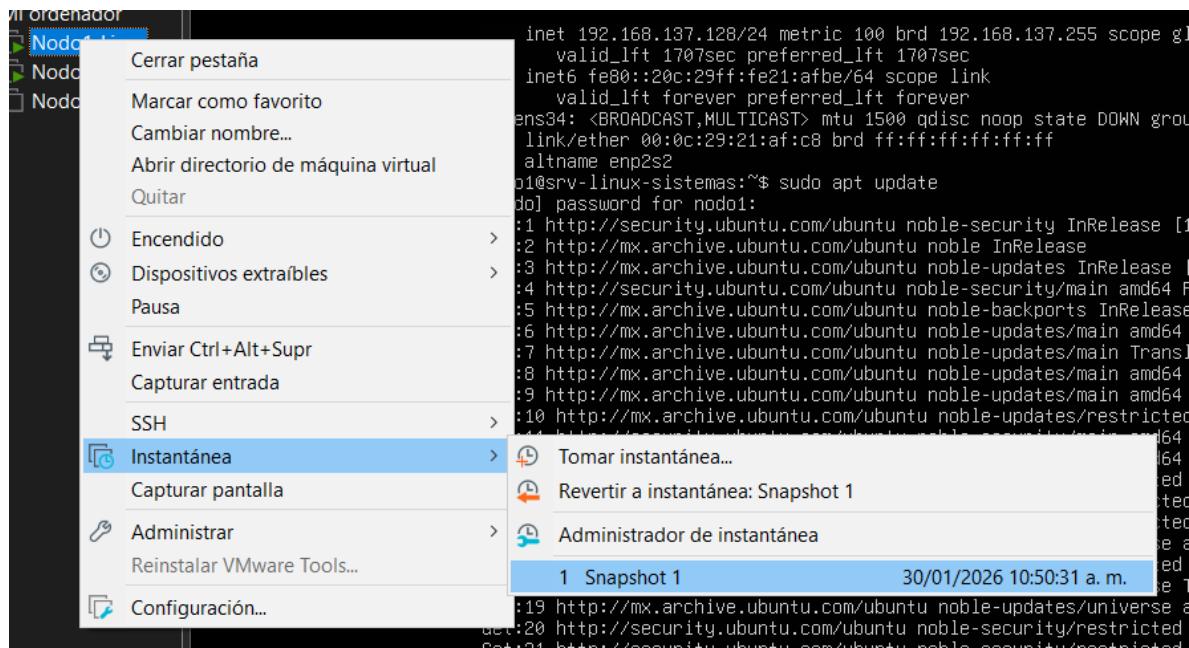
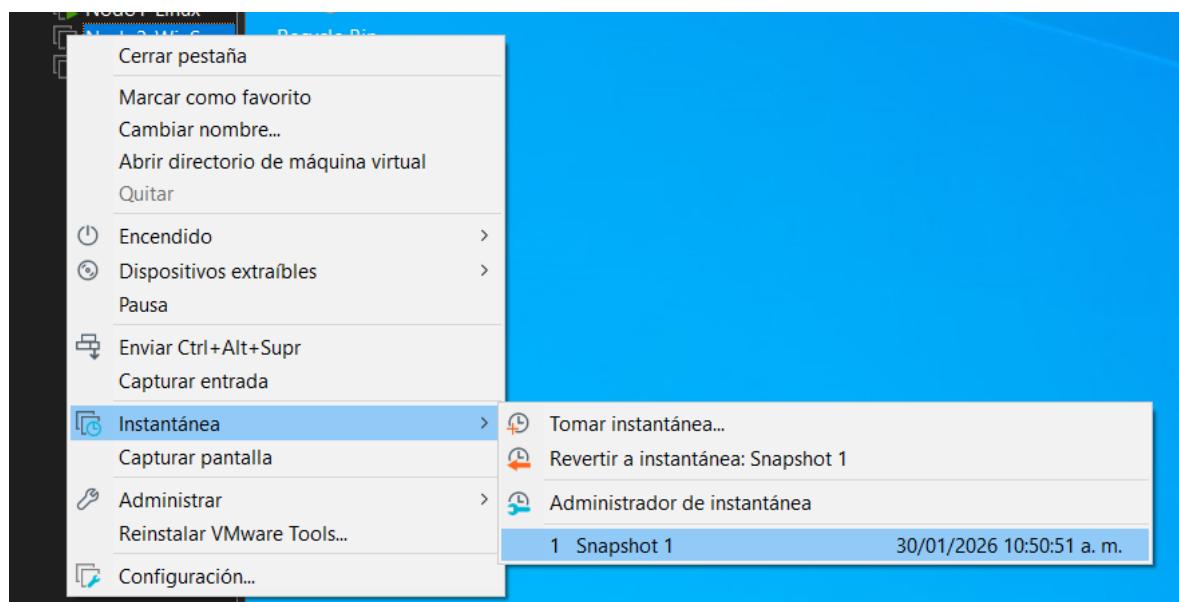


