

Manual

3

ESCUELA SUPERIOR DE CÓMPUTO

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Para la clase de Administración de Servicios en Red

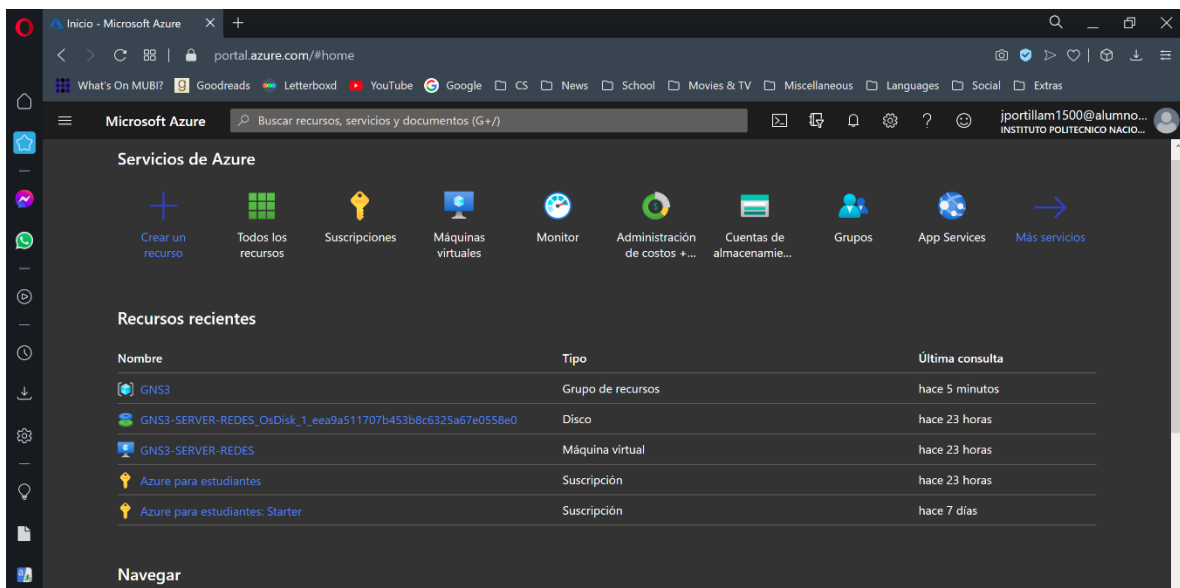
# Instalación del Servidor GNS3

# Requisitos

- 1 Computadora con conexión a internet
- 2 Cuenta de correo electrónico institucional
- 3 Cuenta de *Azure for Students* activada
- 4 Sesión iniciada en el Portal de Azure (<https://portal.azure.com/>)
- 5 Recurso llamado: [Script\\_02\\_InstalacionServidorGNS3.sh](#)

