

Install Debian over SSH with Knoppix

Need to have keyboard attached to machine as I have not altered CD image to automatically use floppy for configuration. The entire process takes me approximately 40mins, assuming nothing goes wrong! This includes the time required to download Debian, but not to make knoppix CD and boot disk.

```
Make Knoppix 3.6 CD
Boot from CD and create boot disks
Copy knoppix.sh to disk 1
Edit syslinux.cfg to read knoppix 2 floppyconfig
```

```
Boot from floppy disk 1
Insert the CD in PC
Press Enter once floppy activity has stopped
Wait approx 10 seconds after floppy activity stops
Change floppy disk 1 to floppy disk 2
Press Enter
Once floppy activity stops switch floppy disk 2 to floppy disk 1
    This must be done before the PC scans for knoppix.sh
```

The PC should now be running an ssh server. Use putty to connect in, you will need to check the IP address that was assigned by looking at your dhcp server.

```
Username: knoppix
Password: secret
```

Format your hard drive

```
su
cfdisk /dev/hda
    create a single large partition
    create a second partition ~approx 128Mb swap
```

Create a filesystem

```
mke2fs -j /dev/hda1
mkswap /dev/hda2
tune2fs -O ^dir_index /dev/hda1
```

Make a directory for the new system to be mounted in

```
mkdir /mnt/debian
mkdir /mnt/debian/media
mkdir /mnt/debian/media/floppy
mkdir /mnt/debian/media/cdrom
```

Mount the filesystem

```
mount /dev/hda1 /mnt/debian
```

Install the base system

```
debootstrap --arch i386 woody /mnt/debian http://
ftp.uk.debian.org/debian
```

```
rm /mnt/debian/etc/hostname
rm /mnt/debian/etc/resolv.conf
touch /mnt/debian/etc/hostname
touch /mnt/debian/etc/resolv.conf
```

Chroot into new system

```
chroot /mnt/debian /bin/bash
```

Create /etc/fstab

```
mount -t proc proc /proc
editor /etc/fstab
```

Setup keyboard

```
dpkg-reconfigure console-data
```

Configure Network

```
editor /etc/network/interfaces
editor /etc/resolv.conf
echo asterisk > /etc/hostname
echo "127.0.0.1 localhost" > /etc/hosts
echo "192.168.0.5 machinename.domain machinename" >> /etc/hosts
hostname machinename
```

Configure System, enable MD5 passwords, don't run tasksel, run dselect and add ssh

```
base-config
```

Install kernel, select the one for your system

```
apt-cache search kernel-image
apt-get install kernel-image-2.4.18-k6
apt-get install discover
```

Reboot the system and hopes it all works

```
lilo      'Note I have to install to /dev/hda else grub stops
          boot
exit
reboot
```

Remove the floppy disk when the cd is ejected

Knoppix.sh – obtained from http://www.knoppix.net/wiki/Headless_Knoppix

```
#!/bin/sh
# Start SSH and Samba servers.
#
# This script can be used on a floppy (bootsfloppy + floppyconfig) to
start a
# server without touching the keyboard. The parameters can be given
on the
# boot cmd line. The intention is that you can use this to rescue
data from
# a PC over the network and that box does not even need to have a
monitor or
# keyboard, just a Knoppix CD and this script on a floppy is used.
#
# Installation
# 1. Create a bootfloppy "cat /cdrom/KNOPPIX/boot.img >/dev/fd0" on
Knoppix
# 2. Copy this file to te floppy, name must be "knoppix.sh"
# 3. Edit syslinux.cfg and append "floppyconfig 2" to all the
"APPEND" lines.
# 4. Optionally add "ip", "hostname" or "password" to the "APPEND"
lines too
# 5. Try i out by booting this floppy with Knoppix CD in the CDROM
#
# Security advice
# The default passowrd is "secret". It should be overridden with the
# "password" option. but still then it's a default password. Default
# passwords are always bad... and insecure.
# The Knoppix home is exported read/write over Samba and the /mnt dir
# is accessible. Somebody with the password could fill the ramdisks
or
# access the mounted partitions.
# Because of these limitations, you should not use this script on
machines
# with internet connection. This script is intended for experienced
users
# only.
#
# Samba is started for two reasons:
# - Easily copy files to a Windows or Linux machine.
# - Use "nmblookup Knoppix" to discover the machine from a remote
computer,
# which is useful if the server started with DHCP and no monitor...
# And the host is found by Windows machines with the name
"\\Knoppix".
#
# SSH is started so that one can login and mount drives, start NFS
exports,
# whatever needed.
#
# Kernel command line parameters used:
# ip=x.x.x.x use static IP instead of DHCP, may also use
"nodhcp"
# password=x use given password instead of "secret"
# hostname=x use given hostname instead of "Knoppix"
#
# Tips and tricks:
# - Start your VNC desktop with "vncserver -geometry 800x600". Don't
start it
# as root but as knoppix user because of the ramdisks size.
```

```

# - Change syslinux.cfg on the bootfloppy so that it only starts to
textmode
# and make sure that it runs "floppyconfig". This means appending
# "floppyconfig 2" to the "APPEND" lines(s)
# - Always supply your own "password".
#
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[ "`id -u`" = "0" ] || { echo "You need root privileges to modify the
system!" >&2 ; exit 1; }

# - - - - -
# ANSI COLORS
CRE=""
_[K"
NORMAL="_[0;39m"
# RED: Failure or error message
RED="_[1;31m"
# GREEN: Success message
GREEN="_[1;32m"
# YELLOW: Descriptions
YELLOW="_[1;33m"
# BLUE: System messages
BLUE="_[1;34m"
# MAGENTA: Found devices or drivers
MAGENTA="_[1;35m"
# CYAN: Questions
CYAN="_[1;36m"
# BOLD WHITE: Hint
WHITE="_[1;37m"

# get the kernel commandline
CMDLINE="$(cat /proc/cmdline)"

# some functions borrowed from knoppix-autoconfig

stringinstring()
{
    case "$2" in *$1*) return 0;; esac
    return 1
}

getbootparam()
{
    stringinstring "$1=" "$CMDLINE" || return 1
    result="${CMDLINE##*$1=}"
    result="${result%%[ ]*}"
    echo "$result"
}

