

ESCUELA COLOMBIANA DE INGENIERÍA

ARQUITECTURA COMPUTACIONAL Y SISTEMAS OPERATIVOS

Laboratorio No. 2

Andrés Camilo Oñate Quimbayo

WINDOWS SERVER

1. Configuración de la Máquina Virtual

1. En base a documentación oficial se tomarán los siguientes valores para los componentes básicos de la máquina virtual.

RAM: 800 MB

32 GB de disco

Type: Microsoft. Version: Other Windows (64-bit)

← Create Virtual Machine

Name and operating system

Name: windowsServer

Machine Folder: C:\Users\andre\VirtualBox VMs

Type: Microsoft Windows

Version: Other Windows (64-bit)

Memory size

4 MB 512 MB 4096 MB

Hard disk

☐ Do not add a virtual hard disk

☒ Create a virtual hard disk now

☐ Use an existing virtual hard disk file

Slackware15.vdi (Normal, 3,00 GB)

Guided Mode Create Cancel

← Create Virtual Hard Disk

File location

C:\Users\andre\VirtualBox VMs\windowsServer\windowsServer.vdi

File size

4,00 MB 32,00 GB 2,00 TB

Hard disk file type

☒ VDI (VirtualBox Disk Image)

☐ VHD (Virtual Hard Disk)

☐ VMDK (Virtual Machine Disk)

☐ HDD (Parallels Hard Disk)

☐ QCOW (QEMU Copy-On-Write)

☐ QED (QEMU enhanced disk)

