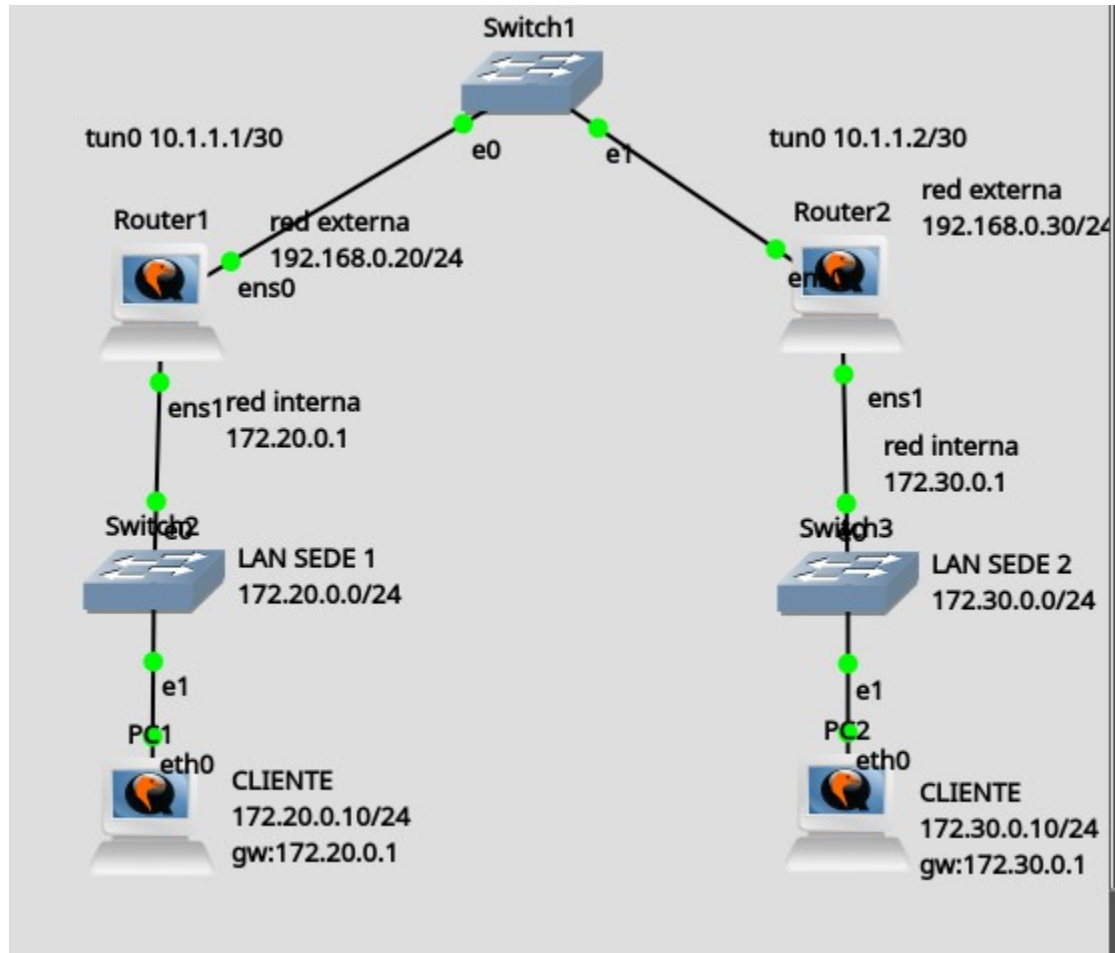


## Sincronización entre equipos por Internet

Esta practica partiremos de la practica anterior ya que tenemos una VPN creada

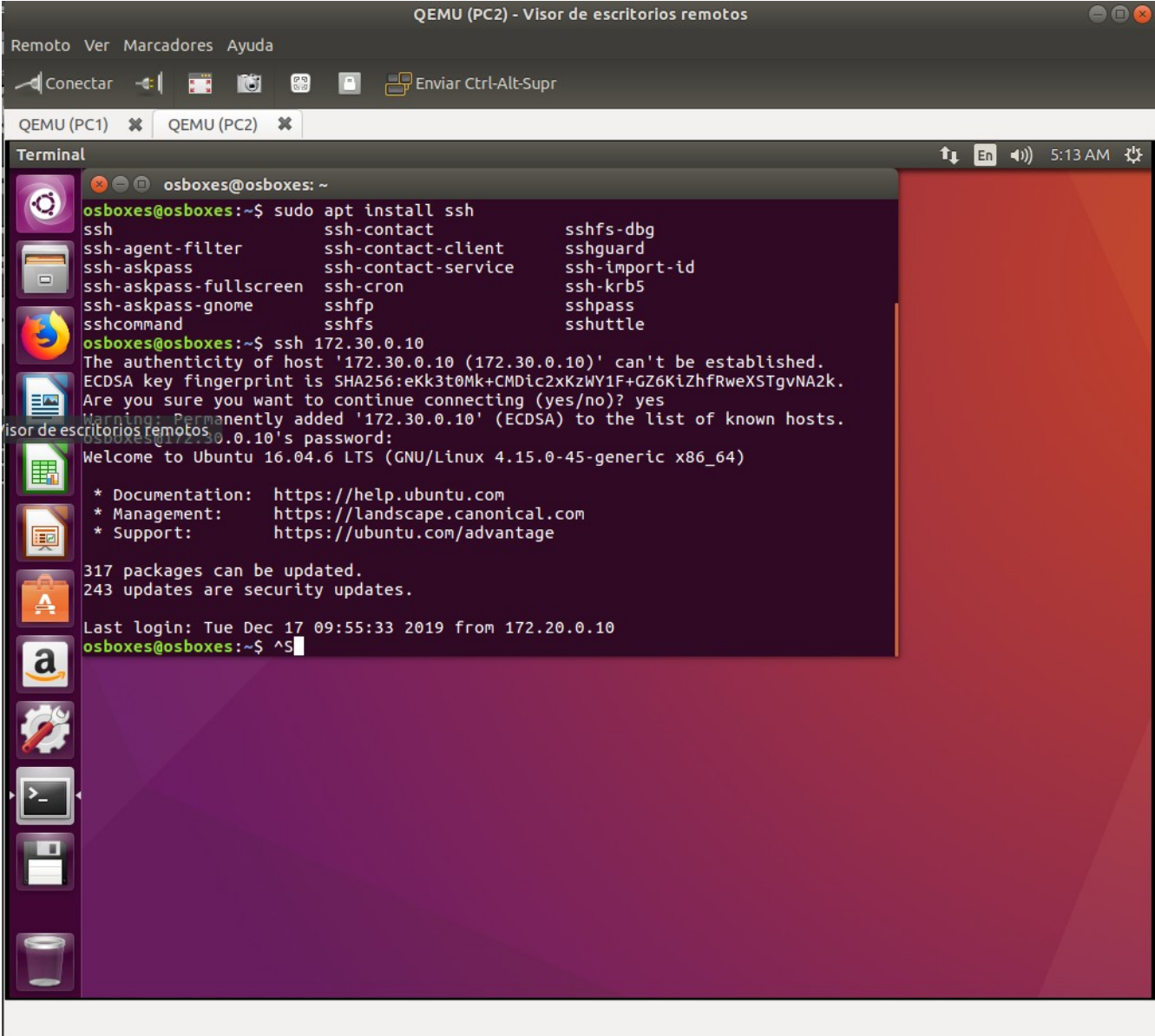
Pero substituiremos las VPCs por Ubuntu Desktop 16 para tener un cliente SSH



La dificultad estará en poder sincronizar los directorios sin necesidad de que nos pida la contraseña ya que lo vamos a programar para que lo ejecute Crontab automáticamente.

## Sincronización entre equipos por Internet

Primeramente instalaremos SSH y probaremos a conestar de PC1 a PC2



The screenshot shows a QEMU (PC2) - Visor de escritorios remotos window. The terminal displays the following commands and output:

```
osboxes@osboxes: ~  
osboxes@osboxes:~$ sudo apt install ssh  
ssh  
ssh-agent-filter  
ssh-askpass  
ssh-askpass-fullscreen  
ssh-askpass-gnome  
sshcommand  
sshfs  
sshfs-dbg  
ssh-contact  
ssh-contact-client  
ssh-contact-service  
ssh-cron  
sshfp  
sshfs  
sshguard  
ssh-import-id  
ssh-krb5  
sshpass  
sshuttle  
osboxes@osboxes:~$ ssh 172.30.0.10  
The authenticity of host '172.30.0.10 (172.30.0.10)' can't be established.  
ECDSA key fingerprint is SHA256:eKk3t0Mk+CMDic2xKzWY1F+GZ6KiZhFRweXSTgvNA2k.  
Are you sure you want to continue connecting (yes/no)? yes  
Warning: Permanently added '172.30.0.10' (ECDSA) to the list of known hosts.  
osboxes@172.30.0.10's password:  
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.15.0-45-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
317 packages can be updated.  
243 updates are security updates.  
  
Last login: Tue Dec 17 09:55:33 2019 from 172.20.0.10  
osboxes@osboxes:~$ ^S
```

