Description: Liberando o protocolo VNC

**MYSQL protocol release**

Action: Pass  
Interface: LAN  
Address Family: IPv4  
Protocol: TCP  
Source: LAN net  
Destination: any  
Destination Port Range: From:(other) Custom: 3306 To: (other) Custom: 3306  
Log  
Description: Liberando a porta 3306 – MYSQL

**VSFTPD ports release**

Action: Pass  
Interface: LAN  
Address Family: IPv4  
Protocol: TCP  
Source: LAN net  
Destination: any  
Destination Port Range: From:(other) Custom: 30000 To: (other) Custom: 31000



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Log

Description: Liberando as portas para o VSFTPD

**RDP protocol release**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: TCP

Source: LAN net

Destination: any

Destination Port Range: From:(other) Custom: 3389 To: (other) Custom: 3389

Log

Description: Liberando o protocolo RDP

**NTP protocol release**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: UDP

Source: LAN net

Destination: any

Destination Port Range: NTP

Log

Description: Liberando o protocolo NTP

**Releasing pfSense to External Access (Unsecure)**

System/Advanced/Admin Access

TCP port: 10443

**Releasing pfSense to External Access (Unsecure)**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: TCP

Source: Any

Destination: Wan address

Destination Port Range: 10443

Log

Description: Liberando a porta 10443 - pfSense

**Releasing Ping to External Access**

Action: Pass

Interface: LAN

Address Family: IPv4

Protocol: ICMP

ICMP Subtypes: any

Source: Any

Destination: Wan address



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Log

Description: Liberando o protocolo ICMP para acessar de fora da rede

## 35. NAT Rules

### NAT Rule to NETDATA

Action: Pass

Interface: WAN

Address Family: IPv4

Protocol: TCP

Destination: WAN address

Destination Port Range: Other: 19999 Other: 19999

Redirect target IP: Single host wsgrupo2linux

Redirect target port: Other 19999

Log

Description: NAT Redirecionamento da Porta 19999 do NETDATA

### NAT Rule to TOMCAT

Action: Pass

Interface: WAN

Address Family: IPv4

Protocol: TCP

Destination: WAN address

Destination Port Range: Other: 8080 Other: 8080

Redirect target IP: Single host wsgrupo2linux

Redirect target port: Other 8080

Log

Description: NAT Redirecionamento da Porta 8080 do Tomcat

### NAT Rule to WEBMIN

Action: Pass

Interface: WAN

Address Family: IPv4

Protocol: TCP

Destination: WAN address

Destination Port Range: Other: 10000 Other: 10000

Redirect target IP: Single host wsgrupo2linux

Redirect target port: Other 10000

Log

Description: NAT Redirecionamento da Porta 10000 do Webmin

### NAT Rule to RDP protocol

Action: Pass

Interface: WAN

Address Family: IPv4

Protocol: TCP

Destination: WAN address

Destination Port Range: Other: 3389 Other: 3389



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Redirect target IP: Single host srvgrupo2windows

Redirect target port: Other 3389

Log

Description: NAT Redirecionamento da Porta 3389 do Windows Server

### **NAT Rule to SSH protocol**

Action: Pass

Interface: WAN

Address Family: IPv4

Protocol: TCP

Destination: WAN address

Destination Port Range: Other: 22 Other: 22

Redirect target IP: Single host wsgrupo2linux

Redirect target port: Other 22

Log

Description: NAT Redirecionamento da Porta 22 do Ubuntu Server

### **NAT Rule to MYSQL**

Action: Pass

Interface: WAN

Address Family: IPv4

Protocol: TCP

Destination: WAN address

Destination Port Range: Other: 3306 Other: 3306

Redirect target IP: Single host wsgrupo2linux

Redirect target port: Other 3306

Log

Description: NAT Redirecionamento da Porta 3306 do MYSQL

## **36. Setting up pfSense VPN IPSec Site-to-Site on the headquarter**

VPN/IPSec/Tunnels

### **ADD P1**

General Information

Description: Configuração da VPN IPSec Matriz Filial

Disable: OFF

IKE Endpoint Configuration

Key Exchange version: IKEv2

Internet Protocol: IPv4

Interface: WAN

Remote Gateway: **10.26.45.XX**

Phase 1 Proposal (Authentication)

Authentication Method: Mutual PSK

My identifier: My IP Address

Peer identifier: Peer IP Address

Pre-Shared Key: 123@senac

Phase 1 Proposal (Encryption Algorithm)

Encryption Algorithm

Algorithm: AES

Key length: 256 bits



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Hash: SHA256

DH Group: 14 (2048 bit)

Expiration and Replacement

Lifetime (Seconds): 28800

Rekey Time: 25920

Reauth Time: 0

Rand Time: 2880

Advanced Options

Child SA Start Action: Default

Child SA Close Action: Default

NAT Traversal: Auto

MOBIKE: Disable

Gateway duplicates: OFF

Split connections: OFF

PRF Selection: OFF

Custom IKE/NAT-T Ports:

Dead Peer Detection: ON

Delay: 10 (request)

Max failures: 5 (disconect)

Save

## **IPSec Phase 2**

Show Phase 2 Entries (0)

ADD P2

General Information

Description: Configuração das Redes da Matriz e Filial

Disabled: OFF

Mode: Tunnel IPv4

Networks

Local Network: LAN Subnet

NAT/BINAT translation: None

Remote Network:

Type: Network

Address: 172.16.100.0/24

Phase 2 Proposal (SA/Key Exchange)

Protocol: ESP

Encryption Algorithms:

ON - AES 128 bits

ON - AES128-GCM - 128 bits

Hash Algorithms

ON - SHA256

PFS key group: 14 (2048 bit)

Expiration and Replacement

Lifetime: 3600

Keep Alive

Automatically ping host: 172.16.100.254



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Configuração da Regra de Firewall para liberação dos protocolos da Matriz e Firewall  
Firewall/Rules/IPSec

Separator

Releasing all networks and protocols to VPN IPSec

ADD

Edit Firewall Rule

Action: Pass  
Disabled: OFF  
Interface: IPSec  
Address Family: IPv4  
Protocol: Any

Source

Source: Any

Destination:

Destination: Any

Extra Options

Log: ON  
Description: Liberação de todas as redes e protocolos na VPN  
Advanced Options: Default

Save

Apply Changes

### **Checking VPN IPSec Status**

Status/IPSec/Overview/IPSec Status

## **37. LDAP Authentication on Active Directory**

On the server srvgrupo2, press the keys Winkey + R and type WF.msc and press OK

Right click on Inbound Rules and click on New Rule

Click on Port and after on Next

Click on TCP, after click on Specific local ports: 389 and click on Next

Allow the connection and click on Next

Set Domain, Private, Public and click on Next

On Name, type: PERMITE CONEXAO NO AD and click on Finish

Press the keys Winkey + R and type dsa.msc and press OK

On the OU grupo2.intra/GRUPO2/USERS create two users:

User: Admin Password: Xtr3m3!

User: bind Password: Xtr3m3!

Create the grupo pfsense-admin (security group, global)

Logon on pfSense

System/User Manager/Authentication Servers/

Descriptive name: ACTIVE DIRECTORY

Type: LDAP

LDAP Server Settings

Hostname or IP address: 172.16.2.10



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Port value: 389

Transport: Standard TCP

Peer Certificate Authority: Global Root CA List

Client Certificate: None

Protocol version: 3

Server Timeout: 25

Search scope: Entire Subtree

Base DN: DC=grupo2,DC=intra

Authentication containers: OU=USERS,OU=GRUPO2,DC=grupo2,DC=intra

Extended query: OFF

Bind anonymous: OFF

Bind credentials: CN=bind,OU=USERS,OU=GRUPO2,DC=grupo2,DC=intra Xtr3m3!

User naming attribute: cn

Group naming attribute: cn

Group member attribute: memberof

RFC 2307 Groups: OFF

Group Object Class: posixGroups

Shell Authentication Group DN:

UTF8 Encode: OFF

Username Alterations: OFF

Allow unauthenticated bind: Allow unauthenticated bind

### Testing Active Directory authentication

Diagnostics/Authentication

Authentication Test: ACTIVE DIRECTORY

Username: admin

Password: Xtr3m3!

### Active Directory Group Permission

System/User Manager/Groups

Group Properties

Group name: pfSense-admin

Scope: Remote

Description: Active Directory Group

Assigned Privileges

+Add

WebCfg - All pages

### Enable Active Directory Authentication

System/User Manager/Settings

Authentication Server: ACTIVE DIRECTORY

Save & Test

Save

Logoff from pfSense and login with the admin account and the password Xtr3m3!



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### 38. OpenVPN integrated with AD

VPN/OpenVPN/Wizards

Type of Server: LDAP

Next

LDAP servers: ACTIVE DIRECTORY

Next

Certificate Authority: grupo2

Next

Certificate: certificado do pfSense

Next

General OpenVPN Server Information

Interface:WAN

Protocol: UDP on IPv4 only

Local Port: 1194

Description: OpenVPN integrado com o AD

Tunnel Settings: 192.168.44.0/24

Redirect Gateway: OFF

Local Network: 172.16.2.0/24

Concurrent Connections: 10

Allow Compression: Refuse any non-stub compression (Most secure)

Compression: Disable Compression [Omit Preference]

Type-of-Service: OFF

Inter-Client Communication: OFF

Duplicate Connections: OFF

Client Settings

Dynamic IP: ON

Topology: net30 – Isolated /30 network per client

DNS Default Domain: grupo2.intra

DNS Server 1: 172.16.2.10

DNS Server 2: 8.8.8.8

Next

Traffic from clients to server

Firewall Rule: ON

Traffic from clients through VPN

OpenVPN rule: ON

Next

Finish

VPN/OpenVPN/Servers

Edit

Server mode: Remote Access (SSL/TLS)

Backend for authentication: ACTIVE DIRECTORY

Save

System/Certificate Manager/Certificates

+Add/Sign

Add/Sign a New Certificate

Method: Create an internal Certificate

Descriptive name: fagner.braga



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Internal Certificate

Common Name: fagner.braga

Save

## 39. OpenVPN with users created on pfSense

### **Creating a group to use VPN Site-to-Client OpenVPN**

System/User Manager/Groups

ADD

Group Properties

Group name: OpenVPN

Scope: Local

Description: Grupo Local de Usuários do OpenVPN

Save

### **Creating a user to use VPN Site-to-Client OpenVPN**

System/User Manager/Users

ADD

User Properties

Defined by: User

Disabled: OFF

Username: fagner.braga

Password: 123@senac - Confirm: 123@senac

Full name: Fagner Geraldes Braga

Expiration date: Default

Custom Settings: OFF

Group membership: OpenVPN

Move to "Member of" list

Certificate: ON

Descriptive name: fagner.braga

Certificate authority: grupo2-ca

Key length: 2048 bits

Lifetime: 3650

Keys

Authorized SSH Keys: Default

IPsec Pre-Shared Key: Default

Save

### **Setup pfSense VPN OpenVPN Site-to-Client on the headquarter**

VPN/OpenVPN/Wizards

Type of Server: Local User Access

Next

Certificate Authority: grupo2

Next

Certificate: certificado do pfSense

Next

General OpenVPN Server Information

Interface:WAN

Protocol: UDP on IPv4 only



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Local Port: 1195

Description: OpenVPN-Usuario-Local-pfSense

Tunnel Settings: 192.168.45.0/24

Redirect Gateway: OFF

Local Network: 172.16.2.0/24

Concurrent Connections: 10

Allow Compression: Refuse any non-stub compression (Most secure)

Compression: Disable Compression [Omit Preference]

Type-of-Service: OFF

Inter-Client Communication: OFF

Duplicate Connections: OFF

Client Settings

Dynamic IP: ON

Topology: net30 – Isolated /30 network per client

DNS Default Domain: grupo2.intra

DNS Server 1: 172.16.2.10

DNS Server 2: 8.8.8.8

Next

Traffic from clients to server

Firewall Rule: ON

Traffic from clients through VPN

OpenVPN rule: ON

Next

Finish

## 40. Installing OpenVPN Client Exporting Settings Packet

System/Package Manager/Available Packages

Search term: openvpn Search

openvpn-client-export Install

## 41. Exporting OpenVPN Client Exporting Settings integrated to Active Directory

VPN/OpenVPN/Client Export/

OpenVPN Server

    Remote Access Server: OpenVPN integrado com o AD UDP4:1194

OpenVPN Clients

    Inline Configurations

Download the configuration file and send it to the user.

The user must install OpenVPN software/app and then import the configuration file to be able to establish a VPN connection.

## 42. Exporting OpenVPN Client Exporting Settings using users created on pfSense

VPN/OpenVPN/Client Export/

OpenVPN Server

    Remote Access Server: OpenVPN-Usuario-Local-pfSense UDP4:1195

OpenVPN Clients



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### Inline Configurations

Download the configuration file and send it to the user.

The user must install OpenVPN software/app and then import the configuration file to be able to establish a VPN connection.

## 43. Setting up Proxy Squid

### Installing Squid and LightSquid Packets

System/Package Manager/Available Packages

Search term: squid <Search>

squid <Install>

Lightsquid <Install>

squidGuard <Install>

freeradius <Install>

### Setting up Local cache on Squid

Service/Squid Proxy Server/Local Cache

Squid Cache General Settings

Disable Caching: <Default>

Cache Replacement Policy: Heap LFUDA <Default>

Low-Water Mark in %: 90 <Default>

High-Water Mark in %: 95 <Default>

Do Not Cache:

itau.com.br

santander.com.br

bb.com.br

bradesco.com.br

caixa.gov.br

Enable Offline Mode: <Default>

External Cache Managers: <Default>

Squid Hard Disk Cache Settings

Hard Disk Cache Size: 100 <Default>

Hard Disk Cache System: ufs <Default>

Level 1 Directories: 16 <Default>

Hard Disk Cache Location: /var/squid/cache <Default>

Minimum Object Size: 0 <Default>

Maximum Object Size: 4 <Default>

Squid Memory Cache Settings

Memory Cache Size: 64 <Default>

Maximum Object Size in RAM: 256 <Default>

Memory Replacement Policy: Headp GDSF <Default>

Dynamic and Update Content

Cache Dynamic Content: <Default>

Custom refresh\_patterns: <Default>

<Save>

### Squid General Set Up (No Transparent Proxy)

Service/Squid Proxy Server/General

Squid General Settings

Enable Squid Proxy: Yes



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Keep Settings/Data: Yes <Default>  
Listen IP Version: IPv4 <Default>  
CARP Status VIP: none <Default>  
Proxy Interface(s):  
LAN  
Loopback  
Outgoing Network Interface: LAN <Default>  
Proxy Port: 3128 <Default>  
ICP Port: <Default>  
Allow Users on Interface: Yes <Default>  
Resolve DNS IPv4 First: Yes  
Disable ICMP: <Default>  
Use Alternate DNS Servers for the Proxy Server: <Default>  
Extra Trusted CA: none <Default>  
Transparent Proxy Settings  
Transparent HTTP Proxy: <Default>  
Transparent Proxy Interface(s): LAN <Default>  
Bypass Proxy for Private Address Destination: <Default>  
Bypass Proxy for These Source IPs: <Default>  
Bypass Proxy for These Destination IPs: <Default>  
SSL Man In the Middle Filtering  
HTTPS/SSL Interception: <Default>  
SSL/MITM Mode: Splice Whitelist, Bump Otherwise <Default>  
SSL Intercept Interface(s): LAN <Default>  
SSL Proxy Port: <Default>  
SSL Proxy Compatibility Mode: Modern <Default>  
DHParams Key Size: 2048 <Default>  
CA: nome <Default>  
SSL Certificate Deamon Children: <Default>  
Remote Cert Checks: <Default>  
Certificate Adapt: <Default>  
Logging Settings  
Enable Access Logging: Yes  
Log Store Directory: /var/squid/logs <Default>  
Rotate Logs: 7  
Log Pages Denied by SquidGuard: <Default>  
Headers Handling, Language and Other Customizations  
Visible Hostname: localhost <Default>  
Administrator's Email: admin@grupo2.intra  
Error Language: pt-br  
X-Forwarded Header Mode: on <Default>  
Disable VIA Header: <Default>  
URI Whitespace Characters Handling: strip <Default>  
Suppress Squid Version: <Default>

<Save>

## **Setting UP Squid C-ICAP ClamD Antivirus**

Service/Squid Proxy Server/Antivirus

ClamAV Anti-Virus Integration Using C-ICAP



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Enable AV: Yes

Client Forward Options: Send both client username and IP info <Default>

Enable Manual Configuration: Disabled <Default>

Redirect URL: <Default>

Scan Type: All <Default>

Exclude Audio/Video Streams: Yes

Block PUA: Yes

ClamAV Database Update: every 1 hour

Regional ClamAV Database Update Mirror: United States

Optional ClamAV Database Update Servers: <Default>

Unofficial Signatures

URLhaus: <Default>

InterServer: <Default>

SecuriteInfo: <Default>

SecuriteInfo Premium: <Default>

SecuriteInfo ID <Default>

<Save>

<Update AV>

### **Squid LDAP Authentication**

Service/Squid Proxy Server/Authentication

Squid Authentication General Settings

Authentication Method: LDAP

Authentication Server: 172.16.2.10

Authentication server port: 389

Authentication Prompt: Digite o seu usuario e senha de dominio para autenticar

Authentication Processes: 5

Authentication TTL: 5 <Default>

Authentication Max User IP Addresses: <Default>

Require Authentication for Unrestricted IPs: <Default>

Subnets That Don't Need Authentication: <Default>

Squid Authentication LDAP Settings

LDAP Version:3

Transport: TCP - Standard

LDAP Server User DN:squiduser,OU=USERS,OU=GRUPO2,DC=grupo2,DC=intra

LDAP Password:Xtr3m3!