Storage on physical hard disk

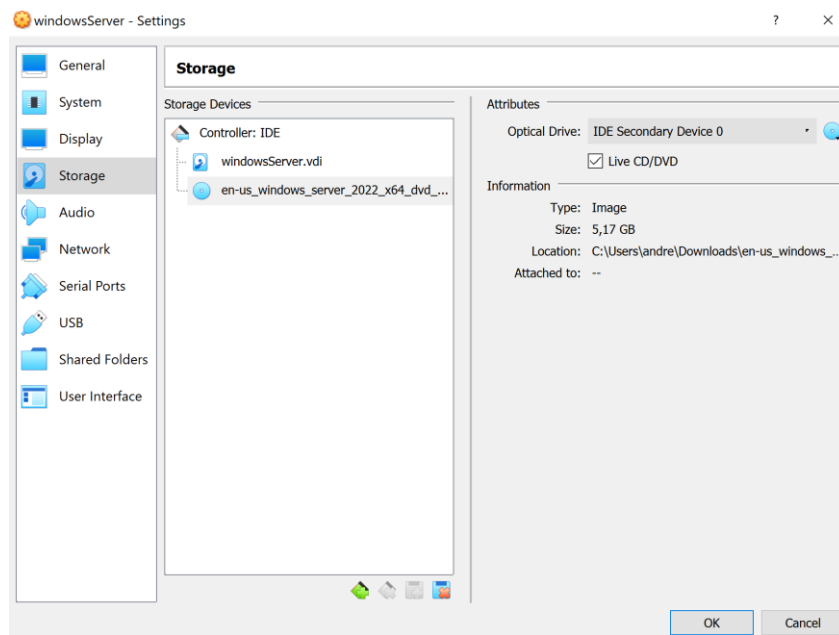
☒ Dynamically allocated

☐ Fixed size

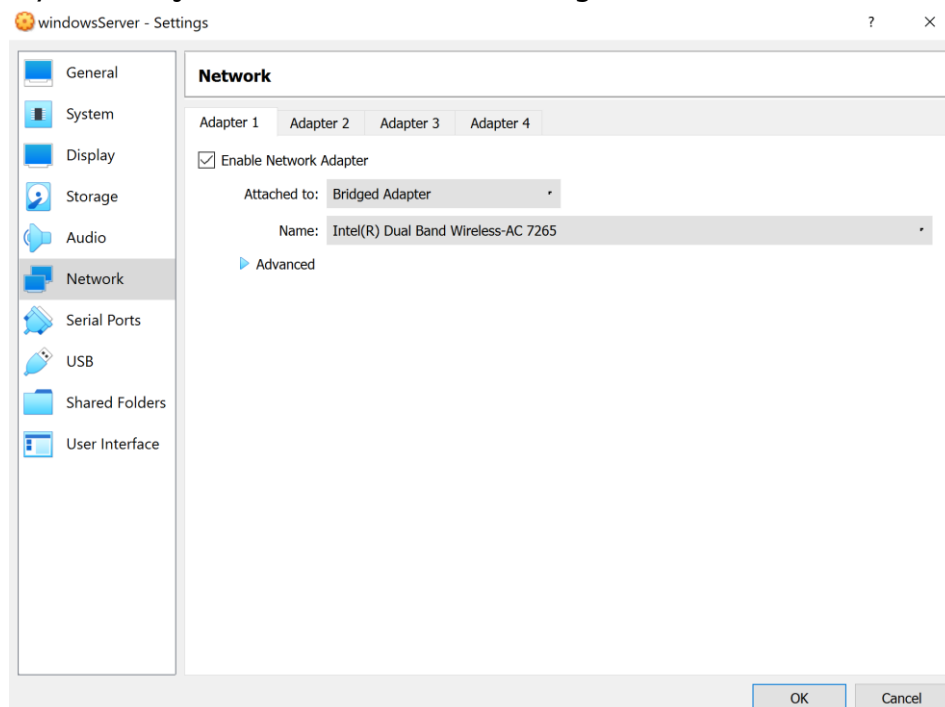
☐ Split into files of less than 2GB

Guided Mode Create Cancel

2. Se agrega la imagen ISO de Windows Server al DVD virtual.

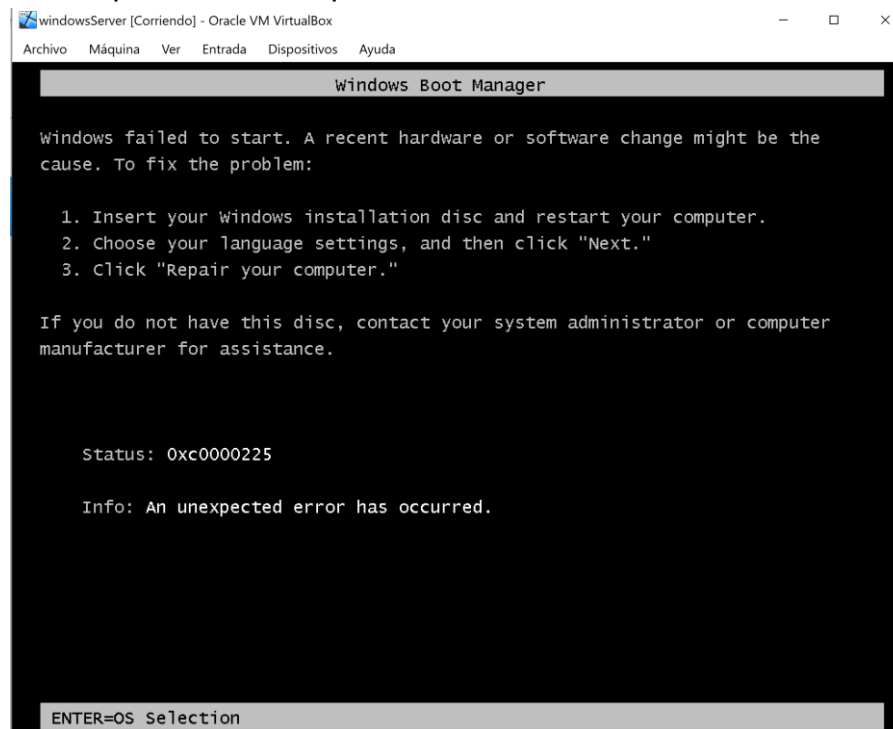


3. Se incluye una tarjeta en de red en modo bridge.

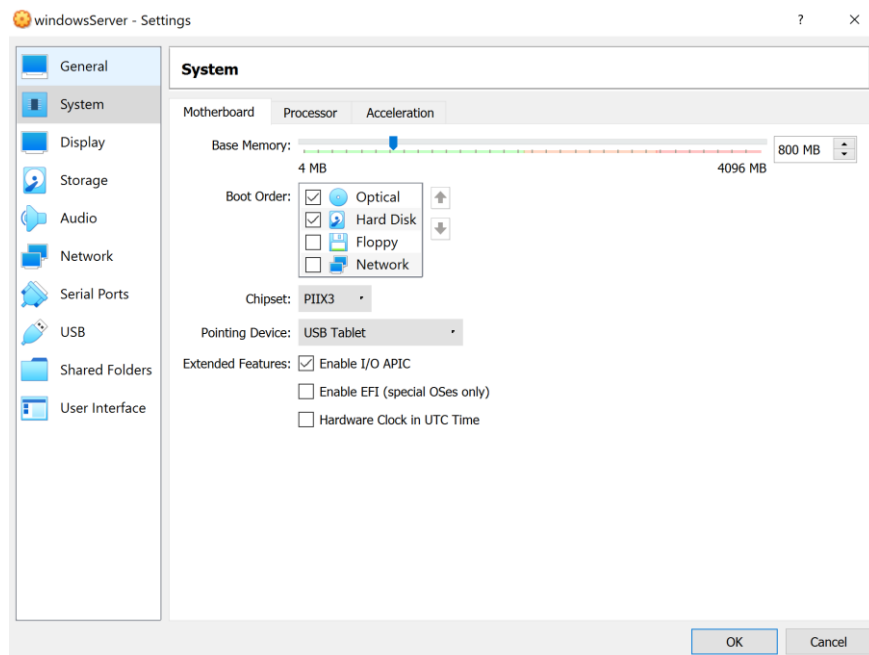


2. INSTALACIÓN

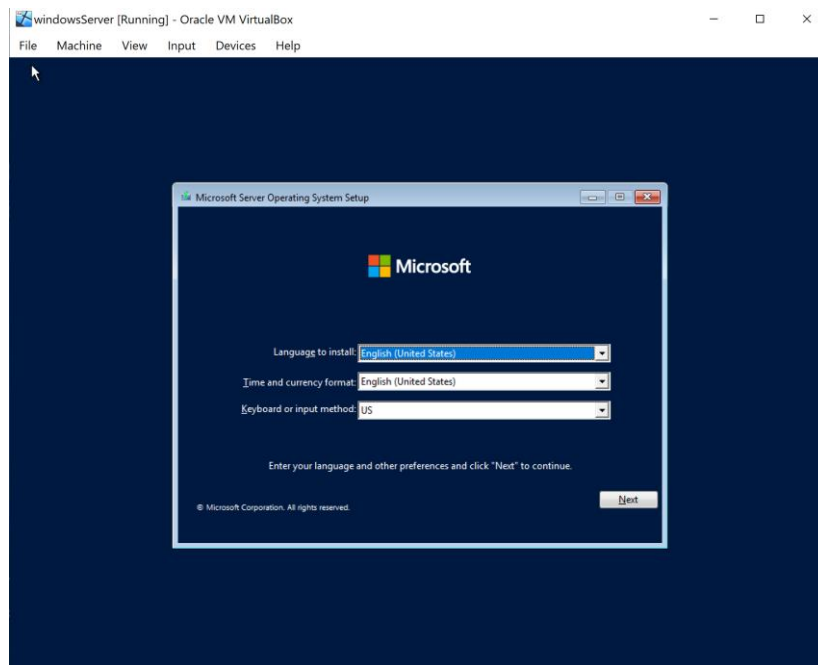
1. Se inicia la máquina virtual se presenta este error,



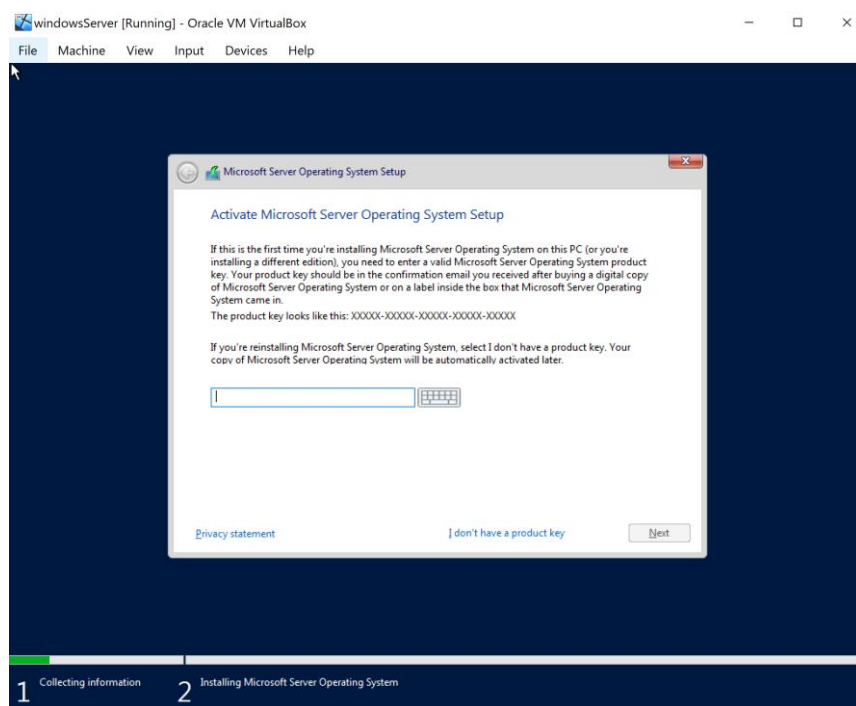
Para solucionarlo en las opciones del sistema se marca la opción de “enable I/O APIC”. Es necesario habilitar la APIC de E/S para los sistemas operativos invitados de 64 bits, especialmente Windows Vista; también es necesario si desea utilizar más de una CPU virtual en una máquina virtual.



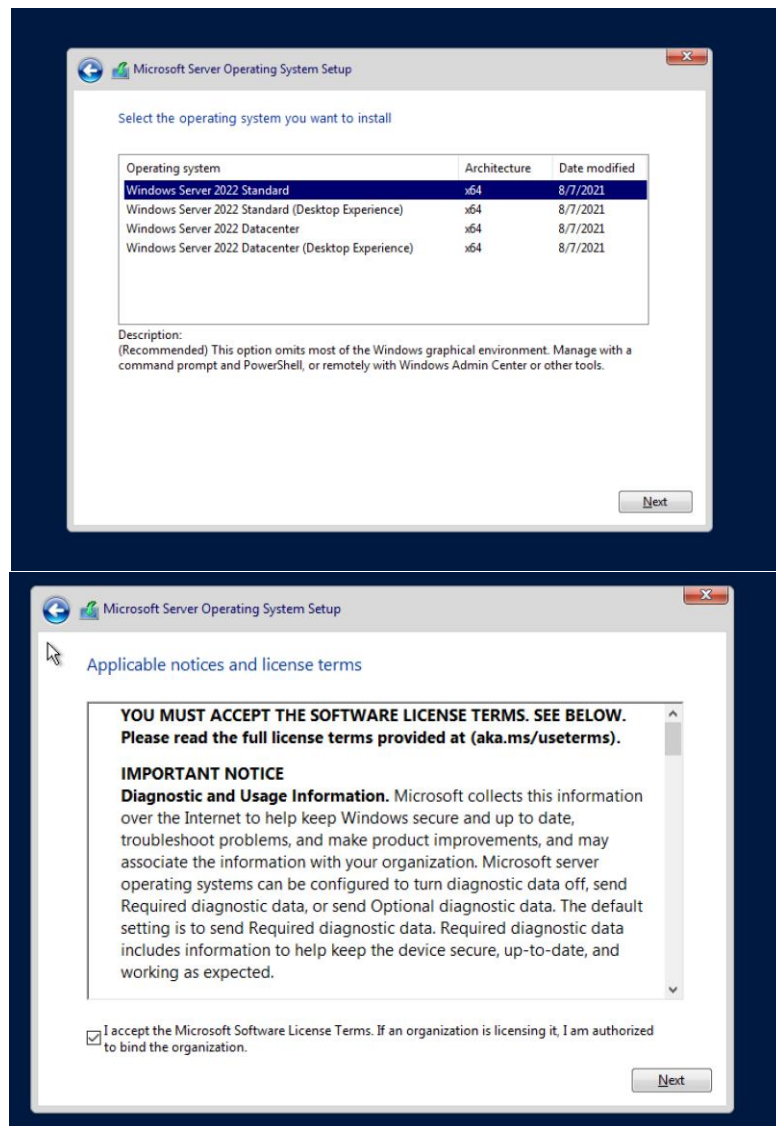
Y el sistema arranca de forma correcta esta vez:



2. Se da clic en next y después en install now. Esperamos que le setup cargue en la pantalla. No tenemos una licencia, así que marcamos la opción I don't have a product key.



