Documentación del Obligatorio

Taller de servidores Linux

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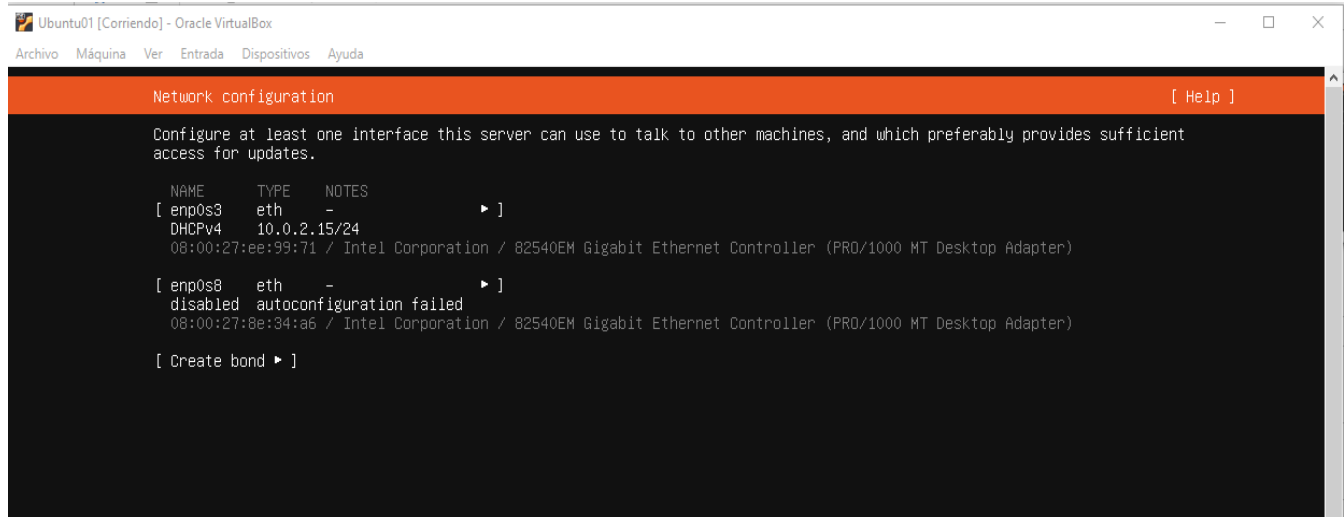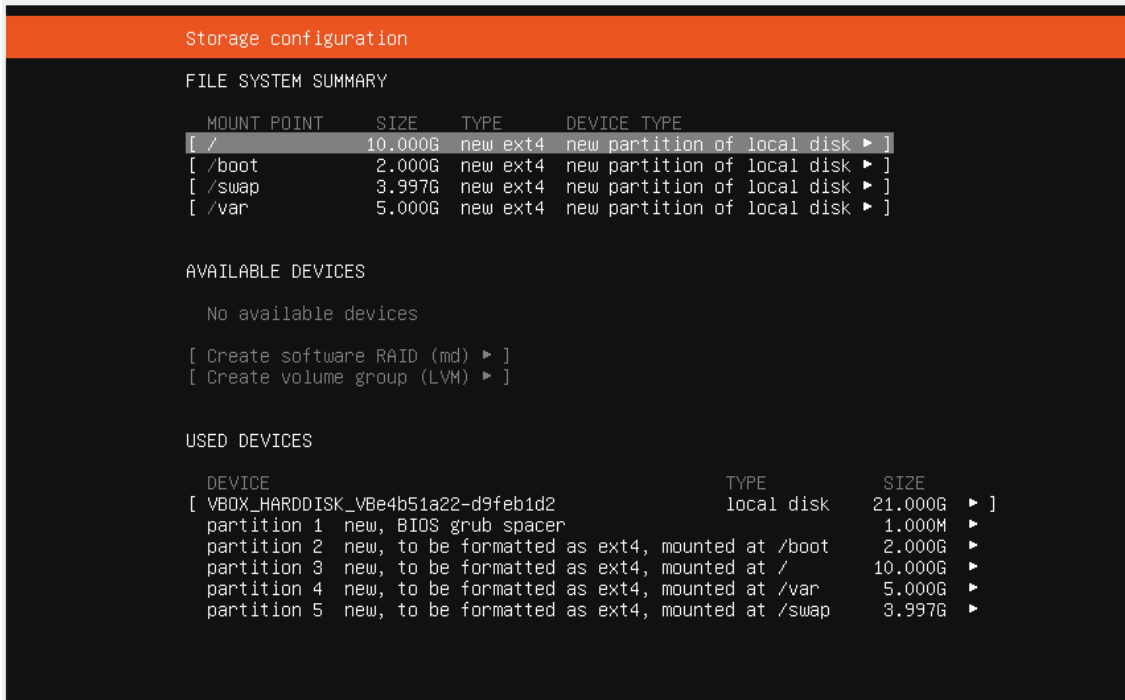**Docente: Enrique Verdes**
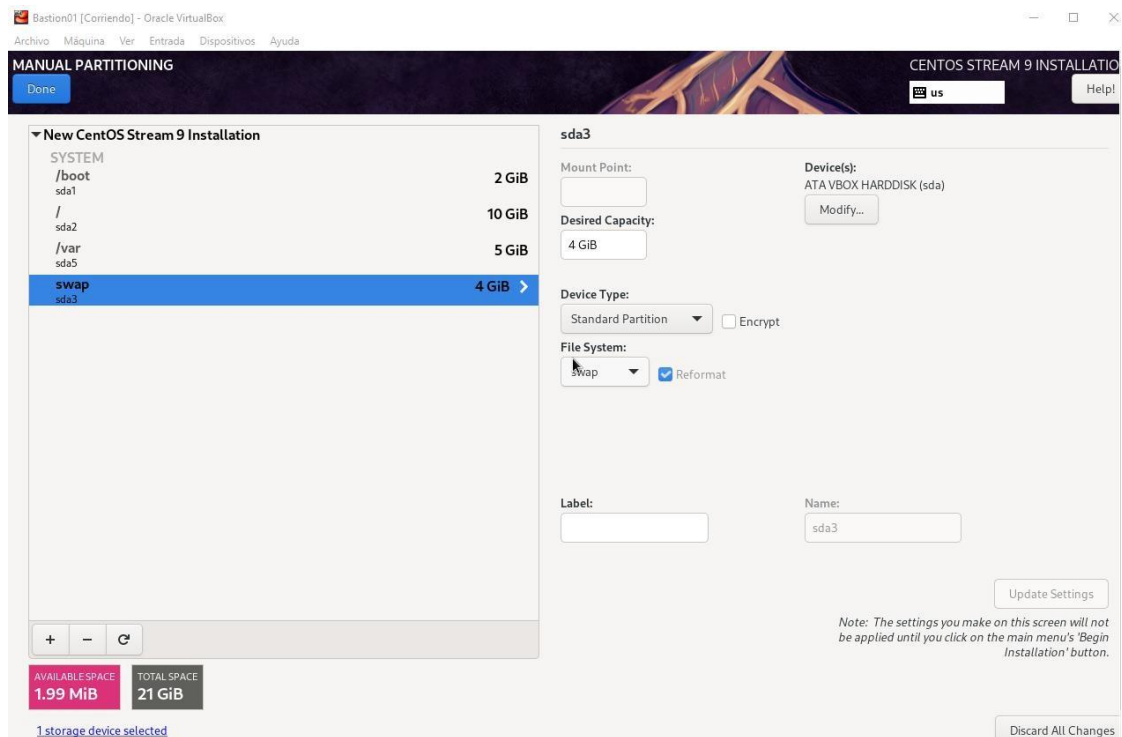