Gentoo quick install guide amd64

This instructor will follow the steps to install Gentoo Linux on an AMD64 machine from the official Gentoo installation CD. Installations will differ slightly for other computer architectures (such as ARM or PowerPC), but the goals of each step are the same. By the end of this Instructable, you will have a fully configured Gentoo system installed on your machine's hard drive, with a boot loader. Before you start this installation guide, you need to take a few steps. It is very important to know the technical specifications and be familiar with the computer hardware before installing Gentoo Linux, because this knowledge will guide some decisions that you will make during installation. Do some research on your system. Then establish a wired Ethernet connection to the network by connecting an Ethernet cable directly from the network router or switch to the computer's Ethernet port. Finally, a hard drive will be formed during installation. This step will erase all other data on the drive, so make sure you have a free hard drive that you're willing to use. In order not to incorrectly use a different hard drive, which contains the data that you want to keep, it is a good idea to disconnect all other drives from your computer during gentoo installation. The exact steps for installing Gentoo may differ between the versions of the installation media or depending on the machine. If you encounter problems during a step or get confused, the most useful resource is the Gentoo Handbook, which is located AMD64The: a first step to install Gentoo Linux is acquiring an environment from which to install Gentoo Linux. Gentoo provides an official installation CD image (.iso). The .iso file can be downloaded from . The file you want to download is the AMD64 minimum installation CD. Download this file, and then mount it to a USB flash drive or CD. There are many tutorials and programs that can be found on the web, which help mount .iso files on USB or CD drives. This process can be different for different operating systems. If you are running Windows or Mac OS X, or another operating system, look for a tutorial on mounting a bootable ISO on a USB drive or CD.Se you are already running GNU+Linux:to create a USB flash drive that can be booted from the .iso image. In the terminal, you must navigate to the directory where the .iso image was downloaded, and then run, replacing the X's to correctly name the .iso and location of the USB device:dd if=./install-amd64-minimal-XXXXXXXX.iso of=/dev/sdXBE EXTREMELY WHILE RUNNING dd. It has earned the nickname disk destoryer, because it will permanently overwrite all information about the device provided after of=. Verify that the device provided after of= is the correct device that want to mount .iso file. After you create the bootable USB flash drive or CD, you must restart your computer. Feeding the Out. Now it's time to disconnect all hard drives from your computer and only connect the hard drive on which you want to install Gentoo. This will prevent you from accidentally overwriting the data you want to keep. When the computer turns on, you should see a BIOS startup screen, which will tell you to press a key to select a boot device or boot options. This key is usually ESC, DEL, or F1, but varies depending on the motherboard. Quickly tap this button before the screen changes. If you lose your opportunity, you can always turn off your computer and turn it off again. Navigate to the Select Boot Device menu or another BIOS menu until

you find the option to boot from the USB flash drive or CD drive. Select this option, and the Gentoo installation image should start booting to your computer. Your computer might beep, and you may see another menu asking which operating system to start. Press Enter, which should select the default option to start Gentoo Live Image. Once the Gentoo image has started, you need to receive the request:livecd ~ #: For more help: AMD64/Installation/Media#Gentoo_Linux_installation_CDIn to install Gentoo on your computer from the minimum installation image, you need to have a network connection. The installation media must automatically detect the device hardware and start drivers for network adapters. The easiest way to establish an Internet connection is to connect directly with an Ethernet cable. Connect an Ethernet cable from your computer's Ethernet port to your router or network switch. This may automatically establish a connection, but it may not. For information, type the following command in the terminal and press ENTER:ifconfigThis command must produce a list of network devices on the computer. Look for a device called eth0, eno0, ens1, enp5s0 or something like that. If you see any of these ads, search for inet, followed by 4 numbers separated by dots. If you receive this message, the network device has been assigned an IP address and must be connected to the network. If this does not appear, try running the terminal:net-setupThis an interactive menu appears that will guide the user through a network configuration. Configure configuration to the best of your knowledge. If your network is specially configured and has special needs to establish an Internet connection (such as using proxies or PPPoEs, or to connect wirelessly, refer to the Gentoo Manual at AMD64/Installation/Networking for instructions). When you're done, try running again:ifconfigFor any network connection issues, refer to the Gentoo Manual. The Network can range from a very simple step that works automatically, to a difficult step that takes time to successfully