## Sincronización entre equipos por Internet

Ahora probaremos a sincronizar un directorio sera el /home/osboxes/carpetasync

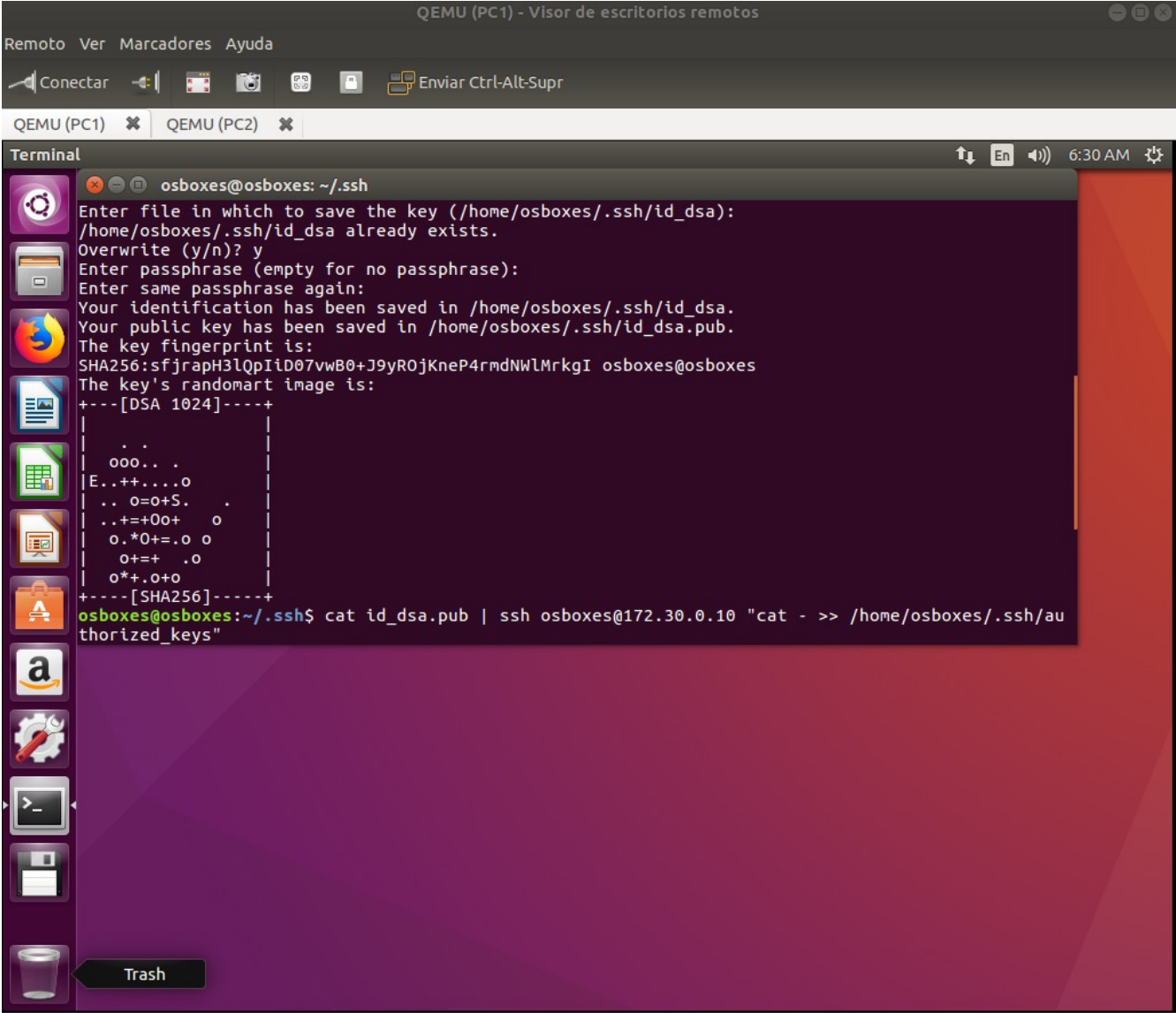
Primero pasaremos el directorio a PC2

```
osboxes@osboxes: ~  
osboxes@osboxes:~$ rsyslogd  
osboxes@osboxes:~$ rsyslogd  
osboxes@osboxes:~$ rsyslogd  
::1: fe00::0: ip6-localhost: osboxes:  
carpetasync/ ff00::0: ip6-localnet: Pictures/  
Desktop/ ff02::1: ip6-loopback: Public/  
Documents/ ff02::2: ip6-mcastprefix: Templates/  
Downloads/ ip6-allnodes: localhost: Videos/  
examples.desktop ip6-allrouters: Music/  
osboxes@osboxes:~$ rsysync -v -e ssh /home/osboxes/  
/home/osboxes/carpetasync/ /home/osboxes/Music/  
/home/osboxes/Desktop/ /home/osboxes/Pictures/  
/home/osboxes/Documents/ /home/osboxes/Public/  
/home/osboxes/Downloads/ /home/osboxes/Templates/  
osboxes@osboxes:~$ rsysync -v -e ssh /home/osboxes/carpetasync/ osboxes@172.30.0.10:/home/osboxes/carp  
etasync/  
osboxes@172.30.0.10's password:  
skipping directory .  
created directory /home/osboxes/carpetasync  
  
sent 16 bytes received 60 bytes 16.89 bytes/sec  
total size is 0 speedup is 0.00  
osboxes@osboxes:~$
```

