

Install Debain 6.0.2 (Powerpc) on Power7 LPAR with multipathing

based on debian-6.0.2.1-powerpc-DVD-1.iso and only one harddisk with one path from each VIOS

Many thanks to all who supported me

1. Create a LPAR, make the mapping in LPAR in VIOS Profile(s)
2. Download the ISO an map or burn it, map the dvddrive to the LPAR
<http://www.debian.org/CD/http-ftp/>
goto DVD click the link powerpc
3. Start the LPAR in SMS Menu (7.), select CD as bootdevice

```
Version AL710_114
SMS 1.7 (c) Copyright IBM Corp. 2000,2008 All rights reserved.
-----
Main Menu
1.  Select Language
2.  Setup Remote IPL (Initial Program Load)
3.  Change SCSI Settings
4.  Select Console
5.  Select Boot Options
```

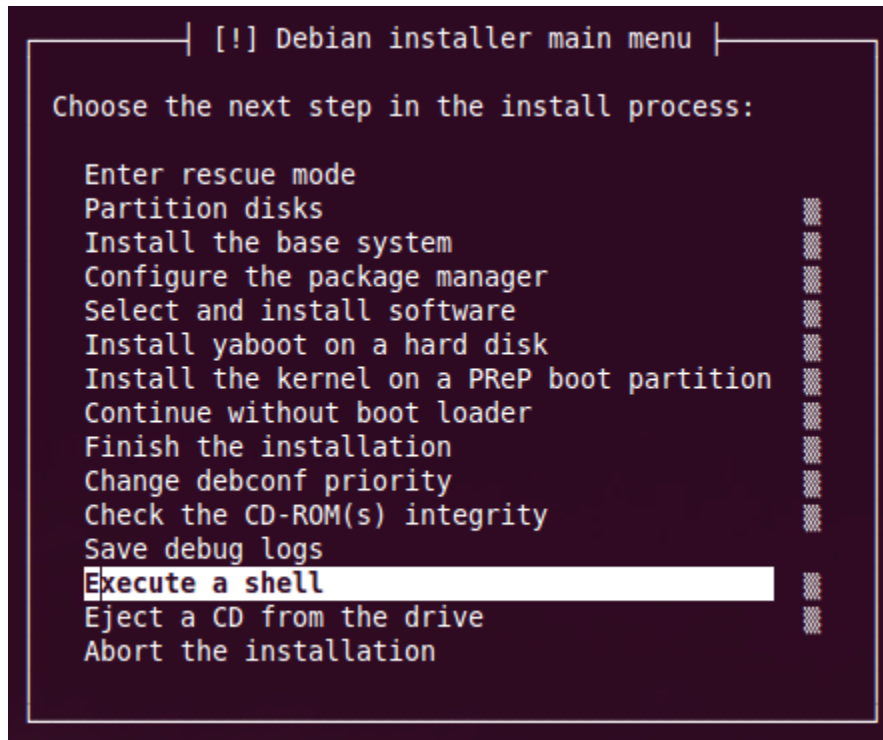
```
Version AL710_114
SMS 1.7 (c) Copyright IBM Corp. 2000,2008 All rights reserved.
-----
Select Device
Device Current Device
Number Position Name
1.      2      Interpartition Logical LAN
      ( loc=U8233.E8B.06B155P-V4-C2-T1 )
2.      -      SCSI 9 GB Harddisk, part=1 ( )
      ( loc=U8233.E8B.06B155P-V4-C290-T1-L8100000000000000 )
3.      -      SCSI CD-ROM
      ( loc=U8233.E8B.06B155P-V4-C291-T1-L8100000000000000 )
4.      1      SCSI 9 GB Harddisk, part=1 ( )
      ( loc=U8233.E8B.06B155P-V4-C291-T1-L8200000000000000 )
-----
Navigation keys:
M = return to Main Menu
ESC key = return to previous screen          X = eXit System Management Services
-----
Type menu item number and press Enter or select Navigation key:3
```

Select: Normal

Welcome to yaboot version 1.3.13
Enter "help" to get some basic usage information
boot: **install64 disk-detect/multipath/enable=true**

Sometimes do this two times if it not boot!