LDAP Base Domain:DC=grupo2,DC=intra

LDAP Username DN Attribute:uid

LDAP Search Filter:sAMAccountName=%s

LDAP not follow referrals: OFF

RADIUS Secret:

<Save>

### **Creating local users on Squid**

Service/Squid Proxy Server/Users

<Add>

Squid Local Users

Username: fagner.braga



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Password: 123@senac

Description: Usuário Fagner Braga

<Save>

### **Setting up Squid local authentication**

Service/Squid Proxy Server/Authentication

Squid Authentication General Settings

Authentication Method: Local

Authentication Server: <Default>

Authentication server port: <Default>

Authentication Prompt: Digite o seu usuario e senha da Internet

Authentication Processes: 5 <Default>

Authentication TTL: 5 <Default>

Authentication Max User IP Addresses: <Default>

Require Authentication for Unrestricted IPs: <Default>

Subnets That Don't Need Authentication: <Default>

<Save>

### **Setting up Squid ACLs**

Service/Squid Proxy Server/ACLs

Squid Access Control Lists

Allowed Subnets:

172.16.2.0/24

Unrestricted IPs

172.16.2.10

172.16.2.20

Banned Hosts Addresses: <Default>

Whitelist: <Default>

Blacklist

professormaramos.com

http://professormaramos.com

joseassis.com.br

<https://joseassis.com.br>

Block User Agents: <Default>

Block MIME Types (Reply Only)

application/x-msdos-program

application/x-msdownload

application/msdos-windows

application/octet-stream

application/dos-exe

application/exe

application/x-exe

application/x-winexe

Squid Allowed Ports

ACL SafePorts: <Default>

ACL SSLPorts: <Default>

Squid Advanced Filtering

Google Accounts Domains> Default>

Youtube Restrictions: <Default>



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<Save>

**Setting up SSL Interception to block HTTPS pages on Squid**

Service/Squid Proxy Server/Squid General

Squid General Settings

Extra Trusted CA: grupo2

SSL Man In the Middle Filtering

HTTPS/SSL Interception: Yes

SSL/MITM Mode: Splice Whitelist, Bump Otherwise <Default>

SSL Intercept Interface(s): LAN <Default>

SSL Proxy Port: <Default>

SSL Proxy Compatibility Mode: Modern <Default>

DHParams Key Size: 2048 <Default>

CA: grupo2

SSL Certificate Deamon Children: <Default>

Remote Cert Checks: Accept remote server certificate with errors

Certificate Adapt:

Sets the "Not After" (setValidAfter)

Sets the "Not Before" (setValidBefore)

Sets CN property (setCommonName)

<Save>

**LightSquid Setup(Squid Proxy Reports)**

Status/Squid Proxy Reports

Web Service Settings

Lightsquid Web Port: 7445

Lightsquid Web SSL: Yes

Lightsquid Web User: admin

Lightsquid Web Password: 123@grupo2

Report Template Settings

Language: Portuguese (Brazilian)

Report Template: Base

Bar Color: Orange

Report Settings and Scheduler

IP Resolve Method: DNS

Skip URL(s): Default

Refresh Scheduler: 10min(!)

<Save>

Report Settings and Scheduler

Refresh Full

Refresh

Firewall Rule to access LightSquid

Firewall/Rules/LAN

<Add>

Firewall Rules

Action: Pass

Disable: Off

Interface: LAN



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Address Family: IPv4

Protocol: TCP

Source

Invert match: Off - LAN Net

Destination

Destination: Invert match: Off - any

Destination Port Range: From: (other): 7445 - To: (other) 7445

Extra Options

Log: ON

Description: Liberar o acesso ao Lightsquid

Advanced Options: Default

<Save>

## 44. General Information

44.1. **Operating System:** Ubuntu Server 22.04 LTS (Jammy Jellyfish)

44.2. **Server Rules:** SSH, LAMP, Webmin, VSFTPD, WordPress, Tomcat, Netdata, phpMyAdmin

## 45. Ubuntu Server Install

Use UP, DOWN and ENTER keys to select your language

English - <Enter>

Keyboard configuration

Layout: [Portuguese (Brazil)]

Variant: [Portuguese (Brazil)]

Network connections

enp0s3 eth

Edit IPv4

IPv4 Method: Manual

Subnet: 172.16.2.0/24

Address: 172.16.2.20

Gateway: 172.16.2.254

Name servers: 172.16.2.10

Search domains: grupo2.intra

Configure proxy

<Done>

Configure Ubuntu archive mirror

Mirror: <http://us.archive.ubuntu.com/ubuntu>

Continue without update

<Done>

Guided storage configuration

Use an entire disk

[VBOX\_HARDDISK local disk 50.000G]

Set up this disk as an LVM group

Storage configuration

USED DEVICES

ubuntu-lv new, to be formatted as ext4, mounted at / 23.996G

Edit



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Name: ubuntu-lv

Size: 47.996G

Format: ext4

Mount: /

Confirm destructive action

<Continue>

Profile setup

Your name: Thanos

Your server's name: wsgrupo2

Pick a username: thanos

Choose a password: Xtr3m3!

Confirm your passwords: Xtr3m3!

SSH Setup

Install OpenSSH server: ON

Import SSH identity: No

Featured Server Snaps

<Done>

Install complete!

<Reboot Now>

Please remove the installation medium, then press ENTER

## 46. Update

```
sudo apt update && sudo apt upgrade -y && sudo apt full-upgrade && sudo apt dist-upgrade  
&& sudo apt autoremove && sudo apt autoclean && sudo apt clean && sudo reboot
```

## 47. Locale Set up

```
sudo localectl
```

```
sudo locale-gen pt_BR.UTF-8
```

```
sudo localectl set-locale LANG=pt_BR.UTF-8
```

```
sudo update-locale LANG=pt_BR.UTF-8 LC_ALL=pt_BR.UTF-8 LANGUAGE="pt_BR:pt:en"
```

```
# Timezone set up
```

```
sudo timedatectl
```

```
#sudo systemctl status systemd-timesyncd.service
```

```
sudo timedatectl set-timezone "America/Sao_Paulo"
```

```
sudo cat /etc/timezone
```

```
sudo cat /etc/systemd/timesyncd.conf
```

```
sudo vim /etc/systemd/timesyncd.conf
```

```
[Time]
```

```
NTP=a.st1.ntp.br
```

```
FallbackNTP=a.ntp.br
```

```
sudo systemctl restart systemd-timesyncd.service
```

```
sudo systemctl status systemd-timesyncd.service
```

```
sudo timedatectl
```

```
sudo reboot
```



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## 48. Netplan Install and Set up

```
sudo apt install bridge-utils ifenslave net-tools -y
```

```
# IPv4 Static
```

```
sudo vim /etc/netplan/00-installer-config.yaml
```

network:

ethernets:

  enp0s3:

    dhcp4: false

    addresses:

      - 172.16.2.20/24

    gateway4: 172.16.2.254

    nameservers:

      addresses:

      - 172.16.2.10

      - 8.8.8.8

      - 8.8.4.4

      search:

      - grupo2.intra

version: 2

```
# Apply the settings and check network adapter status
```

```
sudo netplan --debug try
```

```
sudo netplan --debug apply
```

## 49. SSH Install and Setup

```
sudo apt update
```

```
sudo apt install openssh-server -y
```

```
sudo systemctl start ssh
```

```
sudo systemctl enable ssh
```

```
systemctl status ssh
```

## 50. Generate and copy the SSH Public Key on Windows to Ubuntu Server

Download and install PuTTY on Windows 10.

<https://the.earth.li/~sgtatham/putty/latest/w64/putty-64bit-0.77-installer.msi>

Open PuTTY and insert Ubuntu Server IP Address: 172.16.2.20 on Host Name

On Saved Sessions type wsgrupo2

Click on Data and on Auto-login username type thanos

Click on Session and after on Save

Check if it is possible to connect on Ubuntu Server

Creating a public and private key

Open PuTTYgen

Click on Generate

Move the mouse in the blank area until a key will be generated

Click on Save public key, create a folder called Keys and name it as public-key and save it on this directory.



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Click on Save private key, press Yes to leave the key without a password.

Name the key as private-key and save it on the folder Keys

Copy all the content from the box Public key for pasting into OpenSSH authorized\_keys file

Open PuTTY and connect on the Ubuntu Server

```
sudo mkdir ~/.ssh
sudo chmod 700 ~/.ssh
sudo vim ~/.ssh/authorized_keys
and copy the key on Putty
sudo chown thanos:thanos ~/.ssh -R
sudo chmod 600 ~/.ssh/authorized_keys
sudo systemctl restart sshd
exit
```

Open Putty

On Saved Sessions, click on wsgrupo2 and click on Load

Click on SSH and after on Auth

Click on Browse and after select the file private-key saved in the folder Keys

Click on Sessions and click on Save

Click on Open

```
sudo vim /etc/ssh/sshd_config
    PermitRootLogin prohibit-password
    PasswordAuthentication no
```

```
sudo ufw allow 22
sudo ufw disable
sudo ufw enable
```

sudo systemctl restart ssh

## 51. LAMP install

sudo apt update && sudo apt upgrade -y

### MariaDB

sudo apt install mariadb-server mariadb-client -y

sudo mysql\_secure\_installation

enter

n

Y

123@grupo2

123@grupo2

Y

Y

Y

Y

sudo mysql -u root -p



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Xtr3m3!

SELECT VERSION();

SHOW DATABASES;

exit

### **Apache**

sudo apt install -y apache2 apache2-utils

sudo apache2 -v

systemctl status apache2

sudo systemctl reload apache2

sudo systemctl enable apache2

sudo systemctl is-enabled apache2

sudo apt install elinks -y

sudo apache2ctl fullstatus

sudo ufw allow "Apache Full"

sudo ufw allow 3306

sudo ufw disable

sudo ufw enable

### **PHP**

sudo apt install php libapache2-mod-php php-cli php-fpm php-json php-mysql php-zip php-gd  
php-mbstring php-curl php-xml php-pear php-bcmath -y

sudo a2enmod php8.1

php -v

sudo vim /var/www/html/phpinfo.php

<?php phpinfo(); ?>

## 52. Webmin install

sudo apt update

sudo apt install vim apt-transport-https curl wget software-properties-common -y

wget https://download.webmin.com/jcameron-key.asc

cat jcameron-key.asc | gpg --dearmor | sudo tee /etc/apt/trusted.gpg.d/jcameron-key.gpg  
>/dev/null

sudo add-apt-repository "deb https://download.webmin.com/download/repository sarge  
contrib"

sudo apt install webmin -y

sudo ufw allow 10000



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sudo systemctl status webmin

### 53. VSFTPD install

sudo apt update

sudo apt upgrade -y

sudo apt install vsftpd -y

systemctl status vsftpd

sudo adduser grupo2

123@grupo2

123@grupo2

Full Name: Grupo 2

Room Number: enter

Work phone: enter

Home phone: enter

Other: enter

Y

sudo mkdir -p /home/grupo2/ftpdir

sudo chmod -R 750 /home/grupo2/ftpdir

sudo chown grupo2: /home/grupo2/ftpdir

sudo bash -c 'echo grupo2 >> /etc/vsftpd.user\_list'

sudo vim /etc/vsftpd.conf

anonymous\_enable=NO

local\_enable=YES

write\_enable=YES

chroot\_local\_user=YES

pasv\_min\_port=30000

pasv\_max\_port=31000

userlist\_enable=YES

userlist\_file=/etc/vsftpd.user\_list

userlist\_deny=NO

sudo chmod a-w /home/grupo2

sudo systemctl restart vsftpd

sudo ufw allow 20:21/tcp

sudo ufw allow 30000:31000/tcp

sudo ufw disable

sudo ufw enable

### 54. WordPress install

sudo mysql -u root -p

CREATE USER 'wpgrupo2'@'localhost' IDENTIFIED BY '123@grupo2';

CREATE DATABASE wordpress\_db;

GRANT ALL ON wordpress\_db.\* TO 'wpgrupo2'@'localhost';



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FLUSH PRIVILEGES;

EXIT;

```
sudo apt update
sudo apt install php-curl php-gd php-mbstring php-xml php-xmlrpc php-soap php-intl php-zip
-y
sudo systemctl restart apache2
```

```
sudo vim /etc/apache2/sites-available/wordpress.conf
<VirtualHost *:80>
...
<Directory /var/www/html/wordpress/>
    AllowOverride All
</Directory>
...
</VirtualHost>
```

```
sudo a2enmod rewrite
sudo apache2ctl configtest
```

```
sudo vim /etc/apache2/apache2.conf
ServerName wsgrupo2.grupo2.intra
```

```
sudo systemctl restart apache2
```

```
cd /tmp
curl -O https://wordpress.org/latest.tar.gz
tar xzvf latest.tar.gz
touch /tmp/wordpress/.htaccess
cp /tmp/wordpress/wp-config-sample.php /tmp/wordpress/wp-config.php
mkdir /tmp/wordpress/wp-content/upgrade
sudo cp -a /tmp/wordpress/. /var/www/html/wordpress
```

```
sudo chown -R www-data:www-data /var/www/html/wordpress
sudo find /var/www/html/wordpress/ -type d -exec chmod 750 {} \;
sudo find /var/www/html/wordpress/ -type f -exec chmod 640 {} \;
```

```
curl -s https://api.wordpress.org/secret-key/1.1/salt/
```

```
define('AUTH_KEY',      'Da?]qY87Rls3|c6qjIkMpot+diP=-w2o|N?ekC?)<#X*D:q$w)UEt8Nfq(+A^P_+');
define('SECURE_AUTH_KEY', 'LFoG+jAeDIB|7Fc!$Gm?NogL(&_hTq5`P:ntj5p-kTcV{jxK@O3AwYk#=)({i~1'});
define('LOGGED_IN_KEY',   'j&3VpE&rK$:K[Q|py.]p]tCxe-@4d!t?LSx.+43PCKw78F0-q:0sZ9qRZVTB8ft+');
define('NONCE_KEY',       'qS8vE,~$LONtyUhe*ZRA0A]D;G[-,L_+moz!Rf~1kiO#!o;wz;koMS<TK9ratku`');
define('AUTH_SALT',        'hCu `VKGHqXZ)2nT0GzC|QXV+LLqt )exu/DoT-R~4/Ku<,tc=i{pM*t,??]-Q$+n');
```



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```
define('SECURE_AUTH_SALT', 'NE)SPa;Ry@ 9+^ I:SZ*o|{*g! b0O >U-+92-GZ?y?5d_0j|>nx8]a>ykj`ToCV');  
define('LOGGED_IN_SALT', '=_k|A6$5umd2[|V6ycZi;(:  
?&+XXQIvjm+T)WMoYY(;EM+NOeMvQ=QG$/Sb8Z zu');  
define('NONCE_SALT',  
'kpo8r2T,C}Rjh`dG]k9.#{#t[SIHP,fhUH8UhH!r/6uC:%Y#treW_PcY4C:ENn>$');
```

```
sudo vim /var/www/html/wordpress/wp-config.php
```

```
define( 'DB_NAME', 'wordpress_db' );
```

```
/** Database username */
```

```
define( 'DB_USER', 'wpgrupo2' );
```

```
/** Database password */
```

```
define( 'DB_PASSWORD', '123@grupo2' );
```

```
define('FS_METHOD', 'direct');
```

Open the browser and type <http://172.16.2.20/wordpress>

Choose the language you want and click on Continue

Tile: Grupo 2

Username: grupo2

Password: 123@grupo2

Your e-mail: Fagner.fgb@gmail.com

Visibility on search engines: Avoid that search mechanisms index this site

Install WordPress

Access

## 55. Tomcat install

```
sudo apt update
```

```
sudo apt install openjdk-11-jdk -y
```

```
java -version
```

```
sudo apt-cache search tomcat
```

```
sudo apt install tomcat9 tomcat9-admin -y
```

```
ss -ltn
```

```
sudo ufw allow from any to any port 8080 proto tcp
```

```
sudo ufw disable
```

```
sudo ufw enable
```

```
sudo vim /etc/tomcat9/tomcat-users.xml
```

```
<role rolename="admin-gui"/>
```

```
<role rolename="manager-gui"/>;
```

```
<user username="tcgrupo2" password="123@grupo2" roles="admin-gui,manager-gui"/>
```

```
sudo systemctl restart tomcat9
```

Open the browser

Download the agenda on

<https://github.com/professorjosedeassis/javaEE/raw/main/agendaVaamonde.war>



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Access this address: <http://172.16.2.20:8080/manager/html>

Username: tcgrupo2

Password: 123@grupo2

Click on WAR file to deploy and after on Search

Choose the file agendaVaamonde.war which you have downloaded previously

Click on Deploy

```
sudo mysql -u root -p
CREATE USER 'dbagenda'@'localhost' IDENTIFIED BY 'dbagenda';
CREATE DATABASE dbagenda;
GRANT ALL ON dbagenda.* TO 'dbagenda'@'localhost';
FLUSH PRIVILEGES;
USE dbagenda;
```

```
CREATE TABLE contatos (
idcon int NOT NULL AUTO_INCREMENT,
nome varchar(50) NOT NULL,
fone varchar(15) NOT NULL,
email varchar(50) DEFAULT NULL,
PRIMARY KEY (idcon)
);
```

## 56. Net Data Install

```
sudo apt update
sudo apt upgrade -y
sudo apt install netdata -y
sudo vim /etc/netdata/netdata.conf
[global]
    run as user = netdata
    web files owner = root
    web files group = root
    # Netdata is not designed to be exposed to potentially hostile
    # networks. See https://github.com/netdata/netdata/issues/164
    bind socket to IP = 172.16.2.20
```

```
sudo systemctl restart netdata
sudo ufw allow 19999
```

### Enabling Tomcat Monitoring

```
sudo vim /etc/netdata/python.d/tomcat.conf
```

localhost:



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```
name : 'local'  
url: 'http://localhost:8080/manager/status?XML=true'  
user : 'tcgrupo2'  
pass : '123@grupo2'
```

```
localipv4  
name : 'local'  
url : 'http://127.0.0.1:8080/manager/status?XML=true'  
user : 'tcgrupo2'  
pass : '123@grupo2'
```

```
localipv6:  
name : 'local'  
url : 'http://[::1]:8080/manager/status?XML=true'  
user : 'tcgrupo2'  
pass : '123@grupo2'
```