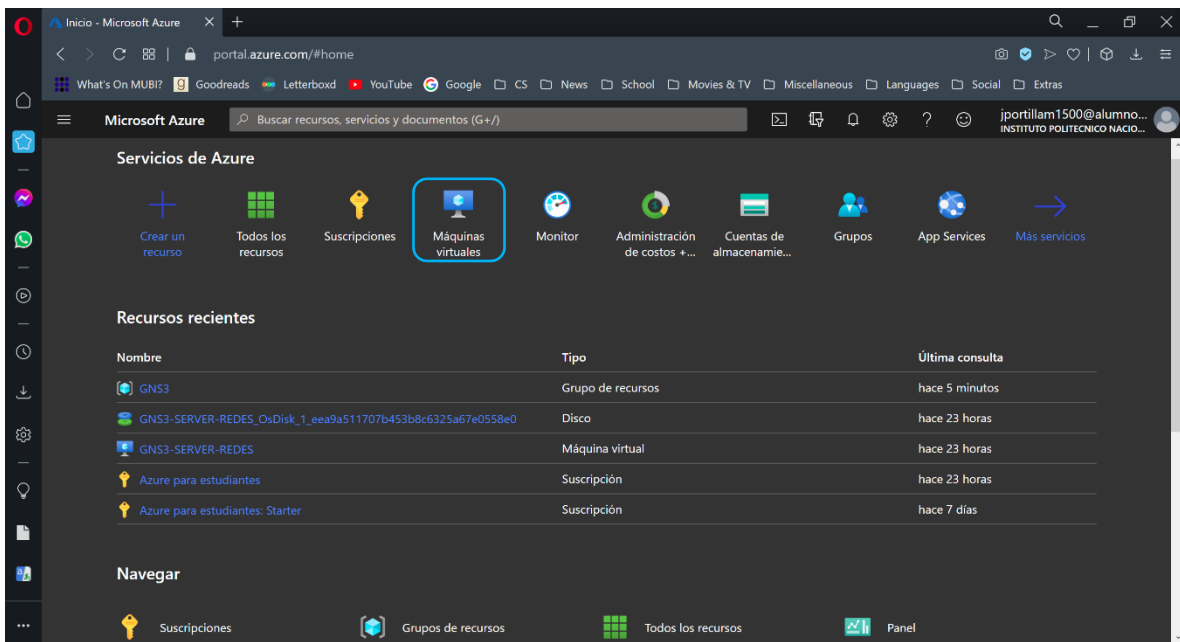
# Instrucciones

- 1 Entrar a la página principal del Portal Azure



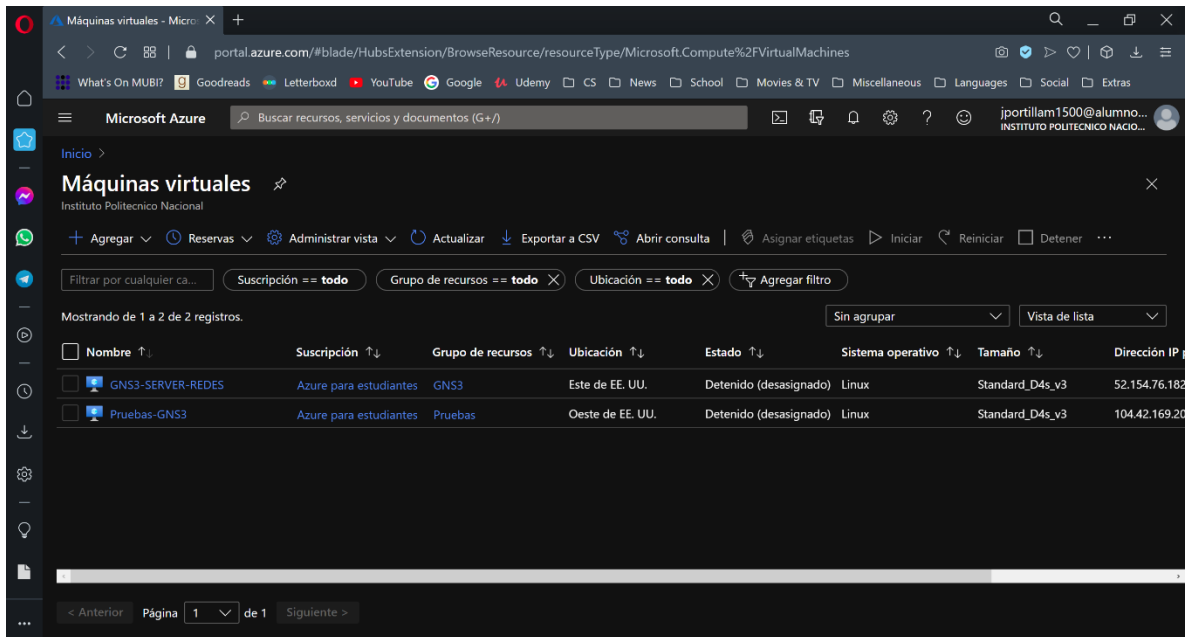
**FIGURA 1.** Portal Azure. En esta página se puede observar tres secciones; la barra de navegación, sección de servicios y recursos recientes en caso de tener.

## 2 Localizar icono de máquinas virtuales y dar clic en el



**FIGURA 2.** Icono Máquinas Virtuales señalado. Al dar clic el portal nos redireccionará a la página donde mostrará una lista de todas las máquinas virtuales creadas.

## 3 Seleccionar máquina virtual para servidor (crear una si no hay creadas)



**FIGURA 3.** Máquinas virtuales. En este ejemplo se puede ver que existen dos máquinas creadas, en este caso se usará el nombrado "Pruebas GNS3". En caso de no tener una máquina creada, abrir manual 01.