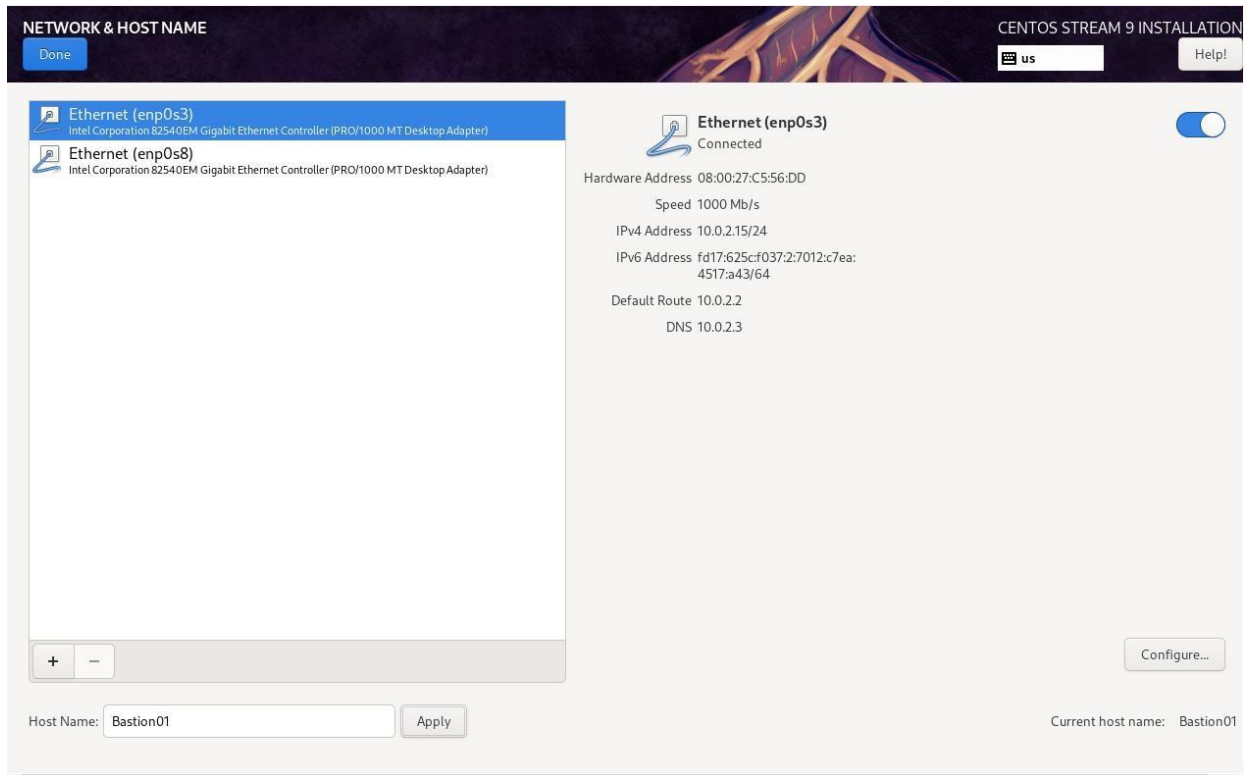
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Contenido

