

## Actividad A6 – GONZALO OSCO HERNANDEZ

Crear una VM, sobre ella realizar un conjunto de 10 acciones cualesquiera.

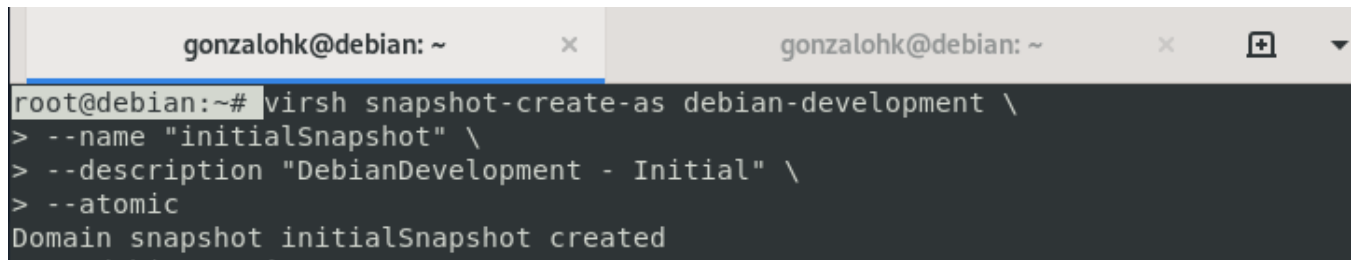
Crear 3 snapshots, que representen 3 hitos dentro de las acciones realizadas.

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### Prime snapshot

Para el ejemplo crearemos un snapshot inicial, que representa la máquina virtual sin la instalación de paquetes adicionales.

```
root@debian:~# virsh snapshot-create-as debian-development \
--name "initialSnapshot" \
--description "DebianDevelopment - Initial" \
--atomic
```

A screenshot of a terminal window with two tabs. The active tab is titled 'gonzalohk@debian: ~'. The terminal shows the command 'virsh snapshot-create-as debian-development \> --name "initialSnapshot" \> --description "DebianDevelopment - Initial" \> --atomic' being entered. The output of the command is 'Domain snapshot initialSnapshot created'.

Instalaremos elementos básicos para establecer una maquina destinada al desarrollo con lenguaje c, incluyendo algunas utilidades básica y el git para el repositorio del código.

Instalando *build-essential* (dpkg-dev, g++, gcc, libc6-dev, libc-dev, make)

```
root@debian:~# apt-get install build-essential
```

Instalación GIT

```
root@debian:~# apt install git
root@debian:~# git config --global user.name "gonzalohk"
root@debian:~# git config --global user.email "goh.acm@gmail.com"
```

Instalación curl

```
root@debian:~# apt install curl
```

### Segundo snapshot

Creamos un segundo snapshot, que representa la máquina virtual con paquetes básicos para la programación en lenguaje c.

```
root@debian:~# virsh snapshot-create-as debian-development \  
> --name "development essentials" \  
> --description "DebianDevelopment - Essentials" \  
> --atomic
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +  
root@debian:~# virsh snapshot-create-as debian-development \  
> --name "development essentials" \  
> --description "DebianDevelopment - Essentials" \  
> --atomic  
Domain snapshot development essentials created
```

Ahora instalaremos elementos iniciales para el desarrollo web con PHP

```
root@debian:~# apt-get install nginx  
root@debian:~# apt install mariadb-server  
root@debian:~# apt install php-fpm php-mysql
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~  
root@debian:~# nginx -v  
nginx version: nginx/1.14.2  
root@debian:~# php --version  
PHP 7.3.14-1~deb10u1 (cli) (built: Feb 16 2020 15:07:23) ( NTS )  
Copyright (c) 1997-2018 The PHP Group  
Zend Engine v3.3.14, Copyright (c) 1998-2018 Zend Technologies  
with Zend OPcache v7.3.14-1~deb10u1, Copyright (c) 1999-2018, by Zend Technolog  
root@debian:~# mariadb --version  
mariadb Ver 15.1 Distrib 10.3.22-MariaDB, for debian-linux-gnu (x86_64) using read
```

```
Welcome to nginx! x +  
192.168.122.42 ...
```

## Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

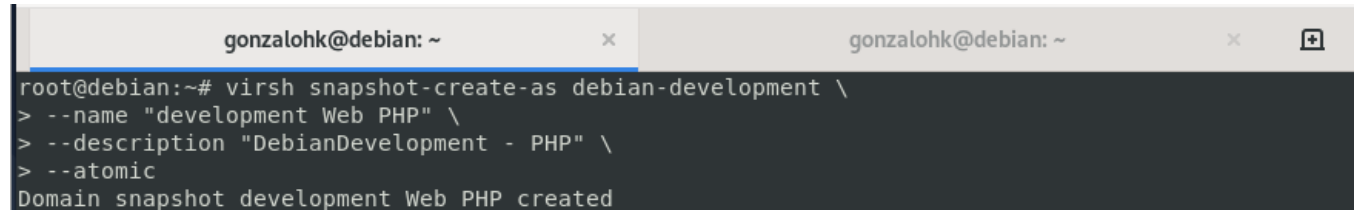
For online documentation and support please refer to [nginx.org](http://nginx.org).  
Commercial support is available at [nginx.com](http://nginx.com).

*Thank you for using nginx.*

## Tercer snapshot

Establecemos un nuevo snapshot para guardar nuestros últimos cambios, luego de instalar un entorno inicial para el desarrollo con PHP.

```
root@debian:~# virsh snapshot-create-as debian-development \  
> --name "development Web PHP" \  
> --description "DebianDevelopment - PHP" \  
> --atomic
```

A terminal window with two tabs. The active tab shows the command 'virsh snapshot-create-as' being executed with various flags to create a snapshot named 'development Web PHP'. The output message 'Domain snapshot development Web PHP created' is displayed at the bottom.

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +  
root@debian:~# virsh snapshot-create-as debian-development \  
> --name "development Web PHP" \  
> --description "DebianDevelopment - PHP" \  
> --atomic  
Domain snapshot development Web PHP created
```

Ahora instalaremos elementos iniciales para el desarrollo con python con su respectivo gestor de paquetes denominado PIP

```
root@debian:~# apt install python  
root@debian:~# apt install python-pip
```

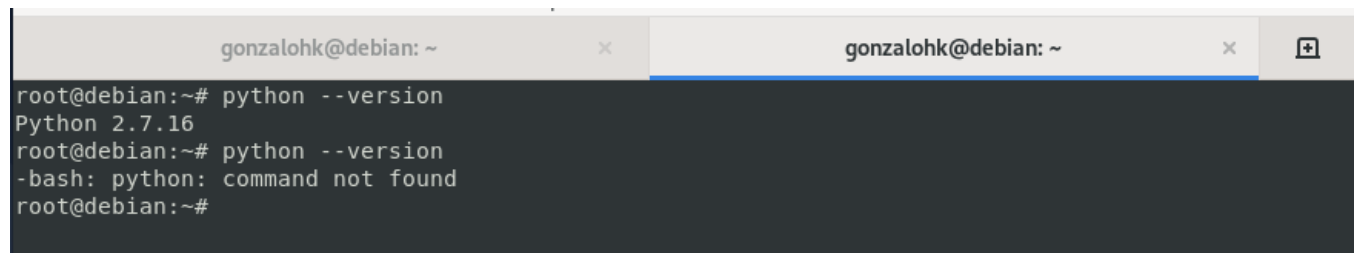
Con PIP instalamos venv

```
root@debian:~# pip install git+https://github.com/pypa/virtualenv.git@master
```

## Revertir Snapshot

Finalmente, revertimos los últimos cambios utilizando el anterior snapshot debido a que decidimos utilizar python 3 en lugar de python 2.

```
root@debian:~# virsh snapshot-revert debian-development --snapshotname "development  
Web PHP"
```

A terminal window with two tabs. The active tab shows the user running 'python --version', which outputs 'Python 2.7.16'. Then, the user runs 'python --version' again, but it fails with the message '-bash: python: command not found'.

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +  
root@debian:~# python --version  
Python 2.7.16  
root@debian:~# python --version  
-bash: python: command not found  
root@debian:~#
```