3. Elegimos la opción de Windows server standard (Sin interfaz gráfica) y aceptamos los términos y condiciones.

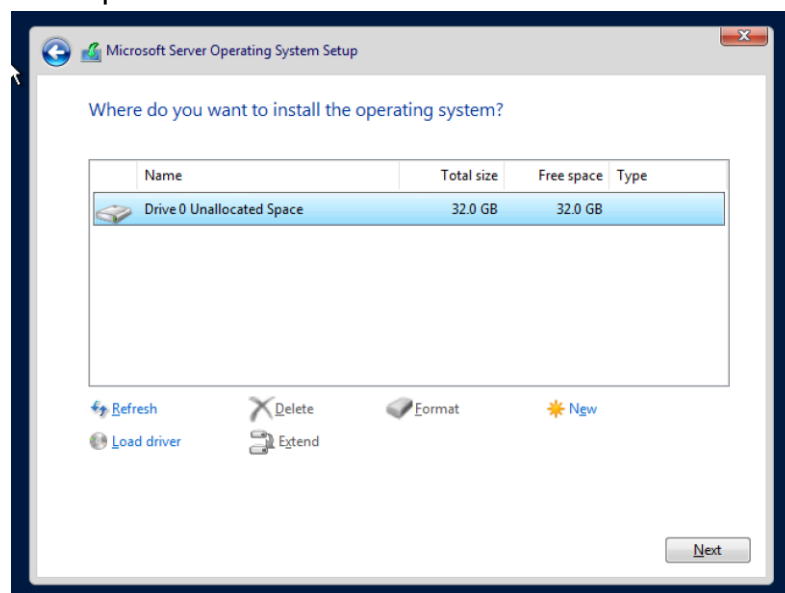


4. Elegimos la opción:

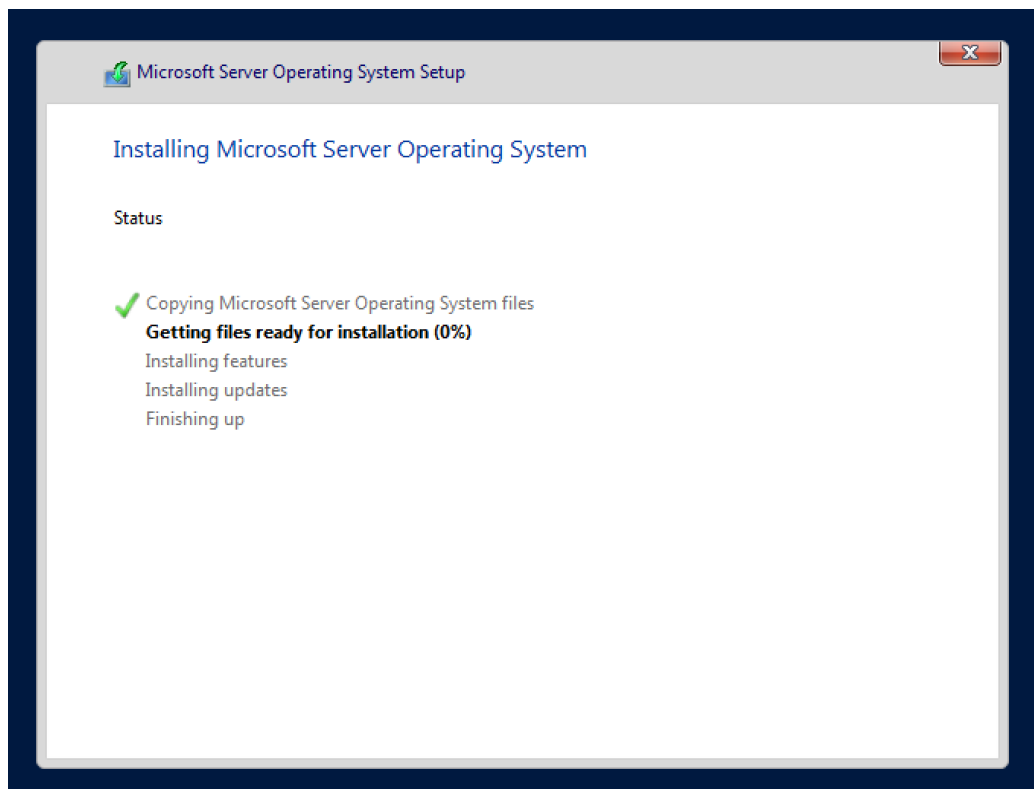
Custom: Install Microsoft Server Operating System only (advanced)

The files, settings, and applications aren't moved to the new operating system with this option. If you want to make changes to partitions and drives, start the computer using the installation disc. We recommend backing up your files before you continue.

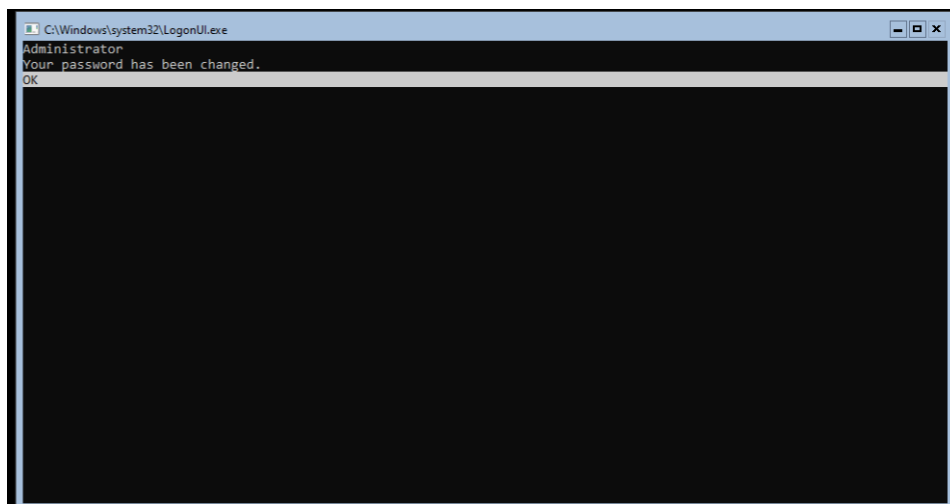
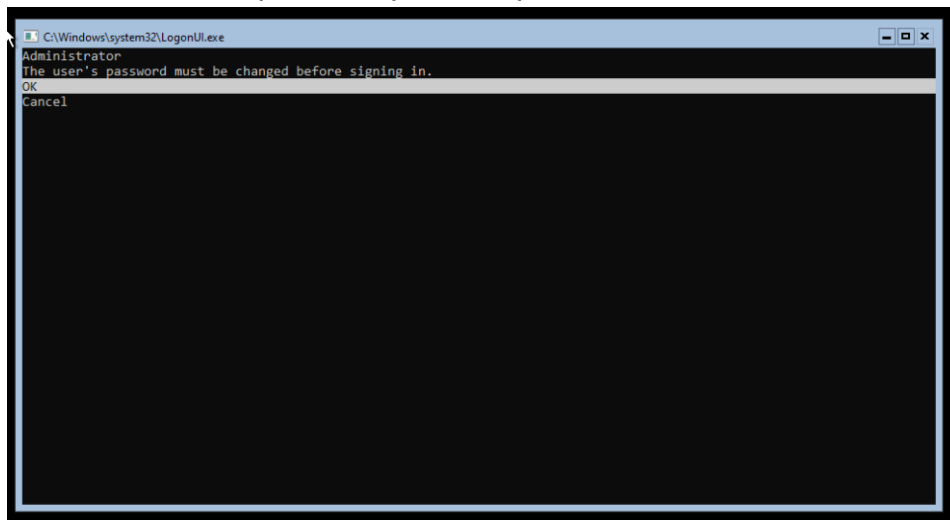
5. Elegimos el disco para la instalación:



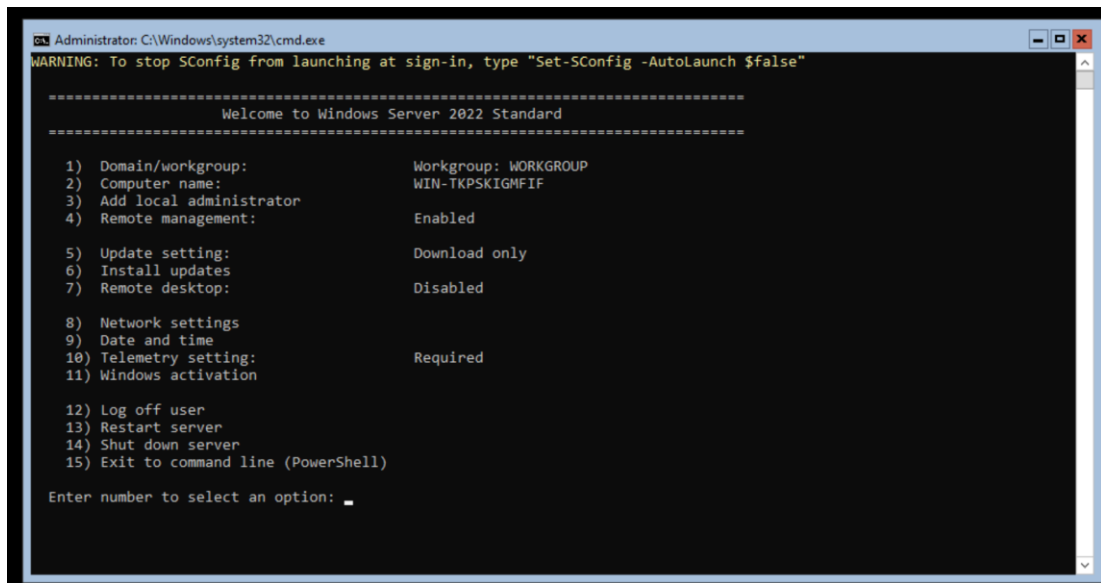
6. Esperamos que se procesa la instalación del sistema operativo.



7. El sistema se reiniciará para completar el proceso.



8. Se despliega un menú de opciones.



```
Administrator: C:\Windows\system32\cmd.exe
WARNING: To stop SConfig from launching at sign-in, type "Set-SConfig -AutoLaunch $false"

=====
Welcome to Windows Server 2022 Standard
=====

1) Domain/workgroup:           Workgroup: WORKGROUP
2) Computer name:             WIN-TKPSKIGMFIF
3) Add local administrator
4) Remote management:         Enabled

5) Update setting:             Download only
6) Install updates
7) Remote desktop:            Disabled

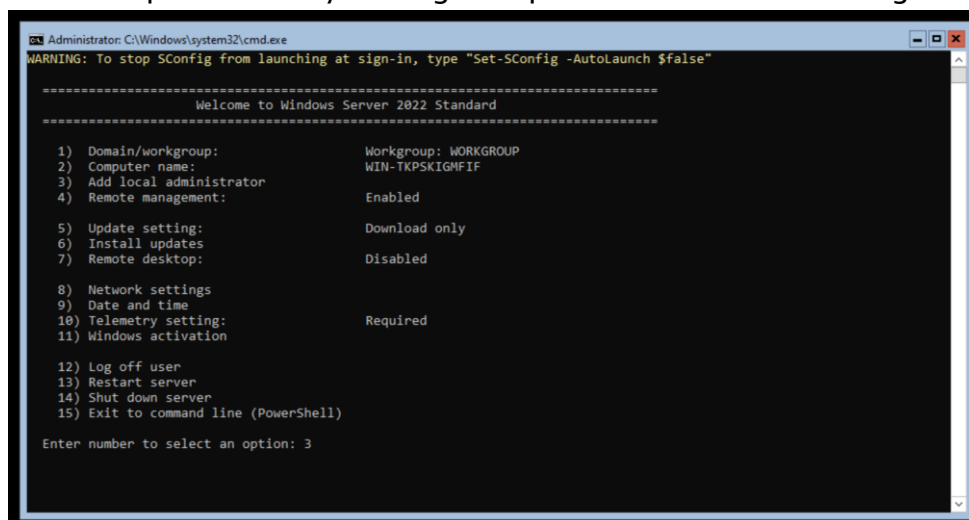
8) Network settings
9) Date and time
10) Telemetry setting:         Required
11) Windows activation

12) Log off user
13) Restart server
14) Shut down server
15) Exit to command line (PowerShell)

Enter number to select an option: _
```