## 57. phpMyAdmin Install

```
sudo apt update && sudo apt upgrade  
sudo apt install php php-{fpm,mbstring,bcmath,xml,mysql,common,gd,cli,curl,zip} -y  
sudo systemctl enable php8.1-fpm --now  
wget https://www.phpmyadmin.net/downloads/phpMyAdmin-latest-all-languages.tar.gz  
tar xvf phpMyAdmin-*-all-languages.tar.gz  
sudo mv phpMyAdmin-* /var/www/html/phpmyadmin  
sudo mkdir -p /var/www/html/phpmyadmin/tmp  
sudo cp /var/www/html/phpmyadmin/config.sample.inc.php  
/var/www/html/phpmyadmin/config.inc.php  
sudo cp /var/www/html/phpmyadmin/config.sample.inc.php  
/var/www/html/phpmyadmin/config.inc.php  
openssl rand -base64 32  
sudo vim /var/www/html/phpmyadmin/config.inc.php  
    $cfg['blowfish_secret'] = 'your-key'; /* YOU MUST FILL IN THIS FOR COOKIE AUTH! */  
    $cfg['TempDir'] = '/var/www/html/phpmyadmin/tmp';  
sudo chown -R www-data:www-data /var/www/html/phpmyadmin  
sudo find /var/www/html/phpmyadmin/ -type d -exec chmod 755 {} \;  
sudo find /var/www/html/phpmyadmin/ -type f -exec chmod 644 {} \;  
  
sudo vim /etc/apache2/conf-available/phpmyadmin.conf  
Alias /phpmyadmin /var/www/html/phpmyadmin  
<Directory /var/www/html/phpmyadmin>  
Options Indexes FollowSymLinks  
DirectoryIndex index.php  
<IfModule mod_php8.c>  
AddType application/x-httdp-php .php  
php_flag magic_quotes_gpc Off  
php_flag track_vars On  
php_flag register_globals Off  
php_value include_path .  
</IfModule>
```



