

How to mount a new machine

From AudioWiki

This pretends show you how to mount a new machine taking the SO from other operative machine. It can be useful when a machine stops working due to a SO critical crash.

The explanation shows a real case in which lab1 machine suffered a collapse in its SO and had been replaced with a lab2's SO copy. It will explain all steps to get the goal of turn on the collapsed machine

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Step by step

First, we get into S8 machine with ssh command and working in sudo mode:

```
$ ssh user_name@smartveu.upc.edu -X -p 2222
$ sudo -s
```

Creating a snapshot from a operative machine

```
$ lvcreate -s LSIZE -n /dev/virt0/snapshotName /dev/virt0/lab2
```

Where **SIZE** can be 300M or 500M (500 Mega Bytes), for example.

You can use:

```
$ lvcreate -s L300M -n /dev/virt0/snapshotName /dev/virt0/lab2
```

Remember unmount and remove snapshot after finish the whole task.

Mounting the snapshot

```
$ mount /dev/virt0/snapshotName /mnt/snapshots/lab2
```

Copying lab2's snapshot to lab1 machine

Step 1)

We have to check that mounting point of lab2's snapshot is clean of any kind of user's data. To get it, before we copy all the content in /mnt/snapshots/lab2 we list home and work directories and them should be empty. Next commands sequence is used to check it:

```
$ cd /mnt/snapshots/lab2
$ ls (any result should be shown)
$ cd home
$ ls (any result should be shown)
$ cd database
$ ls (any result should be shown)
```

Step 2)

Before copy whole data from /mnt/snapshots/lab2 in lab1 machine we must be sure that lab1 machine is empty so, we have to remove all data in lab1 machine:

```
$ cd /mnt/pool/vms/lab/lab1
$ rm -rf *
```

If all goes well you can continue with Step 3, but in that moment we had some problems during the execution of **rm** command.

lab1 machine was in use and some files couldn't be removed. This problem was due to NFS daemon was running and using files from lab1 machine. To solve it lab1 machine must be removed from /etc/exports file.

```
$ vim /etc/exports
```

And comment next line:

```
/mnt/pool/vms/lab/lab1      192.168.123.221(rw,no_root_squash,no_subtree_check)
```

After this we have to restart NFS daemon:

```
$ /etc/init.d/nfs-kernel-server restart
```

And we can test operation's success with:

```
$ cd \
$ umount /mnt/pool/vms/lab1
$ mount /mnt/pool/vms/lab1
$ cd -
```

If we don't get a error message with **umount** command it will be successful.

Step 3)

Copy whole data from lab2 in lab1:

```
$ cp -Rp /mnt/snapshots/lab2/* /mnt/pool/vms/lab/lab1
```

Step 4)

If you didn't have problems in Step 2 you continue with **Removing 70-persistent-net.rules**. Else, if you had problems with NFS you need to put lab1 into it again and restart NFS daemon. First, we uncomment next line:

```
/mnt/pool/vms/lab/lab1 192.168.123.221(rw,no_root_squash,no_subtree_check)
```

So we open exports file and modify it:

```
$ vim /etc/exports
```

And then, restart NFS:

```
$ /etc/init.d/nfs-kernel-server restart
```

Removing 70-persistent-net.rules file

```
$ vim /srv/pool/vms/lab/lab1/etc/hostnames
```

We have to put **lab1** instead of **lab2**. This files shows the machine's name.

Changing host name

Open hostnames file:

```
$ vim /mnt/pool/vms/lab1/lab1/etc/hostnames
```

And change **lab2** by **lab1**. This file shows machine's name.

Selecting correct kernel in pxelinux.cfg

If we execute:

```
$ cat /srv/tftp/pxelinux.cfg/lab1
```

We can see that lab1 machine was using **vmlinuz** kernel and **initrd.ini** as shown below:

```
PROMPT 0
```

```

TIMEOUT 0
NOESCAPE 1
ALLOWOPTIONS 0
DEFAULT linux
MENU TITLE PXE Network boot menu
LABEL linux
    kernel vmlinux
    append initrd=initrd.img ramdisk_size=14332 root=/dev/nfs nfsroot=192.168.123.1:/srv/tftp/lab1
    ip=192.168.123.221:192.168.123.1:192.168.123.1:255.255.255.0:::none rw --

```

But now, we have a exactly copy of lab2 in lab1, therefore we must put the correct kernel and boot image for lab1. To get it we put the same parameters than lab2, we execute:

```
$ cat /srv/tftp/pxelinux.cfg/lab2
```

And we can see that lab2 machine is using another image and image boot diferent to lab1:

```

PROMPT 0
TIMEOUT 0
NOESCAPE 1
ALLOWOPTIONS 0
DEFAULT linux
MENU TITLE PXE Network boot menu
LABEL linux
    kernel vmlinux-3.2.0-4-amd64
    append initrd=initrd.img-3.2.0-4-amd64 ramdisk_size=14332 root=/dev/nfs nfsroot=192.168.123.1:/srv/tftp/lab2
    ip=192.168.123.222:192.168.123.1:192.168.123.1:255.255.255.0:::none rw --

```

We edit the file:

```
$ cat /srv/tftp/pxelinux.cfg/lab1
```

And modify it to looks like this:

```

PROMPT 0
TIMEOUT 0
NOESCAPE 1
ALLOWOPTIONS 0
DEFAULT linux
MENU TITLE PXE Network boot menu
LABEL linux
    kernel vmlinux-3.2.0-4-amd64
    append initrd=initrd.img-3.2.0-4-amd64 ramdisk_size=14332 root=/dev/nfs nfsroot=192.168.123.1:/srv/tftp/lab2
    ip=192.168.123.221:192.168.123.1:192.168.123.1:255.255.255.0:::none rw --

```

Testing lab1 machine

We must test that lab1 machine is working well. So we connect it via ssh first we have to connect to hq machine:

```

$ ssh user_name@smartveu.upc.edu
$ (introduce pass)
$ ssh user_name@lab1
$ (introduce pass)

```

If all goes well, we will connect with lab1 machine and see the propmt like:

```
user_name@lab1:~$
```

Umounting the snapshot

```
$ umount /mnt/snapshots/lab2
```

Removing the snapshot

```
$ lvremove /dev/virt0/snapshotName
```

Troubleshooting

This time we had problems with NFS but you probably won't have them or will have other ones.

If the problem grow up with **rm** command, it's common that some actions were using the machine and you need stop it.

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