3. CONFIGURACIÓN DE LA RED

1. Se inicia la máquina virtual y ele elige la opción 3 de network settings.



```
Administrator: C:\Windows\system32\cmd.exe
WARNING: To stop SConfig from launching at sign-in, type "Set-SConfig -AutoLaunch $false"

=====
Welcome to Windows Server 2022 Standard
=====

1) Domain/workgroup:           Workgroup: WORKGROUP
2) Computer name:             WIN-TKPSKIGMFIF
3) Add local administrator
4) Remote management:         Enabled

5) Update setting:             Download only
6) Install updates
7) Remote desktop:            Disabled

8) Network settings
9) Date and time
10) Telemetry setting:         Required
11) Windows activation

12) Log off user
13) Restart server
14) Shut down server
15) Exit to command line (PowerShell)

Enter number to select an option: 3
```

2. En la ventana inicial se pide seleccionar el adaptador, seleccionamos el primero.

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

=====
Network settings
=====

Available network adapters:

Index # | IP address | Description
1       | 169.254.81.146 | Intel(R) PRO/1000 MT Desktop Adapter

Select network adapter index # (Blank=Cancel): 1
```

3. Cambiamos el IP por el especificado en el laboratorio. Opción 1, (S) tatic IP

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

=====
Network adapter settings
=====

NIC index: 1
Description: Intel(R) PRO/1000 MT Desktop Adapter
IP address: 169.254.81.146,
fe80::9cbb:5473:c5c6:5192
Subnet mask: 255.255.0.0
DHCP enabled: True

Default gateway:
Preferred DNS server:
Alternate DNS server:

1) Set network adapter address
2) Set DNS servers
3) Clear DNS server settings

Enter selection (Blank=Cancel): 1
Select (D)HCP or (S)tatic IP address (Blank=Cancel): S
Enter static IP address (Blank=Cancel): 10.2.77.34
Enter subnet mask (Blank=255.255.255.0): 255.255.0.0
Enter default gateway (Blank=Cancel): 10.2.65.60
```

4. Ingresamos todos los datos básicos para la conexión:

```
Enter selection (Blank=Cancel): 1
Select (D)HCP or (S)tatic IP address (Blank=Cancel): S
Enter static IP address (Blank=Cancel): 10.2.77.34
Enter subnet mask (Blank=255.255.255.0): 255.255.0.0
Enter default gateway (Blank=Cancel): 10.2.65.1
Setting NIC to static IP...
Failed to release DHCP lease.
Result code: 83
Method name: ReleaseDHCPLease
(Press ENTER to continue):
```

Configuramos el DNS con los valores determinados.


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

=====
Network adapter settings
=====

NIC index:      1
Description:    Intel(R) PRO/1000 MT Desktop Adapter
IP address:     10.2.77.34,
                fe80::b153:184f:2888:e0ac
Subnet mask:    255.255.0.0
DHCP enabled:   False

Default gateway: 10.2.65.1
Preferred DNS server:
Alternate DNS server:

1) Set network adapter address
2) Set DNS servers
3) Clear DNS server settings

Enter selection (Blank=Cancel): 2
Enter new preferred DNS server (Blank=Cancel): 10.2.65.61
Enter alternate DNS server (Blank=None):
Successfully assigned DNS server(s).
(Press ENTER to continue):
```

5. Salimos al cmd con la opción 15, y realizamos las pruebas con el comando ping.

```
Administrator: C:\Windows\system32\cmd.exe
WARNING: To launch Server Configuration tool again, run "SConfig"
PS C:\Users\Administrator> ping www.google.com

Pinging www.google.com [142.250.189.132] with 32 bytes of data:
Reply from 142.250.189.132: bytes=32 time=46ms TTL=112
Reply from 142.250.189.132: bytes=32 time=45ms TTL=112
Reply from 142.250.189.132: bytes=32 time=45ms TTL=112
Reply from 142.250.189.132: bytes=32 time=45ms TTL=112

Ping statistics for 142.250.189.132:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 45ms, Maximum = 46ms, Average = 45ms
PS C:\Users\Administrator>
```

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

Ping statistics for 142.250.189.132:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 45ms, Maximum = 46ms, Average = 45ms
PS C:\Users\Administrator> ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=42ms TTL=108
Reply from 8.8.8.8: bytes=32 time=42ms TTL=108
Reply from 8.8.8.8: bytes=32 time=42ms TTL=108
Reply from 8.8.8.8: bytes=32 time=42ms TTL=108

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 42ms, Maximum = 42ms, Average = 42ms
PS C:\Users\Administrator> ping 10.2.65.1

Pinging 10.2.65.1 with 32 bytes of data:
Reply from 10.2.65.1: bytes=32 time<1ms TTL=64
Reply from 10.2.65.1: bytes=32 time<1ms TTL=64
Reply from 10.2.65.1: bytes=32 time<1ms TTL=64
Reply from 10.2.65.1: bytes=32 time<1ms TTL=64

Ping statistics for 10.2.65.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator>
```

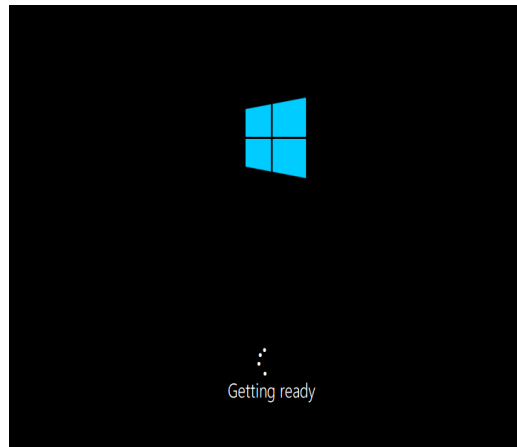
Windows Server Con Interfaz Grafica

1. Configuramos una máquina virtual con las mismas características que la anterior. Iniciamos la instalación de Windows server con interface gráfica.

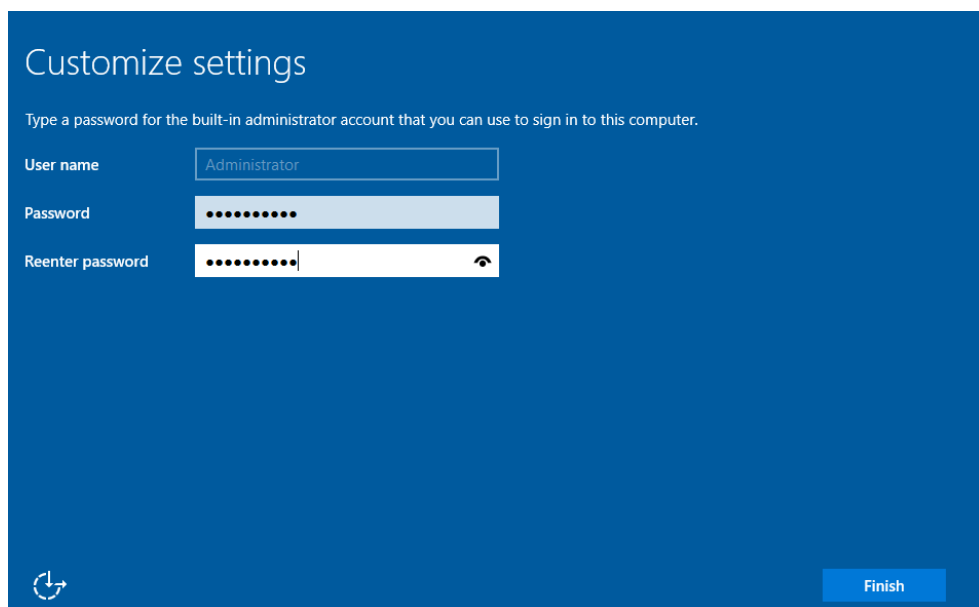
RAM: 2048 MB

32 GB de disco

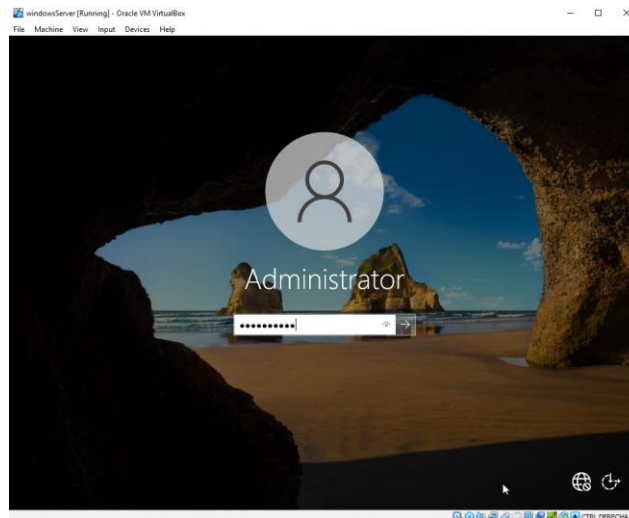
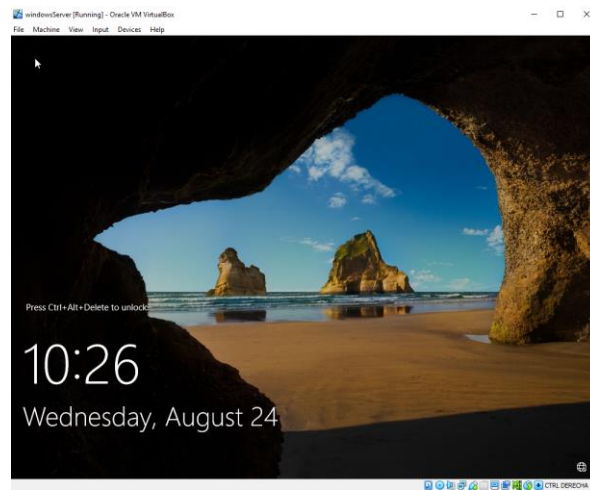
Type: Microsoft. Version: Other Windows (64-bit)