## 4 Iniciar máquina virtual

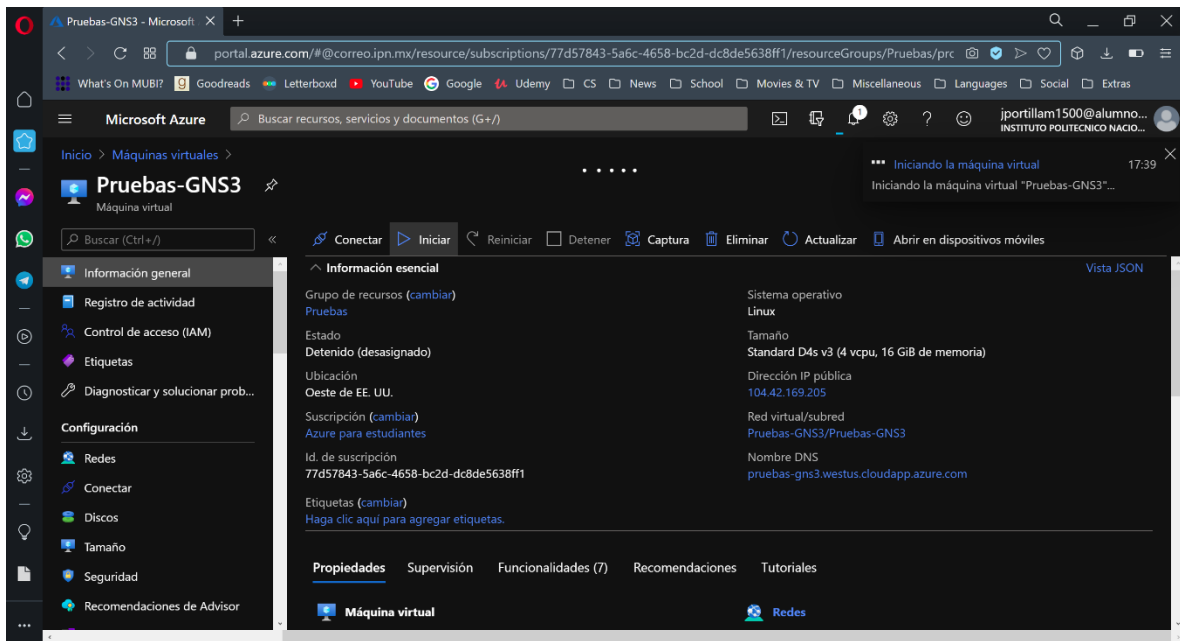


Figura 4. Máquina virtual iniciando. En caso de estar detenida, dar clic en el botón Iniciar y la máquina será “encendida”

## 5 Abrir una ventana de PowerShell en Windows (o algún CLI)

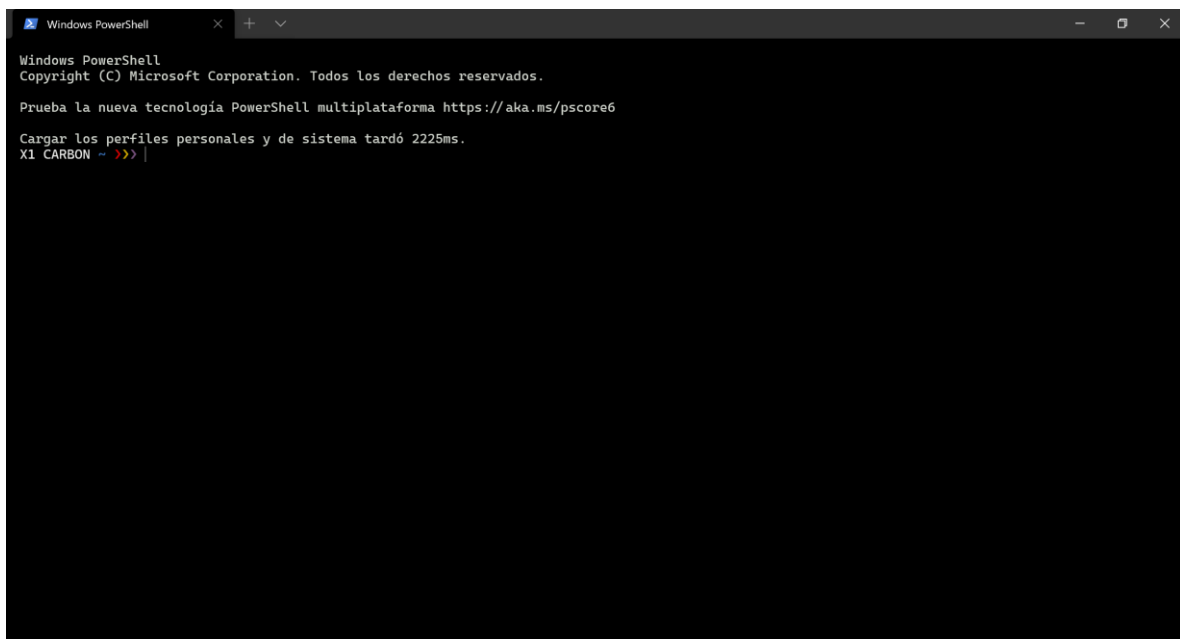
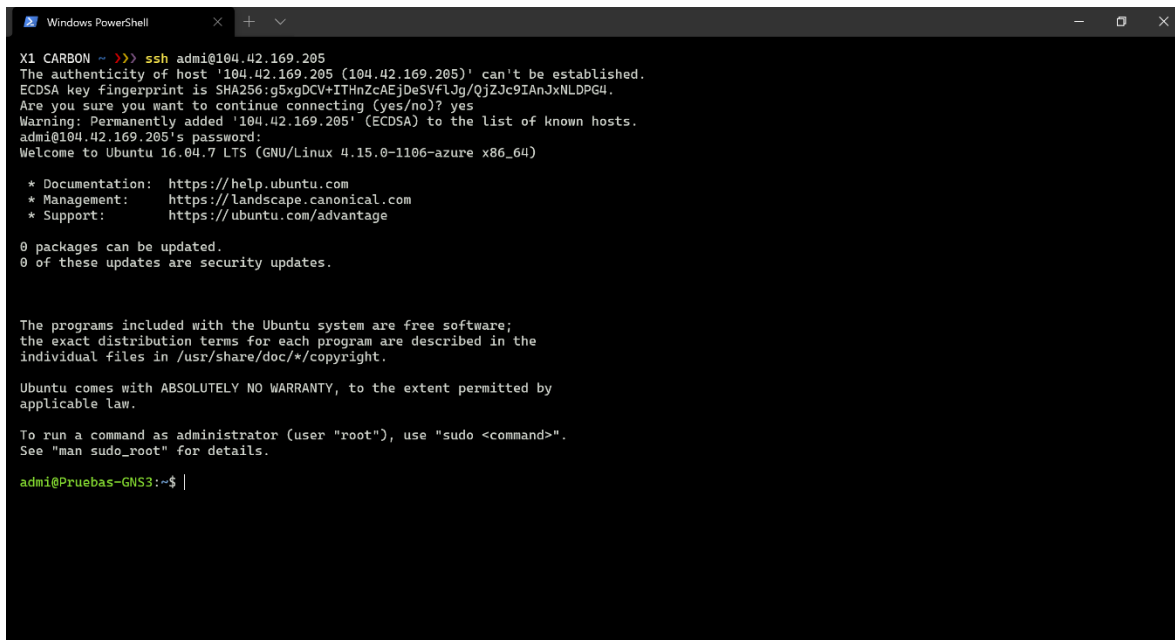