set up the connection. It helps to familiarize yourself with network setup. once connected to the network confirm your internet connection website:ping www.gentoo.orgTo see if you receive bytes back. If you receive the data back, press CTRL+C (ctrl-clicking and tapping C) to unped. If you do not receive bytes back, make sure that the router or network switch is properly connected to the Internet. Once you are able to connect to the Internet, you can move on to acquiring more installation materials. During this step, you will partition and format a hard drive in preparation to host your Gentoo system. Make sure you don't use a hard drive with the information you want to keep. This step will overwrite all the data on the hard drive you use! Make sure that only the correct hard disk has been connected to the computer and that all other data storage devices have been disconnected. Make sure that the drive you want to use is at least 24 Gb in size. To view the list of devices, running in terminal:ls /dev/This will show a long list of devices, most of which can be ignored. The devices you want to watch will be labeled as sd* and sd*#, such as sda or sda1. Typically, hard drives will appear as devices that start with sd, although older systems can use other letters, such as had. Each separate letter following sd is associated with a different physical drive, and each number following is a different partition. Now we want to partition the disc to prepare for the Gentoo system. We will use a Master Boot Record (MBR) and create 3 base partitions, boot partition, exchange partition, and root partition. There are many different settings for your drive, which you may want to choose if you have experience with Linux. Some of these options include using UEFI rather than MBR, creating multiple specialized partitions, or using logical volumes. We will not cover these set-ups in this Instructable.To partition the disk, we will use a program called fdisk. Start this program by running in the terminal (replacing /dev/sda with the device location):fdisk /dev/sdaThis program will provide a request. Type p, and then type ENTER, to print the list of partitions on the drive. If partitions are listed, delete them by typing d and ENTER, then the number of a partition (they are numbered starting at 1), and then press ENTER. Repeat this situation until all partitions are deleted. When you enter p it provides an empty list, the disk is free from all partitions. Now we want to create the first of our three partitions, the boot partition. This partition is where the boot loader will reside, which is used by the BIOS to load the operating system. Create the partition by entering n, for a new partition. So p for a primary partition. We will not use extended partitions. So 1. When you are prompted for the first sector, press Enter to choose the default setting. Then enter +256M for the last sector. What we just did was create a new partition, numbered 1, which is located in the first sector open on disk and is 256Mb long. Type to, a, Enter 1. This will set the bootable flag for this partition, which tells the computer which partition to start. Now we're going to do the exchange partition. The exchange partition is used by the operating system to store temporary files that must run successfully. It will also be used when the computer hibernates or crashes. There is a debate about how large the exchange partition should be, but a good rule of thumb is 2 times the amount of RAM used by the system. Create another partition by entering n, and then enter 2. Press send when the first sector is asked again, then +#G, replacing the # with the number of Gb you want the swap partition to be. Enter t, and then enter 3. This will set the partition type to Linux Swap.Finally, we will create the root partition. This is where the Gentoo system and all your data will be stored. Create this partition by entering n, and then 3, and then press Enter twice. This will select the first and last default sector, which, by default, will use the rest of the disk space. Enter p again at the prompt to print the partition list. This should print a list with three partitions. Check the size, types, and partition with the bootable flag. When you are sure that everything is fine, enter w to write these changes to the disk and exit the fdisk program. Now we have to format partitions. Currently, the disk has empty partitions that the system cannot use. By formatting them, we have set each partition so that the Gentoo system is able to work with them. The boot partition will be formatted with the EXT2 file system. The swap partition will be formatted with an exchange file system. The root partition will be formatted with the EXT4 file system. These are typical choices, but there are more options you can look for. Run the following commands:mkfs.ext2 /dev/sda1mkfs.ext4 /dev/sda3mkswap /dev/sda2swapon /dev/sda2Now that the file systems are set to the parties, you want to mount partitions, and start installing Gentoo on disk. To mount them, run:mount /dev/sda3 /mnt/gentoomkdir /mnt/gentoo/bootmount /dev/sda1 /mnt/gentoo/bootThis mount the root partition in the /mnt/gentoo directory. The mkdir program creates a new directory and we are creating one in /mnt/gentoo/ called startup. This is where our boot partition will go, so we mount it there. Now we are ready to start installing Gentoo! Check out the Gentoo Manual for more AMD64/Installation/DisksThe: the first thing we want to do is check the date on the machine. Some parts of the installation are based on date correctness and may