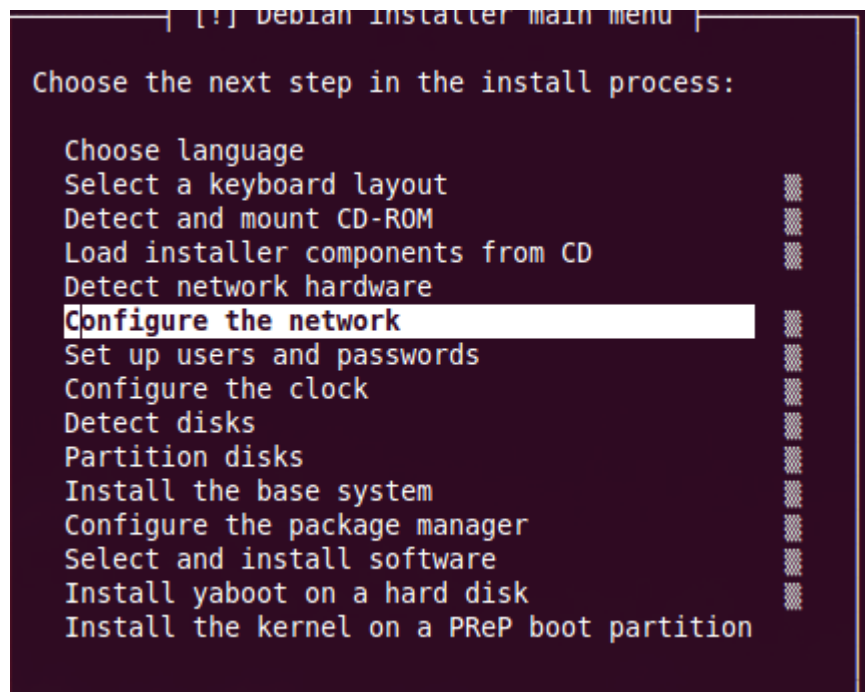
4. Bootparameter
boot: **install64 disk-detect/multipath/enable=true**
exit the debian-installer to the Shell (use the back button to get this menu)
after the Point: Loading additional components



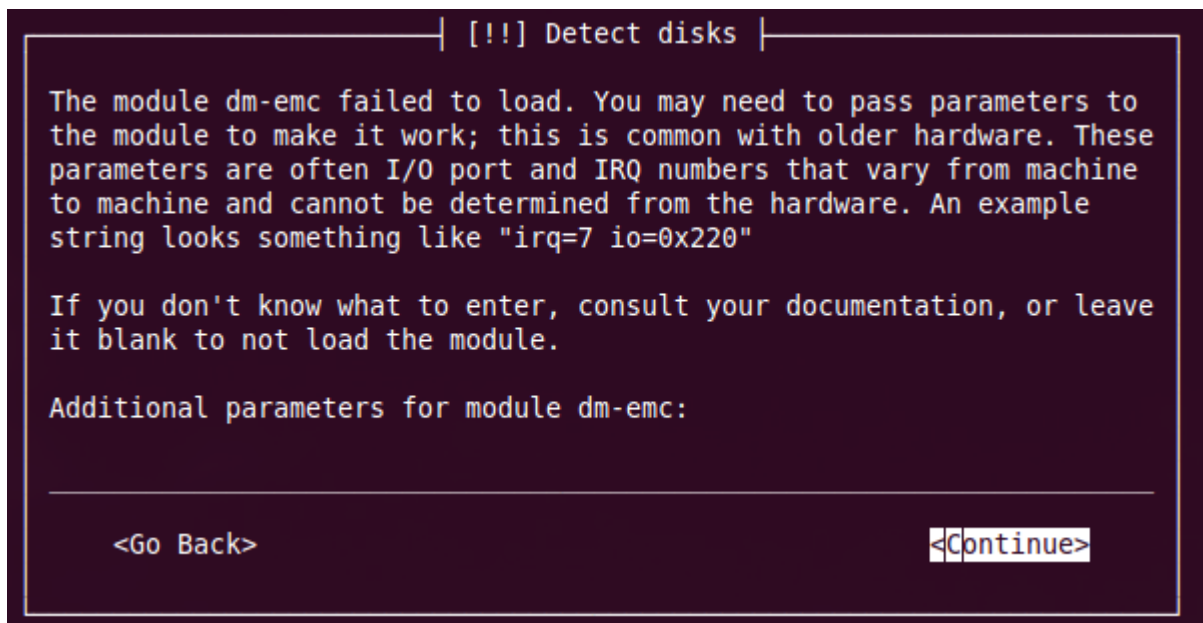
5. # bash

```
# cd /lib/modules/2.6.xx-x-powerpc64/kernel/drivers/md  
# insmod dm-mod.ko  
# insmod md-mod.ko  
# insmod multipath.ko
```

