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
(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

(1) Download linux-2.6-xen kernel: apt-get install linux-source-2.6-xen
(2) 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
```
(3) Make install
(4) make modules_install install
(5) mkinitramfs -o /boot/initrd.img-2.6.32.40 2.6.32.40

Step 5: Add Xen boot entry to Grub

(1) 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

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