produce strange results, otherwise. Check the date by running in the terminal:datesTo change the date, replace each of the letters in the date code with their correct values (March 29, 4:21 p.m. in 2014 would be 032916212014):d are MMDDhhmmYYYO after the date is correct, run the following commands to download :d copy of the stage3 tarball:cd /mnt/gentoolinks will open a very simple web browser, which will allow you to navigate a website using the arrow keys, spacebar and access. The first thing we will do is select a mirror from the list on the page. Next, after selecting the mirror, switch to versions/amd64/autobuilds/current-stage3-autobuild/. These subdirectories may vary by mirror, but they should be quite similar and simple to navigate. Find a list that contains an Stage3-amd64-xxxxxxxx.tar.bz2 file. Select the file to download it to the current directory in the terminal. You can exit the links by typing q. Once the download is finished, you need to unpack the tarball archive, which contains enough of the basic Gentoo system to allow us to install the rest. Unpack it by running:tar xvjpf stage3-*.tar.bz2 --xattrsNext you must mount all the necessary file systems contained in this store. After doing this, chroot, which allows us to start using this basic Gentoo system. Run:mount -t proc proc /mnt/gentoo/procmount --rbind /sys /mnt/gentoo/sysmount --make-rslave /mnt/gentoo/sysmount --rbind /dev /mnt/gentoo/devmount --make-rslave /mnt/gentoo/devchroot /mnt/gentoo /bin/bashsource /etc/profileexport PS1=(chroot) $PS 1Si is working from gentoo environment on hard disk! We can start setting up the rest of the system so we can boot from it. Gentoo uses Portage, which is a package manager. This package manager allows you to update and install all the programs and libraries that the system needs and uses. Portage is unique in that by default, it compiles these programs from source code, while most package handlers install precompiled binary files on the system. There are advantages and trade-offs for compiling your own software. One advantage is that your programs will be customized according to your machine and your needs. One scam is that installing programs usually takes much longer, because compiling is usually a large job for completing a computer. We will configure portage and update our system now:emerge-websrynceselect profile set 1env-update && source /etc/profileThis configures Portage and tells him what kind of Gentoo environment we intend to perform. You can search for different profiles and configurations AMD64/Installation/Base, but we'll only use a generic one. Now we will install and configure the Linux kernel. This is one of the biggest steps of the installation. The kernel is a very important program that is the basis for the operating system and controls many of the interactions between programs and machine hardware. Run:emerge --ask sys-kernel/gentoo-sourcesThis will install the source for the Gentoo kernel in the system. Now we will use a tool called genkernel that will automatically configure and compile the kernel for you. One of the biggest advantages of using Gentoo is that you are able to manually configure This means that you can hand-customize the kernel based on your machine's hardware. We will allow genkernel to automatically configure the kernel for a generic and large set of hardware. If you want to know the manual configuration of the kernel, start AMD64/Installation/Kernel. First, we will update our file system table, which genkernel will look at to help configure the kenrel. Run:nano -w /etc/fstabThis will open the file in the nano text editor, which will allow you to edit its lines. Edit the file to reflect:/dev/sda2 /boot ext2 defaults,noatime 0 2/dev/sda3 no swap sw 0/dev/sda4 / ext4 noatime 0 1The first column is the lock device, the second column is the mounting point on which it should be mounted. Close the file and save it by typing CTRL+X and entering y. Next build with:genkernel allThis build procedure starts. This procedure can take a long time to complete! Be patient. When this process is complete, run:passwdThis you enter a password that you will need to access back to your computer. Make sure you don't forget this password, you can't recover it. Now we need to install a boot loader, which will allow us to start again in our Gentoo installation later. The boot loader we will use is GRUB2, although there are others, which can be searched AMD64/Installation/Bootloader. Run:emerge --ask sys-boot/grubgrub2-install /dev/sdagrub2-mkconfig -o /boot/grub/grub.cfgThe system is ready to restart and a basic gentoo installation has been successfully configured. Before restarting, you should review the Gentoo Manual for more configuration and configuration to your specific needs. Some of these might include setting up a permanent network connection or installing a desktop environment. When any configuration is complete, enter the commands:exitreboot If the system needs to shut down, and then back up to Gentoo. You can sign in with your previously chosen root username and password. Congratulations on your new Gentoo system! At this point, there are many different paths to take on system configuration, including choosing graphics environments, web browsers, and any other software you want to run. At this point, you have a working Gentoo system that you can start and access! You might wonder what now? Some good next steps may be to start reading resources and installing new software. Some places to start searching are: AMD64/Networking/Introduction //wiki.gentoo.org/wiki/GNOME/Guide