Configuración de las máquinas virtuales en su instalación

Configuración máquina virtual Ubuntu01:

```
Storage configuration

FILE SYSTEM SUMMARY

  MOUNT POINT    SIZE    TYPE     DEVICE TYPE
  [ /            10.000G  new ext4  new partition of local disk ▶ ]
  [ /boot         2.000G  new ext4  new partition of local disk ▶ ]
  [ /swap         3.997G  new ext4  new partition of local disk ▶ ]
  [ /var          5.000G  new ext4  new partition of local disk ▶ ]


AVAILABLE DEVICES

  No available devices

[ Create software RAID (md) ▶ ]
[ Create volume group (LVM) ▶ ]


USED DEVICES

  DEVICE                                      TYPE         SIZE
[ VBOX_HARDDISK_VBe4b51a22-d9feb1d2           local disk   21.000G  ▶ ]
  partition 1   new, BIOS grub spacer                      1.000M   ▶
  partition 2   new, to be formatted as ext4, mounted at /boot   2.000G   ▶
  partition 3   new, to be formatted as ext4, mounted at /       10.000G  ▶
  partition 4   new, to be formatted as ext4, mounted at /var    5.000G   ▶
  partition 5   new, to be formatted as ext4, mounted at /swap   3.997G   ▶
```

```
Ubuntu01 [Corriendo] - Oracle VirtualBox                                      —   □   ×
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda

Network configuration                                                    [ Help ]

Configure at least one interface this server can use to talk to other machines, and which preferably provides sufficient
access for updates.

  NAME      TYPE    NOTES
[ enp0s3    eth     -              ▶ ]
  DHCPv4    10.0.2.15/24
  08:00:27:ee:99:71 / Intel Corporation / 82540EM Gigabit Ethernet Controller (PRO/1000 MT Desktop Adapter)

[ enp0s8    eth     -              ▶ ]
  disabled  autoconfiguration failed
  08:00:27:8e:34:a6 / Intel Corporation / 82540EM Gigabit Ethernet Controller (PRO/1000 MT Desktop Adapter)

[ Create bond ▶ ]
```
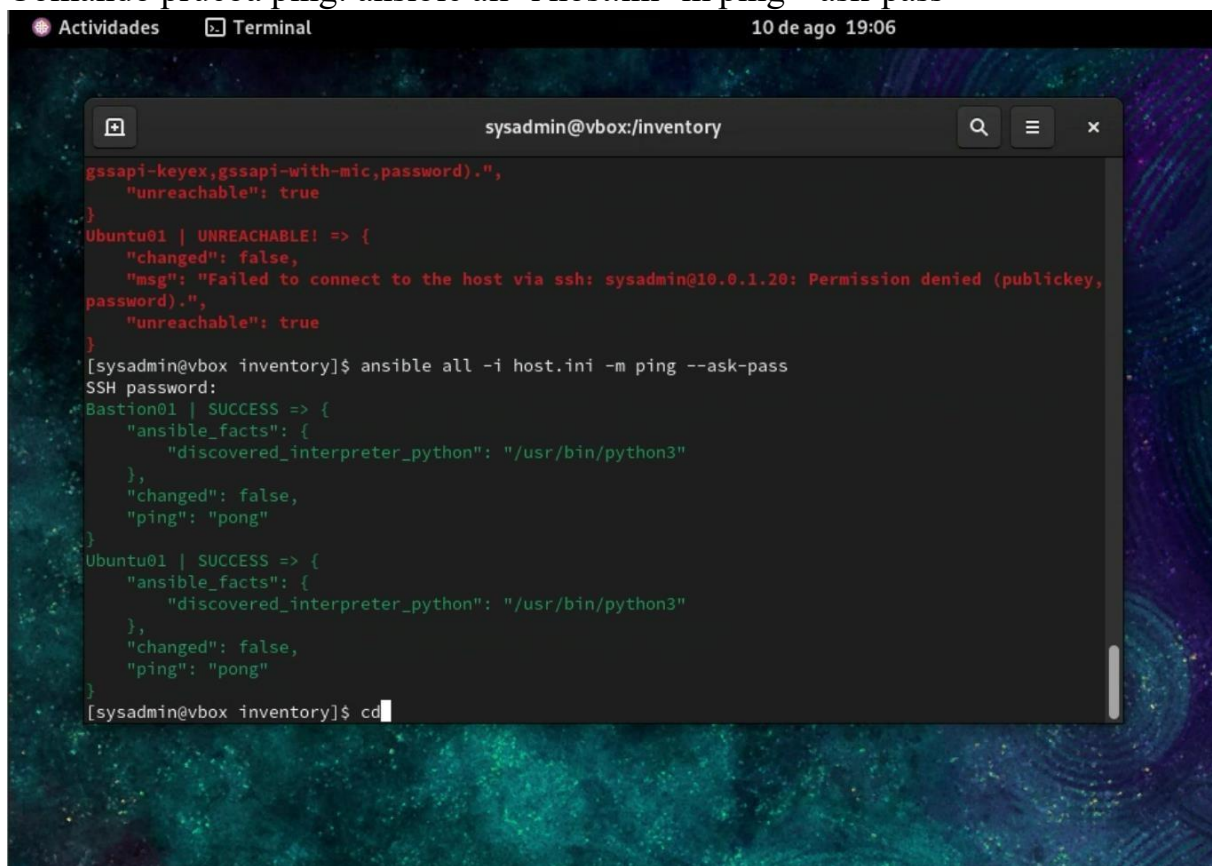
Configuración de Bastion01- CentOS:

Prueba de comandos con conexión exitosa

Comando: ansible-inventory -i host.ini –list

```
[sysadmin@vbox inventory]$ ansible-inventory -i host.ini --list
{
    "_meta": {
        "hostvars": {
            "Bastion01": {
                "ansible_host": "10.0.1.15"
            },
            "Ubuntu01": {
                "ansible_host": "10.0.1.20"
            }
        }
    },
    "all": {
        "children": [
            "ungrouped",
            "linux",
            "fileserver"
        ]
    },
    "centos": {
        "hosts": [
            "Bastion01"
        ]
    },
    "fileserver": {
        "hosts": [
            "Bastion01"
        ]
    },
    "linux": {
        "children": [
            "centos",
            "ubuntu"
        ]
    },
    "ubuntu": {
        "hosts": [
            "Ubuntu01"
        ]
    }
}
[sysadmin@vbox inventory]$
```

Comando prueba ping: ansible all -i host.ini -m ping --ask-pass

```
gssapi-keyex,gssapi-with-mic,password).",
    "unreachable": true
}
Ubuntu01 | UNREACHABLE! => {
    "changed": false,
    "msg": "Failed to connect to the host via ssh: sysadmin@10.0.1.20: Permission denied (publickey,
password).",
    "unreachable": true
}
[sysadmin@vbox inventory]$ ansible all -i host.ini -m ping --ask-pass
SSH password:
Bastion01 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
Ubuntu01 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
[sysadmin@vbox inventory]$ cd
```

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Ejecución de los comandos ad-hoc:

Comando para listar todos los usuarios en servidor Ubuntu01:
ansible ubuntu -i host.ini -m command -a "cat /etc/passwd" –ask-pass

```
[sysadmin@vbox inventory]$ ansible ubuntu -i host.ini -m command -a "cat /etc/passwd" --ask-pass
SSH password:
Ubuntu01 | CHANGED | rc=0 >>
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
_apt:x:42:65534::/nonexistent:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
systemd-timesync:x:997:997:systemd Time Synchronization:/:/usr/sbin/nologin
dhcpcd:x:100:65534:DHCP Client Daemon,,,:/usr/lib/dhcpcd:/bin/false
messagebus:x:101:102::/nonexistent:/usr/sbin/nologin
systemd-resolve:x:992:992:systemd Resolver:/:/usr/sbin/nologin
pollinate:x:102:1::/var/cache/pollinate:/bin/false
polkitd:x:991:991:User for polkitd:/:/usr/sbin/nologin
syslog:x:103:104::/nonexistent:/usr/sbin/nologin
uuidd:x:104:105::/run/uuidd:/usr/sbin/nologin
tcpdump:x:105:107::/nonexistent:/usr/sbin/nologin
tss:x:106:108:TPM software stack,,,:/var/lib/tpm:/bin/false
landscape:x:107:109::/var/lib/landscape:/usr/sbin/nologin
fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin
usbmux:x:108:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
sysadmin:x:1000:1000:sysadmin:/home/sysadmin:/bin/bash
dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin
sshd:x:109:65534::/run/sshd:/usr/sbin/nologin
[sysadmin@vbox inventory]$
```
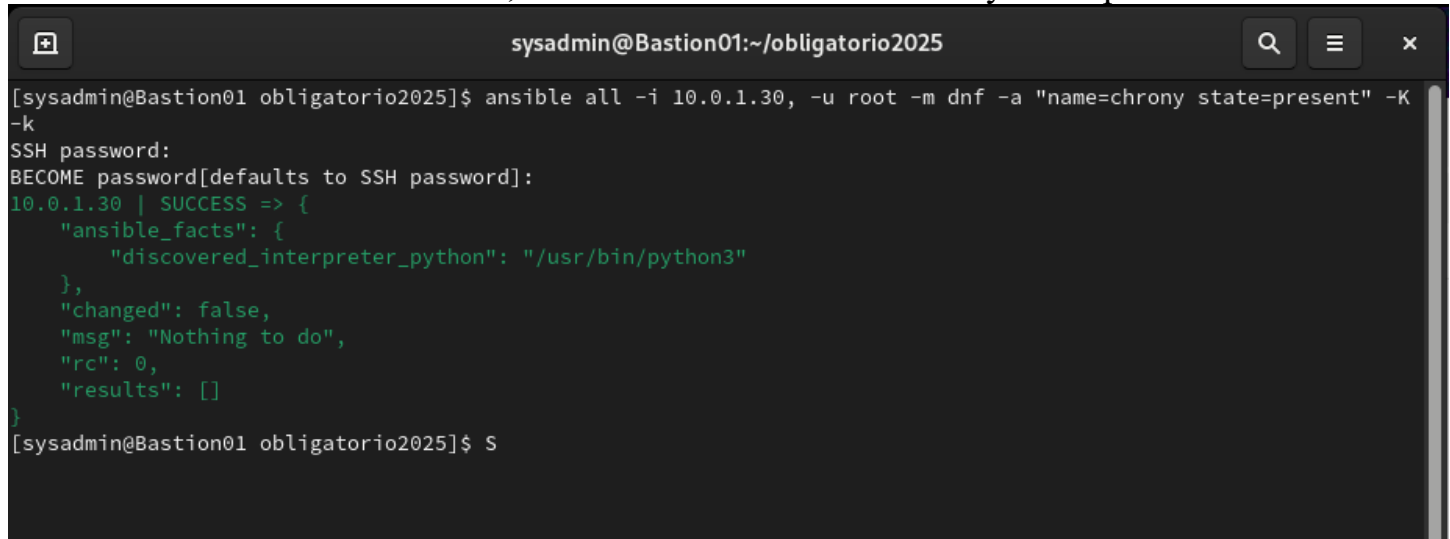
Comando para mostrar el uso de memoria en todos los servidores:
ansible all -i host-ini -m command -a "free -h" –ask-pass

```
[sysadmin@vbox inventory]$ ansible all -i host.ini -m command -a "free -h" --ask-pass
SSH password:
Ubuntu01 | CHANGED | rc=0 >>
              total        used        free      shared  buff/cache   available
Mem:          1,9Gi       330Mi       1,5Gi       1,1Mi       216Mi       1,6Gi
Swap:         1,9Gi          0B       1,9Gi
Bastion01 | CHANGED | rc=0 >>
              total        used        free      shared  buff/cache   available
Mem:          1,7Gi       922Mi       302Mi        21Mi       653Mi       784Mi
Swap:         4,0Gi          0B       4,0Gi
[sysadmin@vbox inventory]$
```

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Comando para mostrar que el servicio chrony esté instalado y funcionando en servidor CentOS:

Comando: ansible all -i 10.0.1.30, -u root -m dnf -a "name=chrony state=present" -K -k
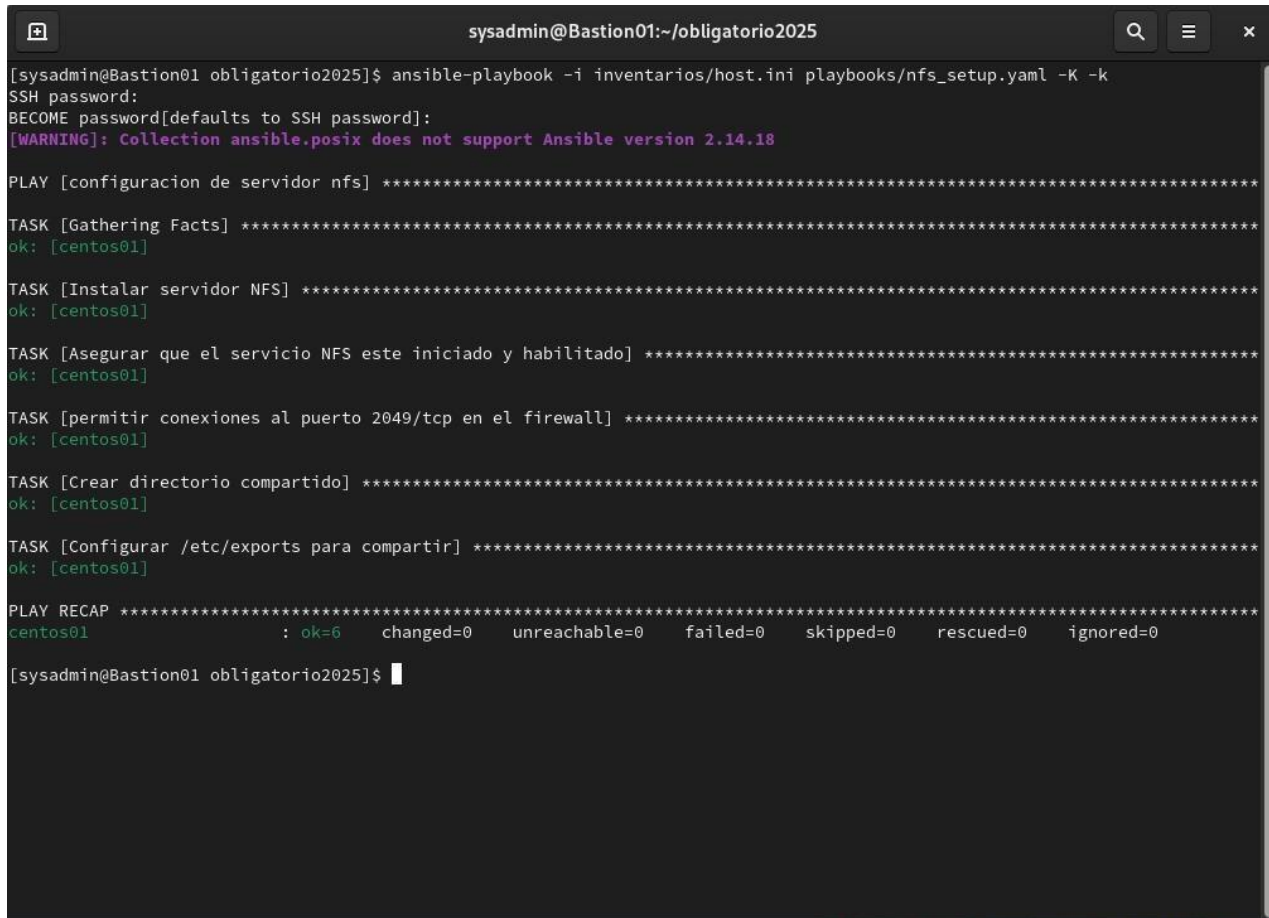
```
sysadmin@Bastion01:~/obligatorio2025                                    🔍  ≡  ✕

[sysadmin@Bastion01 obligatorio2025]$ ansible all -i 10.0.1.30, -u root -m dnf -a "name=chrony state=present" -K
-k
SSH password:
BECOME password[defaults to SSH password]:
10.0.1.30 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "msg": "Nothing to do",
    "rc": 0,
    "results": []
}
[sysadmin@Bastion01 obligatorio2025]$ S
```