Figura 5. Ventana de Windows PowerShell. Otra línea de comandos que serviría en Windows es CMD.



```

Windows PowerShell
X1 CARBON ~ ->>> ssh admi@104.42.169.205
The authenticity of host '104.42.169.205 (104.42.169.205)' can't be established.
ECDSA key fingerprint is SHA256:g5xgDCV+IThnZcAEjDeSVfJg/QjZJc9IAJxNLDPG4.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '104.42.169.205' (ECDSA) to the list of known hosts.
admi@104.42.169.205's password:
Welcome to Ubuntu 16.04.7 LTS (GNU/Linux 4.15.0-1106-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

0 packages can be updated.
0 of these updates are security updates.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

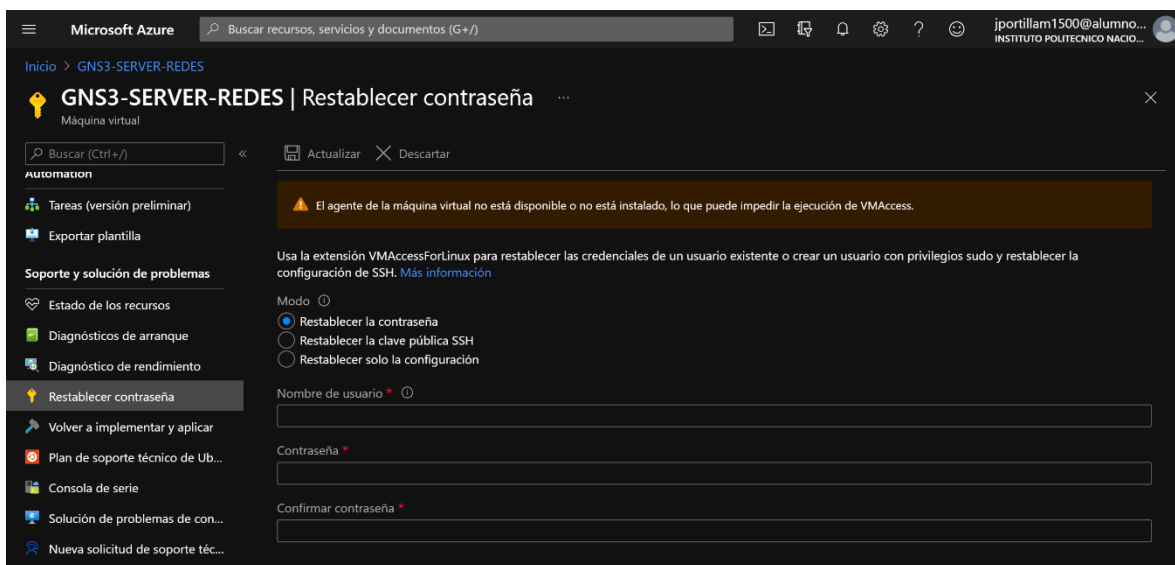
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

admi@Pruebas-GNS3:~$ |

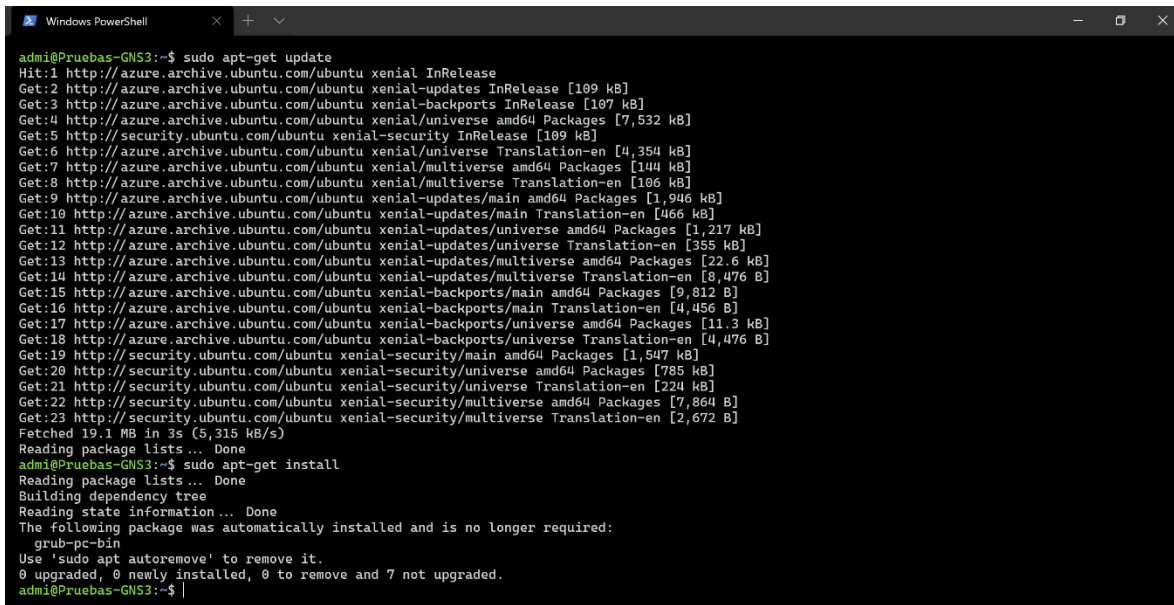
```