## Tarea 1: Entorno de Virtualización e Infraestructura Base

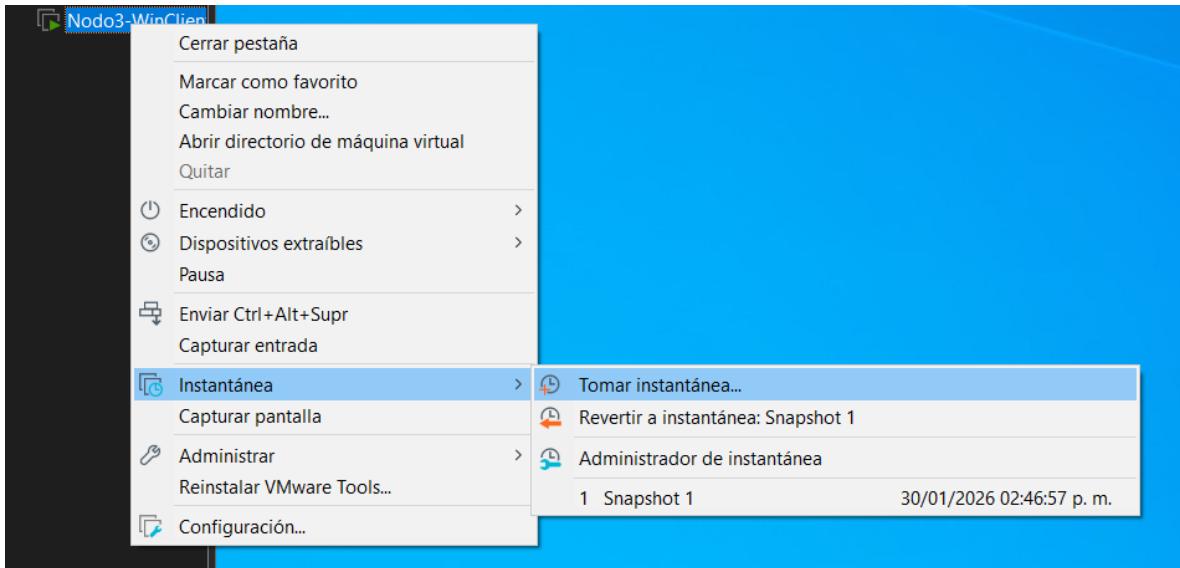
### 1.Crear instantáneas a cada máquina virtual



### Caso 1 Linux con Ubuntu



### Caso 2 Windows Server 2022



### Caso 3 Windows 10 cliente

#### 2.Cambiar hostname a cada maquina virtual

```
nodo1@srv-linux-sistemas:~$ sudo hostnamectl set-hostname Srv-Linux-Sistemas
[sudo] password for nodo1:
nodo1@srv-linux-sistemas:~$
```

### Caso 1 Nodo Linux

#### Device specifications

Device name      Srv-Win-Sistemas

```
PS C:\Users\Administrador> Rename-Computer -NewName "Srv-Win-Sistemas"
```

