

## How to install an OVH Kernel and to boot the server from your hard disk?

### Introduction

OVH propose Netboot service for free. It enables you to boot your server on a pre configured kernel directly from your network. See KernelNetboot However, it would be better to arrange the same kernel on your hard disk. In case of Netboot problem at the time of a reboot of your server, It takes automatically the kernel available from the hard disk. It is therefore better that the kernel is always up dated on your hard disk.

### Your server configuration

If you wish that your server start on the kernel installed on its hard disk, you have to configure this option from your manager. Go to "Dedicated servers" section and choose the server you'd like to configure. Then "select netboot" Next, configure the start up of your server on the hard disk and choose the main partition to use according to your server type (IDE, SATA2, SCSI, RAID SOFT or RAID HARD) without forgetting to validate your choice. At the next start up, you server will use the kernel delivered by default on the hard disk to start. You will have therefore to follow the procedure shown below to up date it regularly. If your server is configured to start on the netboot, you have also to make sure to maintain the kernel installed on your hard disk up dated because in case of problem with the netboot your server starts automatically on the kernel present on its hard disk.

### Procedure to update the kernel on your hard disk

**1.** Connect via SSH to your dedicated server as a root For further details about SSH connection, you can consult this guide: SshOnDedicated **2.** Go on /boot:cd/boot directory **3.** All our kernels are available on our FTP server: ftp://ftp.ovh.net/made-in-ovh/bzImage There you can recover all the files corresponding to your configuration. A kernel is available for each configuration: for servers based on Pentium 3, 4, bi-processor, processor equipped with Hyper Threading option? Each kernel is available in 2 versions: with or without grsecurity security patch (-grsec extension). For each kernel corresponds a System.map file. For example, for the latest version of Celeron (SuperPlan & SuperPlan+ Offers), you have to download System.map-2.4.32-piv and bzImage-2.4.32-piv files to obtain the 2.4.32 version of the kernel

```
wget ftp://ftp.ovh.net/made-in-ovh/bzImage/bzImage-2.4.32-piv wget
ftp://ftp.ovh.net/made-in-ovh/bzImage/System.map-2.4.32-piv
```

Once the files are recovered, create a symbolic link for System.map:

```
ln -sf /boot/System.map-2.4.32-piv /boot/System.map
```

**4.** Edit /etc/lilo.conf file and modify the file as follows (you should have only the bold line to modify):

- Configuration for a PIII or Celeron < 1,7GHz:

```
boot=/dev/hda map=/boot/map install=/boot/boot.b prompt timeout=50 linear default=linux append="nousb"
serial=0,9600n8 image=/boot/bzImage-2.4.32-piii label=linux read-only root=/dev/hda1
image=/boot/xxxxxxxxxxxxxxxx label=linux-old read-only root=/dev/hda1
```

- Configuration for a PIV or Celeron >= 1,7GHz

## OVH

```
boot=/dev/hda map=/boot/map install=/boot/boot.b prompt timeout=50 linear default=linux append="nousb"
serial=0,9600n8 image=/boot/bzImage-2.4.32-piv label=linux read-only root=/dev/hda1
image=/boot/xxxxxxxxxxxxxxxxxxxx label=linux-old read-only root=/dev/hda1
```

- Configuration for a PIV ?HyperThreading?>=3.06GHz:

```
boot=/dev/hda map=/boot/map install=/boot/boot.b prompt timeout=50 linear default=linux append="nousb
noapic" serial=0,9600n8 image=/boot/bzImage-2.4.32-bipiv label=linux read-only root=/dev/hda1
append="nousb noapic" image=/boot/xxxxxxxxxxxxxxxxxxxx label=linux-old read-only root=/dev/hda1
```

5. Don't forget to launch the following command to take into account your modifications at the time of reboot:

```
/sbin/lilo
```

6. Special Cases HG servers (monon Xeon and bi Xeon with SCSI disks in RAID HARD) have been delivered with 2.4XX in 32 bits kernels. In this kernel version, detection of network interfaces is done in the opposite direction than PCI. That is to say network1 is eth1 and network2 is eth0. All the physical cables towards the routers respect this characteristic. That is why in 2.4x64 bits version (this version is not proposed any more by OVH) or in 2.6x (32 bits or 64 bits), you have to reverse the interfaces in the software configuration of your linux, free BSD or Windows. **Linux** To reverse the interfaces under Redhat, you have to edit the following files

```
/etc/sysconfig/network-scripts/ifcfg-eth0 /etc/sysconfig/network-scripts/ifcfg-eth1
```

And reverse the configurations (you just have to reverse ifcfg-eth0 files to ifcfg-eth1 and ifcfg-eth1 to ifcfg-eth0 To reverse the interfaces under Debian, you have to edit the following file:

```
/etc/network/interfaces
```

And place eth0 configuration on eth1 and eth1 on eth0. To reverse the interfaces under Gentoo, you have to edit the following file:

```
/etc/conf.d/net
```

Once you have reversed the interfaces, you can reboot the server on the new kernel. If your server doesn't respond and doesn't ping, you can reboot the server on rescue then correct the configuration files once again.