**Figura 6.** Sesión SSH iniciada. Para establecer la conexión es necesario tres datos, los dos primeros, usuario e IP pública usando en comando ssh como se puede observar en la segunda línea, por ejemplo, ssh 'usuario'@'IP Pública' El tercer dato es la contraseña que se asignó a la máquina virtual, en caso de no recordarla se puede cambiar en la opción de restablecer contraseña; esto se muestra en la figura 6.1



**Figura 6.1** Para restablecer la contraseña navegar en la barra lateral izquierda donde se encuentran las configuraciones y buscar "Restablecer contraseña"

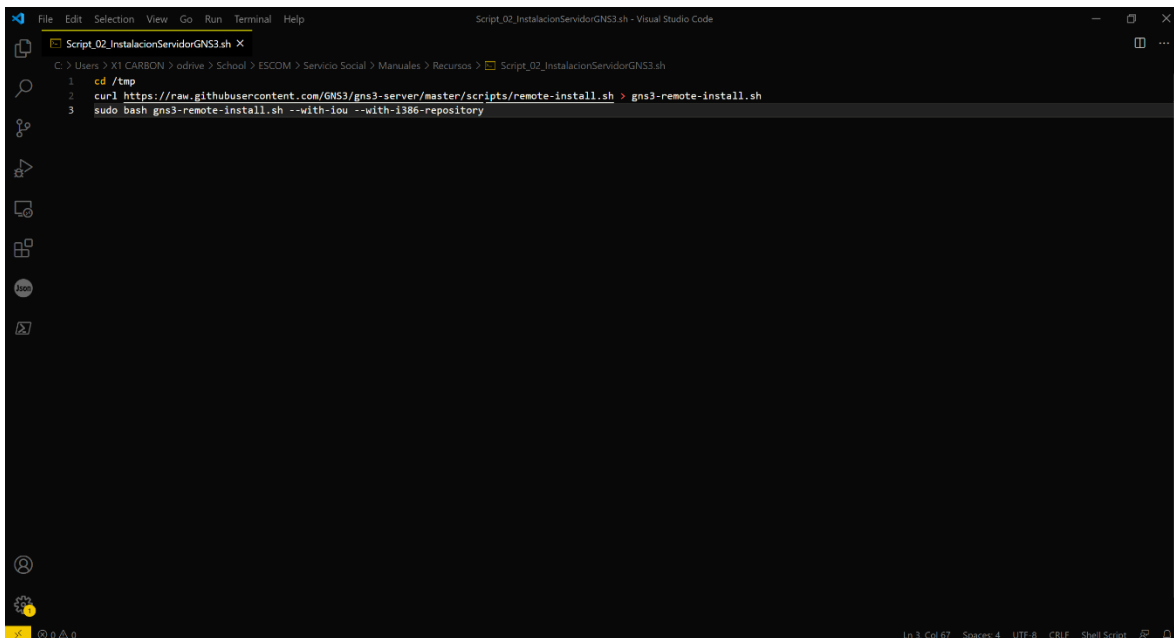
## 7 Actualizar repositorios de la máquina



```
admin@Pruebas-GNS3:~$ sudo apt-get update
Hit:1 http://azure.archive.ubuntu.com/ubuntu xenial InRelease
Get:2 http://azure.archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:3 http://azure.archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Get:4 http://azure.archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [7,532 kB]
Get:5 http://security.ubuntu.com/ubuntu xenial-security InRelease [109 kB]
Get:6 http://azure.archive.ubuntu.com/ubuntu xenial/universe Translation-en [4,354 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu xenial/multiverse amd64 Packages [144 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu xenial/multiverse Translation-en [106 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [1,946 kB]
Get:10 http://azure.archive.ubuntu.com/ubuntu xenial-updates/main Translation-en [466 kB]
Get:11 http://azure.archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [1,217 kB]
Get:12 http://azure.archive.ubuntu.com/ubuntu xenial-updates/universe Translation-en [355 kB]
Get:13 http://azure.archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 Packages [22.6 kB]
Get:14 http://azure.archive.ubuntu.com/ubuntu xenial-updates/multiverse Translation-en [8,476 B]
Get:15 http://azure.archive.ubuntu.com/ubuntu xenial-backports/main amd64 Packages [9,812 B]
Get:16 http://azure.archive.ubuntu.com/ubuntu xenial-backports/main Translation-en [4,456 B]
Get:17 http://azure.archive.ubuntu.com/ubuntu xenial-backports/universe amd64 Packages [11.3 kB]
Get:18 http://azure.archive.ubuntu.com/ubuntu xenial-backports/universe Translation-en [4,476 B]
Get:19 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages [1,547 kB]
Get:20 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 Packages [785 kB]
Get:21 http://security.ubuntu.com/ubuntu xenial-security/universe Translation-en [224 kB]
Get:22 http://security.ubuntu.com/ubuntu xenial-security/multiverse amd64 Packages [7,864 B]
Get:23 http://security.ubuntu.com/ubuntu xenial-security/multiverse Translation-en [2,672 B]
Fetched 19.1 MB in 3s (5,315 kB/s)
Reading package lists ... Done
admin@Pruebas-GNS3:~$ sudo apt-get install
Reading package lists ... Done
Building dependency tree
Reading state information ... Done
The following package was automatically installed and is no longer required:
  grub-pc-bin
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
admin@Pruebas-GNS3:~$
```

