**Step 1: Install Domain0 Operating System**

We prefer you install **Debian 7 (Huixiang Chen, debian-live-7.0.0-amd64-gnome-desktop.iso)**

**Step 2: Install Prerequisites Software**

1. modify the /etc/apt/sources.list like this:

# deb cdrom:[Debian GNU/Linux 6.0.4 \_Squeeze\_ - Official amd64 CD Binary-1 20120128-13:42]/ squeeze main

#deb cdrom:[Debian GNU/Linux 6.0.4 \_Squeeze\_ - Official amd64 CD Binary-1 20120128-13:42]/ squeeze main

deb http://ftp.us.debian.org/debian/ squeeze main non-free contrib

deb-src http://ftp.us.debian.org/debian/ squeeze main non-free contrib

deb http://security.debian.org/ squeeze/updates main

deb-src http://security.debian.org/ squeeze/updates main

# squeeze-updates, previously known as 'volatile'

deb http://ftp.us.debian.org/debian/ squeeze-updates main

deb-src http://ftp.us.debian.org/debian/ squeeze-updates main

**(2)** apt-get update

**(3)** apt-get upgrade

**(4)** apt-get install git-core mercurial screen tcpdump minicom ntp ntpdate tree debootstrap bcc bin86 gawk bridge-utils iproute libcurl3 libcurl4-openssl-dev bzip2 module-init-tools transfig tgif texinfo pciutils-dev build-essential make gcc libc6-dev zlib1g-dev python python-dev python-twisted libncurses5-dev patch libvncserver-dev libjpeg62-dev iasl libbz2-dev e2fslibs-dev uuid-dev libtext-template-perl autoconf debhelper debconf-utils docbook-xml docbook-xsl dpatch xsltproc rcconf bison flex gcc-multilib ocaml-findlib libyajl-dev yajl-tools libglib2.0-dev libsdl-ttf2.0-0 libsdl-ttf2.0-dev

**(5)** apt-get clean

**Step 3: Download and Install Xen 4.1.2 from Xensource Repo**

**(1)** First make sure that "hgext.mq=" is uncommented in /etc/mercurial/hgrc.d/hgext.rc

**(2)** cd /usr/src

**(3)** hg clone -r RELEASE-4.1.2 [http://xenbits.xen.org/xen-4.1-testing.hg xen-4.1.2](http://xenbits.xen.org/xen-4.1-testing.hg%20xen-4.1.2)

**(4)** wget http://remusha.wikidot.com/local--files/configuring-and-installing-remus/01\_remus\_compression.patch -O /tmp/01\_remus\_compression.patch

**(5)** wget http://remusha.wikidot.com/local--files/configuring-and-installing-remus/02\_persistent\_bitmap.patch -O /tmp/02\_persistent\_bitmap.patch

**(6)** wget http://remusha.wikidot.com/local--files/configuring-and-installing-remus/03\_config\_fixups.patch -O /tmp/03\_config\_fixups.patch

**(7)** wget http://remusha.wikidot.com/local--files/configuring-and-installing-remus/04\_stats\_fix.patch -O /tmp/04\_stats\_fix.patch

**(8)** wget http://remusha.wikidot.com/local--files/configuring-and-installing-remus/05\_timeouts.patch -O /tmp/05\_timeouts.patch

**(9)** wget http://remusha.wikidot.com/local--files/configuring-and-installing-remus/06\_qdisc\_3.4\_fix.patch -O /tmp/06\_qdisc\_3.4\_fix.patch