#### Caso 2 Nodo Windows Configurado en base de comandos powershell

#### 3. Ejecutar comandos de actualización inicial en ambos SO.

```
arielname:~$ apt update
[nodo1@srv-linux-sistemas:~$ sudo apt update
[sudo] password for nodo1:
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:2 http://mx.archive.ubuntu.com/ubuntu noble InRelease
Get:3 http://mx.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1,410 kB]
Get:5 http://mx.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:6 http://mx.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1,717 kB]
Get:7 http://mx.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [317 kB]
Get:8 http://mx.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:9 http://mx.archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [16.0 kB]
Get:10 http://mx.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [2,536 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [9,820 B]
Get:13 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [2,369 kB]
Get:14 http://mx.archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [580 kB]
Get:15 http://mx.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:16 http://mx.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1,525 kB]
Get:17 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [543 kB]
Get:18 http://mx.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [312 kB]
Get:19 http://mx.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [386 kB]
Get:20 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:21 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [536 B]
Get:22 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [74.2 kB]
Get:23 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [19.7 kB]
Get:24 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [28.8 kB]
Get:25 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [6,492 B]
Get:26 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:27 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [396 B]
Get:28 http://mx.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [31.8 kB]
Get:29 http://mx.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [32.1 kB]
Get:30 http://mx.archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [6,816 B]
Get:31 http://mx.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:32 http://mx.archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7,300 B]
Get:33 http://mx.archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [212 B]
Get:34 http://mx.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [10.5 kB]
Get:35 http://mx.archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 12.5 MB in 5s (2,664 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
66 packages can be upgraded. Run 'apt list --upgradable' to see them.
nodo1@srv-linux-sistemas:~$ -
```

## Caso 1 Linux con Ubuntu

```
PS C:\Users\Administrador> start ms-settings:windowsupdate-action  
PS C:\Users\Administrador>
```

[\(View policies\)](#)

Actualización de inteligencia de seguridad para Microsoft

Defender Antivirus - KB2267602 (versión 1.443.963.0) -

Canal actual (ampliado)

**Status:** Pending install

Actualización para la plataforma antimalware Microsoft

Defender Antivirus: KB4052623 (versión 4.18.25110.6) -

Canal actual (ampliado)

**Status:** Pending install

Herramienta de eliminación de software malintencionado

de Windows x64, v5.138 (KB890830)

**Status:** Installing - 0%

2025-10 Actualización acumulativa para .NET Framework

3.5, 4.8 y 4.8.1 para Microsoft server operating system

version 21H2 para x64 (KB5066743)

**Status:** Pending restart

[Restart now](#)

[Schedule the restart](#)

## Caso 2 Windows para actualización

### 4. Crear script

```
GNU nano 7.2
#!/bin/bash
echo "---ESTADO DEL SISTEMA ---"
echo "Nombre del equipo: $(hostname)"
echo "IP Interna: $(hostname -I | awk '{print $2}')"
echo "Espacio en disco:"
df -h / | grep /
```

```
nodo1@srv-linux-sistemas:~$ nano tarea1_diagnostico.sh
```

## Caso 1 Linux

```
tarea1_diagnostico.ps1 X
1 Write-Host "--- ESTADO DEL SISTEMA ---" -ForegroundColor Cyan
2 Write-Host "Nombre del equipo: $env:COMPUTERNAME"
3 Write-Host "IP Actual:" (Get-NetIPAddress -AddressFamily IPv4 | Where-Object { $_.InterfaceAlias -eq "Ethernet" })[0].IPv4Address
4 Write-Host "Espacio en disco:"
5 Get-PSDrive C | Select-Object Used, Free
```

## Caso 2 Windows

### 5. Conectividad entre todas

Tabla de direccionamiento

Nodo	Hostname	Interfaz de Red	IP Estática	Máscara
<b>Nodo 1 (Linux)</b>	Srv-Linux-Sistemas	ens34	<b>192.168.10.10</b>	255.255.255.0
<b>Nodo 2 (Win Server)</b>	Srv-Win-Sistemas	Ethernet 2	<b>192.168.10.20</b>	255.255.255.0
<b>Nodo 3 (Win 10)</b>	Cli-Win-Sistemas	Ethernet 2	<b>192.168.10.30</b>	255.255.255.0

```
nodo1@srv-linux-sistemas:~$ ip addr show ens34
3: ens34: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 00:0c:29:21:af:c8 brd ff:ff:ff:ff:ff:ff
    altname enp2s2
    inet 192.168.10.10/24 brd 192.168.10.255 scope global ens34
        valid_lft forever preferred_lft forever
        inet6 fe80::20c:29ff:fe21:afc8/64 scope link
            valid_lft forever preferred_lft forever
nodo1@srv-linux-sistemas:~$ _
```

```
network:
  version: 2
  renderer: networkd
  ethernets:
    ens33:
      dhcp4: true
      ens34:
        addresses:
          - 192.168.10.10/24
```

Caso 1 Linux

```
Write-Host "IP Actual: $IP"
Write-Host "Espacio en disco:"
Get-PSDrive C | Select-Object Used, Free
--- ESTADO DEL SISTEMA ---
Nombre del equipo: SRV-WIN-SISTEMA
IP Actual: 192.168.10.20
Espacio en disco:

      Used          Free
      ----          ----
13153677312  50549407744
```

Caso 2 Windows Server

```
--- ESTADO DEL SISTEMA ---
Nombre del equipo: DESKTOP-6V055LO
IP Actual: 192.168.10.30
Espacio en disco:

      Used          Free
      ----          ----
22438920192  41274183680
```

Caso 3 Win Cliente

```
nodo1@srv-linux-sistemas:~$ ping c- 194.168.10.20
ping: c-: Temporary failure in name resolution
nodo1@srv-linux-sistemas:~$ ping c- 192.168.10.20
ping: c-: Temporary failure in name resolution
nodo1@srv-linux-sistemas:~$ ping -c 4 192.168.10.20
PING 192.168.10.20 (192.168.10.20) 56(84) bytes of data.
64 bytes from 192.168.10.20: icmp_seq=1 ttl=128 time=1.22 ms
64 bytes from 192.168.10.20: icmp_seq=2 ttl=128 time=0.816 ms
64 bytes from 192.168.10.20: icmp_seq=3 ttl=128 time=0.830 ms
64 bytes from 192.168.10.20: icmp_seq=4 ttl=128 time=0.781 ms

--- 192.168.10.20 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3005ms
rtt min/avg/max/mdev = 0.781/0.912/1.221/0.179 ms
nodo1@srv-linux-sistemas:~$
```

```
nodo1@srv-linux-sistemas:~$ ping -c 4 192.168.10.30
PING 192.168.10.30 (192.168.10.30) 56(84) bytes of data.
64 bytes from 192.168.10.30: icmp_seq=1 ttl=128 time=0.839 ms
64 bytes from 192.168.10.30: icmp_seq=2 ttl=128 time=0.732 ms
64 bytes from 192.168.10.30: icmp_seq=3 ttl=128 time=0.580 ms
64 bytes from 192.168.10.30: icmp_seq=4 ttl=128 time=0.680 ms

--- 192.168.10.30 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3065ms
rtt min/avg/max/mdev = 0.580/0.707/0.839/0.093 ms
nodo1@srv-linux-sistemas:~$ _
```

```
PS C:\Users\Administrador> ping 192.168.10.10

Pinging 192.168.10.10 with 32 bytes of data:
Reply from 192.168.10.10: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.10.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PS C:\Users\Administrador>
```

```
PS C:\Users\Administrador> ping 192.168.10.30

Pinging 192.168.10.30 with 32 bytes of data:
Reply from 192.168.10.30: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.30:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PS C:\Users\Administrador> |
```

Win Server

```
PS C:\Windows\system32> ping 192.168.10.10

Haciendo ping a 192.168.10.10 con 32 bytes de datos:
Respuesta desde 192.168.10.10: bytes=32 tiempo<1m TTL=64
Respuesta desde 192.168.10.10: bytes=32 tiempo=1ms TTL=64
Respuesta desde 192.168.10.10: bytes=32 tiempo<1m TTL=64
Respuesta desde 192.168.10.10: bytes=32 tiempo<1m TTL=64

Estadísticas de ping para 192.168.10.10:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
                (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
        Mínimo = 0ms, Máximo = 1ms, Media = 0ms
PS C:\Windows\system32>
```

```
PS C:\Windows\system32> ping 192.168.10.20

Haciendo ping a 192.168.10.20 con 32 bytes de datos:
Respuesta desde 192.168.10.20: bytes=32 tiempo<1m TTL=128

Estadísticas de ping para 192.168.10.20:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
                (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
        Mínimo = 0ms, Máximo = 0ms, Media = 0ms
PS C:\Windows\system32> ■
```

Win Cliente