Obligatorio Taller de servidores Linux

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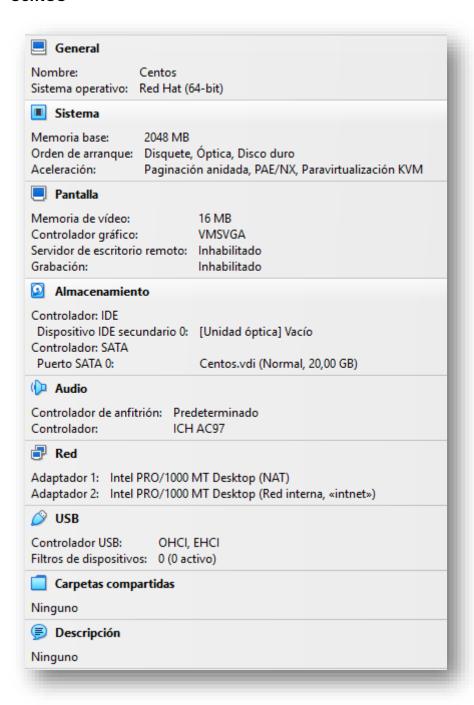
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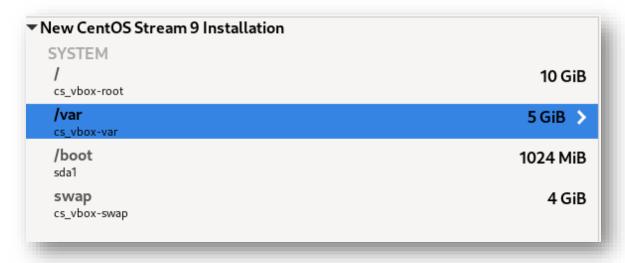
Tarea 1

Instalación de servidores

CentOS



Almacenamiento

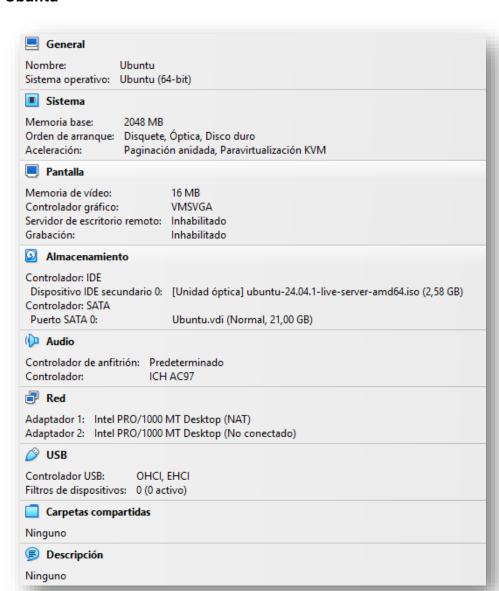


Configuración de red - (192.168.1.10/24)

```
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000 link/ether 08:00:27:73:fb:2a brd ff:ff:ff:ff:ff
inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
    valid_lft 86398sec preferred_lft 86398sec
inet6 fd00::a00:27ff:fe73:fb2a/64 scope global dynamic noprefixroute
    valid_lft 86400sec preferred_lft 14400sec
inet6 fe80::a00:27ff:fe73:fb2a/64 scope link noprefixroute
    valid_lft forever preferred_lft forever

3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000 link/ether 08:00:27:bb:99:c7 brd ff:ff:ff:ff:ff
inet 192.168.1.10/24 brd 192.168.1.255 scope global noprefixroute enp0s8
    valid_lft forever preferred_lft forever
inet6 fe80::a00:27ff:febb:99c7/64 scope link noprefixroute
    valid_lft forever preferred_lft forever
```

Ubuntu



Almacenamiento

MOUNT POINT	SIZE	TYPE	DEVICE TYPE	
[]	10.000G	new ext4	new LVM logical volume	▶]
[/boot	1.860G	new ext4	new partition of local disk	▶]
[/var	5.000G	new ext4	new LVM logical volume	▶]
[SWAP	4.000G	new swap	new LVM logical volume	▶]

Configuración de red - (192.168.1.11/24)

Copiamos la clave publica desde el bastión

CentOS

ssh-copy-id 192.168.1.10

```
Number of key(s) added: 1

Now try logging into the machine, with: "ssh '192.168.1.10'"

and check to make sure that only the key(s) you wanted were added.

[sysadmin@bastion01 ~]$
```

Ubuntu

```
ssh-copy-id 192.168.1.11
```

```
Number of key(s) added: 1

Now try logging into the machine, with: "ssh '192.168.1.11'"

and check to make sure that only the key(s) you wanted were added.

[sysadmin@bastion01 ~]$
```

Tarea 2

Configurar un archivo de inventario de Ansible

ansible-inventory -i Obligatorio2025/inventories/inventory.ini -list

```
[sysadmin@bastion01 ~]$ ansible-inventory -i Obligatorio2025/inventories/inventory.ini --list
     "_meta": {
          "hostvars": {
               "Centos": {
                    "ansible_host": "192.168.1.10",
"ansible_user": "sysadmin"
               "Ubuntu": {
    "ansible_host": "192.168.1.11",
    "ansible_user": "sysadmin"
    },
"all": {
"children": [
"ungroupe
              "ungrouped",
               "linux",
               "webserver"
    },
"centos": {
          "hosts": [
               "Centos"
    },
"linux": {
    "children": [
    "centos",
               "ubuntu"
    },
"ubuntu": {
          "hosts": [
                "Ubuntu"
    },
"webserver": {
          "hosts": [
                "Centos"
```

ansible all -i Obligatorio2025/inventories/inventory.ini -m ping

```
[sysadmin@bastion01 ~]$ ansible all -i Obligatorio2025/inventories/inventory.ini -m ping
Ubuntu | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
Centos | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
```