Una vez creado confirmamos que funciona.

## Sincronización entre equipos por Internet

Vamos a ver lo que no nos pida la contraseña cada vez que utilicemos el SSH para eso deberemos que crear la clable del PC1 y pasarselo a PC2 para que este en el directorio de las claves autorizadas del PC2 para que nos pida la contraseña en PC1



The screenshot shows a QEMU (PC1) - Visor de escritorios remotos window. The terminal displays the following commands and output:

```
osboxes@osboxes: ~/.ssh
Enter file in which to save the key (/home/osboxes/.ssh/id_dsa):
/home/osboxes/.ssh/id_dsa already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/osboxes/.ssh/id_dsa.
Your public key has been saved in /home/osboxes/.ssh/id_dsa.pub.
The key fingerprint is:
SHA256:sfjrapH3lQpIiD07vwB0+J9yR0jKneP4rmdNWLmrkgI osboxes@osboxes
The key's randomart image is:
+---[DSA 1024]-----+
|
| . .
| ooo..
|E..++....o
|.. o=o+S.
|..+=+0o+ o
|o.*0+=.o o
|o+=+ .o
|o*+.o+o
+----[SHA256]-----+
osboxes@osboxes:~/.ssh$ cat id_dsa.pub | ssh osboxes@172.30.0.10 "cat - >> /home/osboxes/.ssh/authorized_keys"
```

The terminal window has a sidebar with various application icons (terminal, file manager, web browser, etc.) and a 'Trash' icon at the bottom. The top bar shows 'Remoto Ver Marcadores Ayuda' and 'Conectar' button. The bottom bar shows 'QEMU (PC1) QEMU (PC2)' and system status icons.

Ahora no nos debería de pedir contraseña el PC2 cada vez que sincronicemos con Rsync.

Pero el segundo punto no me funcionaba.

## Sincronización entre equipos por Internet

Existe otra manera de pasarle añadirlo al PC2

```
osboxes@osboxes:~/.ssh$ ssh-copy-id osboxes@172.30.0.10
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are
already installed
/usr/bin/ssh-copy-id: INFO: 2 key(s) remain to be installed -- if you are prompted now it is to
install the new keys
osboxes@172.30.0.10's password:

Number of key(s) added: 2

Now try logging into the machine, with:  "ssh 'osboxes@172.30.0.10'"
and check to make sure that only the key(s) you wanted were added.
```