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```
</Directory>
# Authorize for setup
<Directory /var/www/html/phpmyadmin/setup>
<IfModule mod_authn_file.c>
AuthType Basic
AuthName "phpmyadmin Setup"
AuthUserFile /etc/phpmyadmin/htpasswd.setup
</IfModule>
Require valid-user
</Directory>
# Disallow web access to directories that don't need it
<Directory /var/www/html/phpmyadmin/libraries>
Order Deny,Allow
Deny from All
</Directory>
<Directory /var/www/html/phpmyadmin/setup/lib>
Order Deny,Allow
Deny from All
</Directory>
sudo a2enconf phpmyadmin.conf
sudo systemctl restart apache2
```

## 58. General Information

58.1. **Operating System:** Windows 10 Professional 21H2

## 59. Windows 10 Install

Language: English

Time and Currency: English

Keyboard: US

Install Now

Custom Install

Create a full size partition on the local disk

Username: suporte

Password: suporte

UAC: Never notify

System Properties (Windows + Pause/Break)

Tab Advanced, Performance, Adjust to obtain the best performance

Tab System Protection – Set up, Enable the system protection and slide the bar to 10% of disc usage

Tab Remote

Uncheck Remote Assistance

Check Allow remote connections with this computer

Activate Windows



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## 60. Default Workstation name

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Note21  
Note22

## 61. Software Install and Bloatware Removal

Copiar a pasta desktop para C:\  
Executar o script desktop.ps1 no Powershell

## 62. Add workstation to the domain grupo2.intra

Press the keys Windows + Pause/Break  
System Advanced Settings  
Computer name  
Change  
Member of Domain: grupo2.intra  
Username: Thanos  
Password: Xtr3m3!

Access ADDS on the server srv2gruop2 and move the computer account to the OU "OU OU=DESKTOPS,OU=GRUPO2,DC=GRUPO2,DC=INTRA"

Reboot the computer  
Logon using a domain user

Exemple:  
Username: Fagner.Braga  
Password: 123@senac



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### Activities asked by the teacher Leandro Ramos

#### 1. Install Windows 2022 Server Standard

Computer name	srvgrupo2	Last installed updates	Never
Domain	grupo2.intra	Windows Update	Download updates only, using Windows Update
		Last checked for updates	Yesterday at 19:24
Microsoft Defender Firewall	Public: On	Microsoft Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Enabled	IE Enhanced Security Configuration	Off
NIC Teaming	Disabled	Time zone	(UTC-03:00) Brasilia
Ethernet	172.16.2.10	Product ID	Not activated
Operating system version	Microsoft Windows Server 2022 Datacenter	Processors	Intel(R) Core(TM) i5-7500 CPU @ 3.40GHz
Hardware information	innotek GmbH VirtualBox	Installed memory (RAM)	4 GB
		Total disk space	49.39 GB

#### 2. Install Windows 10 64 bits on 2 notebooks: Note21 e Note22

##### Especificações do dispositivo

Nome do dispositivo	note21
Nome completo do dispositivo	note21.grupo2.intra
Processador	Intel(R) Core(TM) i5-7500 CPU @ 3.40GHz 3.41 GHz
RAM instalada	4.00 GB

##### Especificações do dispositivo

Nome do dispositivo	note22
Nome completo do dispositivo	note22.grupo2.intra
Processador	Intel(R) Core(TM) i5-7500 CPU @ 3.40GHz 3.41 GHz
RAM instalada	2.00 GB

#### 3. Network settings = 172.16.2.10 255.255.255.0 172.16.2.254

#### 4. Hostname = srvgrupo2

Computer name	srvgrupo2	Last installed updates	Never
Domain	grupo2.intra	Windows Update	Download updates only, using Windows Update
		Last checked for updates	Yesterday at 19:24
Microsoft Defender Firewall	Public: On	Microsoft Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Enabled	IE Enhanced Security Configuration	Off
NIC Teaming	Disabled	Time zone	(UTC-03:00) Brasilia
Ethernet	172.16.2.10	Product ID	Not activated
Operating system version	Microsoft Windows Server 2022 Datacenter	Processors	Intel(R) Core(TM) i5-7500 CPU @ 3.40GHz
Hardware information	innotek GmbH VirtualBox	Installed memory (RAM)	4 GB
		Total disk space	49.39 GB

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## 5. ADDS install = srvgrupo2.intra with integrated DNS

Name	Type	Data	Timestamp
_msdcs	Start of Authority (SOA)	[39], srvgrupo2.grupo2.int...	static
_sites	Name Server (NS)	srvgrupo2.grupo2.intra.	static
_tcp	Host (A)	172.16.2.10	23/05/2022 23:00:00
_udp	Host (A)	172.16.2.10	static
DomainDnsZones			
ForestDnsZones			
(same as parent folder)			
(same as parent folder)			
(same as parent folder)			
srvgrupo2			

## 6. DHCP Server install

Range: 172.16.2.100 to 172.16.2.200 Exclusion: 172.16.2.130 to 172.16.2.136

Start IP Address	End IP Address	Description
172.16.2.100	172.16.2.200	Address range for distribution
172.16.2.130	172.16.2.136	IP Addresses excluded from distribution

## 7. DHCP IP Reservation to Note22.

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## 8. Add 2 workstations to the domain: Note21 e Note22.

Active Directory Users and Computers [srvgrupo2.gr]

- > Saved Queries
- > grupo2.intra
  - > Builtin
  - > Computers
  - > Domain Controllers
  - > ForeignSecurityPrincipals
  - > GRUPO2
    - > DESKTOPS
    - > GROUPS
    - > SERVERS
    - > USERS
  - > Keys
  - > LostAndFound
  - > Managed Service Accounts
  - > Program Data
  - > System
  - > Users
  - > NTDS Quotas
  - > TPM Devices

Name	Type	Job Title
NOTE21	Computer	
NOTE22	Computer	
Alunos	Security Group - Domain Local	
Coordenadores	Security Group - Domain Local	
Directoria	Security Group - Domain Local	
Pedagogico	Security Group - Domain Local	
Professores	Security Group - Domain Local	
Suporte	Security Group - Domain Local	
#SquidGuard-Com...	Security Group - Global	
#SquidGuard-Sem-...	Security Group - Global	
pfsense-admin	Security Group - Global	
Admin	User	
Bind	User	
Squid user	User	
ADM SENAC	User	Administrador
Catarina Matos	User	Aluna
Gabriela Ludovico	User	Aluna
Giovanna Gil	User	Aluna
...	...	...

## 9. Create an OU called “GRUPO2”

## 10. Create the following users: Leandro Ramos, Jefferson Costa, Edilson Silva, Kelly Cristina, Noemi Pinheiro, Anderson Mendonça, Robson Vaamonde, Robson Angelotti, Sirlene Matos, Milton Santos, Diego Rosalino Cornelio, Paula Fernandez, Gabriela Ludovico, Teresa Lima, Catarina Matos

Active Directory Users and Computers [srvgrupo2.gr]

- > Saved Queries
- > grupo2.intra
  - > Builtin
  - > Computers
  - > Domain Controllers
  - > ForeignSecurityPrincipals
  - > GRUPO2
    - > DESKTOPS
