Installation

This is a migration scenario. I set up the new machine first with the new Debian system, then move the data drives from the old server. For initial setup I create a 5GB Home mount point, which will later be replaced with the one on the data drives from the old server.

Install ISO image

1. Test your hardware compatibility with a Debian Live system, then download and do a manual install from the image file on a USB-stick
2. Partition manually on System Drive 1: partitions ESP (500MB), RAID (127.5GB)
3. Partition manually on System Drive 2: partitions ESP (500MB), RAID (127.5GB), Home (5GB), Swap (remaining)

Graphics driver

Since I'm installing an old technology low performance quiet graphics card, I need to setup access for Xorg first.

1. After booting into the installed system the screen goes blank
2. Enter a tty terminal with Ctrl-Alt-F1 and login
3. Add file `20-nouveau.conf` to `/etc/X11/xorg.conf.d/` containing:

```
Section "Device"
        Identifier "Nvidia card"
        Driver "nouveau"
EndSection
```

4. Do not install nVidia's proprietary drivers, see Debian Linux – Uninstall NVIDIA Driver & Reinstall Nouveau Driver (Step-by-Step) if you already did, and google *use nouveau xorg* on an AI enabled browser

Next steps

1. Data drives must be set to RAID, LVM, CRYPT in this order. For my use cases LUKS on LVM is the best scenario.
2. If you set data drives, the installer request to encrypt swap space. Do it, then remove the swap encryption after booting into the system.
3. Set manual static IP address in Network Manager for main NIC and reboot
4. Update repositories and apps

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

5. Copy “.bashrc” from user account to /root, modify prompt color from 0;32 (green) to 0;31 (red)

6. Check your locale settings

```
locale -a
```

7. Install the required locales

```
dpkg-reconfigure locales
```

8. Change *dhcp* to *static* in file /etc/network/interfaces, or remove the entry for the interface you want to manage with *wicd* or *network manager*, to avoid dhcp-client to assign a dynamic ip during boot. Do not add further interface information, do this in *wicd* or *network manager*

```
sudo vim /etc/network/interfaces
iface eth0 inet manual
```

Root and SSH access

1. Add user to sudoers group and set sudo user permissions (type exactly as indicated)

```
sudo adduser <user> sudo
```

2. Logout and Login again
3. Disable root account, vim /etc/passwd, replace the following line with the one below

```
root:x:0:0:root:/root:/bin/bash
root:x:0:0:root:/root:/usr/sbin/nologin
```

4. Install SSH Access

Check Network

- Get gateway address:

```
ip r | awk '/^def/{print $3}'
```

- Get network interface:

```
ip r | awk 'END{print $3}'
```

- Make sure only one network interface gets an IP address and only one gateway is defined as default

Tuning

- Swap behavior

Virtualbox 7.1

1. Import the GPG key: `wget -q https://www.virtualbox.org/download/oracle_vbox_2016.asc -O- | sudo gpg –dearmor -o /etc/apt/trusted.gpg.d/virtualbox.gpg`
2. Add the repository: `sudo sh -c 'echo "deb [arch=amd64] http://download.virtualbox.org/virtualbox/debian bookworm contrib" >> /etc/apt/sources.list.d/virtualbox.list'`
3. Update package lists: `sudo apt update`
4. Install VirtualBox: `sudo apt install virtualbox-7.1`

LVM

1. Install the lvm2 package:

```
sudo apt install lvm2
```

2. Enable and start the LVM service:

```
sudo systemctl enable lvm2-lvmetad
sudo systemctl start lvm2-lvmetad
```

LUKS

1. Install:

```
sudo apt install cryptsetup
```

OpenVPN

1. Install:

```
apt install openvpn
```

Connect existing data volumes

1. Mount LVM volumes, first check filesystem type

```
file -sL /dev/sda1 or file -sL /dev/vg_group/lv_volume
```

2. Add fstab entry to mount during system boot for unencrypted volumes

```
/dev/vg_group/lv_volume /home ext4 noatime,user_xattr 0 0
```

3. Add Encrypted partitions/folders with auto-mount

Install Software

1. Install

```
sudo apt install vim
sudo apt install smartmontools
sudo apt install iotop
sudo apt install rsync
sudo apt install zip
sudo apt install wget
```

2. Usage

```
smartctl --health /dev/sda
```

Autostart Apps

- Set up rc.local to autostart scripts at boot time
- Services - rc.local

Remove Applications

LibreOffice

```
sudo apt-get remove --purge libreoffice*
sudo apt-get clean
sudo apt-get autoremove
```

Exclude package from upgrade

Sometimes it is helpful to exclude a package from upgrading. Virtualbox, for example, requires the GUI on the client to be used after version upgrade to upgrade and install the guest addtions, so sometimes it's better to not upgrade the package while you don't have physical access to the client. You can exclude and include with the following commands:

```
sudo apt-mark hold virtualbox-6.1
sudo apt-mark unhold virtualbox-6.1
```

Change host name

- `sude hostnamectl set-hostname newname`
- Update `/etc/hostname`
- Update `/etc/hosts`
- either:

```
sudo invoke-rc.d hostname.sh start
sudo invoke-rc.d networking force-reload
```

- or:

```
sudo systemctl restart networking.service
```

Links

- Where is rc.local in Debian 9 (Debian Stretch)
- How to manage startup applications in Debian 9?

From:
https://wiki.condrau.com/ - **Bernard's Wiki**

Permanent link:
https://wiki.condrau.com/deb12:instolympus2

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