Go back to Installer with typing exit



6. do the installation process



Ignore this → Continue

```
| [!!] Partition disks |
This is an overview of your currently configured partitions and mount
points. Select a partition to modify its settings (file system, mount
point, etc.), a free space to create partitions, or a device to
initialize its partition table.

Guided partitioning
Configure software RAID
Configure the Logical Volume Manager
Configure encrypted volumes

Multipath mpath0 (WWID 360050768018100bb9000000000000186) - 10.7
>   pri/log 10.7 GB      FREE SPACE
SCSI1 (0,1,0) (sda) - 10.7 GB AIX VDASD
>   pri/log 10.7 GB      FREE SPACE
SCSI2 (0,2,0) (sdb) - 10.7 GB AIX VDASD

<Go Back>
```

Here you can see the multipath device mpath0

```
| [!!] Partition disks |
If you choose guided partitioning for an entire disk, you will next
be asked which disk should be used.

Partitioning method:

  Guided - use the largest continuous free space
  Guided - use entire disk
  Guided - use entire disk and set up LVM
  Guided - use entire disk and set up encrypted LVM
  Manual

<Go Back>
```

Choose the mpath0 device

```

[!!] Partition disks

Note that all data on the disk you select will be erased, but not
before you have confirmed that you really want to make the changes.

Select disk to partition:

Multipath mpath0 (WWID 360050768018100bb9000000000000186) - 10.7
SCSI1 (0,1,0) (sda) - 10.7 GB AIX VDASD
SCSI2 (0,2,0) (sdb) - 10.7 GB AIX VDASD

<Go Back>

```

```

[!!] Partition disks

If you continue, the changes listed below will be written to the
disks. Otherwise, you will be able to make further changes manually.

WARNING: This will destroy all data on any partitions you have
removed as well as on the partitions that are going to be formatted.

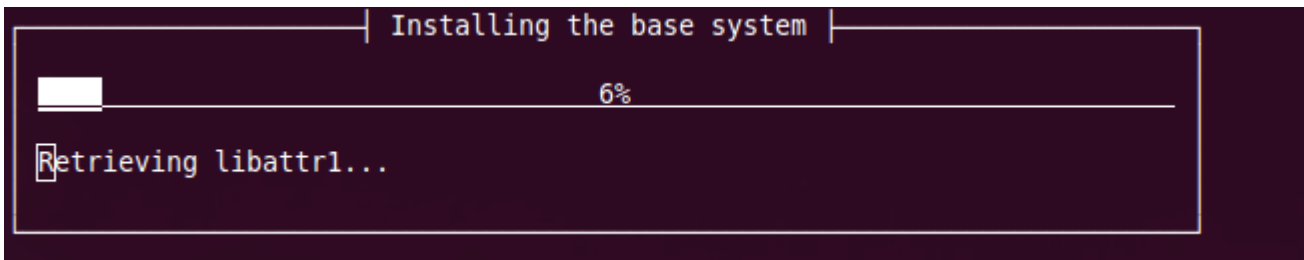
The partition tables of the following devices are changed:
  Multipath mpath0 (WWID 360050768018100bb9000000000000186)
  SCSI1 (0,1,0) (sda)
  SCSI2 (0,2,0) (sdb)

The following partitions are going to be formatted:
  partition #2 of Multipath mpath0 (WWID
  360050768018100bb9000000000000186) as ext4
  partition #5 of Multipath mpath0 (WWID

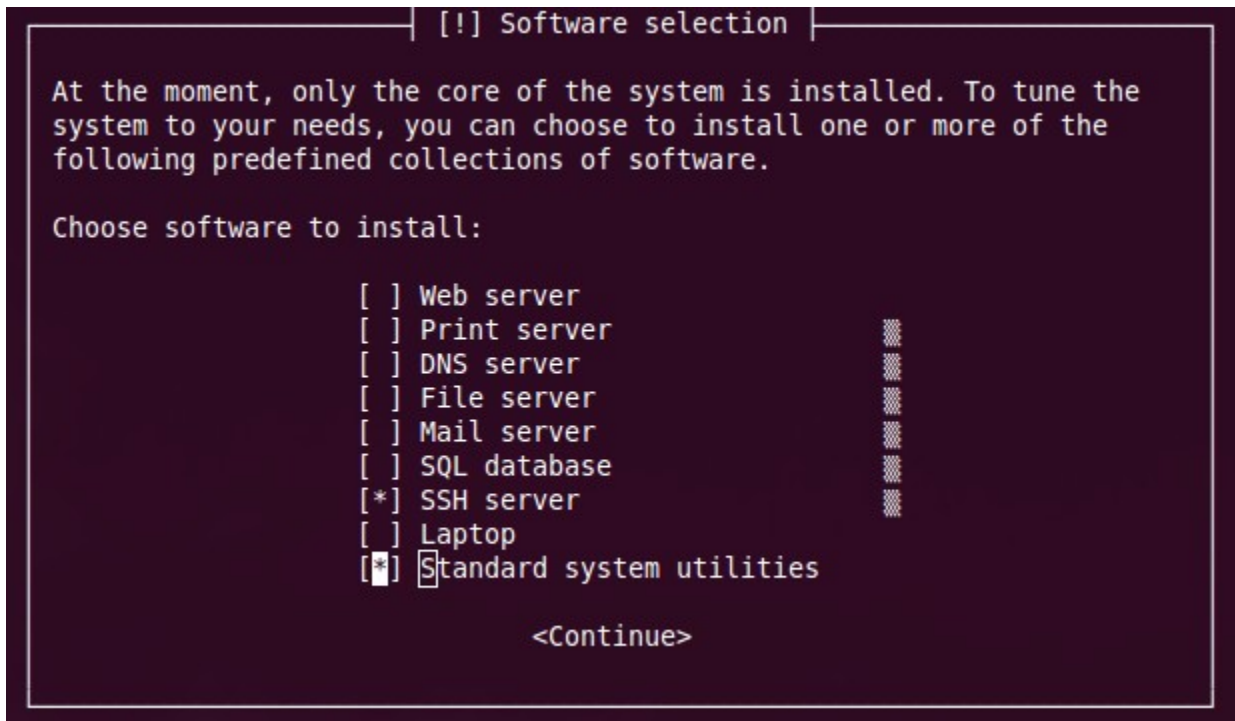
<Yes>