    - > GROUPS
    - > SERVERS
    - > USERS
  - > Keys
  - > LostAndFound
  - > Managed Service Accounts
  - > Program Data
  - > System
  - > Users
  - > NTDS Quotas
  - > TPM Devices

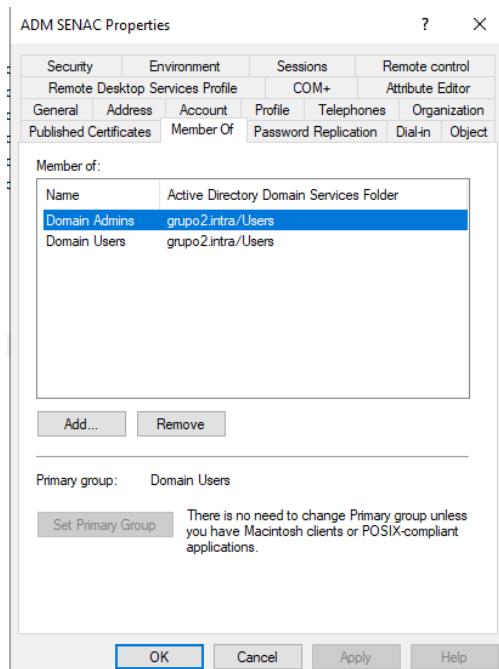
Name	Type	Job Title
ADM SENAC	User	Administrador
Catarina Matos	User	Aluna
Gabriela Ludovico	User	Aluna
Giovanna Gil	User	Aluna
Karen Silva	User	Aluna
Paula Fernandez	User	Aluna
Teresa Lima	User	Aluna
Adilson Santos	User	Aluno
Allan Gomes	User	Aluno
Bruno Silva	User	Aluno
Celso Kuteken	User	Aluno
Diego Cornelio	User	Aluno
Diego Fernandes	User	Aluno
Fagner Braga	User	Aluno
Felipe Cachuf	User	Aluno
Guilherme Silva	User	Aluno
Heder Silva	User	Aluno
Hector Martins	User	Aluno
Igor Oliveira	User	Aluno
Lucas Santos	User	Aluno
Luiz Pereira	User	Aluno
Matheus Silva	User	Aluno
Nicolas Araujo	User	Aluno
Otavio Cricco	User	Aluno
Pedro Goncalves	User	Aluno
Samuel Silva	User	Aluno
Jefferson Costa	User	Coordenador
Noemi Pinheiro	User	Coordenadora
Anderson Mendonça	User	Diretor
Edilson Silva	User	Professor
Leandro Ramos	User	Professor
Milton Santos	User	Professor
Robson Vaamonde	User	Professor

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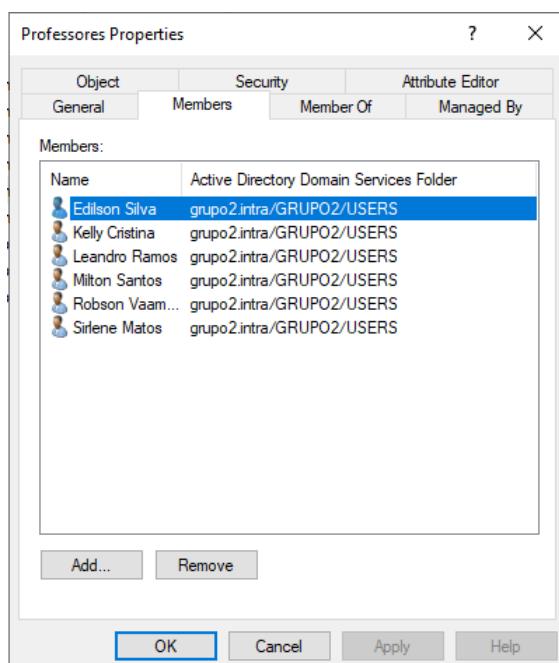
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11. Create the user ADMSENAC. This user must be member of Domain Admins group.



12. Create a Security Local Domain group called "Professores" and add the following users to it: Leandro Ramos, Edilson Silva, Kelly Cristina, Robson Vaamonde, Sirlene Matos e Milton Santos

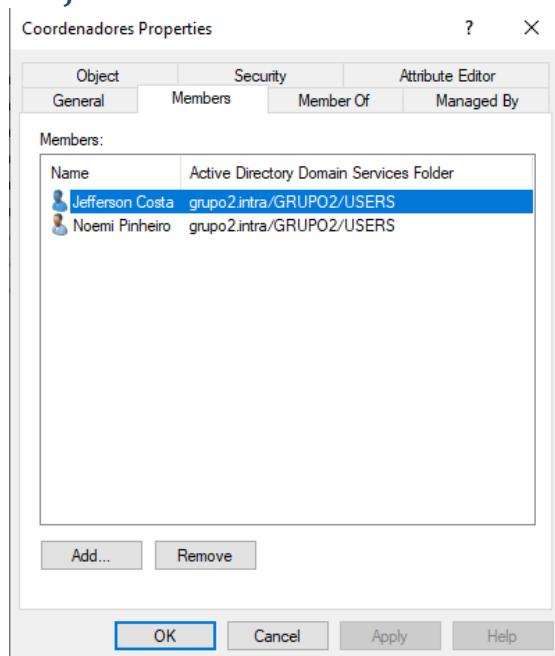


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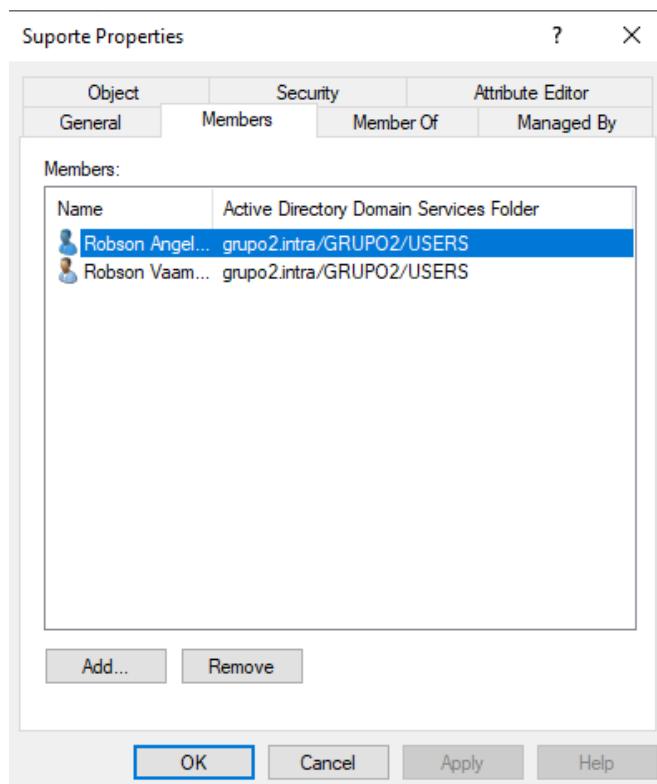
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13. Create a Security Local Domain group called “Coordenadores” and add the following users to it: Jefferson Costa e Noemi Pinheiro.



14. Create a Security Local Domain group called “Suporte” and add the following users to it: Robson Vaamonde, Robson Angelotti.

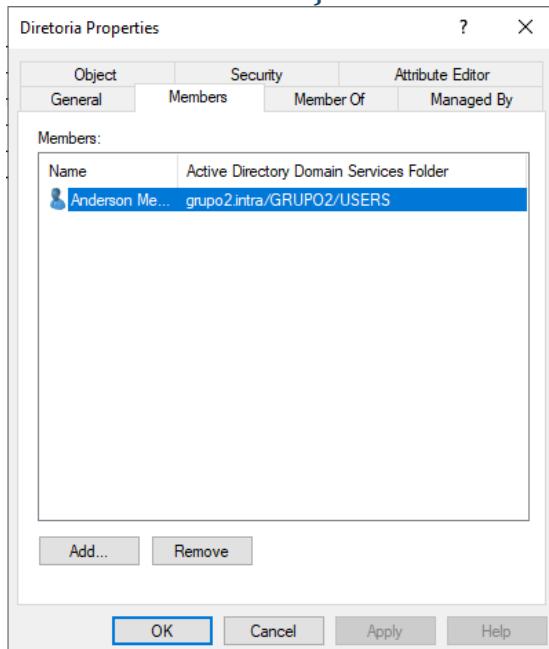


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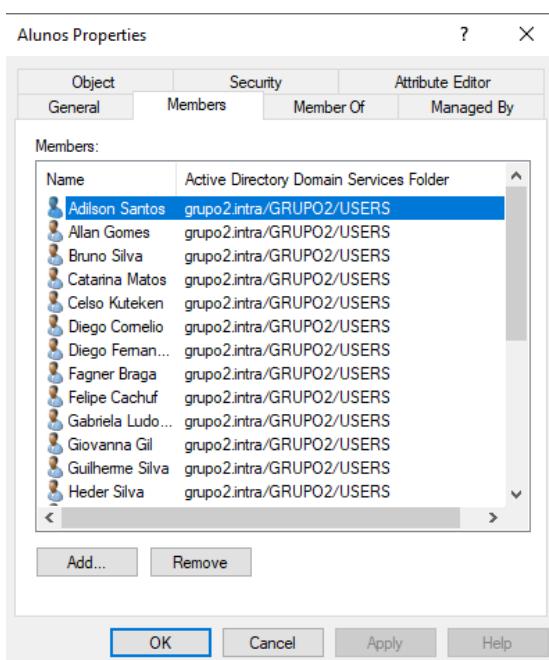
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15. Create a Security Local Domain group called “Diretoria” and add the following user to it: Anderson Mendonça



16. Create a Security Local Domain group called “Alunos” and add the following users to it: Paula Fernandez, Gabriela Ludovico, Teresa Lima, Catarina Matos e Diego Rosalino Cornelio



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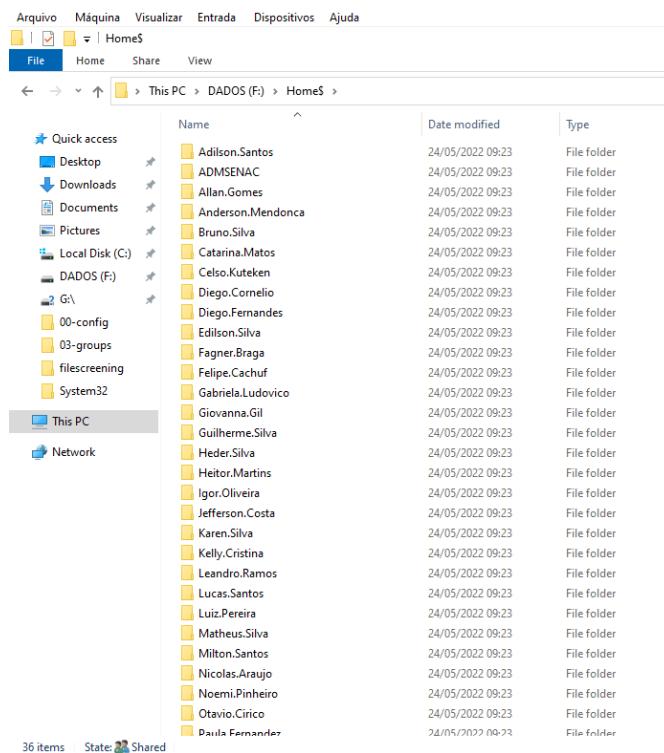
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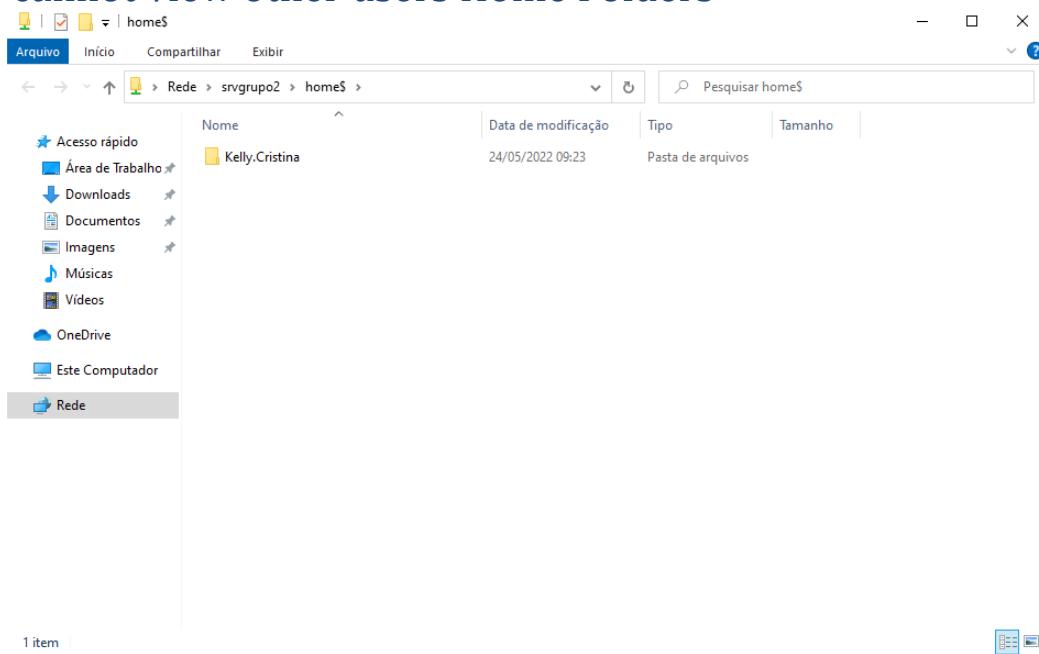
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## 17. All users have a Home Folder on the Server.



## 18. Users cannot view other users Home Folders



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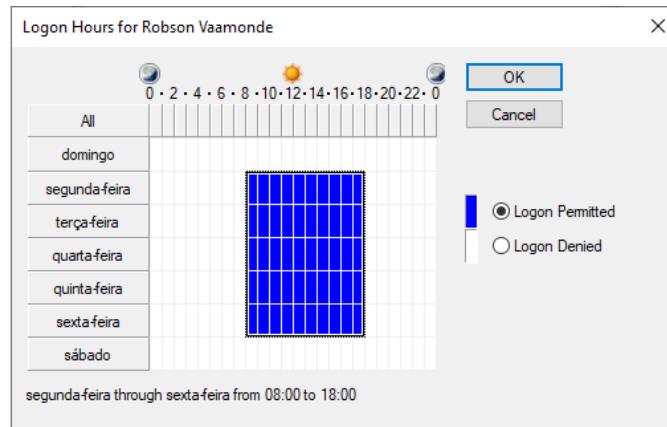
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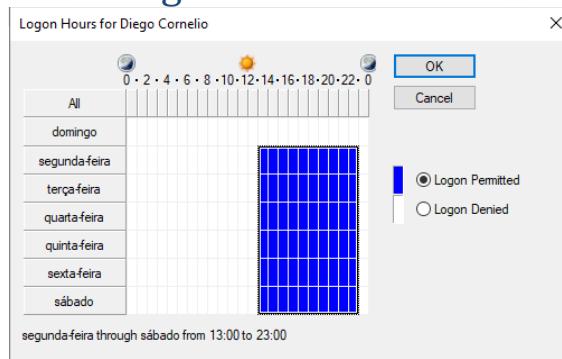
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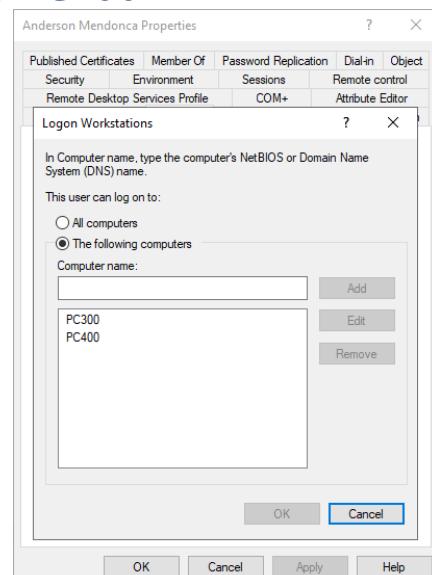
19. The user Robson Vaamonde can logon from Monday to Friday in the mornings and in the afternoons.



20. The user Diego Rosalino can logon from Monday to Saturday in the afternoons and in the evenings.



21. The user Anderson Mendonça can logon only in the following workstations: PC300 and PC400



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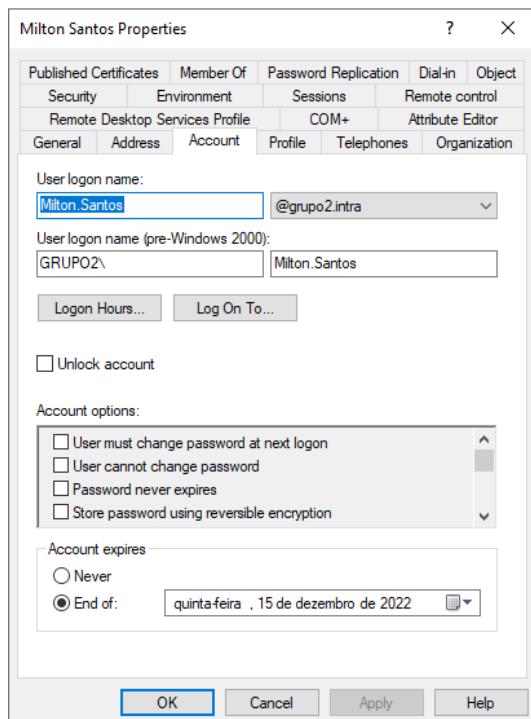
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## 22. The User's account Milton Santos expires on 15/12/2022



## 23. Create a folder named Ex-Alunos2. The disk space of the folder must be bigger than 100 MB. This folder must be Compacted and only the groups "Coordenadores" and "Diretoria" can access it.





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The screenshot shows the 'Ex-Alunos2 Properties' dialog box. In the General tab, it displays the following information:

- Type: File folder
- Location: F:\
- Size: 108 MB (113,916,978 bytes)
- Size on disk: 109 MB (114,315,264 bytes)
- Contains: 168 Files, 0 Folders
- Created: terça-feira, 24 de maio de 2022, 09:21:32
- Attributes:  Read-only (Only applies to files in folder)  Hidden [Advanced...](#)

At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

A second window titled 'Advanced Attributes' is overlaid on the first. It contains the following text:  
Choose the settings you want for this folder.  
When you click OK or Apply on the Properties dialog, you will be asked if you want the changes to affect all subfolders and files as well.

Archive and Index attributes:  
 Folder is ready for archiving  
 Allow files in this folder to have contents indexed in addition to file properties

Compress or Encrypt attributes:  
 Compress contents to save disk space  
 Encrypt contents to secure data [Details](#)

Buttons at the bottom: 'OK' (highlighted), 'Cancel'.

The screenshot shows the 'Advanced Security Settings for Ex-Alunos2' dialog box. It displays the following information:

Name: F:\Ex-Alunos2  
Owner: Administrators (GRUPO2\Administrators) [Change](#)

Permissions Share Auditing Effective Access

For additional information, double-click a permission entry. To modify a permission entry, select the entry and click Edit (if available).

Permission entries:

Type	Principal	Access	Inherited from	Applies to
Allow	Coordenadores (GRUPO2\Co...	Modify	None	This folder, subfolders and files
Allow	Diretoria (GRUPO2\Diretoria)	Modify	None	This folder, subfolders and files
Allow	Administrators (GRUPO2\Ad...	Full control	F:\	This folder, subfolders and files
Allow	CREATOR OWNER	Full control	F:\	Subfolders and files only
Allow	SYSTEM	Full control	F:\	This folder, subfolders and files

Buttons at the bottom: 'Add', 'Remove', 'View', 'Disable inheritance', ' Replace all child object permission entries with inheritable permission entries from this object', 'OK' (highlighted), 'Cancel', 'Apply'.

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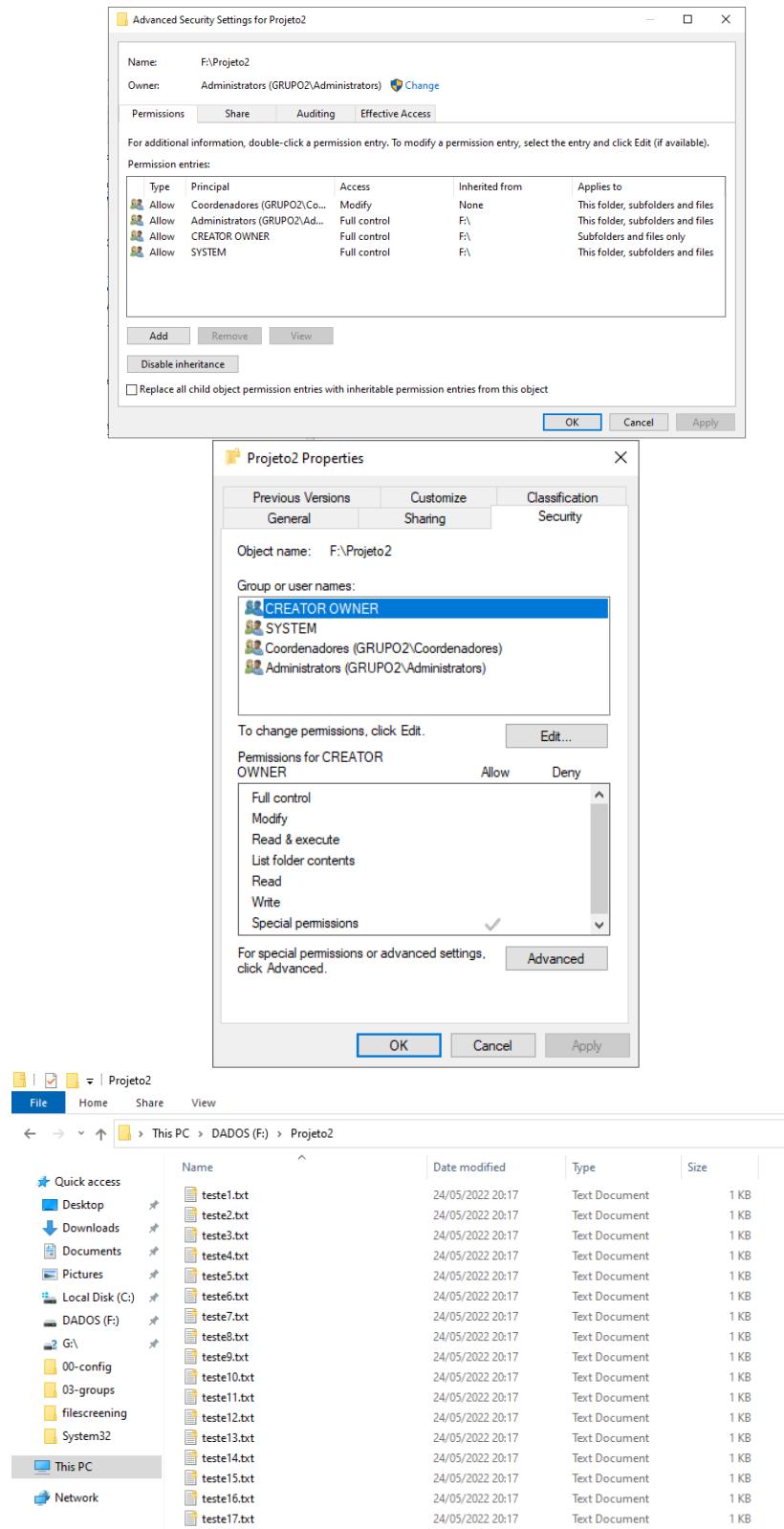
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## 24. Create a folder named “Pasta Projeto2” and encrypt it. Only the group “Coordenadores” can access it.

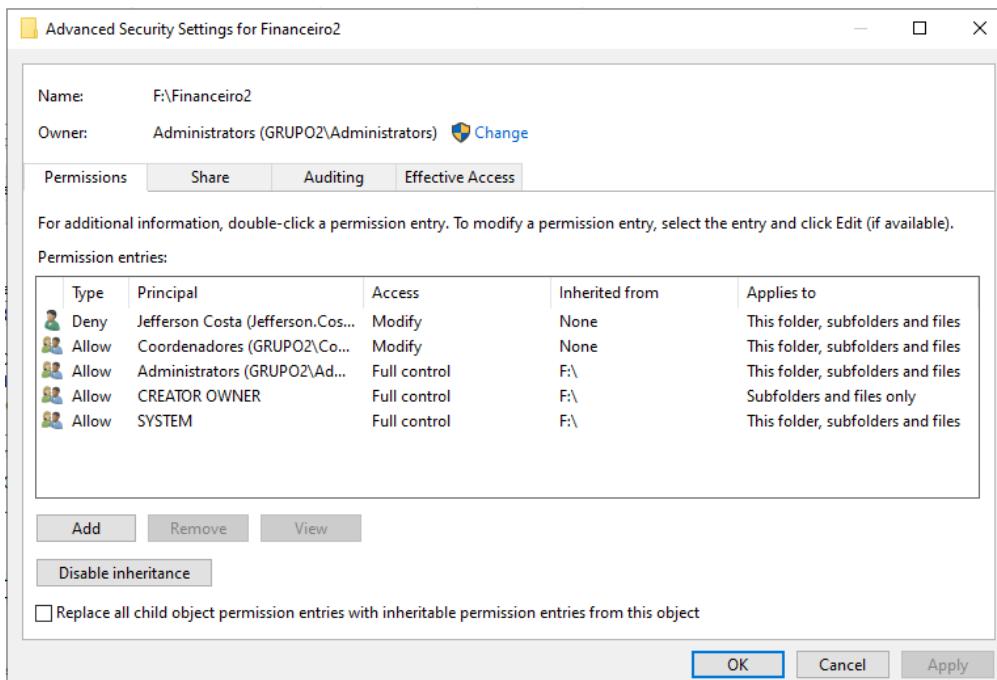


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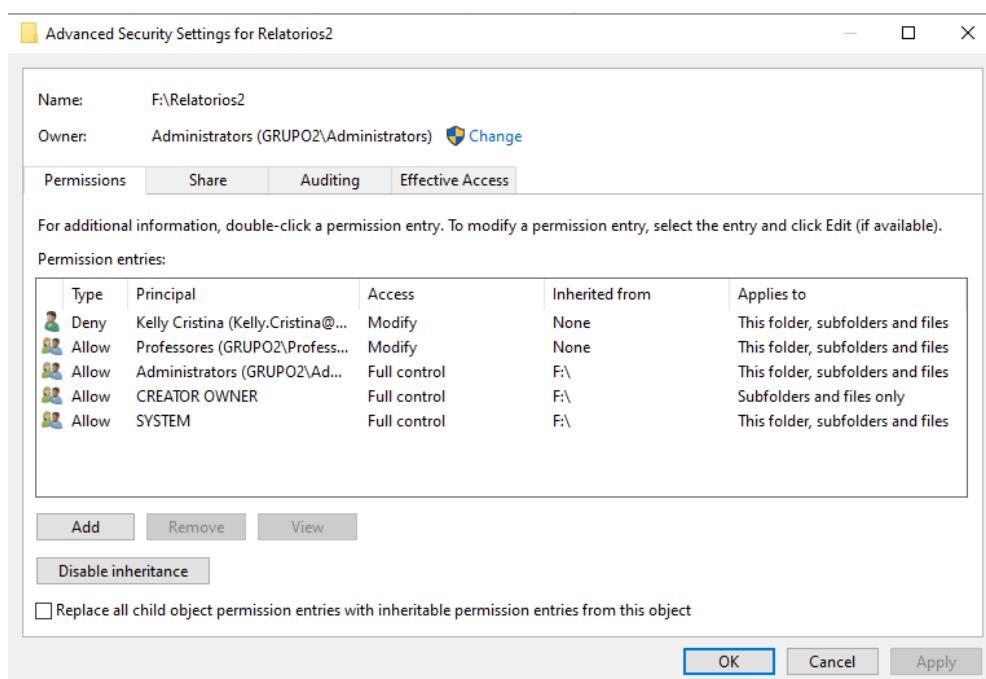