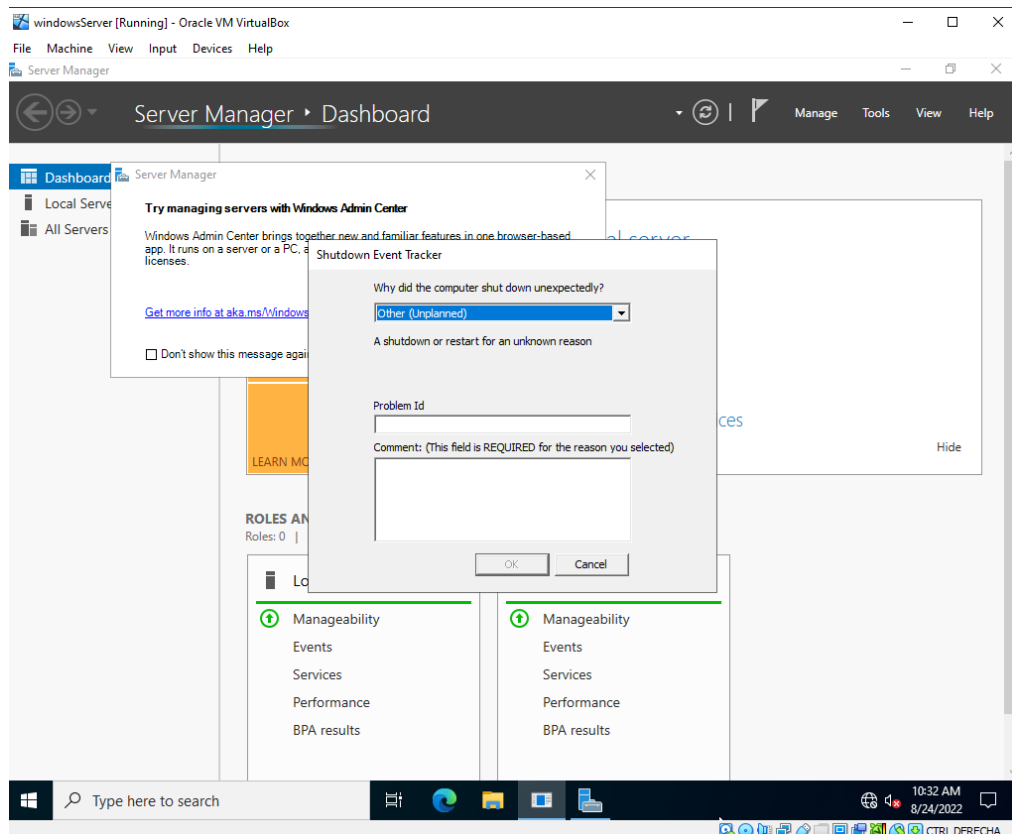
2. Una vez cargado el sistema, nos pide una contraseña para el administrador del sistema. Después en Finish.

A blue screen titled "Customize settings". Below the title, it says "Type a password for the built-in administrator account that you can use to sign in to this computer." There are three input fields: "User name" with "Administrator" entered, "Password" with masked characters, and "Reenter password" with masked characters and a visibility icon. A "Finish" button is in the bottom right corner, and a circular arrow icon is in the bottom left corner.

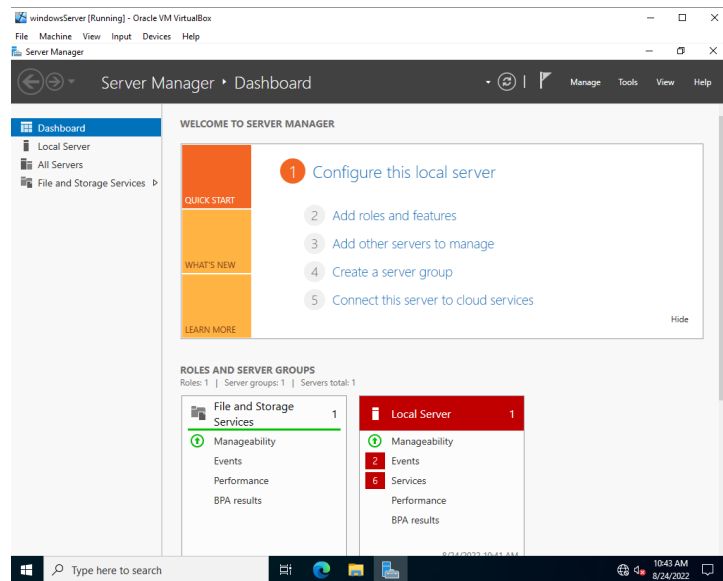
3. El sistema presenta una pantalla inicial en la cual iniciamos sesión como administradores.



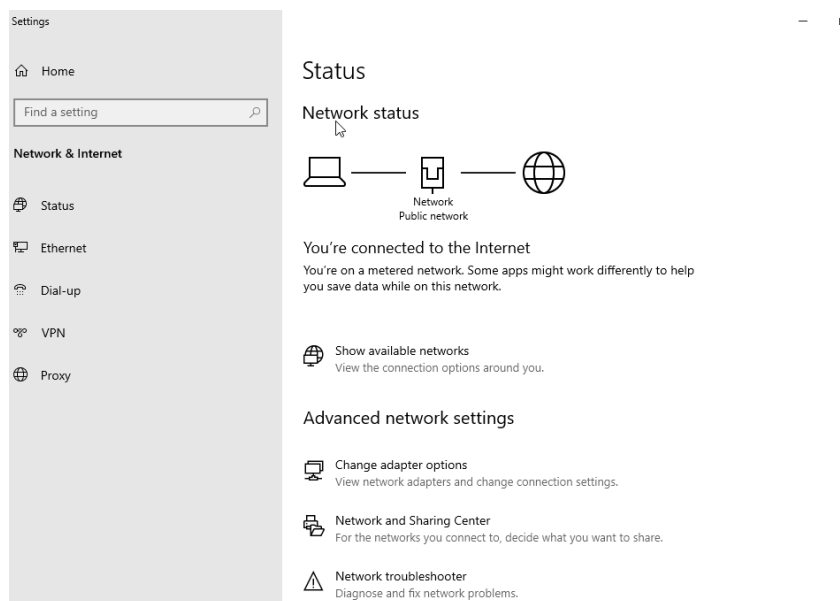
4. Iniciamos la configuración de la red, al iniciar el sistema se presenta la siguiente información:



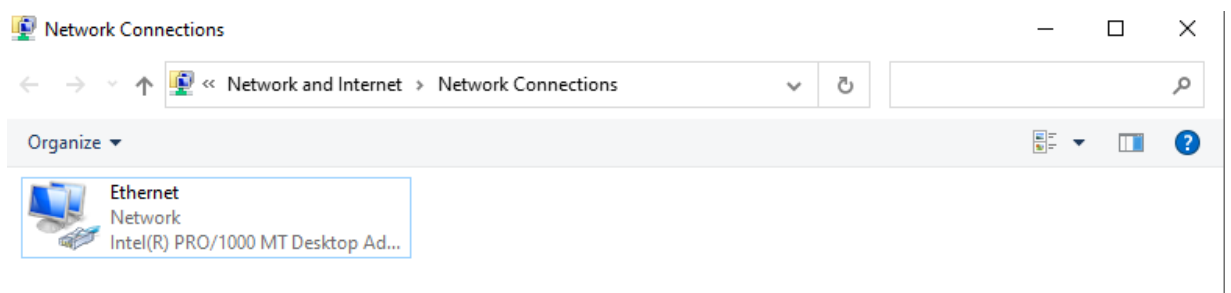
Cerramos estos mensajes y abrimos el panel de control para la configuración de red.