```

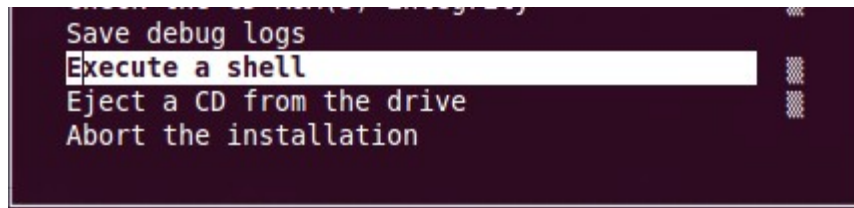
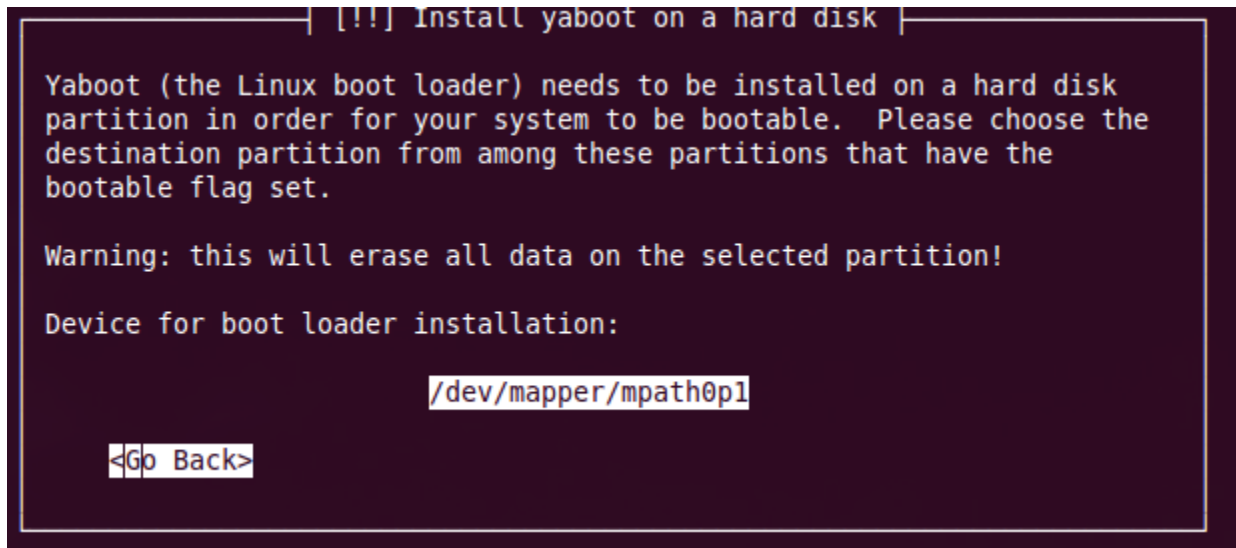
<No>



Select the Software you like to install



BUT DO NOT INSTALL THE Yaboot, you have to update the yaboot before !