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25. Create a folder named “Financeiro2” where the group “Coordenadores” has Read and Write permissions. Except Jefferson Costa (Deny).



26. Create a folder named “Relatorios22” where the group “Professores” has Read and Write permissions. Except Kelly Cristina (Deny).





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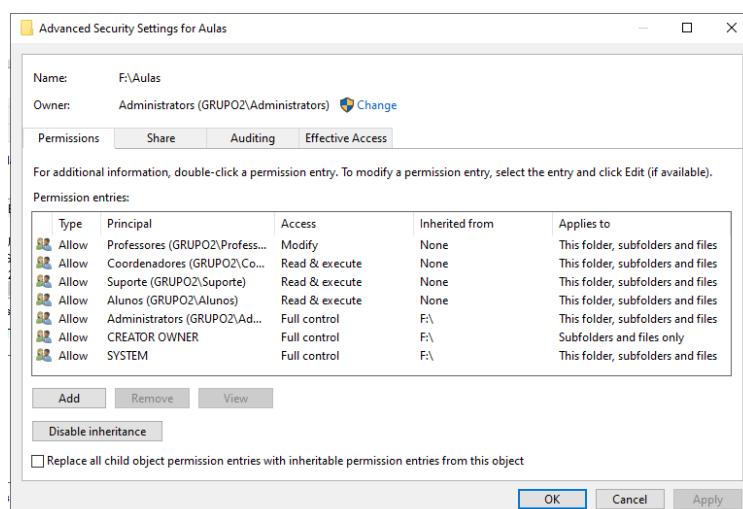
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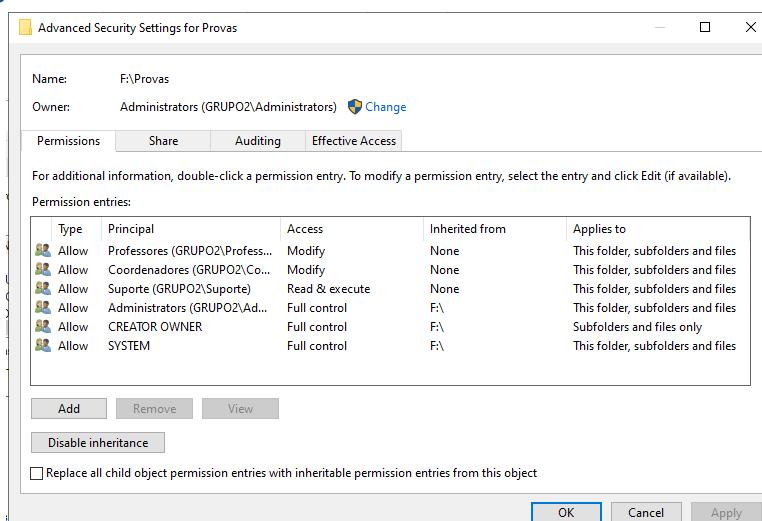
## 27. Create and Share the folders below with the following permissions

Folder	Professores	Coordenadores	Suporte	Diretoria	Alunos
Aulas	RW	R	R	X	R
Provas	RW	RW	R	X	X
Alunos	RW	R	RW	X	RW
Trabalhos	RW	R	R	X	RW
Coordenacao	X	RW	R	X	X
Diretoria\$	X	X	X	RW	X
Suporte	X	X	RW	X	X
Softwares\$	X	X	RW	X	X
Publica	RW	RW	RW	RW	RW
Turmas	R	R	R	X	RW

### 27.1. Aulas



### 27.2. Provas





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### 27.3. Alunos

Name: F:\Alunos  
Owner: Administrators (GRUPO2\Administrators) [Change](#)

Permissions Share Auditing Effective Access

For additional information, double-click a permission entry. To modify a permission entry, select the entry and click Edit (if available).

Permission entries:

Type	Principal	Access	Inherited from	Applies to
Allow	Professores (GRUPO2\Professores)	Modify	None	This folder, subfolders and files
Allow	Coordenadores (GRUPO2\Coordenadores)	Read & execute	None	This folder, subfolders and files
Allow	Suporte (GRUPO2\Supporte)	Modify	None	This folder, subfolders and files
Allow	Alunos (GRUPO2\Alunos)	Modify	None	This folder, subfolders and files
Allow	Administrators (GRUPO2\Administrators)	Full control	F:\	This folder, subfolders and files
Allow	CREATOR OWNER	Full control	F:\	Subfolders and files only
Allow	SYSTEM	Full control	F:\	This folder, subfolders and files

### 27.4. Trabalhos

Name: F:\Trabalhos  
Owner: Administrators (GRUPO2\Administrators) [Change](#)

Permissions Share Auditing Effective Access

For additional information, double-click a permission entry. To modify a permission entry, select the entry and click Edit (if available).

Permission entries:

Type	Principal	Access	Inherited from	Applies to
Allow	Professores (GRUPO2\Professores)	Modify	None	This folder, subfolders and files
Allow	Coordenadores (GRUPO2\Coordenadores)	Read & execute	None	This folder, subfolders and files
Allow	Suporte (GRUPO2\Supporte)	Read & execute	None	This folder, subfolders and files
Allow	Alunos (GRUPO2\Alunos)	Modify	None	This folder, subfolders and files
Allow	Administrators (GRUPO2\Administradores)	Full control	F:\	This folder, subfolders and files
Allow	CREATOR OWNER	Full control	F:\	Subfolders and files only
Allow	SYSTEM	Full control	F:\	This folder, subfolders and files

Add Remove View  
Disable inheritance  
 Replace all child object permission entries with inheritable permission entries from this object  
OK Cancel Apply

### 27.5. Coordenacao

Name: F:\Coordenacao  
Owner: Administrators (GRUPO2\Administrators) [Change](#)

Permissions Share Auditing Effective Access

For additional information, double-click a permission entry. To modify a permission entry, select the entry and click Edit (if available).

Permission entries:

Type	Principal	Access	Inherited from	Applies to
Allow	Coordenadores (GRUPO2\Coordenadores)	Modify	None	This folder, subfolders and files
Allow	Suporte (GRUPO2\Supporte)	Read & execute	None	This folder, subfolders and files
Allow	Administrators (GRUPO2\Administradores)	Full control	F:\	This folder, subfolders and files
Allow	CREATOR OWNER	Full control	F:\	Subfolders and files only
Allow	SYSTEM	Full control	F:\	This folder, subfolders and files

Add Remove View  
Disable inheritance  
 Replace all child object permission entries with inheritable permission entries from this object  
OK Cancel Apply

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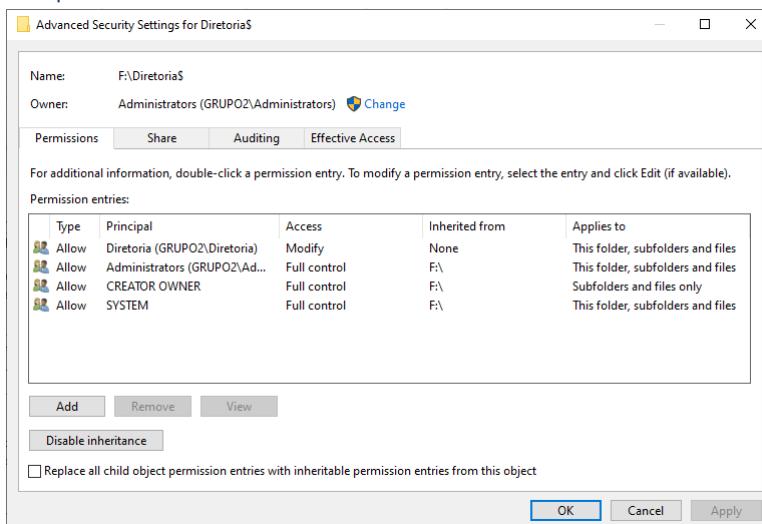
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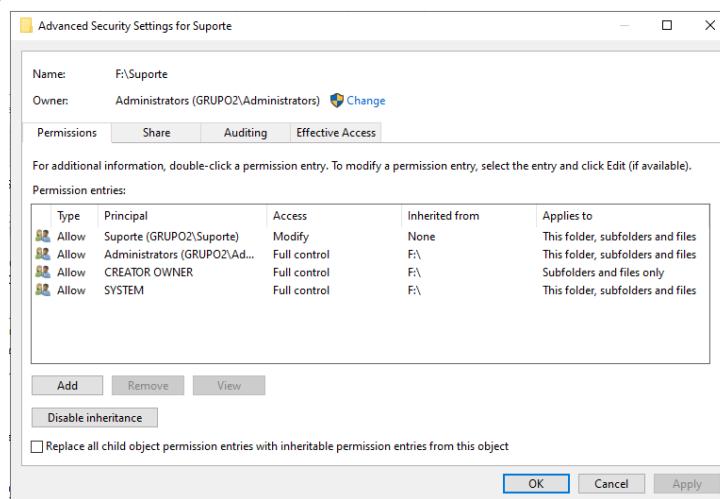
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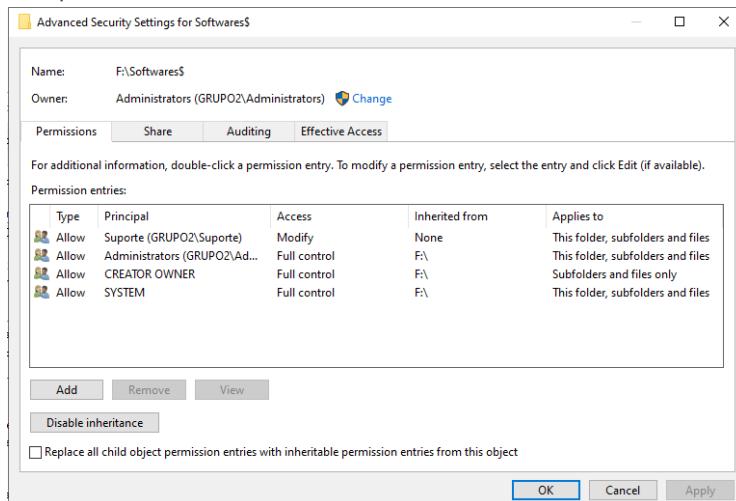
## 27.6. Diretoria\$



## 27.7. Suporte



## 27.8. Softwares\$

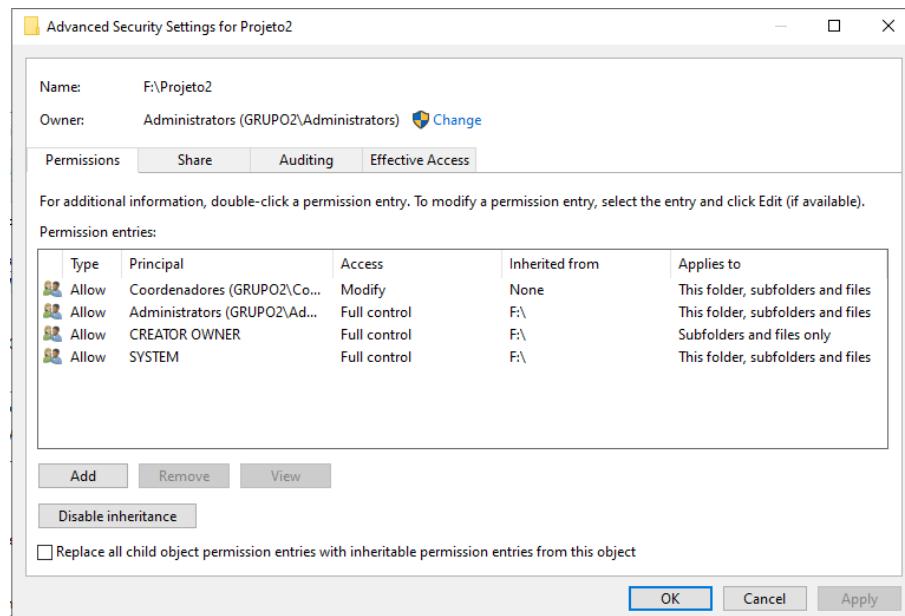


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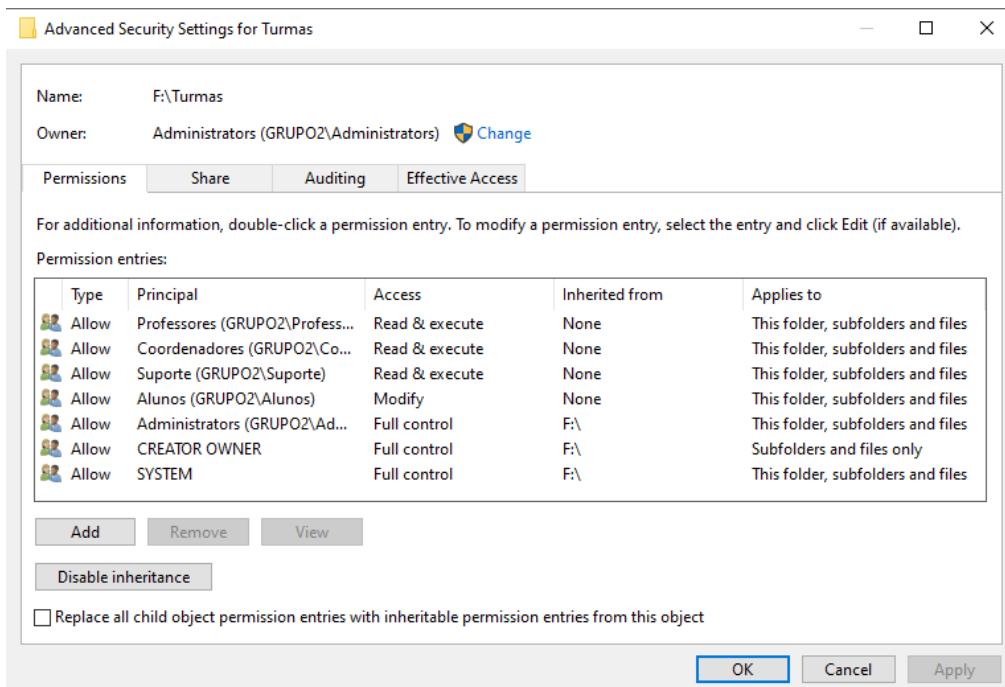
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## 27.9. Publica



## 27.10. Turmas



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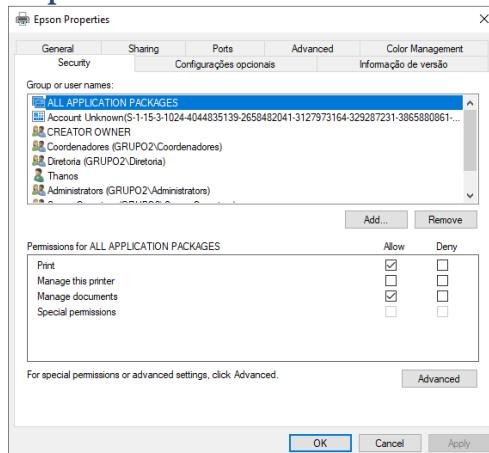
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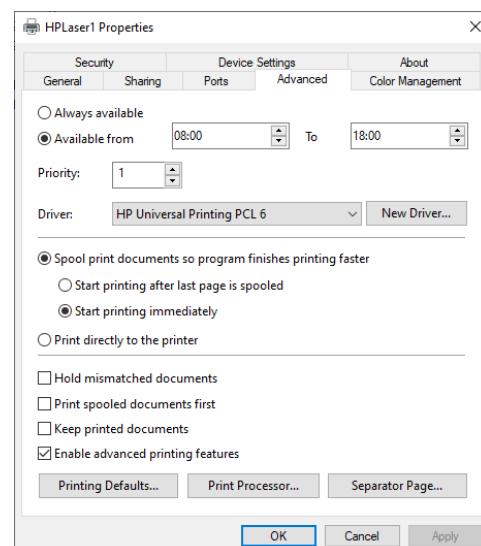
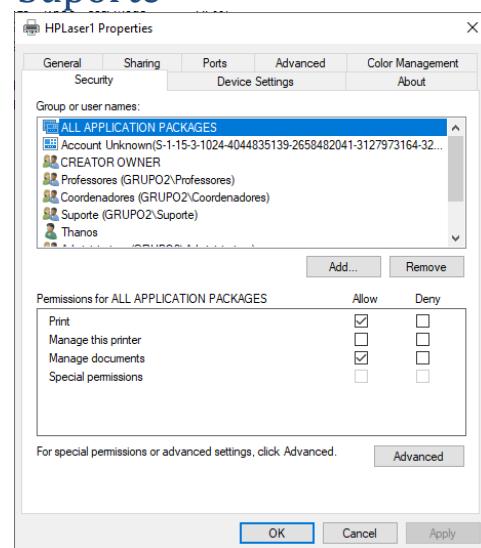
ISSUING AREA: INFORMATION TECHNOLOGY

**SUBJECT: WINDOWS AND UBUNTU SERVER IMPLEMENTATION**

## 28. Printer EPSON – Groups “Diretoria” and “Coordenadores”



## 29. Printer HPLaser1 - Available from 8:00 to 18:00 - Groups “Professores”, “Coordenadores” and “Suporte”



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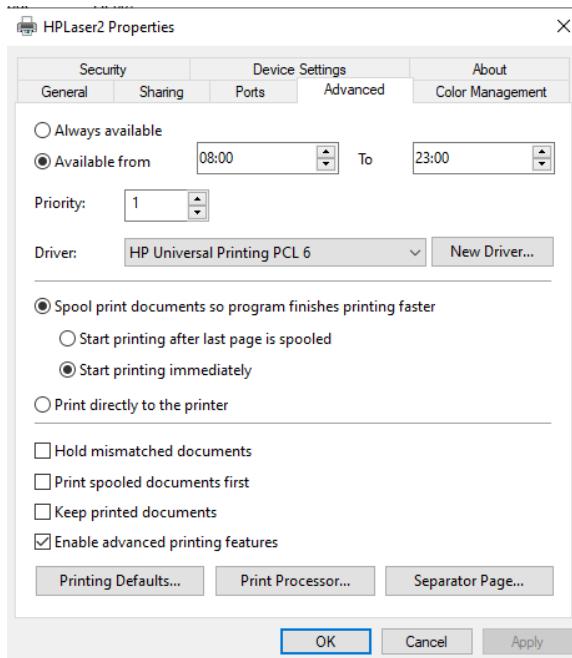
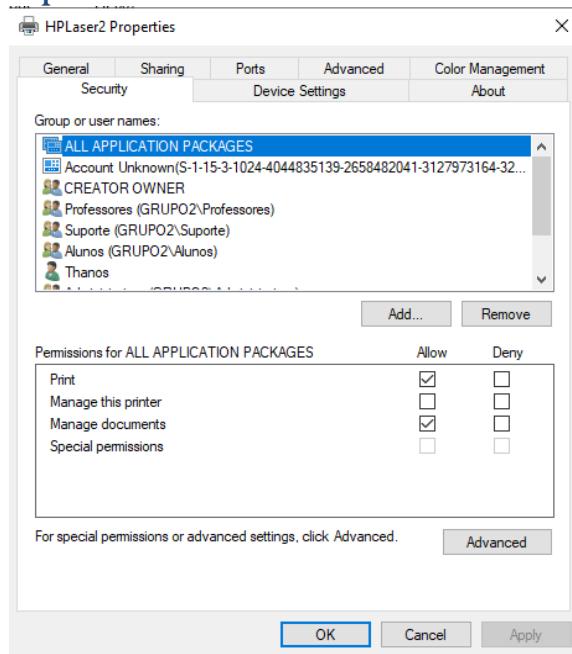
 Last Revision  
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ISSUING AREA: INFORMATION TECHNOLOGY

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### 30. Printer HPLaser2 – Available from 8:00 to 23:00 - Groups “Alunos”, “Professores” and “Suporte”





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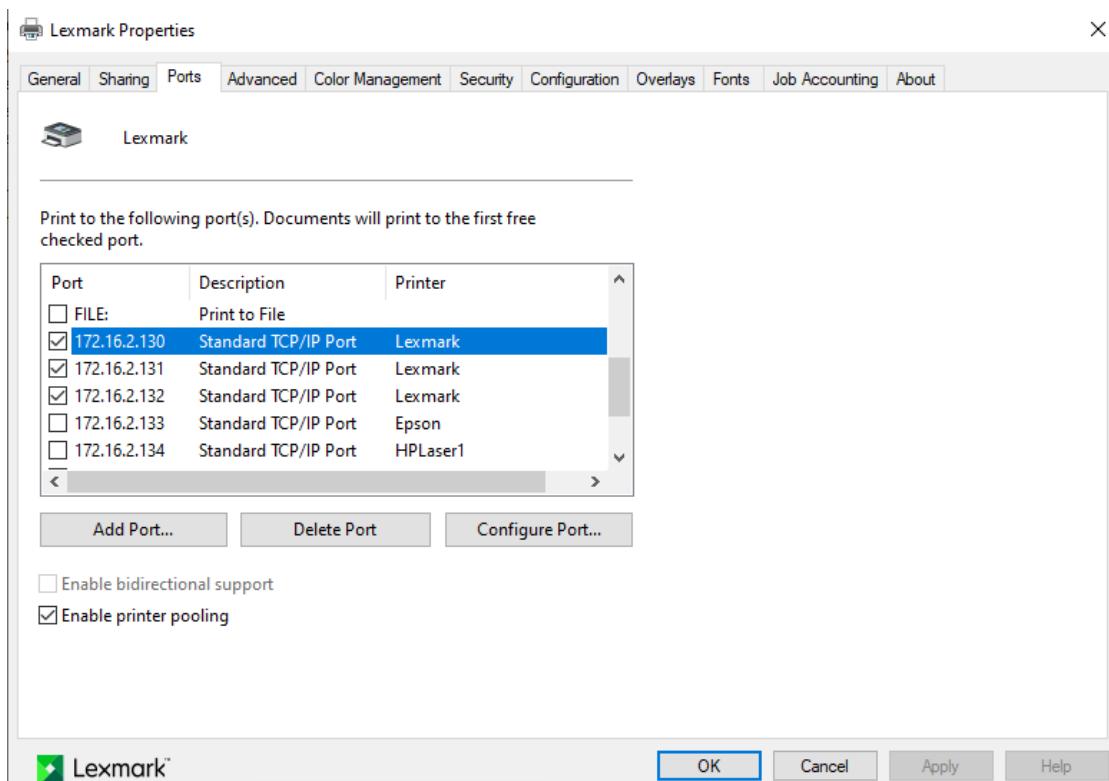
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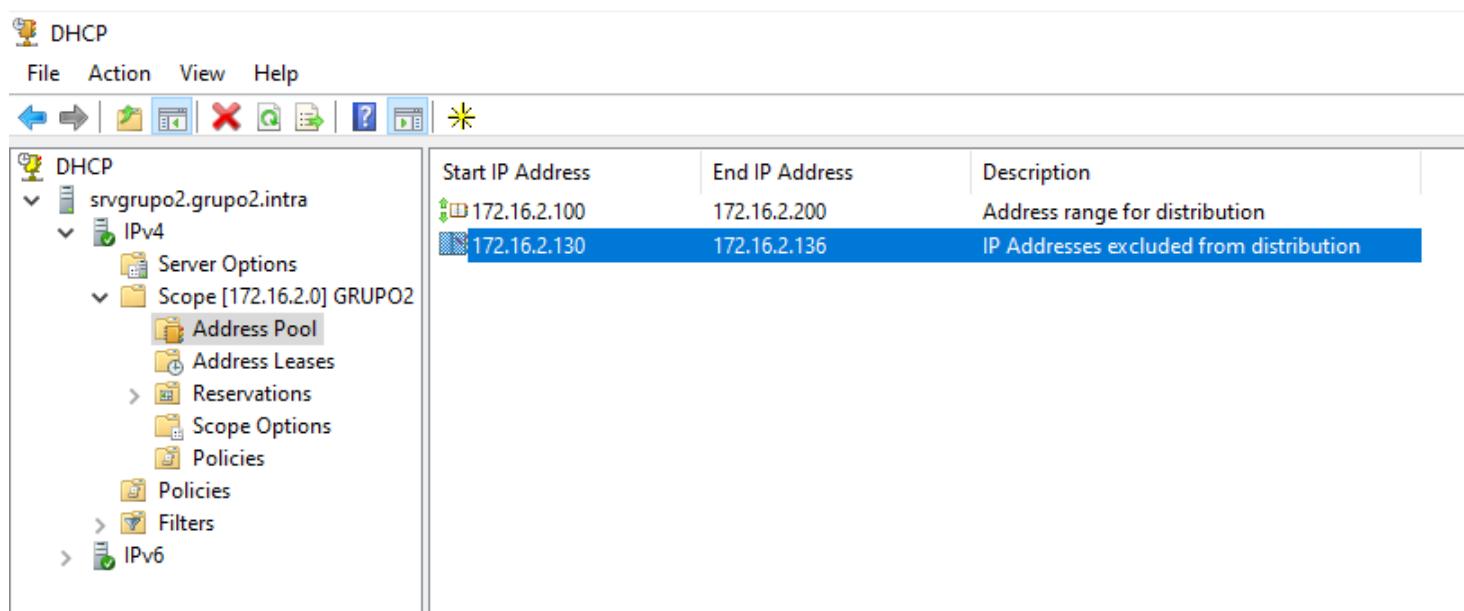
ISSUING AREA: INFORMATION TECHNOLOGY

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### 31. Create a printer pooling using the Printer Lexmark and the following IP addresses: 172.16.2.130, 172.16.2.131, e 172.16.2.132



### 32. Create a Exclusion Range to the printers addresses on the DHCP server.



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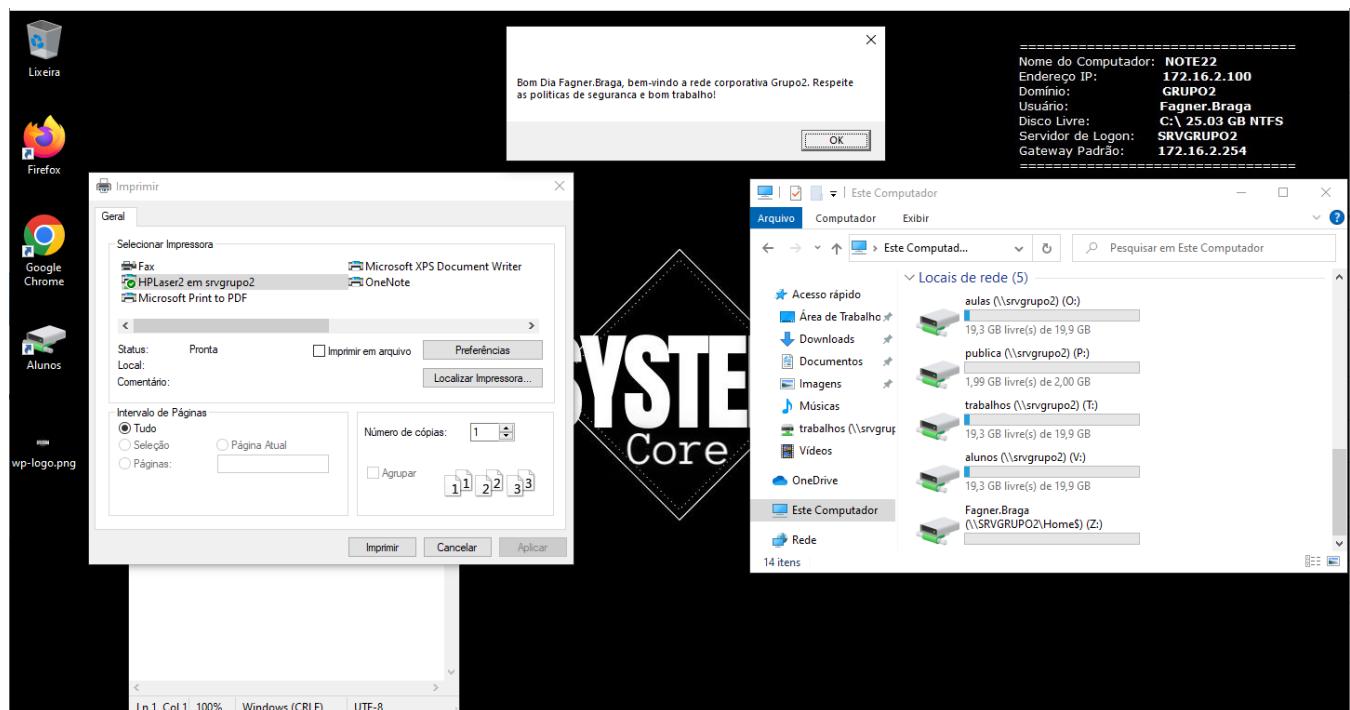
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33. Create a logon script to the group named "Aluno" where the following folders are mapped: "Aulas", "alunos", "Publica" and "Trabalhos". This script should also install the printer named "HPLaser2", create a shortcut on the desktop mapping the drive Z: with the folder "Alunos". Finally, this script must show a Welcome message to the user.