**(10)** make sure that "hgext.mq=" is uncommented in /etc/mercurial/hgrc.d/hgext.rc

**(11)** cd /usr/src/xen-4.1.2

**(12)** hg qinit

**(13)** hg qimport /tmp/01\_remus\_compression.patch

**(14)** hg qpush

**(15)** hg qimport /tmp/02\_persistent\_bitmap.patch

**(16)** hg qpush

**(17)** hg qimport /tmp/03\_config\_fixups.patch

**(18)** hg qpush

**(19)** hg qimport /tmp/04\_stats\_fix.patch

**(20)** hg qpush

**(21)** hg qimport /tmp/05\_timeouts.patch

**(22)** hg qpush

**(23)** hg qimport /tmp/06\_qdisc\_3.4\_fix.patch

**(24)** hg qpush

**(25)** make clean

**(26)** make install-xen

**(27)** make tools

**(28)** make install-tools PYTHON\_PREFIX\_ARG=

**(29)** cd /usr/src/xen-4.1.2/tools/ioemu-remote

**(30)** wget http://remusha.wikidot.com/local--files/configuring-and-installing-remus/drbd-hvm-fix

**(31)** patch -p1 <drbd-hvm-fix

**(32)** cd /usr/src/xen-4.1.2

**(33)** make install-tools

## **Step 4: Dom0 and DomU kernel**

1. Download linux-3.2 kernel: apt-get install linux-source-3.2
2. configure the kernel according to this configuration: <http://wiki.xenproject.org/wiki/Mainline_Linux_Kernel_Configs> You can also find the configuration file on my github: <https://github.com/huixiangufl/linux-kernel-3.2.68-config>
3. make
4. make modules\_install
5. make install
6. mkinitramfs -o /boot/initrd.img-3.2.68
7. Download linux-2.6-xen kernel: apt-get install linux-source-2.6-xen
8. Make

When appeared the following error, please rm include/asm, rm –rf include/asm

root@SolarNode2:/usr/src/linux-2.6-xen# make

CHK include/linux/version.h

CHK include/linux/utsrelease.h

ERROR: include/asm is a directory but a symlink was expected

make: \*\*\* [include/asm] Error 1

1. Make install
2. make modules\_install install
3. mkinitramfs -o /boot/initrd.img-2.6.32.40 2.6.32.40

## **Step 5: Add Xen boot entry to Grub**

## Update the grub using the configuration in this link: We are going to change the order of the operating systems so that our hypervisor is the default option. By executing the below command we are moving the hypervisor to a higher priority than default Linux so that it gets the first position in the boot menu.

## **dpkg-divert --divert /etc/grub.d/08\_linux\_xen --rename /etc/grub.d/20\_linux\_xen**

## We then generate the /boot/grub/grub.cfg file by running the command below:

## **update-grub**

## (1) Create file on /etc/grub.d/08\_xen and modify the UUID and xen.gz **(If you installed your linux OS in the second partition,change hd0 to hd2,but you’d better install your OS in the first partition )**

#!/bin/sh

exec tail -n +3 $0

menuentry "Xen Unstable / Debian Squeeze kernel 2.6.32.40" {

insmod ext2

set root='(hd0,1)'

multiboot (hd0,1)/boot/xen.gz dummy dom0\_mem=512M

module (hd0,1)/boot/vmlinuz-2.6.32.40 dummy root=UUID=8e339522-dab5-4a81-8066-c41cc3908a15 ro quiet console=tty0 nomodeset

module (hd0,1)/boot/initrd.img-2.6.32.40

}

(2) chmod -x /etc/grub.d/20\_linux\_xen

(3) chmod 755 /etc/grub.d/08\_xen

(4) update-grub2

(5) update-rc.d xencommons defaults 19 18

(6) update-rc.d xend defaults 20 21

(7) update-rc.d xendomains defaults 21 20

(9) Reboot

**Red font indicates that it doesn’t work in our environment. （红色的部分代表不work的，不要那样配置）**

**安装后会产生的问题参照这个链接解决：**

[**http://blog.csdn.net/jinzhuojun/article/details/8570566**](http://blog.csdn.net/jinzhuojun/article/details/8570566)

**Install xen-tools:**

sudo apt-get install xen-tools

**Next install libvirt, virt-manager:**

sudo apt-get install libvirt-bin libvirt-dev virt-manager

**libvirtError: unable to connect to 'localhost:8000': Connection refused**

**Solution:** I have found a workaround:

In the /etc/xen/xend-config.sexp file, find and uncommont the lines:

(xend-unix-server no)

(xend-unix-path /var/lib/xend/xend-socket)

and change the "(xend-unix-server no)" line to "yes":

(xend-unix-server yes)

Then reboot.

I request Ubuntu package maintainers add some kind of installation task to the "libvirt" or "virt-manager" package that automatically modifies the "/etc/xen/xend-config.sexp" file so long as the file has not been modified since the time it was installed.

[**https://bugs.launchpad.net/ubuntu/+source/virt-manager/+bug/915954**](https://bugs.launchpad.net/ubuntu/+source/virt-manager/+bug/915954)