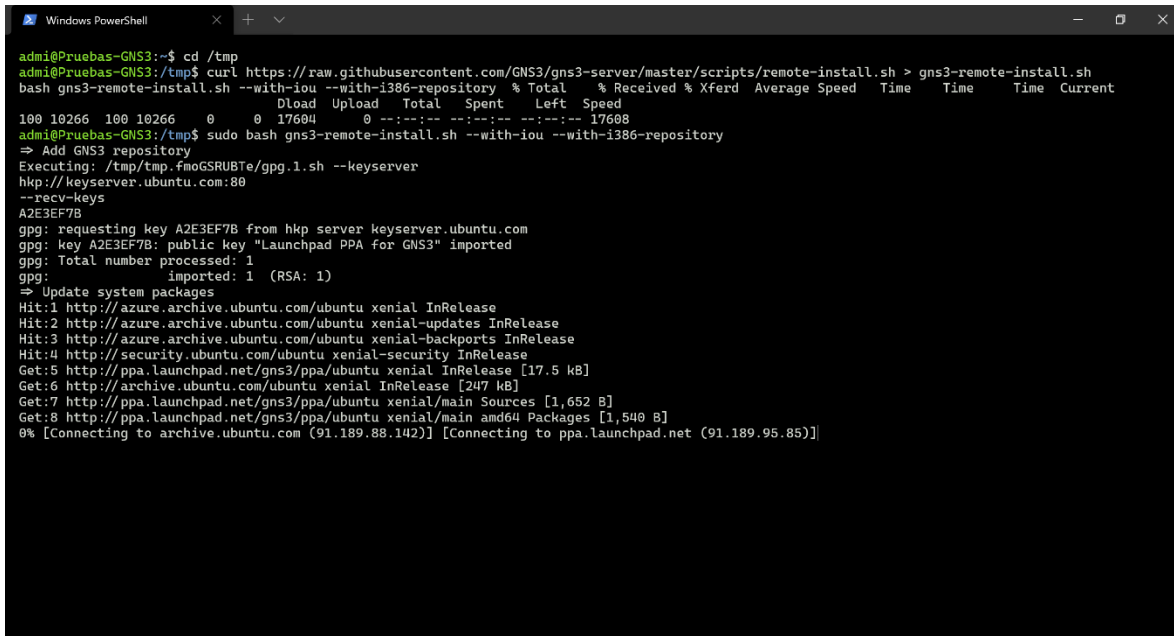
**Figura 7.** Actualización del sistema. Usando los comandos que se pueden ver (ver `sudo apt-get update` y `sudo apt-get install`), se actualizará los repositorios del sistema y después instalar las actualizaciones.

## 8 Abrir recurso requerido, el script 02



```
Script_02_InstalacionServidorGNS3.sh - Visual Studio Code
Script_02_InstalacionServidorGNS3.sh X
C:\Users\X1 CARBON > odrive > School > ESCOM > Servicio Social > Manuales > Recursos > Script_02_InstalacionServidorGNS3.sh
1 cd /tmp
2 curl https://raw.githubusercontent.com/GNS3/gns3-server/master/scripts/remote-install.sh > gns3-remote-install.sh
3 sudo bash gns3-remote-install.sh --with-iou --with-i386-repository
```

**Figura 8.** Recurso 01. Los comandos del script son para instalar el servidor GNS3 en un servidor remoto, como en Azure u otras plataformas como Amazon Web Services

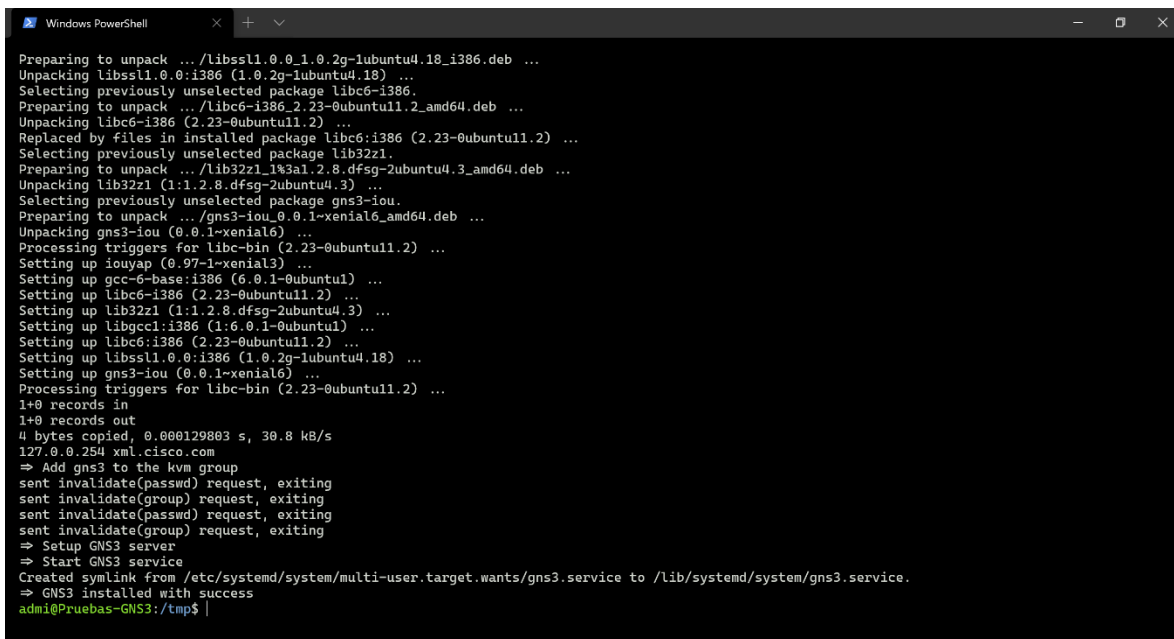


```

admi@Pruebas-GNS3:~$ cd /tmp
admi@Pruebas-GNS3:/tmp$ curl https://raw.githubusercontent.com/GNS3/gns3-server/master/scripts/remote-install.sh > gns3-remote-install.sh
bash gns3-remote-install.sh --with-iou --with-i386-repository % Total % Received % Xferd Average Speed Time Time Time Current
