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## Install Xen 3 from Scratch on Debian Sarge using Backports

Introduction to Backports <http://en.wikipedia.org/wiki/Backport>

Debian Backports are created to allow newer software run on existing systems.

- This How-to is the EXACT same as is outlined here: <http://www.debian-administration.org/articles/423>

### Add in Backports

```
vi /etc/apt/sources.list
```

```
deb http://www.backports.org/debian/ sarge-backports main
```

```
vi /etc/apt/preferences
```

```
Package: *  
Pin: release a=sarge-backports  
Pin-Priority: 200
```

```
Package: xen-3.0  
Pin: release a=sarge-backports  
Pin-Priority: 999
```

```
Package: linux-2.6  
Pin: release a=sarge-backports  
Pin-Priority: 999
```

```
Package: xen-tools  
Pin: release a=sarge-backports  
Pin-Priority: 999
```

```
Package: udev  
Pin: release a=sarge-backports  
Pin-Priority: 999
```

## XenDebianBackports

```
Package: lsb
Pin: release a=sarge-backports
Pin-Priority: 999
```

```
Package: module-init-tools
Pin: release a=sarge-backports
Pin-Priority: 999
```

```
Package: grub
Pin: release a=sarge-backports
Pin-Priority: 999
```

Note that for Backports, we can specify which packages can be used from backports. The dependencies are figured out from Documents and trial & error.

### Now - Update, Dist-upgrade to receive backports and get packages.

```
apt-get update && apt-get dist-upgrade
```

```
apt-get install grub/sarge-backports
apt-get install makedev/sarge-backports
apt-get install lsb-base/sarge-backports
apt-get upgrade
```

```
apt-get install xen-hypervisor-3.0-i386 xen-utils-3.0
apt-get install linux-image-2.6.16-2-xen-686
//or if your on AMD:
#apt-get install linux-image-2.6.16-2-xen-k7
//or if your on a Hetzner Server (see bottom of page):
#apt-get install linux-image-2.6.16-1-xen-k7
```

```
dpkg --purge hotplug
apt-get install bridge-utils xen-tools/sarge-backports sysfsutils
mv /lib/tls/ /lib/tls.disabled
```

### Make initial RAM Disk Module to LOAD Xen Kernel

```
cd /boot
mkinitramfs -o /boot/initrd.img-2.6.16-2-xen-686 2.6.16-2-xen-686
//or if your on a Hetzner Server - make appropriate change to:
#mkinitramfs -o /boot/initrd.img-2.6.16-1-xen-k7 2.6.16-1-xen-k7
```

### Configure Grub and Xen Config

Note:

- Grub can be configured to allow a "fallback" option, whereby if the server hangs on kernel load etc. when it reboots, it will boot a second grub entry etc.
- Please make necessary adjustments if your using SATA,RAID, or using a Hetzner Server

```
vi /boot/grub/menu.lst
```

Add in Backports

## XenDebianBackports

```
title Xen 3.0 / XenLinux 2.6-686
kernel /boot/xen-3.0-i386.gz
module /boot/vmlinuz-2.6.16-2-xen-686 root=/dev/md0 ro
module /boot/initrd.img-2.6.16-2-xen-686
```

### My Current Grub Config

```
title Xen 3.0 / XenLinux 2.6-k7
root      (hd0,1)
kernel    /boot/xen-3.0-i386.gz dom0_mem=128000
module    /boot/vmlinuz-2.6.16-1-xen-k7 root=/dev/md0 ro panic=10
module    /boot/initrd.img-2.6.16-1-xen-k7
savedefault  fallback
boot
```

```
vi /etc/xen/xend-config.sxp
```

```
#xend-relocation-server yes
(vif-script vif-bridge)
(dom0-min-mem 128)
#(network-script network-dummy)
#(xend-relocation-hosts-allow '^localhost$')
(network-script network-bridge)
```

## Have Xend Daemon start on System start

```
invoke-rc.d xend restart
```

## Reboot into Dom0

```
reboot
```

All going well the server should boot up using a Xen modified Kernel. It should pick up sata drivers and boot off them. If the system boots - excellent. Type **xm list** to see if dom0 is listed and running.