Tarea 3

Ejecutar comandos ad-hoc

Listado de usuarios en el servidor Ubuntu:

ansible Ubuntu -i Obligatorio2025/inventories/inventory.ini -m command -a "cut -d: -f1 /etc/passwd"

```
[sysadmin@bastion01 ~]$ ansible ubuntu -i Obligatorio2025/inventories/inventory.ini -m command -a "cut -d: -f1 /etc/passwd"
Toot
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
_apt
nobody
systemd-rtmesync
dhcped
messagebus
systemd-rtmesync
dhcped
messagebus
systemd-resolve
pollintd
usbmux
sysadmin
sysolog
uuridd
tcpdump
sshd
_rpc
statd
```

Uso de memoria en todos los servidores:

ansible all -i Obligatorio2025/inventories/inventory.ini -m command -a "free -h"

Verificar servicio de chrony instalado y configurado en servidor Centos

ansible Centos -i Obligatorio2025/inventories/inventory.ini -m shell -a "rpm -q chrony && systemctl is-active chronyd && systemctl is-enabled chronyd"

```
[sysadmin@bastion01 ~]$ ansible Centos -i Obligatorio2025/inventories/inventory.ini -m shell -a "rpm -q chrony && systemctl is-active chronyd && systemctl is -enabled chronyd"
Centos | CHANGED | rc=0 >> chrony-4.6.1-2.el9.x86_64
active
enabled
[sysadmin@bastion01 ~]$
```

Tarea 4:

Creación y ejecución de playbooks en Ansible

Se crea directorio *collections* y dentro del mismo el archivo **requirements.yaml**

Se edita requeriments.yaml con la siguiente información:

```
---
collections:
    - name: ansible.posix
    version: 1.5.4

- name: community.general
    version: 9.5.10
```

Se instala "ansible.posix collection" y "community general" necesario para el uso del módulo posix y community en las versiones soportadas para Ansible v 2.14.18

```
ansible-galaxy install -r
Obligatorio2025/collections/requirements.yaml
```

```
[sysadmin@bastion01 ~]$ ansible-galaxy install -r Obligatorio2025/collections/requirements.yaml
Starting galaxy collection install process
Process install dependency map
Starting collection install process
Downloading https://galaxy.ansible.com/api/v3/plugin/ansible/content/published/collections/artifacts/ansible-posix-1.5.4.tar.gz to /home/sysadmin/.ansible/tmp
/ansible-local-2722p9zh0lhn/tmp3ucu_rgo/ansible-posix-1.5.4-k87hddwb
Installing 'ansible.posix:1.5.4' to '/home/sysadmin/.ansible/collections/ansible_collections/ansible/posix'
ansible.posix:1.5.4 was installed successfully
Downloading https://galaxy.ansible.com/api/v3/plugin/ansible/content/published/collections/artifacts/community-general-9.5.10.tar.gz to /home/sysadmin/.ansible
e/tmp/ansible-local-2722p9zh0lhn/tmp3ucu_rgo/community-general-9.5.10-egu0b0ym
Installing 'community.general:9.5.10' to '/home/sysadmin/.ansible/collections/ansible_collections/community/general'
community.general:9.5.10 was installed successfully
```

Se crea archivo ansible.cfg con la ruta del inventario:

```
[defaults]
inventory = ./inventories/inventory.ini
```

Ejecución de playbook nfs_setup.yml

ansible-playbook playbooks/nfs setup.yml -K

Ejecución de playbook hardening.yml

ansible-playbook playbooks/hardening.yml -K

```
[sysadmin@bastion01 Obligatorio2025]$ ansible-playbook playbooks/hardening.yml -K
BECOME password:

PLAY [Playbook para hardening en servidor Ubuntu]

TASK [Gathering Facts]

Ok: [Ubuntu]

TASK (Actualizacion de paquetes]

ok: [Ubuntu]

TASK [Instalacion de paquetes]

ok: [Ubuntu]

TASK [Verificar ufw instalado]

ok: [Ubuntu]

TASK [Bloqueo trafico entrante]

ok: [Ubuntu]

TASK [Permitir SSH]

ok: [Ubuntu]

TASK [No permitir login como root]

ok: [Ubuntu]

TASK [Instalar fail2ban]

ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]

TASK [Instalar fail2ban] ok: [Ubuntu]
```

Bibliografía

- https://docs.ansible.com/ansible/latest/collections/ansible/posix/firewalld_module.html
- https://docs.ansible.com/ansible/latest/collections/ansible/builtin/dnf_module.ht
 ml
- https://docs.ansible.com/ansible/latest/collections/ansible/builtin/systemd_service_module.html
- https://docs.ansible.com/ansible/latest/collections/ansible/builtin/file_module.ht ml
- https://docs.ansible.com/ansible/latest/collections/ansible/builtin/lineinfile_mod-ule.html
- https://docs.ansible.com/ansible/latest/collections/ansible/builtin/apt_module.ht ml
- https://docs.ansible.com/ansible/latest/collections/ansible/builtin/reboot_modul e.html
- https://docs.ansible.com/ansible/latest/collections/community/general/ufw_mod_ ule.html
- https://galaxy.ansible.com/ui/repo/published/community/general/?version=9.5.10
- https://docs.ansible.com/ansible/latest/getting_started/introduction.html
- Chat GPT :
 - Handler para actualizar archivo /etc/export
 - > Tarea de playbook para forzar login ssh con clave publica
 - > Tarea de playbook para bloquear intentos fallidos de login por ssh