```
' Script de Logon
'-----
'Impedindo exibição de erro para o usuário
On error Resume Next
Err.clear 0
'-----
'Mapeando Unidades de Disco
Set WshNetwork = Wscript.CreateObject("Wscript.Network")
WshNetwork.MapNetworkDrive "O:", "\\\srvgrupo2\aulas", "true"
WshNetwork.MapNetworkDrive "V:", "\\\srvgrupo2\alunos", "true"
WshNetwork.MapNetworkDrive "P:", "\\\srvgrupo2\publica", "true"
WshNetwork.MapNetworkDrive "T:", "\\\srvgrupo2\trabalhos", "true"
'-----
'Mapeando Impressora
Set WshNetwork = Wscript.CreateObject("Wscript.Network")
WshNetwork.AddWindowsPrinterConnection "\\\srvgrupo2\HPLaser2"
WshNetwork.SetDefaultPrinter "\\\srvgrupo2\HPLaser2", "HPLaser2"
'-----
'CRIA ATALHO DO COMPARTILHAMENTO NO DESKTOP
strAppPath = "V:\"
Set wshShell = CreateObject("WScript.Shell")
objDesktop = wshShell.SpecialFolders("Desktop")
set oShellLink = wshShell.CreateShortcut(objDesktop & "\Alunos.lnk")
oShellLink.TargetPath = strAppPath
oShellLink.WindowStyle = "1"
oShellLink.Description = "Alunos"
oShellLink.Save
'ENVIA O COMANDO PARA APERTAR A TECLA F5 PARA ATUALIZAR OS ICONES NO DESKTOP
WshShell.SendKeys "(F5)"
'-----
'SINCRONIZA HORARIO ESTAÇÃO X SERVIDOR
Set wshShell = CreateObject("WScript.Shell")
wshShell.Run "NET TIME \\srvgrupo2 /SET /Y", 0, True
'-----
'Boas Vindas Ao Usuário
Set objUser = WScript.CreateObject("WScript.Network")
wuser=objUser.UserName
If Time <= "12:00:00" Then
    MsgBox ("Bom Dia "+wuser+", bem-vindo a rede corporativa Grupo2. Respeite as politicas de segurança e bom trabalho!")
ElseIf Time >= "12:00:01" And Time <= "18:00:00" Then
    MsgBox ("Boa Tarde "+wuser+", bem-vindo a rede corporativa Grupo2. Respeite as politicas de segurança e bom trabalho!")
Else
    MsgBox ("Boa Noite "+wuser+", bem-vindo a rede corporativa Grupo2. Respeite as politicas de segurança e bom trabalho!")
End If
Wscript.Quit
```



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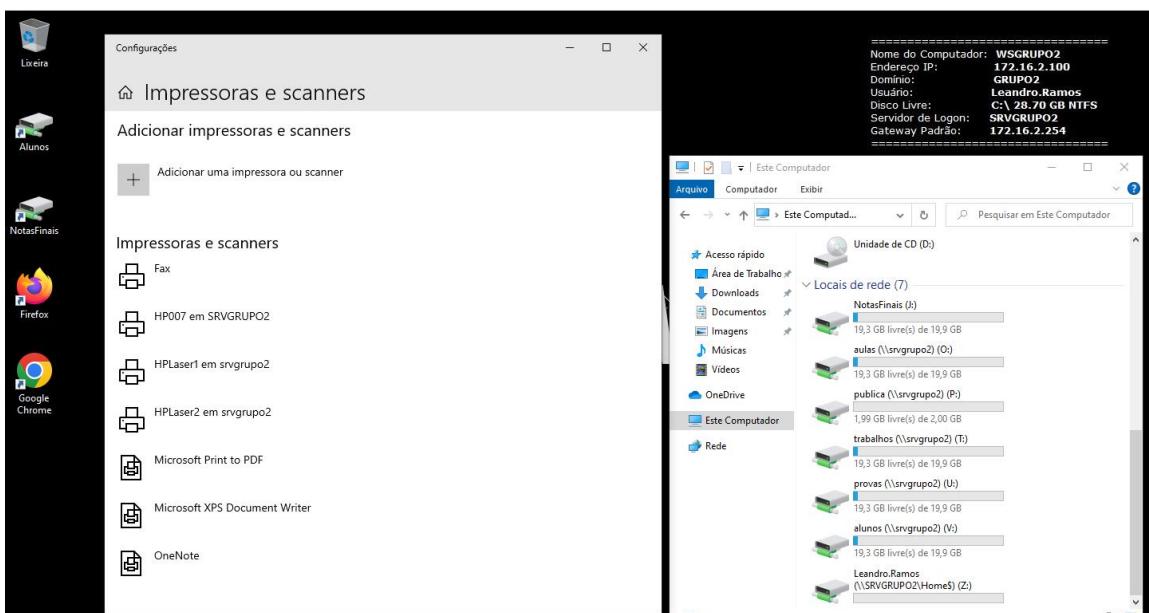
 Last Revision  
 05/06/2022

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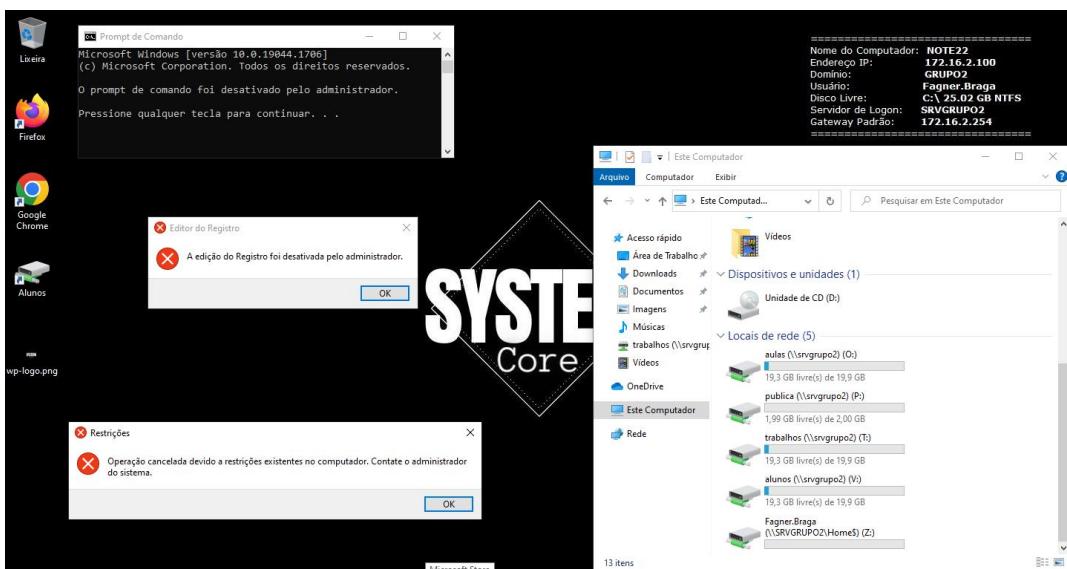
ISSUING AREA: INFORMATION TECHNOLOGY

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34. Create a logon script to the group “Professores”. This script must map the following folders: “Aulas”, “alunos”, “Publica”, “Trabalhos” and “PROVAS”. It must also install the printers “HPLaser2” and “HPLaser1”. Finally, it must create a shortcut to the folder “Alunos” on the Desktop to Drive V:.



35. Create a set of GPOs where all members of the group “Alunos” can't access MS-DOS, Control Panel, Registry and Disk Volumes. They are not allowed to install softwares and their wallpapers must be defined by the Administrator



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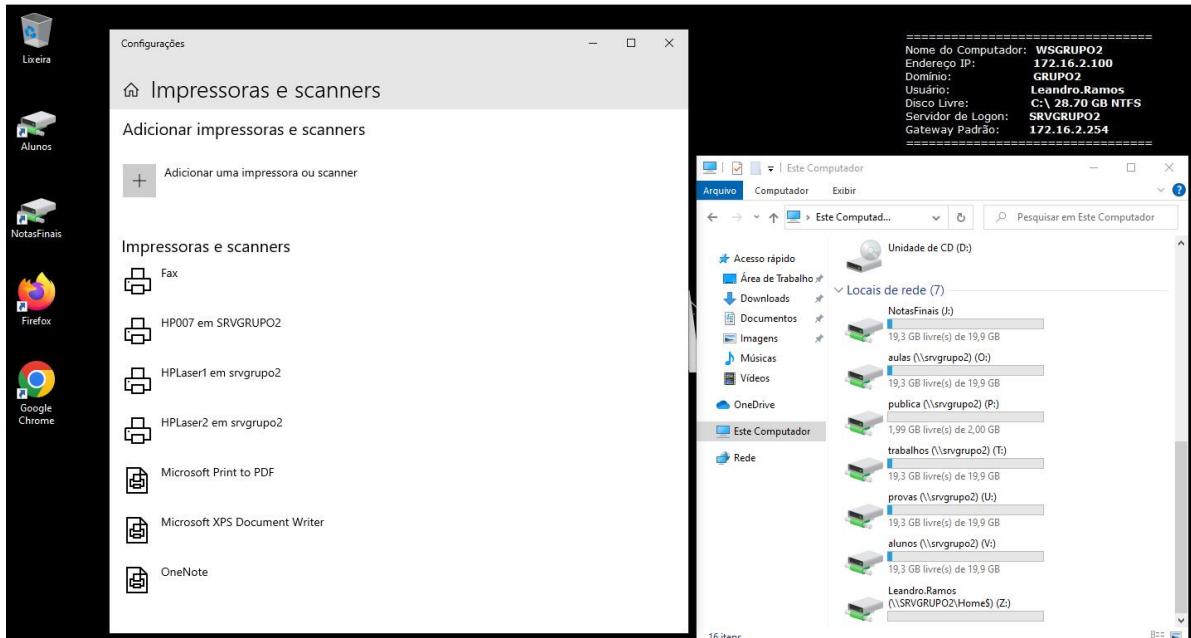
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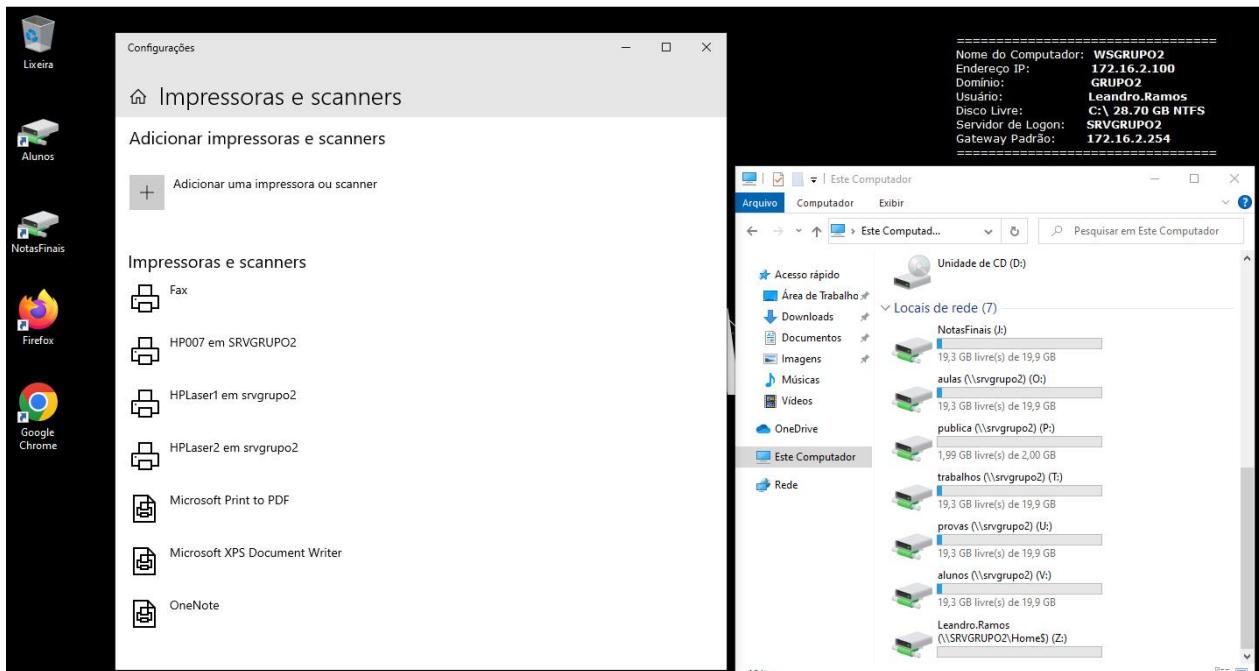
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36. Create a GPO to the group “Suporte. This GPO must install Google Chrome on the Desktops automatically.



37. Create a GPP to map the printer HP007, map the folder “NotasFinais” on the drive J: and create a shorcut on Desktop to Drive J:





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### 38. Create 20 different GPOs to use in your network environment.

Link Order	GPO	Enforced	Link Enabled	GPO Status	WMI Filter	Modified	Domain
1	■ GPO-USERS-BGINFO-DESKTOPS	No	Yes	Computer configuration s...	None	24/05/2022 14:01:18	grupo2.intra
2	■ GPO-USERS-BLOQUEIA-INSTALACAO-DE-SOFT...	No	Yes	Computer configuration s...	None	26/05/2022 09:42:32	grupo2.intra
3	■ GPO-USERS-BLOQUEIA-PAINEL-DE-CONTROLE	No	Yes	Computer configuration s...	None	26/05/2022 17:06:57	grupo2.intra
4	■ GPO-USERS-BLOQUEIA-PROMPT	No	Yes	Computer configuration s...	None	26/05/2022 17:05:18	grupo2.intra
5	■ GPO-USERS-BLOQUEIA-REGISTRO	No	Yes	Computer configuration s...	None	26/05/2022 17:07:42	grupo2.intra
6	■ GPO-USERS-BLOQUEIA-SW-POR-HASH	No	Yes	Computer configuration s...	None	26/05/2022 10:55:05	grupo2.intra
7	■ GPO-USERS-MAPEAMENTOS	No	Yes	Computer configuration s...	None	26/05/2022 20:52:15	grupo2.intra
8	■ GPO-USERS-MOSTRA-EXTENSAO-DE-ARQUIVO	No	Yes	Computer configuration s...	None	24/05/2022 14:01:22	grupo2.intra
9	■ GPO-USERS-NAVEGADORES	No	Yes	Computer configuration s...	None	24/05/2022 14:01:27	grupo2.intra
10	■ GPO-USERS-REGISTRA-LOGON-LOGOFF	No	Yes	Computer configuration s...	None	24/05/2022 14:01:30	grupo2.intra
11	■ GPO-USERS-BLOQUEIA-MIDIA-REMOVIVEL	No	Yes	Computer configuration s...	None	26/05/2022 17:06:32	grupo2.intra
12	■ GPO-COMP-AUDITORIA	No	Yes	User configuration setting...	None	24/05/2022 14:00:25	grupo2.intra
13	■ GPO-COMP-AVISO-TROCA-DE-SENHA	No	Yes	User configuration setting...	None	24/05/2022 14:00:28	grupo2.intra
14	■ GPO-COMP-CERT-FIREFOX	No	Yes	User configuration setting...	None	24/05/2022 14:00:35	grupo2.intra
15	■ GPO-COMP-CERTIFICADOS	No	Yes	User configuration setting...	None	29/05/2022 19:44:30	grupo2.intra
16	■ GPO-COMP-COPIA-ARQUIVOS	No	Yes	User configuration setting...	None	24/05/2022 14:00:40	grupo2.intra
17	■ GPO-COMP-DESABILITA-IPV6	No	Yes	User configuration setting...	None	24/05/2022 14:00:44	grupo2.intra
18	■ GPO-COMP-ENERGIA	No	Yes	User configuration setting...	None	24/05/2022 14:00:48	grupo2.intra
19	■ GPO-COMP-FIREFOX-PADRAO	No	Yes	User configuration setting...	None	24/05/2022 14:00:52	grupo2.intra
20	■ GPO-COMP-FIREWALL	No	Yes	User configuration setting...	None	26/05/2022 23:15:13	grupo2.intra
21	■ GPO-COMP-INSTALA-CHROME	No	Yes	User configuration setting...	None	26/05/2022 22:49:13	grupo2.intra
22	■ GPO-COMP-INSTALA-FIREFOX	No	Yes	User configuration setting...	None	26/05/2022 22:59:31	grupo2.intra
23	■ GPO-COMP-MOTD	No	Yes	User configuration setting...	None	24/05/2022 14:01:00	grupo2.intra
24	■ GPO-COMP-POWERSHELL-EXECUTION-POLICY	No	Yes	User configuration setting...	None	24/05/2022 14:01:04	grupo2.intra
25	■ GPO-COMP-REMOTE-DESKTOP	No	Yes	User configuration setting...	None	24/05/2022 14:01:08	grupo2.intra
26	■ GPO-COMP-VNC	No	Yes	User configuration setting...	None	24/05/2022 14:01:12	grupo2.intra
27	■ GPO-USERS-INSTALA-CHROME	No	No	Computer configuration s...	None	29/05/2022 19:51:48	grupo2.intra
28	■ GPO-USERS-FAVORITOS-FIREFOX	No	Yes	Computer configuration s...	None	30/05/2022 09:07:09	grupo2.intra
29	■ GPO-USERS-PROXY	No	Yes	Computer configuration s...	None	31/05/2022 21:38:15	grupo2.intra
30	■ GPO-USERS-BLOQUEIA-UNIDADES-DE-DISCO	No	Yes	Computer configuration s...	None	01/06/2022 11:01:21	grupo2.intra

### 39. Create the website [www.souadadmwindows.com.br](http://www.souadadmwindows.com.br) and host it on the IIS Server

#### Somos Administradores Windows



Adilson Santos

Allan Richard de Souza Gomes

Fagner Geraldes Braga

Felipe Parisi Cachuf

Heder Esteves De Farias Silva Higor da Silva Ribeiro

Igor Oliveira

Karen Oliveira Da Silva



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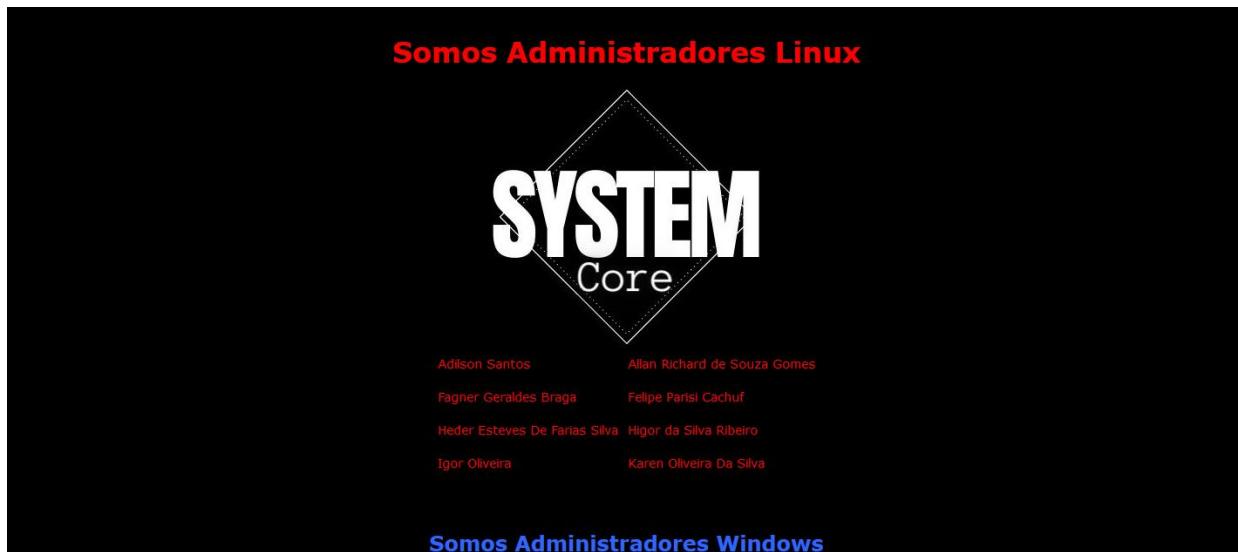
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40. Create the website [www.souadmlinux.com.br](http://www.souadmlinux.com.br) and host it on the IIS Server