~ # **mount**

rootfs on / type rootfs (rw)

none on /proc type proc (rw,relatime)

none on /sys type sysfs (rw,relatime)

tmpfs on /dev type tmpfs (rw,relatime,mode=755)

none on /dev/pts type devpts (rw,relatime,gid=5,mode=620,ptmxmode=000)

none on /sys/kernel/debug type debugfs (rw,relatime)

/dev/mapper/mpath0p2 on /target type ext4 (rw,relatime,errors=remount-ro,barrier=1,data=ordered)

/dev/mapper/mpath0p2 on /dev/.static/dev type ext4 (rw,relatime,errors=remount-ro,barrier=1,data=ordered)

tmpfs on /target/dev type tmpfs (rw,relatime,mode=755)

/dev/sr0 on /cdrom type iso9660 (ro,relatime)

```
~ # chroot /target/
```

```
# bash
```

```
# cd /var/tmp
```

Download to another system a newer yaboot
you can get it here: <http://ftp.debian.org/pool/main/y/yaboot/>
for example: yaboot_1.3.16-3_powerpc.deb

```
# scp user@host:/path/to/yaboot/yaboot-1.3.16-3.deb .
```

```
# dpkg -i yaboot_1.3.16-3_powerpc.deb
```

```
# exit
```

```
# exit
```

```
# exit (back to the installer)
```

```
[!] Debian installer main menu

Choose the next step in the install process:

Choose language
Select a keyboard layout
Detect and mount CD-ROM
Load installer components from CD
Detect network hardware
Configure the network
Set up users and passwords
Configure the clock
Detect disks
Partition disks
Install the base system
Configure the package manager
Select and install software
Install yaboot on a hard disk
Install the kernel on a PReP boot partition
```

Welcome to yaboot version 1.3.16
Enter "help" to get some basic usage information
boot: **Linux root=/dev/sda2**

if I dont not use root=/dev/sda2 the I can not mount the /dev/mapper/mpath0-part2

The boot crash and is in intramfs

(initramfs) **mount**

rootfs on / type rootfs (rw)

none on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)

none on /proc type proc (rw,nosuid,nodev,noexec,relatime)

none on /dev type devtmpfs (rw,relatime,size=1013116k,nr_inodes=253279,mode=755)

none on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)

(initramfs) **mkdir /mnt**

(initramfs) **mount /dev/mapper/mpath0-part2 /mnt**

(initramfs) **mount -o bind /dev/ /mnt/dev/**

(initramfs) **mount -t proc proc /mnt/proc**

(initramfs) **chroot /mnt**

(initramfs) **bash**

(initramfs) **vi /etc/yaboot.conf**

my /etc/yaboot.conf look like this:

```
boot="/dev/mapper/mpath0-part1"  
#partition=0p2  
root="/dev/mapper/mpath0-part2"  
timeout=50  
install=/usr/lib/yaboot/yaboot  
enablecdboot
```

```
image=/boot/vmlinux
```

```
label=Linux
```

```
read-only
```

```
initrd=/boot/initrd.img
```

```
append="ipv6.disable=1"
```

```
image=/boot/vmlinux.old
```

```
label=old
```

```
read-only
```

```
initrd=/boot/initrd.img.old
```

```
append="ipv6.disable=1"
```

I disabled ipv6 if you need, rmov the line: append="ipv6.disable=1"

Write the new bookblock

```
root@(none):/# ybin -v -v  
[ 321.410925] ioctl32(nvsetenv:840): Unknown cmd fd(3) cmd(20007043){t:'p';sz:0} arg(00000009)  
on /dev/nvram  
ybin: Installing primary bootstrap /usr/lib/yaboot/yaboot onto /dev/dm-1...  
ybin: Installation successful
```

```
root@(none):/# sync
```

```
root@(none):/# exit
```

Power off the LPAR, Power ON the LPAR

Boot the LPAR an Login

```
root@localhost:~# multipath -l  
mpath0 (360050768018100bb900000000000186) dm-0 AIX,VDASD  
size=10G features='1 queue_if_no_path' hwhandler='0' wp=rw  
`-+- policy='round-robin 0' prio=-2 status=active  
|- 0:0:1:0 sda 8:0 active undef running  
`- 1:0:2:0 sdb 8:16 active undef running
```

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

enable this to lines

```
deb http://security.debian.org/ squeeze/updates main contrib  
deb http://ftp.debian.org/debian/ squeeze-updates main contrib
```

```
# apt-get update  
# apt-get upgrade
```

Attention: Live Partition Mobility is not possible if the LPAR is running!