## If it fails

- Check grub to see if it actually boots the Xen kernel or a standard one.
- Check to see if the files in grub actually match the files located in /boot
- Make sure grub is installed correctly to the Hard Disk.
- Make sure that it boots off the correct partition, e.g. (hd0,1) or (hd0,0)
- It will not work with RAID for the moment.
- Go back and follow the initial how-to on debian administration at:  
<http://www.debian-administration.org/articles/423>
- Go back and choose a different Xen Kernel: apt-get install linux-image-2.6.16-1-xen-k7

## Links and Other How-To's

The BackPorts URL -> <http://www.debian-administration.org/articles/423>

Debian Sid & Xen -> <http://www.debian-administration.org/articles/396>

Dapper Drake & Xen -> [http://www.howtoforge.com/xen\\_3.0\\_ubuntu\\_dapper\\_drake](http://www.howtoforge.com/xen_3.0_ubuntu_dapper_drake)

HowtoForge - Debian & Xen -> [http://www.howtoforge.org/perfect\\_setup\\_xen3\\_debian\\_p5](http://www.howtoforge.org/perfect_setup_xen3_debian_p5)

RemoteInstallofXen -> [http://www.option-c.com/xwiki/Xen\\_at\\_ServerBeach](http://www.option-c.com/xwiki/Xen_at_ServerBeach)

### More Useful URLS

[http://66.249.93.104/translate\\_c?hl=en&ie=UTF-8&oe=UTF-8&langpair=de%7Cen&u=http://www.pug.org/index.php/Xe](http://66.249.93.104/translate_c?hl=en&ie=UTF-8&oe=UTF-8&langpair=de%7Cen&u=http://www.pug.org/index.php/Xe)

<http://translate.google.com/translate?u=http%3A%2F%2Fforum.hetzner.de%2Fwbb2%2Fthread.php%3Fthreadid%3D698>

<http://translate.google.com/translate?u=http%3A%2F%2Fforum.hetzner.de%2Fwbb2%2Fthread.php%3Fthreadid%3D696>

<http://www.eecs.iu-bremen.de/wiki/index.php/Xen>

## Summary of Solution to getting Xen (dom0) working on Hetzner

"use xen 3.0.1 (NOT 3.0.2) kernel has I apart from which in the Howto stood actually only the VIA sata drivers in kernel kompieliert, are unfortunately only with the CONSOLE of more hetzner draufgekommen where the problem is."

So working off backports on <http://www.debian-administration.org/articles/423>

It was a case of:

```
apt-get remove linux-image-2.6.16-2-xen-k7  
apt-get install linux-image-2.6.16-1-xen-k7
```

yey :-)

## LILLO & XEN & GRUB

On my hetzner server I encountered great difficulty in getting "grub" working. At one stage, only LILO would boot my server. Although I did finally manage to get grub working after a hetzner admin looked into it, I researched the possibility of booting the XEN modified Kernel with LILO.

Get, compile and install "mbootpack".

```
/root/mboot/mbootpack -o /boot/mboot-2.6.16-xen -m /boot/vmlinuz-2.6.16-2-xen-k7 -m /boot/initrd.img  
mbootpack -o mboot-2.6.16-xen -m vmlinuz-2.6.16-2-xen-686 -m initrd.img-2.6.16-2-xen-686 ./xen-3.0-i
```

## XenDebianBackports

But the modified Bootpack would not boot correctly. It appears from the documentation that Xen doesn't boot using Lilo.

<http://www.tjd.phlegethon.org/software/>

---

### Here was the planned method of moving from LILO to GRUB:

```
apt-get install grub
grub-install /dev/sda
update-grub
apt-get remove lilo
```

```
grub-install /dev/sda
```

Special menu.lst config to Allow for FALLBACK ->

```
default          saved
fallback         1

### END DEBIAN AUTOMAGIC KERNELS LIST

title Xen 3.0 / XenLinux 2.6-686
kernel /boot/xen-3.0-i386.gz
module /boot/vmlinuz-2.6.16-2-xen-686 root=/dev/md0 ro
module /boot/initrd.img-2.6.16-2-xen-686
savedefault      fallback
```

Make 1 option default.

```
grub-set-default 0
```

// 0 - first, 1 - second safe, 2 - our entry cat /boot/grub/default //to check