100 10266 100 10266 0 0 17604 0 --:--:-- --:--:-- --:--:-- 17608
admi@Pruebas-GNS3:/tmp$ sudo bash gns3-remote-install.sh --with-iou --with-i386-repository
=> Add GNS3 repository
Executing: /tmp/tmp.fmoGSRUBTe/gpg.1.sh --keyserver
hkp://keyserver.ubuntu.com:80
--recv-keys
A2E3EF7B
gpg: requesting key A2E3EF7B from hkp server keyserver.ubuntu.com
gpg: key A2E3EF7B: public key "Launchpad PPA for GNS3" imported
gpg: Total number processed: 1
gpg: imported: 1 (RSA: 1)
=> Update system packages
Hit:1 http://azure.archive.ubuntu.com/ubuntu xenial InRelease
Hit:2 http://azure.archive.ubuntu.com/ubuntu xenial-updates InRelease
Hit:3 http://azure.archive.ubuntu.com/ubuntu xenial-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu xenial-security InRelease
Get:5 http://ppa.launchpad.net/gns3/ppa/ubuntu xenial InRelease [17.5 kB]
Get:6 http://archive.ubuntu.com/ubuntu xenial InRelease [247 kB]
Get:7 http://ppa.launchpad.net/gns3/ppa/ubuntu xenial/main Sources [1,652 B]
Get:8 http://ppa.launchpad.net/gns3/ppa/ubuntu xenial/main amd64 Packages [1,540 B]
0% [Connecting to archive.ubuntu.com (91.189.88.142)] [Connecting to ppa.launchpad.net (91.189.95.85)]

