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The Perfect Xen Setup For Debian And Ubuntu - Page 5

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4.2 Create And Start The First Virtual Machine

Now we create our first virtual machine, *vm01*, by making a copy of our template:

```
cp -pf /vserver/images/vm_base.img /vserver
/images/vm01.img
cp -pf /vserver/images/vm_base-swap.img
/vserver/images/vm01-swap.img
```

Then we create a Xen configuration file for *vm01*, */etc/xen/vm01-config.sxp*:

```
name = "vm01"
kernel = "/boot/vmlinuz-2.6.11.12-xenU
"
root = "/dev/hda1"
memory = 128
disk = ['file:/vserver/images/vm01.im
g,hda1,w','file:/vserver/images/vm01-
swap.img,hda2,w']

# network
nics=1
dhcp = "off"
ip="192.168.0.101"
netmask="255.255.255.0"
gateway="192.168.0.1"
hostname="vm01.example.com"
```



Tutorial Info

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Tags: virtualization, debian, ubuntu, xen

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```
extra="3"
```

In *memory* you specify the RAM you want to allocate to that virtual machine (here: *128 MB*). In *disk* you specify which images to use and how to mount them (i.e., under which partition, e.g. *hda1*). This **must** correspond to the settings in the image's */etc/fstab* file! In the network settings we tell *vm01* that its IP address is *192.168.0.101* (the main machine's (*dom0*) IP address is *192.168.0.100*), and what *hostname* it has.

If you want *vm01* to start automatically at the next boot of the system, then do this:

```
ln -s /etc/xen/vm01-config.sxp /etc/xen/auto
```

Now let's start *vm01*:

```
xm create -c /etc/xen/vm01-config.sxp
```

If nothing's wrong, *vm01* should come up without problems, and you should be able to login. If you installed Xen from the sources, by running *iptables -L* you should see that *iptables* is available on *vm01*. To leave *vm01*'s shell, type *CTRL+J* if you are at the console, or *CTRL+5* if you're using PuTTY. From the outside you should be able to connect to *192.168.0.101* via *SSH*.

Back on *dom0*'s shell, you can shutdown *vm01* by running

```
xm shutdown vm01
```

Here are some other Xen commands:

```
xm create -c /path/to/config - Start a virtual machine.
xm shutdown <name> - Stop a virtual machine.
xm list - List all running systems.
xm console <name> - Login on a virtual machine.
xm help - List of all commands.
```

Now you can reboot the main system to see if *vm01* comes up automatically (if you created the symlink in */etc/xen/auto*):

```
shutdown -r now
```

4.3 Creating And Customizing Further Virtual Machines

You can create further virtual machines simply by copying the image template:

```
cp -pf /vserver/images/vm_base.img /vserver
/images/vm02.img
cp -pf /vserver/images/vm_base-swap.img
/vserver/images/vm02-swap.img
```

Then you have to create a Xen configuration file, e.g. `/etc/xen/vm02-config.sxp`:

```
name = "vm02"
kernel = "/boot/vmlinuz-2.6.11.12-xenU
"
root = "/dev/hda1"
memory = 64
disk = ['file:/vserver/images/vm02.im
g,hda1,w', 'file:/vserver/images/vm02-
swap.img,hda2,w']

# network
nics=1
dhcp = "off"
ip="192.168.0.102"
netmask="255.255.255.0"
gateway="192.168.0.1"
hostname="vm02.example.com"

extra="3"
```

Start the machine:

```
xm create -c /etc/xen/vm02-config.sxp
```

and create a symlink, if you want to start the virtual machine at boot time:

```
ln -s /etc/xen/vm02-config.sxp /etc/xen/auto
```

Now you can log into each machine, e.g. via SSH, and configure it as if it was a normal system.

You can create as many virtual machines as you like. Your hardware's the limit!

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I had to create the hda2 entry under /dev in order to have the swap (I use the Xen 3.0 version):
mknod --mode=666 /dev/hda2 b 3 2 (for example)
Anyway, thanks a lot for this wonderful work!!


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