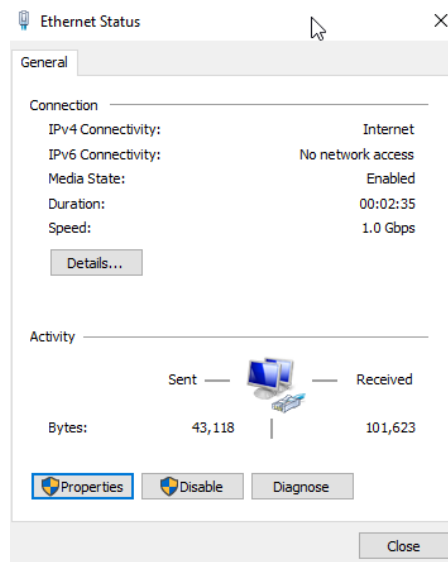
5. Realizamos la configuración de con la información en el enunciado de este laboratorio. Vamos a configuraciones de la red



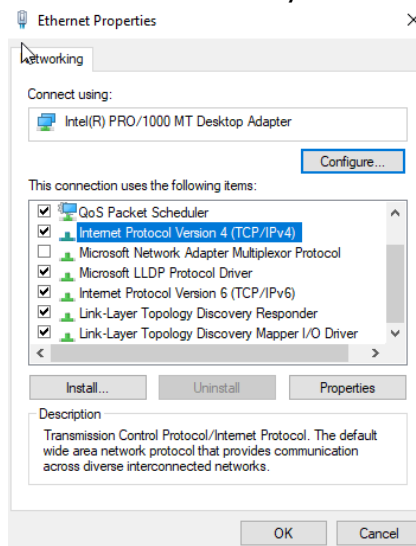
Seleccionamos el adaptador que sale por defecto.



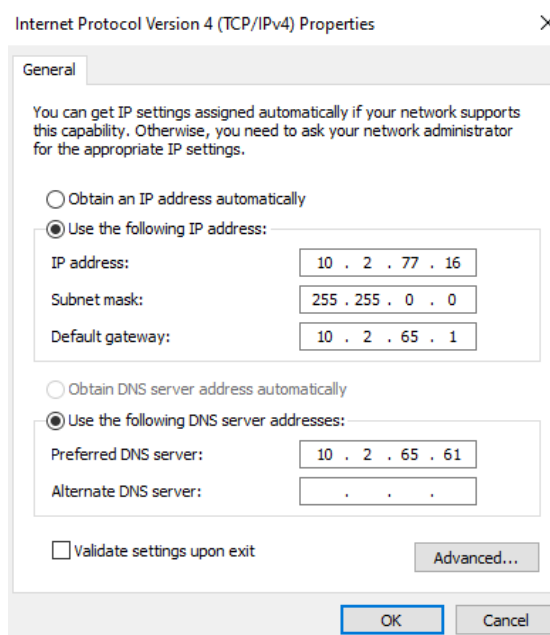
Abrimos las propiedades de y configuramos los datos.



Seleccionamos el ítem relacionado a la IPv4 y abrimos sus propiedades:



Ingresamos los datos:



6. Realizamos las pruebas:

```
WARNING: To launch Server Configuration tool again, run "SConfig"

C:\Users\Administrator>ping www.google.com

Pinging www.google.com [142.250.189.132] with 32 bytes of data:
Reply from 142.250.189.132: bytes=32 time=51ms TTL=112
Reply from 142.250.189.132: bytes=32 time=42ms TTL=112
Reply from 142.250.189.132: bytes=32 time=46ms TTL=112
Reply from 142.250.189.132: bytes=32 time=44ms TTL=112

Ping statistics for 142.250.189.132:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 42ms, Maximum = 51ms, Average = 45ms

C:\Users\Administrator>ping 10.2.65.1

Pinging 10.2.65.1 with 32 bytes of data:
Reply from 10.2.65.1: bytes=32 time=7ms TTL=64
Reply from 10.2.65.1: bytes=32 time=3ms TTL=64
Reply from 10.2.65.1: bytes=32 time=5ms TTL=64
Reply from 10.2.65.1: bytes=32 time=40ms TTL=64

Ping statistics for 10.2.65.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 40ms, Average = 13ms

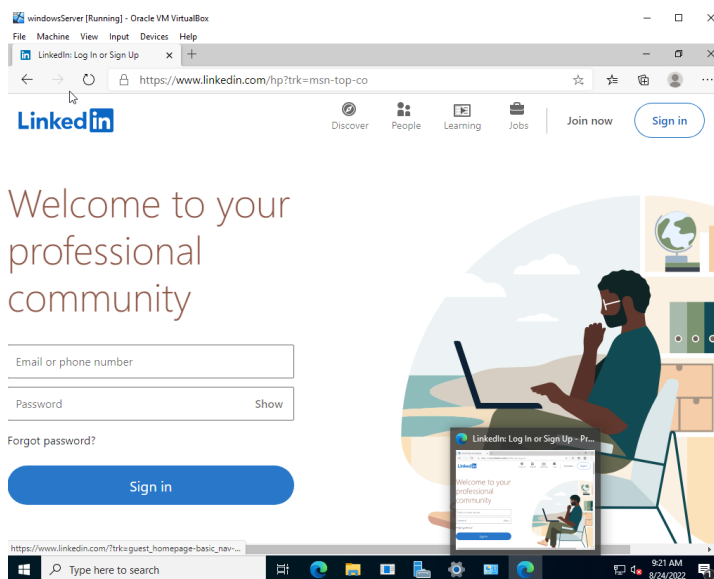
C:\Users\Administrator>
```

```
C:\Users\Administrator>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=42ms TTL=111
Reply from 8.8.8.8: bytes=32 time=42ms TTL=111
Reply from 8.8.8.8: bytes=32 time=42ms TTL=111
Reply from 8.8.8.8: bytes=32 time=42ms TTL=111

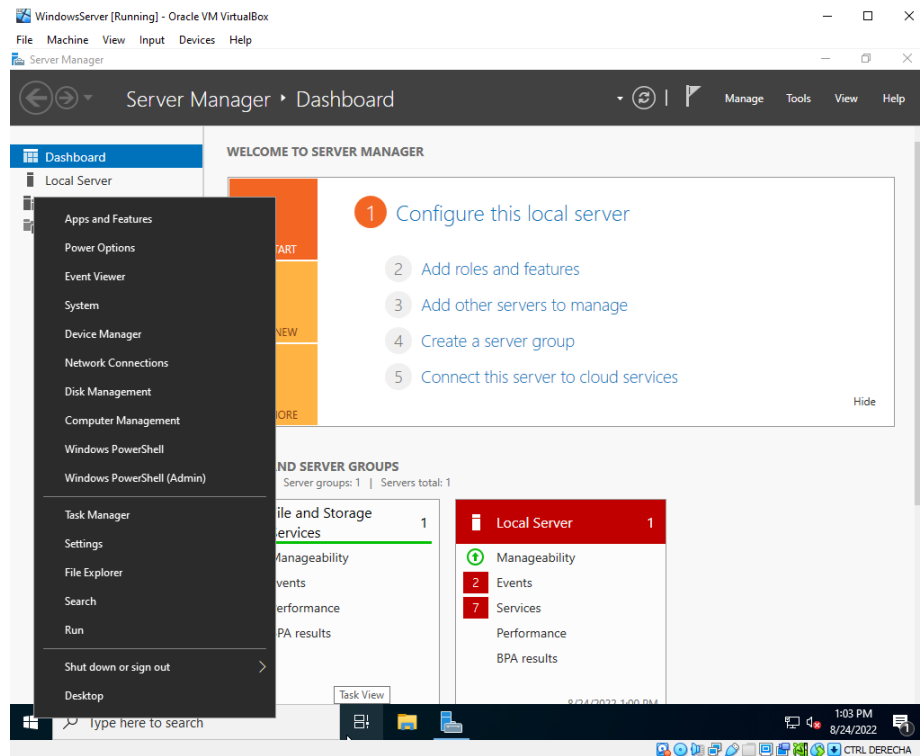
Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 42ms, Maximum = 42ms, Average = 42ms

C:\Users\Administrator>
```