41. Set up Disk Quota on the Home Folders and limit it to 20 MB.

42. Test if the users are prohibited from exceeding the Quota.

Nome	Data de modificação	Tipo	Tamanho
Turma.txt-1997	26/05/2022 20:28	Arquivo TXT-1997	5.120 KB
Turma.txt-1998	26/05/2022 20:28	Arquivo TXT-1998	5.120 KB
Turma.txt-2000	26/05/2022 20:28	Arquivo TXT-2000	5.120 KB

**Copiar Item**

Não há espaço suficiente em Robson.Angelotti (\SRVGRUPO2\Home\$)

5,00 MB é necessário a cópia do item. Exclua ou mova arquivos para ter espaço suficiente.

Robson.Angelotti (\SRVGRUPO2\Home\$)  
Espaço livre: 4,99 MB  
Tamanho total: 20,0 MB

**Tentar novamente** **Cancelar**

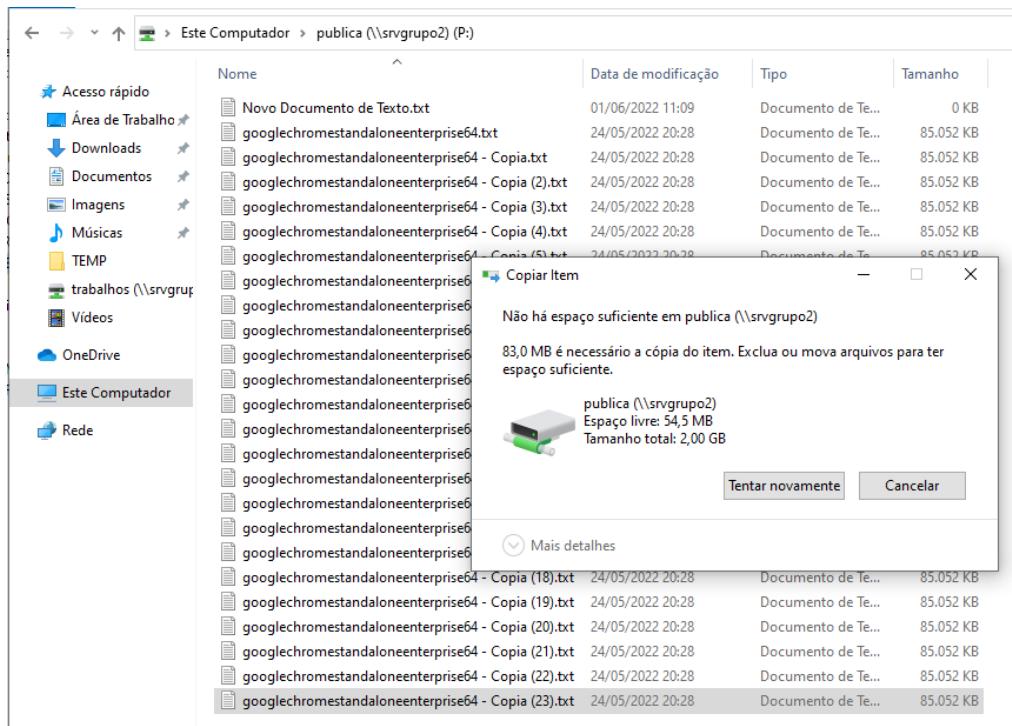
**Mais detalhes**

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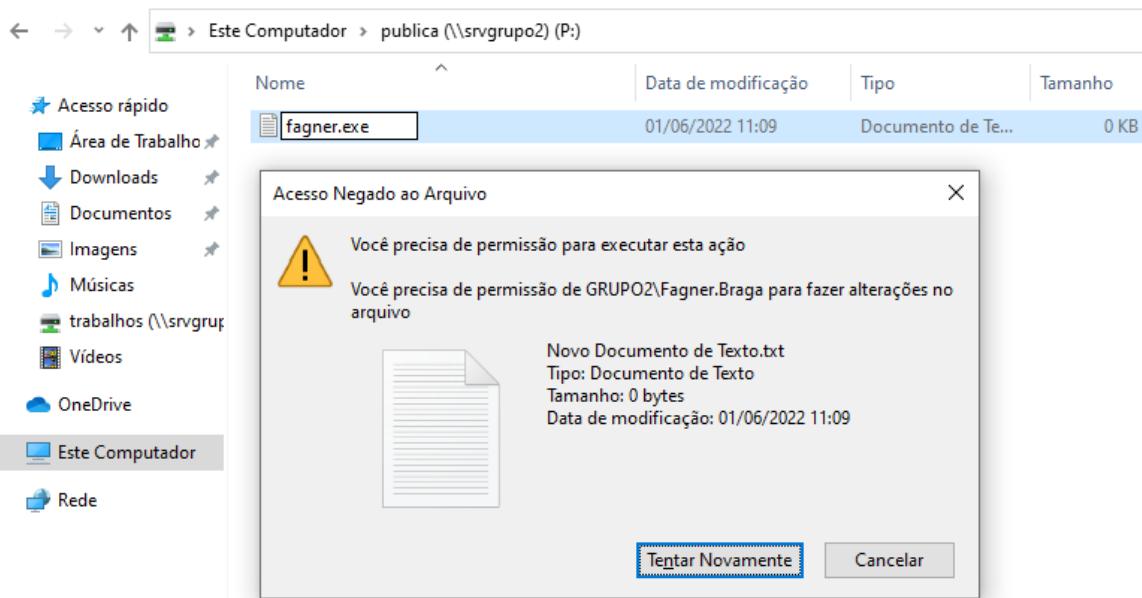
ISSUING AREA: INFORMATION TECHNOLOGY

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#### 43. Set up the disk quota on the folder “Pública” and limit it to 2GB.



#### 44. Setup File Screening on the folder “Pasta Pública” to not allow System files and executables (.exe, .bat, .com, etc...)

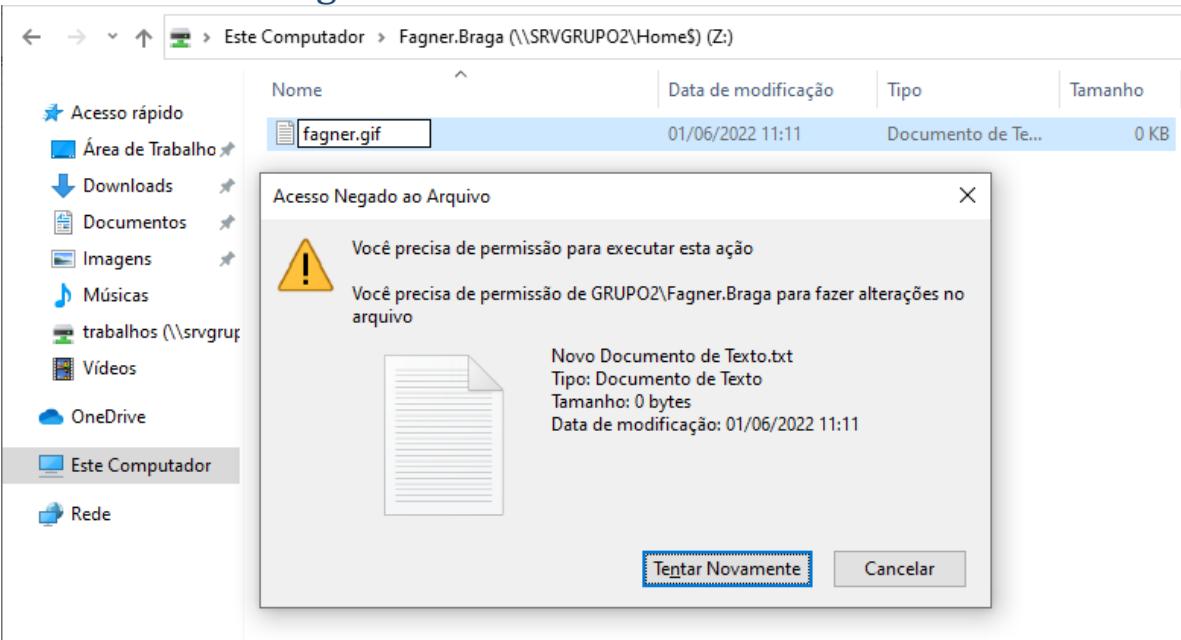


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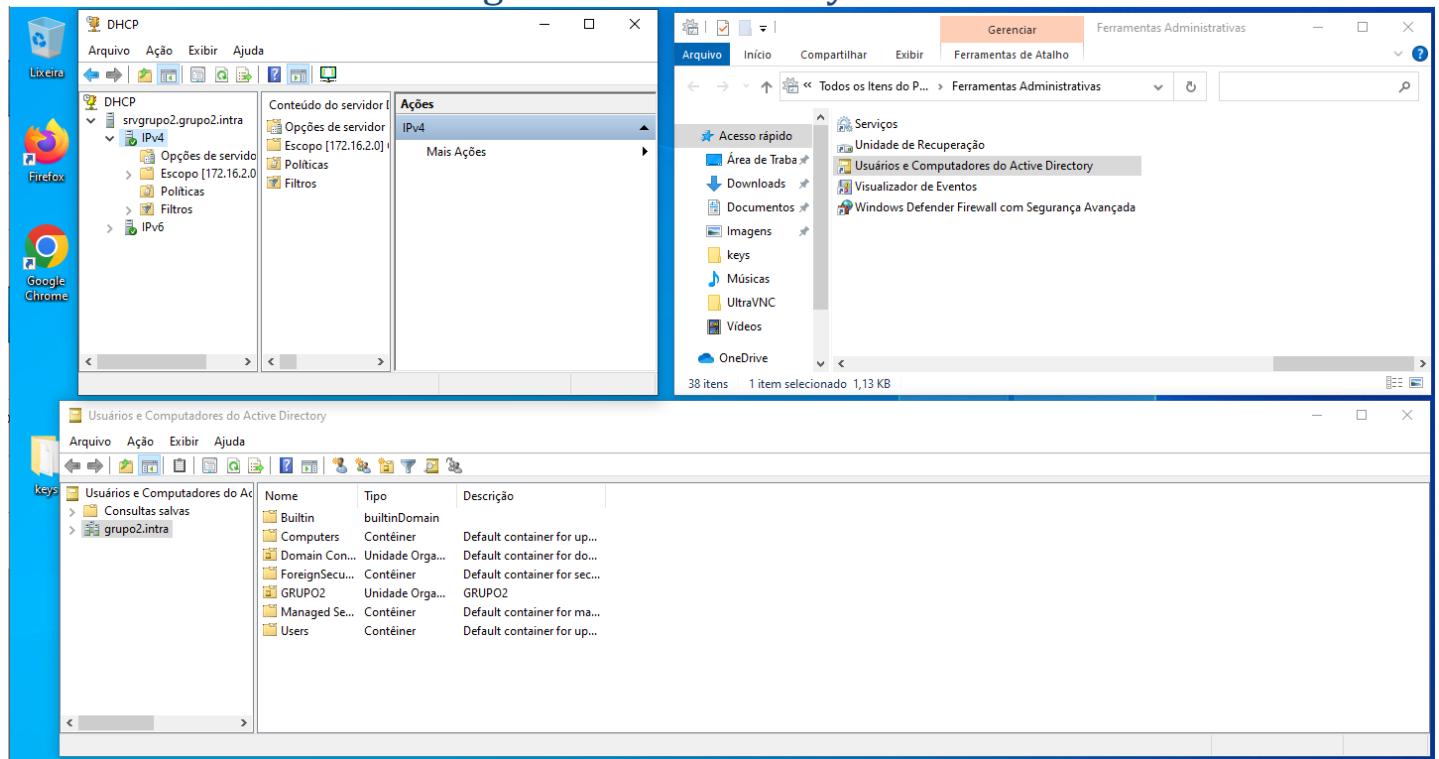
ISSUING AREA: INFORMATION TECHNOLOGY

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## 45. Test File Screening on the Home Folders



## 46. Install RSAT to manage the server from your workstation.



## 47. Enable the Recycle Bin on ADDS



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The screenshot shows the Active Directory Administrative Center interface. The left navigation pane includes 'Active Directory...', 'Overview', 'Dynamic', 'Auth...', and 'Global'. The main area displays the 'grupo2 (local)' container with a list of objects. A context menu is open over the 'grupo2' entry, listing the following options:

- Change domain controller
- Raise the forest functional level...
- Raise the domain functional level...
- Enable Recycle Bin ...
- New
- Search under this node
- Properties

The 'Properties' option is currently selected. The main list of objects in the center pane includes:

Name	Type	Description
builtinDom...	Container	Default container for upgr...
Container	Container	Default container for delet...
Organizati...	Container	Default container for dom...
Organizati...	Container	Default container for secur...
infrastructu...	Container	Default container for key o...
Keys	Container	Default container for orph...
LostAndFound	Container	Default container for man...
Managed Service Accounts	Container	msDS-Quo...
NTDS Quotas	Container	Quota specifications conta...
Program Data	Container	Default location for storag...
System	Container	Builtin system settings
TPM Devices	Container	msTPM-Inf...

48. Set up the backup of all users folder from Monday to Friday at 19:00, 19:30, 20:30 and 21:30. This backup must be done on a specific folder dedicated that only contains backup files.

File Action View Help

Windows Server Backup (Local Backup)

## Local Backup

You can perform a single backup or schedule a regular backup using this application.

Messages (Activity from last week, double click on the message to see details)

Time	Message	Description
31/05/2022 21:30	Backup	Successful
31/05/2022 20:30	Backup	Successful
31/05/2022 19:30	Backup	Successful
31/05/2022 19:00	Backup	Successful
31/05/2022 08:42	Backup	Successful
30/05/2022 20:30	Backup	Successful
30/05/2022 19:50	Backup	Failed

Status

Last Backup

Status: ✓ Successful  
Time: 31/05/2022 21:30  
[View details](#)

Next Backup

Status: Scheduled  
Time: 01/06/2022 19:00  
[View details](#)

All Backups

Total backups: 25 copies  
Latest copy: 31/05/2022 21:30  
Oldest copy: 25/05/2022 19:26  
[View details](#)

Scheduled Backup

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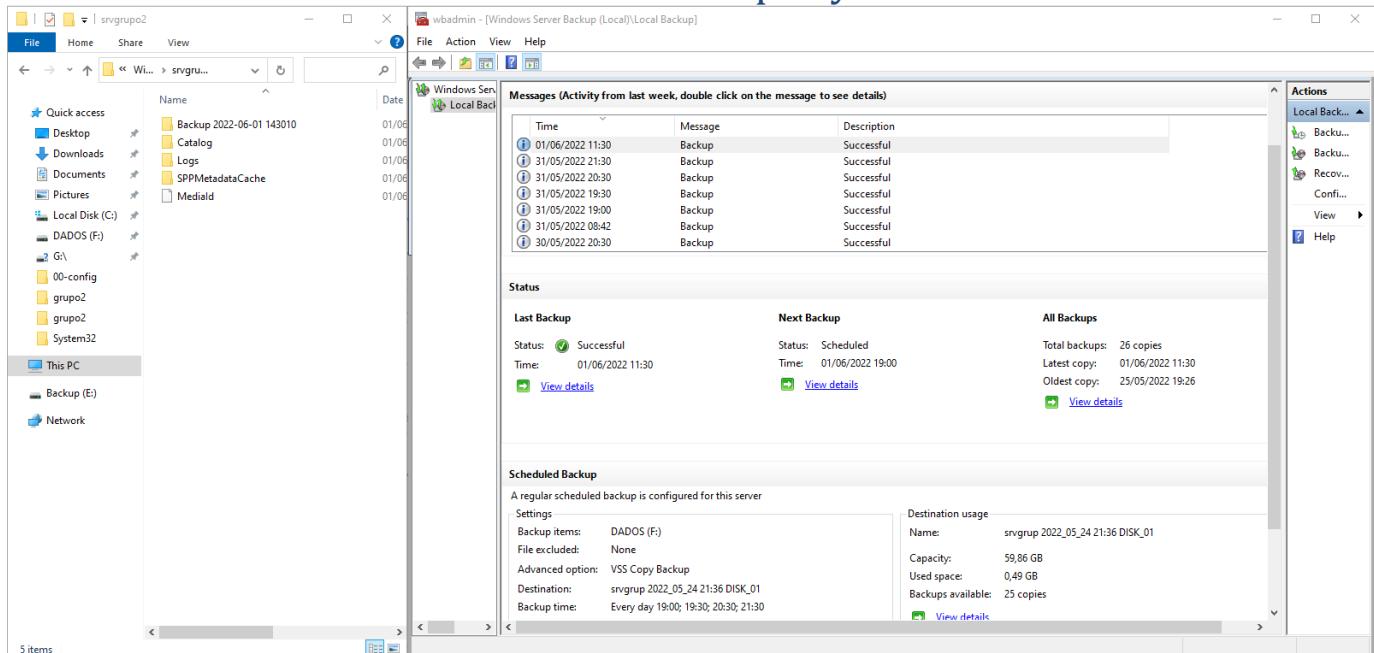
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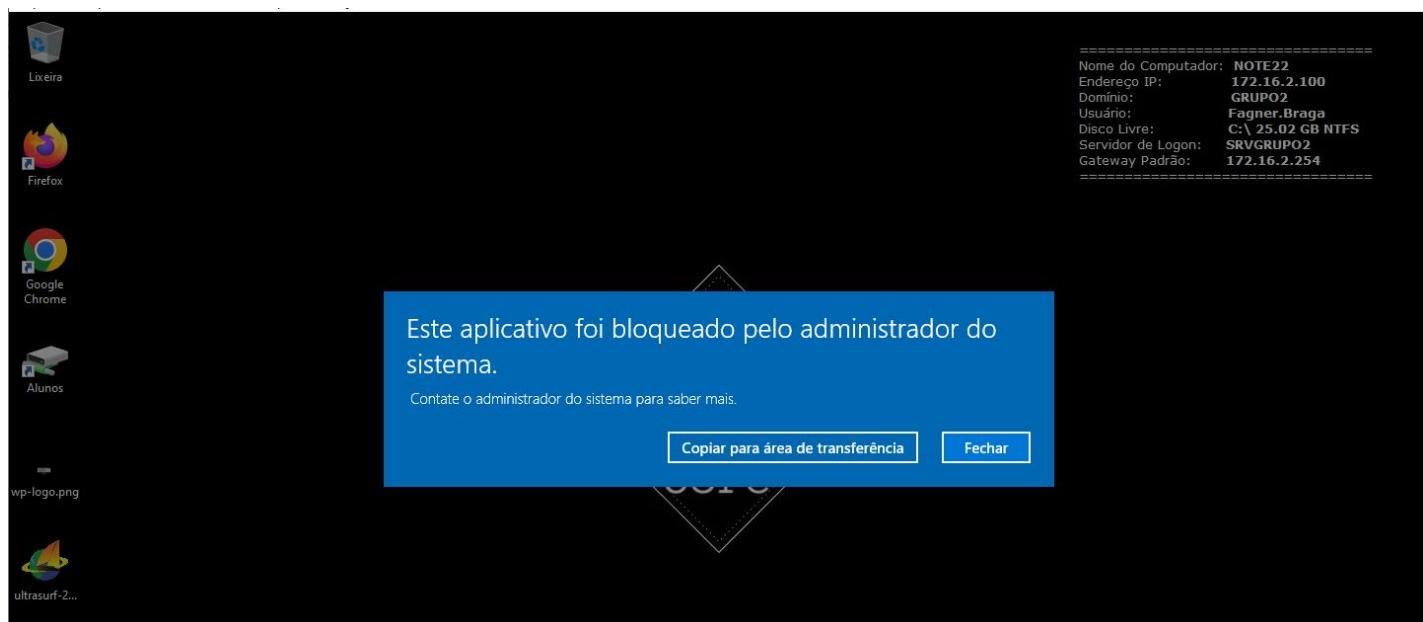
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## 49. Perform a Full Bare Metal Backup of your Server on an External HD



## 50. Forbid users to run the App “ULTRASURF” using a Hash Rule via GPO





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## 51. Audit the folder “Trabalhos” to discover who deleted a determined file.

The screenshot shows the 'Advanced Security Settings for Auditoria\$' dialog box. The 'Name:' field is set to 'F:\Auditoria\$'. The 'Owner:' field is set to 'Administrators (GRUPO2\Administrators)'. The 'Permissions' tab is selected, showing four entries:

Type	Principal	Access	Inherited from	Applies to
Allow	Domain Users (GRUPO2\Dom...)	Modify	None	This folder, subfolders and files
Allow	Administrators (GRUPO2\Ad...)	Full control	F:\	This folder, subfolders and files
Allow	CREATOR OWNER	Full control	F:\	Subfolders and files only
Allow	SYSTEM	Full control	F:\	This folder, subfolders and files

Buttons at the bottom include 'Add', 'Remove', 'View', 'Disable inheritance', and checkboxes for 'Replace all child object permission entries with inheritable permission entries from this object' and 'Replace all child object audit entries with inheritable audit entries from this object'. The 'OK' button is highlighted.

The screenshot shows the Windows Event Viewer interface. The title bar says 'Security Number of events: 32.252'. A filter bar indicates 'Filtered: Log: Security; Source: ; Event ID: 4663. Number of events: 1'. The main table has columns: Keywords, Date and Time, Source, Event ID, and Task Category. One event is listed:

Keywords	Date and Time	Source	Event ID	Task Category
Audit Success	26/05/2022 23:36:22	Microsoft Windows security...	4663	File System

The details pane shows the event information for Event 4663, Microsoft Windows security auditing:

**General** tab (selected):

Value
Security ID: GRUPO2\Fagner.Braga
Account Name: Fagner.Braga
Account Domain: GRUPO2
Logon ID: 0xE7F5C
<b>Object:</b>
Object Server: Security
Object Type: File
Object Name: F:\Trabalhos\Novo Documento de Texto.txt
Handle ID: 0x260c
Resource Attributes: S:AI
<b>Process Information:</b>
Process ID: 0x4
Process Name:
<b>Access Request Information:</b>
Accesses: DELETE

**Details** tab:

Value
Log Name: Security
Source: Microsoft Windows security
Event ID: 4663
Level: Information
User: N/A
OpCode: Info
More Information: <a href="#">Event Log Online Help</a>



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## 52. Webgraphy

<https://techexpert.tips/>

<https://comoaprenderwindows.com.br/>

<https://cursosdetionline.com/>

<https://github.com/vaamonde/pfsense>

<https://github.com/vaamonde/senactat/tree/main/ProjetoIntegrador>

<https://computingforgeeks.com/install-and-configure-ssh-server-on-ubuntu/>

<https://computingforgeeks.com/how-to-install-lamp-stack-on-ubuntu/>

<https://techviewleo.com/configure-vsftpd-ftp-server-on-ubuntu-linux/>

[https://linuxhint.com/install\\_apache\\_tomcat\\_server\\_ubuntu/](https://linuxhint.com/install_apache_tomcat_server_ubuntu/)

<https://linuxhint.com/install-and-use-webmin-in-ubuntu-22-04/>

<https://www.digitalocean.com/community/tutorials/how-to-install-wordpress-on-ubuntu-22-04-with-a-lamp-stack>