```

Figura 9. Ejecutando comandos para la instalación del servidor GNS3



```

Preparing to unpack .../libssl1.0.0-1.0.2g-1ubuntu4.10_i386.deb ...
Unpacking libssl1.0.0:i386 (1.0.2g-1ubuntu4.10) ...
Selecting previously unselected package libc6-i386.
Preparing to unpack .../libc6-i386-2.23-0ubuntu11.2_amd64.deb ...
Unpacking libc6-i386 (2.23-0ubuntu11.2) ...
Replaced by files in installed package libc6:i386 (2.23-0ubuntu11.2) ...
Selecting previously unselected package lib32z1.
Preparing to unpack .../lib32z1-1.3a1.2.8.dfsg-2ubuntu4.3_amd64.deb ...
Unpacking lib32z1 (1:1.2.8.dfsg-2ubuntu4.3) ...
Selecting previously unselected package gns3-iou.
Preparing to unpack .../gns3-iou_0.0.1-xenial6_amd64.deb ...
Unpacking gns3-iou (0.0.1-xenial6) ...
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
Setting up iouyap (0.97-1-xenial3) ...
Setting up gcc-6-base:i386 (6.0.1-0ubuntu1) ...
Setting up libc6-i386 (2.23-0ubuntu11.2) ...
Setting up lib32z1 (1:1.2.8.dfsg-2ubuntu4.3) ...
Setting up libgcc1:i386 (1:6.0.1-0ubuntu1) ...
Setting up libc6:i386 (2.23-0ubuntu11.2) ...
Setting up libssl1.0.0:i386 (1.0.2g-1ubuntu4.10) ...
Setting up gns3-iou (0.0.1-xenial6) ...
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
1+0 records in
1+0 records out
4 bytes copied, 0.000129803 s, 30.8 kB/s
127.0.0.254 xml.cisco.com
=> Add gns3 to the kvm group
sent invalidate(passwd) request, exiting
sent invalidate(group) request, exiting
sent invalidate(passwd) request, exiting
sent invalidate(group) request, exiting
=> Setup GNS3 server
=> Start GNS3 service
Created symlink from /etc/systemd/system/multi-user.target.wants/gns3.service to /lib/systemd/system/gns3.service.
=> GNS3 installed with success
admi@Pruebas-GNS3:/tmp$

```

Figura 10. Instalación exitosa. Una vez terminado el proceso se puede cerrar la ventana y empezar a usar el servidor o detener la máquina virtual