Ejecuciones de los Playbooks solicitados

Ejecución del playbook nfs_setup.yml para CentOs

Comando: Ansible-playbook -i inventarios/host.ini playbooks/nfs_setup.yaml -K -k

```
[sysadmin@Bastion01 obligatorio2025]$ ansible-playbook -i inventarios/host.ini playbooks/nfs_setup.yaml -K -k
SSH password:
BECOME password[defaults to SSH password]:
[WARNING]: Collection ansible.posix does not support Ansible version 2.14.18

PLAY [configuracion de servidor nfs] ****************************************************************

TASK [Gathering Facts] ****************************************************************
ok: [centos01]

TASK [Instalar servidor NFS] ****************************************************************
ok: [centos01]

TASK [Asegurar que el servicio NFS este iniciado y habilitado] ****************************************************************
ok: [centos01]

TASK [permitir conexiones al puerto 2049/tcp en el firewall] ****************************************************************
ok: [centos01]

TASK [Crear directorio compartido] ****************************************************************
ok: [centos01]

TASK [Configurar /etc/exports para compartir] ****************************************************************
ok: [centos01]

PLAY RECAP ****************************************************************
centos01                   : ok=6    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

[sysadmin@Bastion01 obligatorio2025]$
```

Ejecución del playbook hardening.yaml para Ubuntu

Comando: ansible-playbook -i inventarios/host.ini playbooks/hardening.yaml -K -

```
[sysadmin@Bastion01 obligatorio2025]$ ansible-playbook -i inventarios/host.ini playbooks/hardening.yaml -K -k
SSH password:
BECOME password[defaults to SSH password]:

PLAY [hardening para ubuntu] *************************************************************************

TASK [Gathering Facts] *******************************************************************************
ok: [ubuntu01]

TASK [sistema actualizado] ***************************************************************************
ok: [ubuntu01]

TASK [instalar ufw] **********************************************************************************
ok: [ubuntu01]

TASK [permitir conecciones SSH] **********************************************************************
ok: [ubuntu01]

TASK [bloquear trafico entrante] *********************************************************************
changed: [ubuntu01]

TASK [no permitir login ssh con root] ****************************************************************
ok: [ubuntu01]

TASK [Instalar fail2ban] *****************************************************************************
ok: [ubuntu01]

TASK [configurar fail2ban] ***************************************************************************
ok: [ubuntu01]

PLAY RECAP *******************************************************************************************
ubuntu01                   : ok=8    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=
0

[sysadmin@Bastion01 obligatorio2025]$
```

```
[sysadmin@Bastion01 obligatorio2025]$ ansible-playbook -i inventarios/host.ini playbooks/hardening.yaml -K -k
SSH password:
BECOME password[defaults to SSH password]:

PLAY [hardening para ubuntu] *************************************************************************

TASK [Gathering Facts] *******************************************************************************
ok: [ubuntu01]

TASK [sistema actualizado] ***************************************************************************
ok: [ubuntu01]

TASK [instalar ufw] **********************************************************************************
ok: [ubuntu01]

TASK [permitir conecciones SSH] **********************************************************************
ok: [ubuntu01]

TASK [no permitir login ssh con root] ****************************************************************
ok: [ubuntu01]

TASK [Instalar fail2ban] *****************************************************************************
ok: [ubuntu01]

TASK [configurar fail2ban] ***************************************************************************
ok: [ubuntu01]

PLAY RECAP *******************************************************************************************
ubuntu01                   : ok=7    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=
0

[sysadmin@Bastion01 obligatorio2025]$
```