```

```

    return 0
}

# - - - - -
#password should be supplied on kernel command line
PASSWORD=`getbootparam password`

#if no password is given, do a stupid thing, use a default.. and
print a warning
if [ -z "$PASSWORD" ]; then
    echo "${RED}WARNING: Using default password \"secret\"!${NORMAL}"
    echo "This is verry insecure. Use \"knoppix password=xx\" as boot
parameter"
    PASSWORD="secret"
fi

#change password
echo "knoppix:$PASSWORD" | chpasswd

# - - - - -
#check if ip number is given
IP=`getbootparam ip`
#if ip is given, set up eth0 appropriately
[ -n "$IP" ] && ifconfig eth0 $IP

# - - - - -
#check if hostname number is given
NEW_HOSTANME=`getbootparam hostname`
#if hostname is given use it
if [ -n "$NEW_HOSTANME" ]; then
    hostname $NEW_HOSTANME
    rm -f /etc/hostname /etc/mailname /etc/hosts
    echo "$NEW_HOSTANME" >/etc/hostname
    echo "$NEW_HOSTANME" >/etc/mailname
    cat /KNOPPIX/etc/hosts|sed s/Knoppix/$NEW_HOSTANME/ >/etc/hosts
fi

# - - - - -
#configure samba
#passwords must be a file, not a link
rm -f /etc/samba/smbpasswd
cp -a /KNOPPIX/etc/samba/smbpasswd /etc/samba/smbpasswd
#set password for user knoppix
echo -e "$PASSWORD\n$PASSWORD"|smbpasswd -a knoppix -s
#update samba config, make home writeable
rm -f /etc/samba/smb.conf
cat /KNOPPIX/etc/samba/smb.conf|sed "s/read only = yes/read only =
no/" >/etc/samba/smb.conf
#make mounts accessible, but the partitions need to be mounted
maually...
ln -s /mnt /home/knoppix/mnt

# - - - - -
# Start servers
# - - - - -
#~ echo "${BLUE}Starting SSH and Samba server...${NORMAL}"
/etc/init.d/ssh start
/etc/init.d/samba start

# - - - - -

```

```

# display short info with ip numbers of this machine
# - - - - -
echo "${BLUE}Server listening on:${GREEN}"
/sbin/ifconfig|grep inet|cut -d " " -f 12
echo "${NORMAL}"
echo "${BLUE}Hostname is: ${GREEN}${('hostname')}${NORMAL}"

# two beeps for those w/o monitor
echo -ne "\007" >/dev/tty1 ; usleep 200000
echo -ne "\007" >/dev/tty1

```

syslinux.cfg

```

DEFAULT linux24
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw
ramdisk_size=100000 init=/etc/init lang=us apm=power-off vga=791
nomce BOOT_IMAGE=knoppix 2 floppyconfig
TIMEOUT 300

PROMPT 1
DISPLAY boot.msg
F1 boot.msg
F2 f2
F3 f3
LABEL knoppix
KERNEL linux24
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw
ramdisk_size=100000 init=/etc/init lang=us apm=power-off vga=791
nomce BOOT_IMAGE=knoppix 2 floppyconfig
LABEL linux26
KERNEL linux26
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw
ramdisk_size=100000 init=/etc/init lang=us apm=power-off vga=791
nomce BOOT_IMAGE=knoppix
LABEL expert26
KERNEL linux26
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw
ramdisk_size=100000 init=/etc/init lang=us apm=power-off vga=791
nomce BOOT_IMAGE=expert
LABEL knoppix26
KERNEL linux26
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw
ramdisk_size=100000 init=/etc/init lang=us apm=power-off vga=791
nomce BOOT_IMAGE=knoppix
LABEL memtest
KERNEL memtest
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw initrd=
LABEL knoppix-txt
KERNEL linux24
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw
ramdisk_size=100000 init=/etc/init lang=us apm=power-off vga=normal
nomce BOOT_IMAGE=knoppix
LABEL expert
KERNEL linux24
APPEND load_ramdisk=1 prompt_ramdisk=1 root=/dev/fd0 rw
ramdisk_size=100000 init=/etc/init lang=us apm=power-off vga=791
nomce BOOT_IMAGE=expert
LABEL fb1280x1024
KERNEL linux24

```



```
iface lo inet loopback

# To use dhcp:
#
# auto eth0
# iface eth0 inet dhcp

# An example static IP setup: (broadcast and gateway are optional)
#
auto eth0
iface eth0 inet static
    address 192.168.0.5
    network 192.168.0.0
    netmask 255.255.255.0
    broadcast 192.168.0.255
    gateway 192.168.0.1

/etc/resolv.conf
nameserver 192.168.0.1
```