Y así no nos pide ya contraseña

```
osboxes@osboxes:~/.ssh$ ssh -l osboxes 172.30.0.10
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.15.0-45-generic x86_64)

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

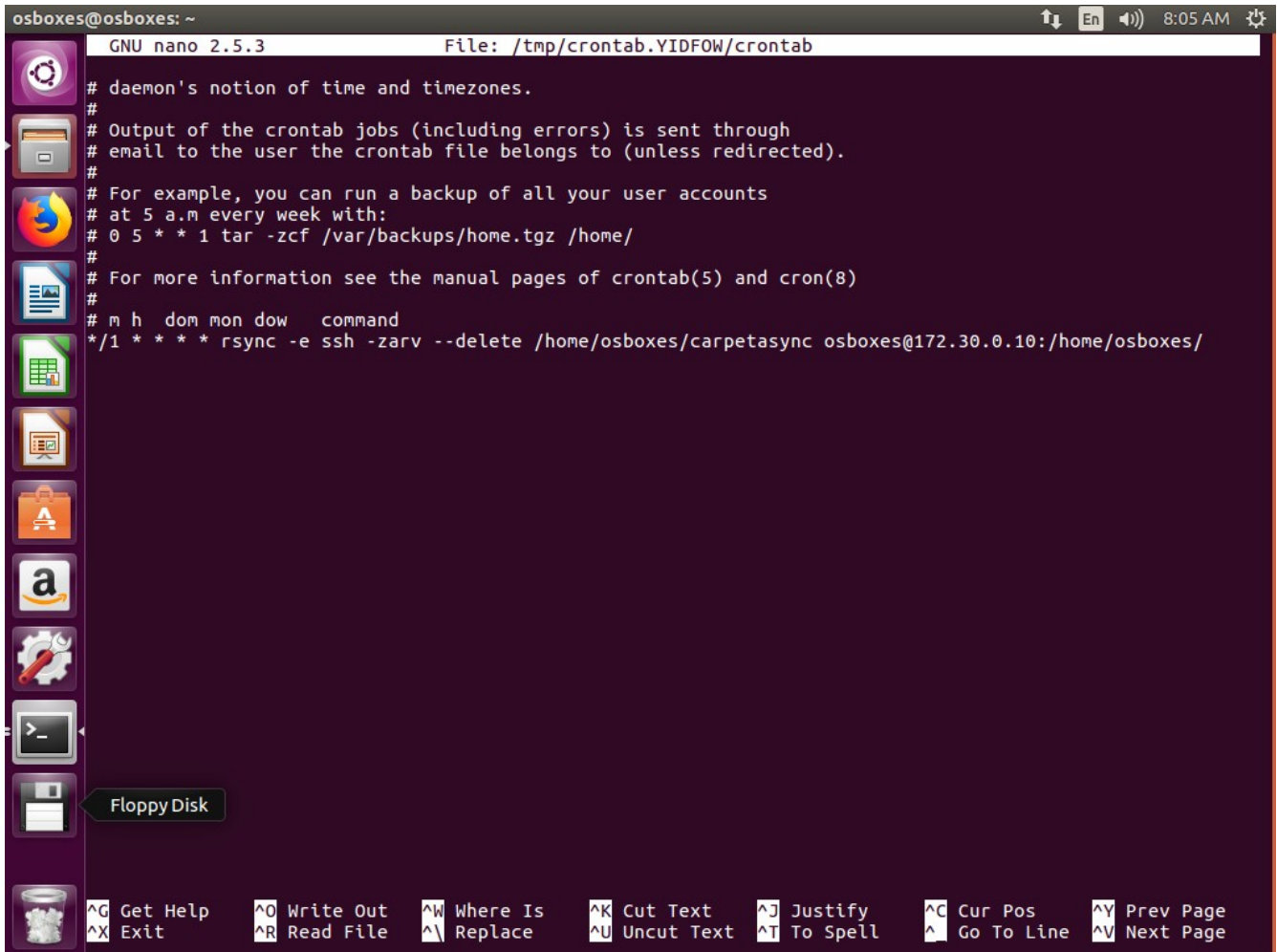
317 packages can be updated.
243 updates are security updates.

Last login: Wed Dec 18 06:37:55 2019 from 172.20.0.10
osboxes@osboxes:~$
```

Ya podemos programar el crontab del PC1 por que no nos pide contraseña para realizar tareas desatendidas mediante SSH.

## Sincronización entre equipos por Internet

Lo programo de la siguiente manera

A screenshot of a terminal window titled 'osboxes@osboxes: ~'. The window shows the GNU nano 2.5.3 text editor editing a file named '/tmp/crontab.YIDFOW/crontab'. The editor's content includes comments about daemon's notion of time, output redirection, and a backup example. The final line is a cron job: '\*1 \* \* \* \* rsync -e ssh -zarv --delete /home/osboxes/carpetasync osboxes@172.30.0.10:/home/osboxes/'. The terminal has a dark purple background with a sidebar on the left containing various application icons. At the bottom, there is a 'FloppyDisk' icon and a row of keyboard shortcuts for nano editor functions like Get Help, Write Out, Where Is, Cut Text, Justify, Cur Pos, Prev Page, Exit, Read File, Replace, Uncut Text, To Spell, Go To Line, and Next Page.

```
osboxes@osboxes: ~
GNU nano 2.5.3      File: /tmp/crontab.YIDFOW/crontab

# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow   command
*/1 * * * * rsync -e ssh -zarv --delete /home/osboxes/carpetasync osboxes@172.30.0.10:/home/osboxes/

^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify      ^C Cur Pos      ^Y Prev Page
^X Exit          ^R Read File    ^_ Replace      ^U Uncut Text   ^T To Spell     ^_ Go To Line   ^V Next Page
```

Pero el problema que tengo es que los cambios que hago en el directorio modifica lo del PC2 pero al revés no para ello sería necesario utilizar `Osync`