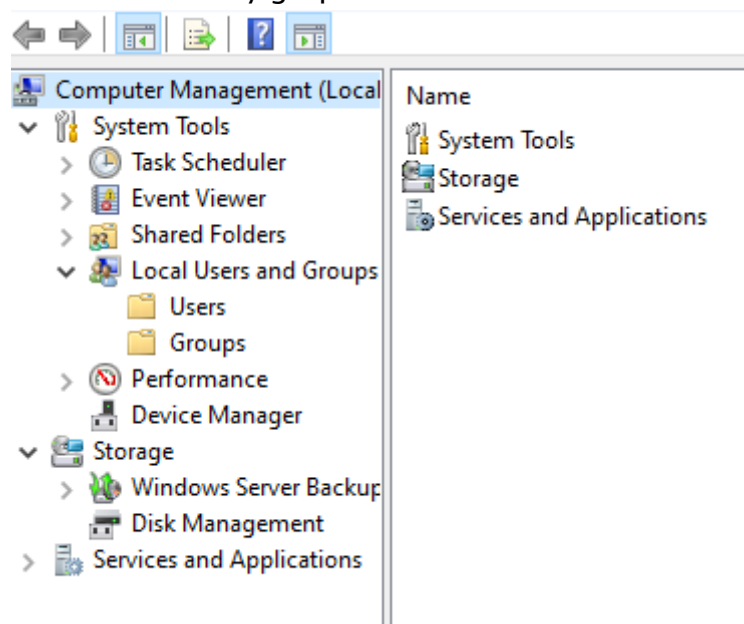


CONFIGURACIÓN DE USUARIOS

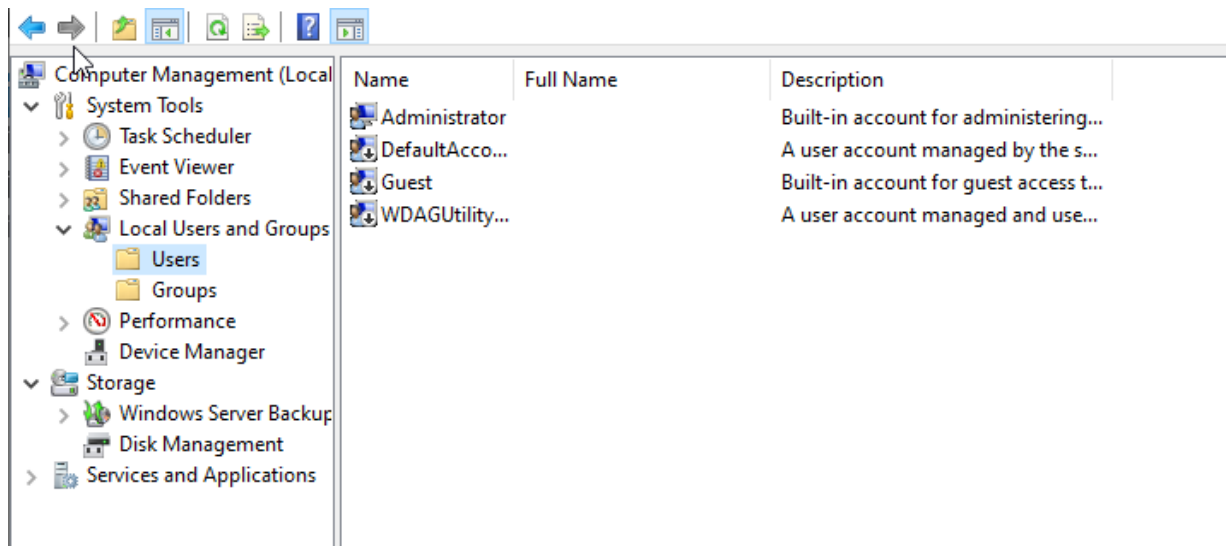
1. Para crear usuarios con este medio damos clic derecho en el menú Inicio y selecciona "Administración de equipos" (Computer Management):



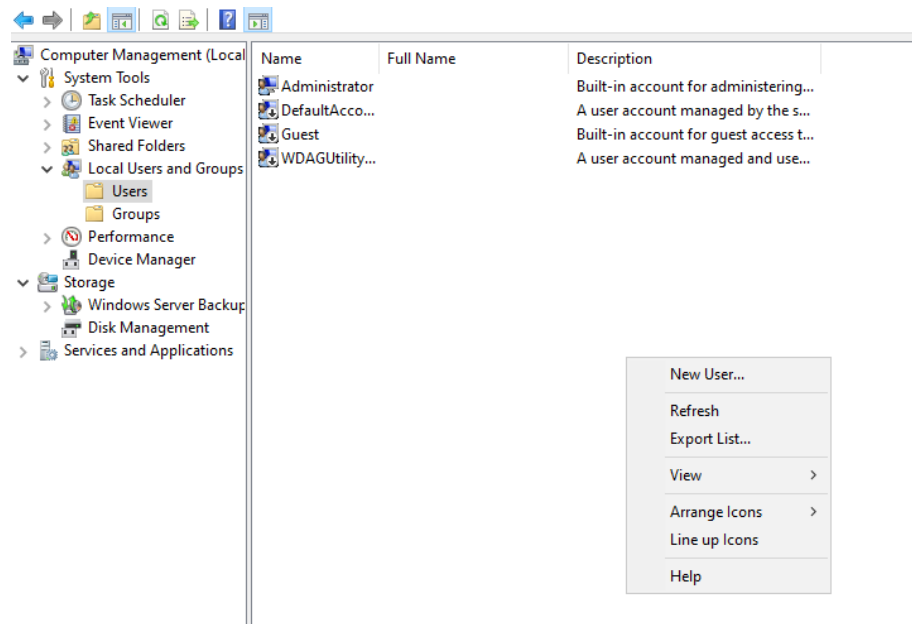
2. Vamos a la sección "Usuarios y grupos locales":



3. Podemos ver allí las dos opciones, accedemos a cada una para ver su contenido por defecto:



4. Para crear el usuario vamos a la carpeta Usuarios, damos clic derecho y selecciona "Usuario nuevo":



5. Registra los datos del usuario y configura la sección de contraseñas.

New User ? X

User name:

Full name:

Description:

Password:

Confirm password:

☐ User must change password at next logon

☐ User cannot change password

☐ Password never expires

☐ Account is disabled

New User ? X

User name:

Full name:

Description:

Password:

Confirm password:

☐ User must change password at next logon

☐ User cannot change password

☐ Password never expires

☐ Account is disabled

New User ? X

User name:

Full name:

Description:

Password:

Confirm password:








☒ User must change password at next logon

☐ User cannot change password

☐ Password never expires

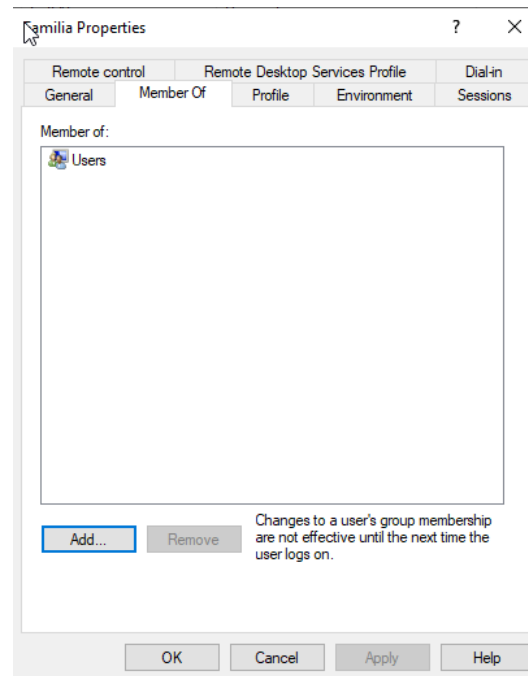
☐ Account is disabled

6. Refrescamos para visualizar los tres usuarios.

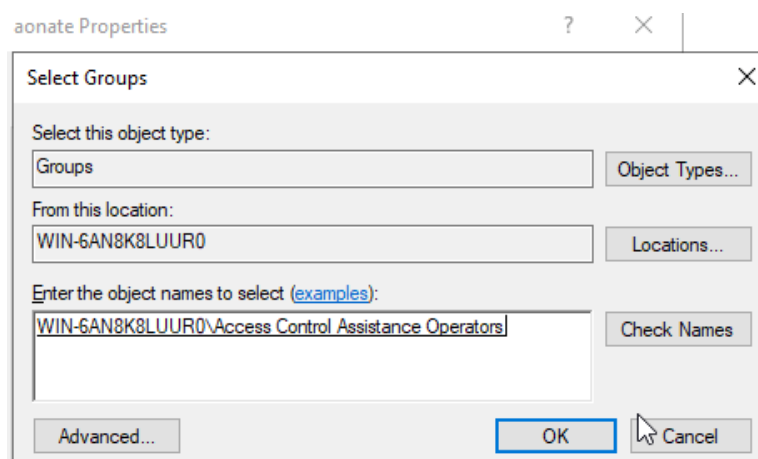
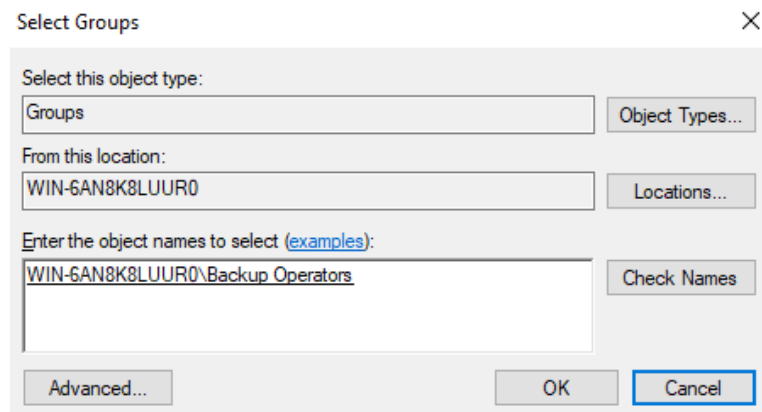
Name	Full Name	Description
 acso	ACSO lab	ACSO Lab User
 Administrator		Built-in account for administering...
 aonate	Andres Camilo Onate	Personal User
 DefaultAcco...		A user account managed by the s...
 Familia	Familia User	Family User
 Guest		Built-in account for guest access t...
 WDAGUtility...		A user account managed and use...

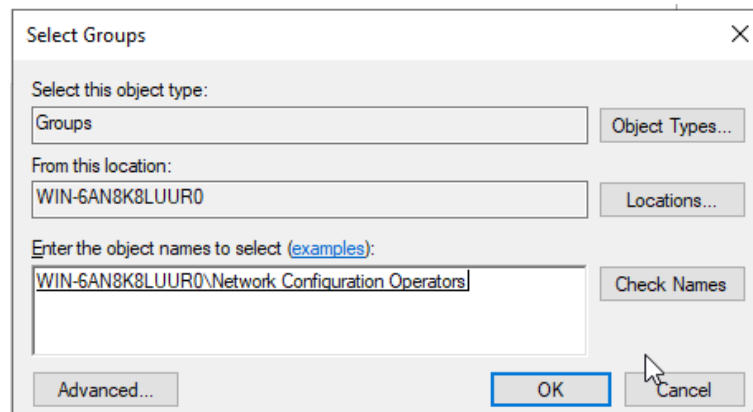
PERMISOS A USUARIOS

1. Ingresamos a las propiedades de usuario y configuramos los grupos a los cuales el usuario es miembro, esto le dará la capacidad de realizar distintas tareas en el sistema operativo.

