Installing Gentoo Linux on a PPC-based machine using the *Network installation*

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1 preface

This document describes how to install Gentoo Linux on a PPC based computer.

2 Installation preperations

- Download the newest LiveCD from the Gentoo website (www.gentoo.org)
- Burn the image on a CD
- Boot from the CD

3 Command line actions

- Set a root password using the "passwd" program
- Run the "dhcpcd" daemon on the eth0 device to get an ip of the DHCP server
- Run mac-fdisk on /dev/hda
- Create a bootstrap partition by using the "b" option and enter "2p"
- Create a swap partition by using the "c" option and enter "3p" and after that "1G"
- Create a root partition by using the "c" option and enter "4p" and after that "4p"
- The root partition has to be converted to an extended 3 partition using "mke2fs -j /dev/hda4"

- Create a swap partition; “mkswap /dev/hda3”
- Activate the swap partition; “swapon /dev/hda3”

You are now working on the LiveCD, in order to get a correct installation you need to mount the harddisk device (root) to the /mnt/gentoo direcory

- Mount the root partition; “mount /dev/hda3 /mnt/gentoo”
- Mount the devices; “mount -o bind /dev /mnt/gentoo/dev”
- Set the correct date; “date061020202004”

I used a stage file (which can be found on the LiveCD) to install Gentoo. It has a kernel inside.

- Change to the /mnt/gentoo directory
- Unpack the stage file; “tar -xvjpf stage3-ppc.tar.bz2”
- Change the /etc/make.conf to the correct architecture CFLAGS etc.
- Copy the resolv.conf to the current installation; “cp -L /etc/resolv.conf /mnt/gentoo/etc/resolv.conf” (edit it if prefered)
- Mount the processor; “mount -t proc none /mnt/gentoo/proc”
- Change the root from the gentoo cd to the harddrive; “chroot /mnt/gentoo /bin/bash”
- Update the environment to be sure the system knows where the root is at; “env-update”
- Tell the system where it can find the user profile; “source /etc/profile”
- Get the latest package list; “emerge sync”
- Set the correct timezone; “ln -sf /usr/share/zoneinfo/GMT /etc/localtime”
- Install the development sources; “emerge gentoo-dev-sources”

It is now time to compile the kernel using the menuconfig application.

- Make a build of the menuconfig; “make menuconfig”
- To be able to use the build-in networkcard, choose for ’sun gem’ in device - networking - 10/100 - Sun GEM support
- Put off the serial port in the MAC, it does not exist!!

- Compile the kernel; “make all make modules$_i nstall''$
  Make the filesystem ready for use;

  - Edit the fstab; “nano -w /etc/fstab”
  - Set the correct parameters, this depends on your systems configuration / paritiontable (/dev/hda4 (root) /ext3 noatime 0 1)
  - Set the hostname of the machine; “echo tux ¿ /etc/hostname”
  - Copy the kernel; “cp vmlinuz /”
  - Tell the Mac bootmanager where it can find the installation; “yaboot-conf -chroot /mnt/gentoo”
  - Install a logging daemon; “emerge metalog”
  - Add metalog to the default runlevel; “rc-update add metalog default”

  Setting up networking

  - Edit the /etc/conf.d/net file to setup the way the network should be configured

  The system is now ready to boot. after this you can use the ’emerge’ program to install additional packages.