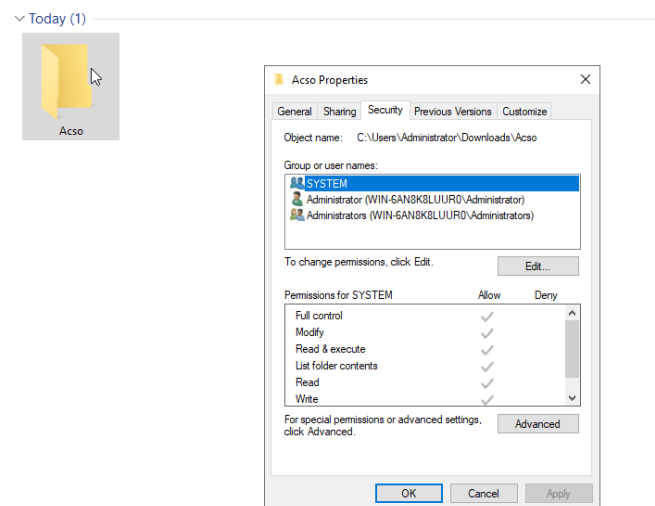


En la ventana emergente ingresamos el nombre del grupo y en OK:

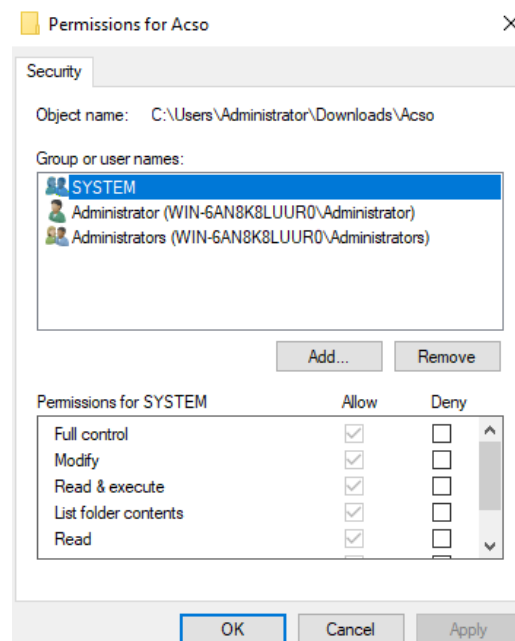


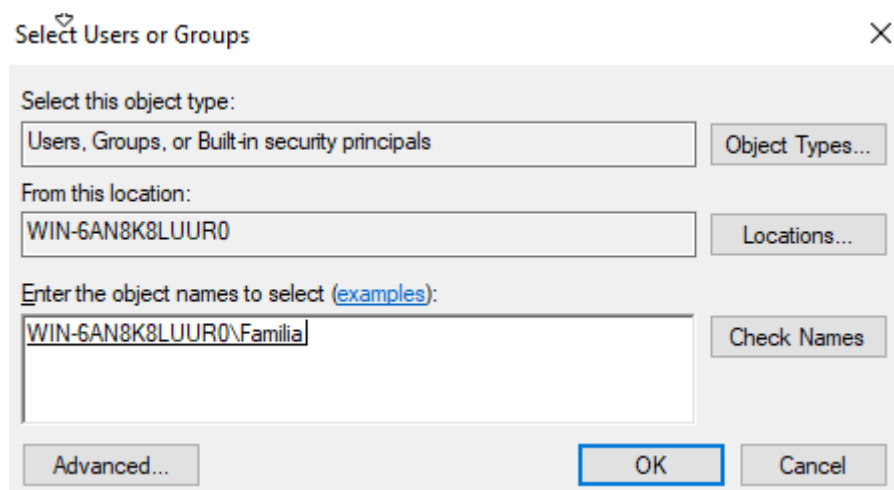


2. Otra forma de dar permisos es directamente sobre un archivo. Para este ejemplo se realizará sobre una carpeta de nombre Acso. Los permisos se configuran en la pestaña "Security".

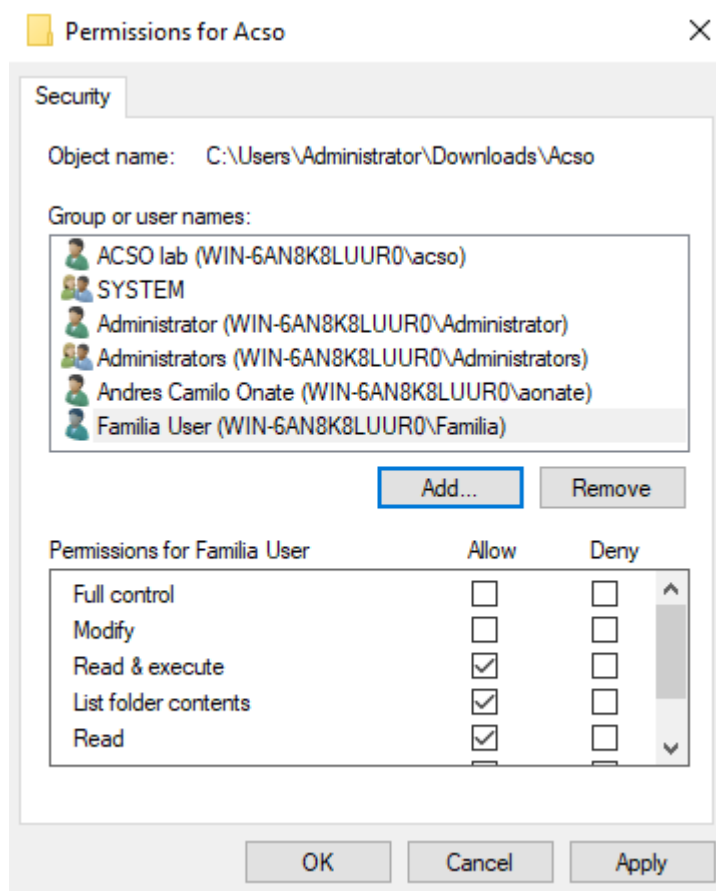


Como podemos ver hay múltiples grupos de usuarios que pueden realizar distintas tareas. Damos clic en la opción Edit para agregar los usuarios previamente creados.



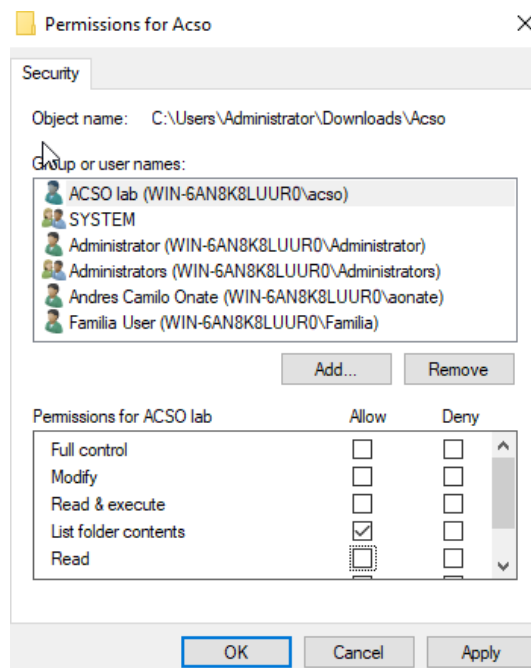


Se puede observar que los usuarios fueron agregados correctamente a la lista:

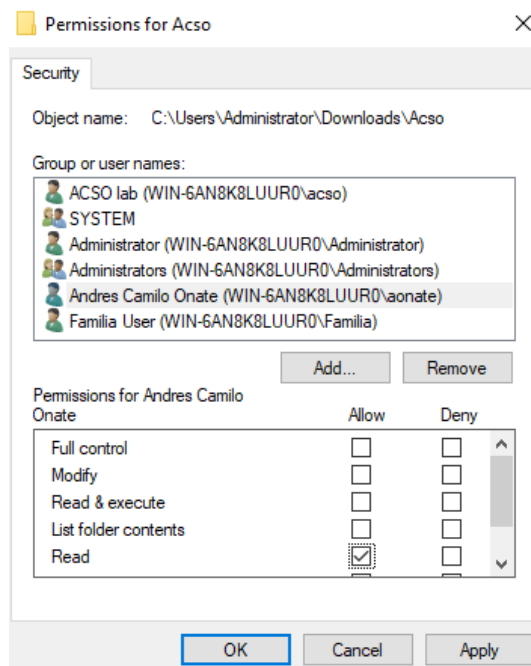


- Podemos Modificar los permisos para cada uno de los usuarios, si nos ubicamos sobre el nombre de cada usuario se mostrara una lista con los permisos que se pueden asignar, estos incluyen: Full Control, Modify, Read & Execute, List folder contest, Read, Write, Special Permissions.

Para el usuario ACSO lab se le permitirá listar el contenido de la carpeta:



Al usuario Andres Camilo Oñate se le da el permiso de leer el archivo.



Al usuario Familia se le da permiso de escritura:

