Born2beroot Part 1: VirtualBox & VirtualMachine

o   Introduction to virtualization
o   Create first machine in VirtualBox
o   Set up own operating system while implementing strict rules.
o   Submit a signature.txt file at the root of my repository - paste in it the signature of my machine's virtual disk.

Hostname: evong42
Host/Root password: Lev2020
New User: Evangelene
New User ID*: evong
Password: Cayo#5782#
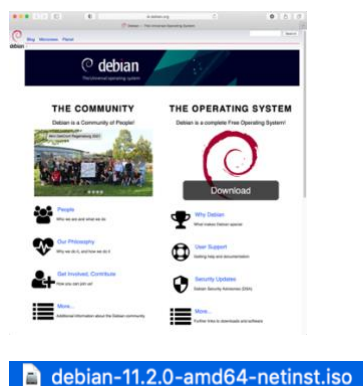Encryption passphrase: Asher#5782

* <u>A note to users of this guide</u>:
Take note that in all print screens, User ID evong22 have been replaced with evong since subject paper requested use of intra login as user.

This <u>video</u> helps with Step 1 & 2:

1.   Download and install <u>VirtualBox</u>
   -    Follow Downloads/OS X hosts

2.   Download <u>Debian</u> OS

debian-11.2.0-amd64-netinst.iso

This <u>video</u> helps with step 3:

3.   Virtual Machine installation

Settings
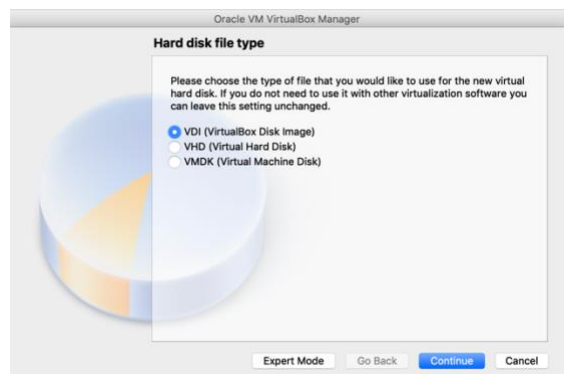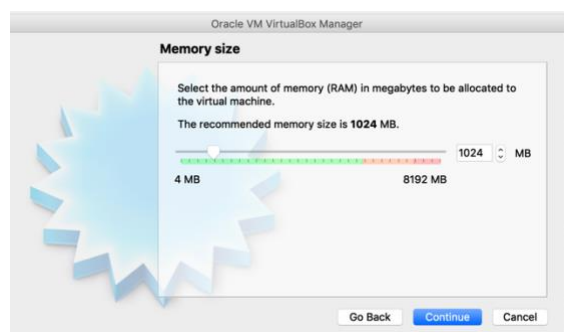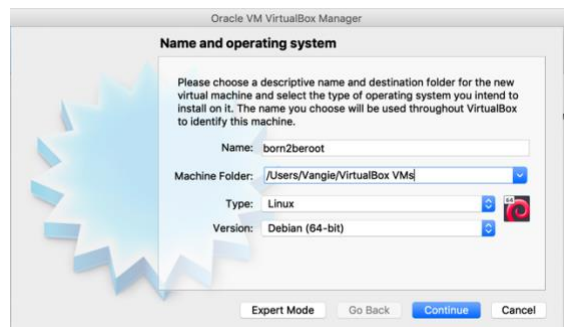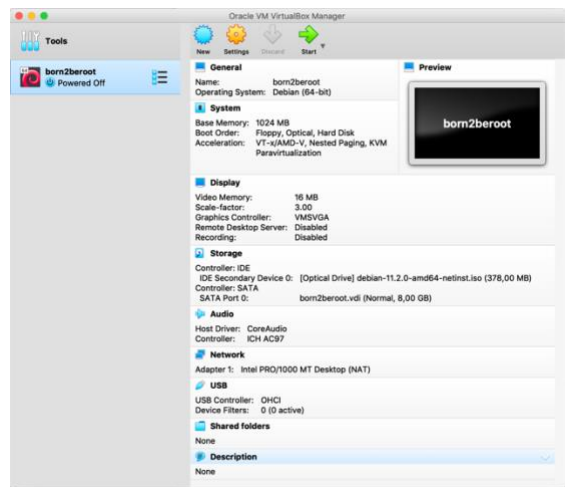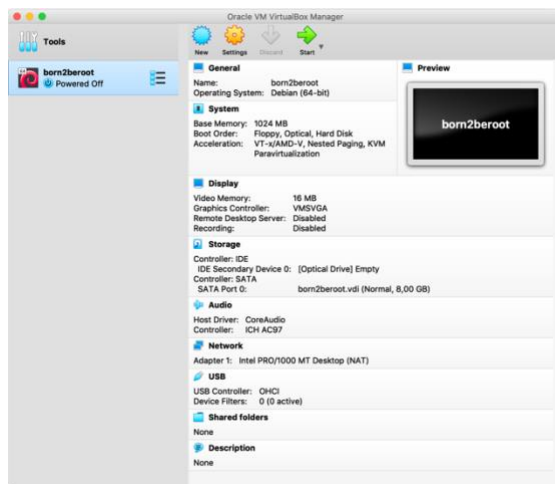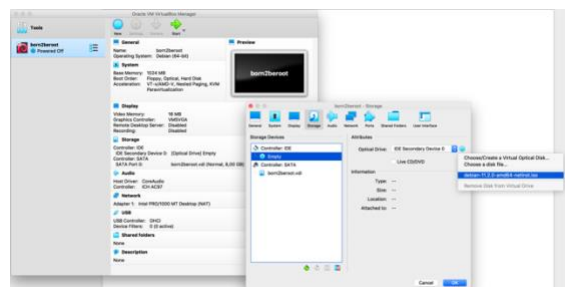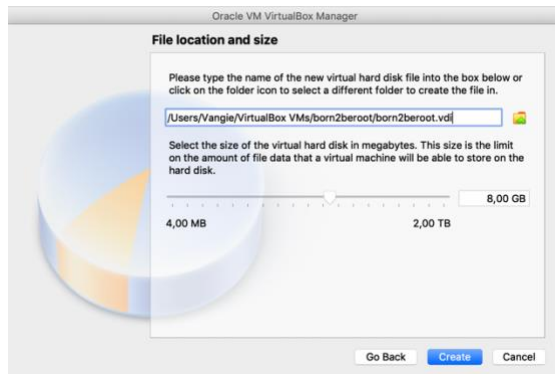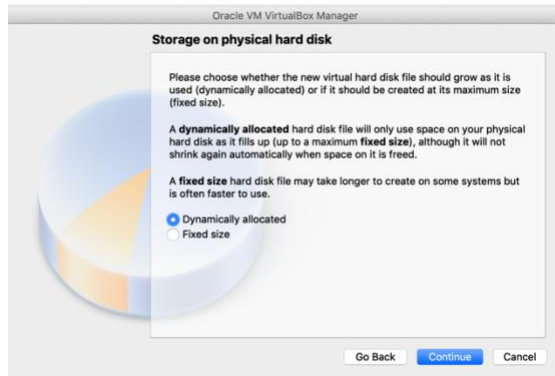
Adjust Display/Scale Factor:

Link Optical Drive to VM/Storage/IDE Controller:

debian-11.2.0-amd64-netinst.iso

Install Debian OS:

Start

Debian GNU/Linux installer menu (BIOS mode)

Graphical install
Install
Advanced options   >
Accessible dark contrast installer menu   >
Help
Install with speech synthesis

debian 11

Set language:

┤ [!!] Select a language ├

Choose the language to be used for the installation process. The selected language will also be the default language for the installed system.

Language:

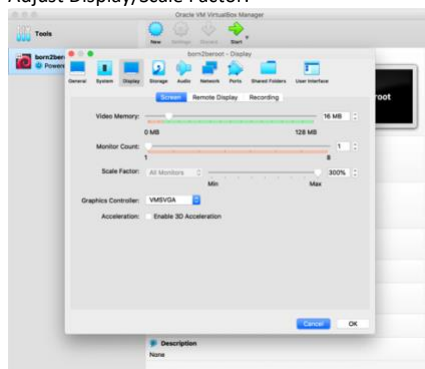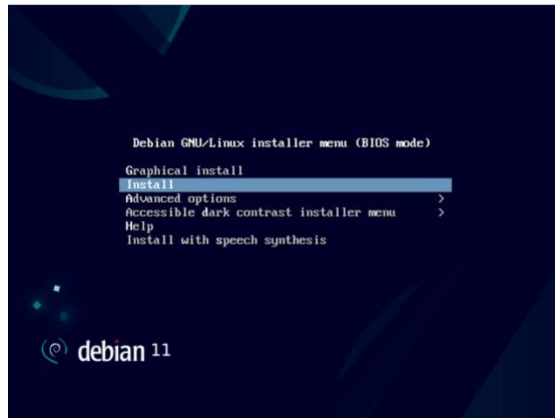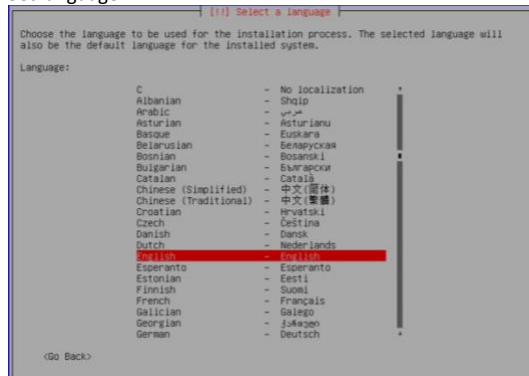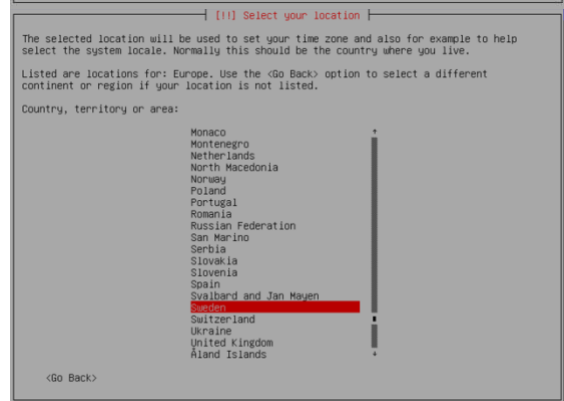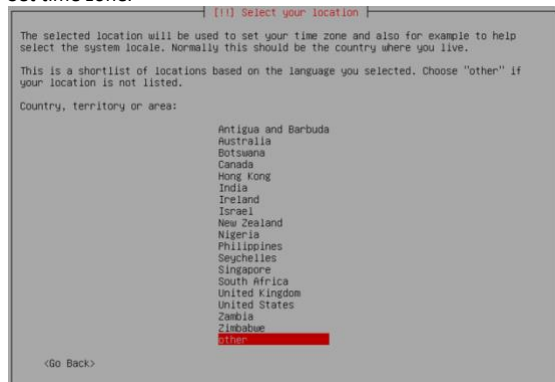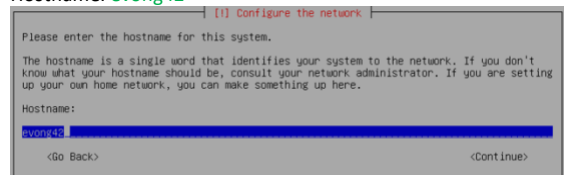|	
C	- No localization
Albanian	- Shqip
Arabic	- عربية
Asturian	- Asturianu
Basque	- Euskara
Belarusian	- Беларуская
Bosnian	- Bosanski
Bulgarian	- Български
Catalan	- Català
Chinese (Simplified)	- 中文(简体)
Chinese (Traditional)	- 中文(繁體)
Croatian	- Hrvatski
Czech	- Čeština
Danish	- Dansk
Dutch	- Nederlands
English	- English
Esperanto	- Esperanto
Estonian	- Eesti
Finnish	- Suomi
French	- Français
Galician	- Galego
Georgian	- ქართული
German	- Deutsch

<Go Back>

┤ [!!] Configure the keyboard ├

Keymap to use:

Persian
Philippines
Polish
Portuguese
Punjabi
Romanian
Russian
Serbian (Cyrillic)
Sindhi
Sinhala
Slovak
Slovenian
Spanish
Swedish
Swiss French
Swiss German
Tajik
Tamil
Telugu
Thai
Tibetan
Turkish (F layout)
Turkish (Q layout)
Ukrainian
Uyghur
Vietnamese

<Go Back>

Set time zone:

┤ [!!] Select your location ├

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

This is a shortlist of locations based on the language you selected. Choose "other" if your location is not listed.

Country, territory or area:

Antigua and Barbuda
Australia
Botswana
Canada
Hong Kong
India
Ireland
Israel
New Zealand
Nigeria
Philippines
Seychelles
Singapore
South Africa
United Kingdom
United States
Zambia
Zimbabwe
other

<Go Back>

┤ [!!] Select your location ├

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

Select the continent or region to which your location belongs.

Continent or region:

Africa
Antarctica
Asia
Atlantic Ocean
Caribbean
Central America
Europe
Indian Ocean
North America
Oceania
South America
other

<Go Back>

┤ [!!] Select your location ├

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

Listed are locations for: Europe. Use the <Go Back> option to select a different continent or region if your location is not listed.

Country, territory or area:

Monaco
Montenegro
Netherlands
North Macedonia
Norway
Poland
Portugal
Romania
Russian Federation
San Marino
Serbia
Slovakia
Slovenia
Spain
Svalbard and Jan Mayen
Sweden
Switzerland
Ukraine
United Kingdom
Åland Islands

<Go Back>

Hostname: evong42

┤ [!] Configure the network ├

Please enter the hostname for this system.

The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here.

Hostname:

evong42

<Go Back>   <Continue>

Domain name:

┤ [!] Configure the network ├

The domain name is the part of your Internet address to the right of your host name. It is often something that ends in .com, .net, .edu, or .org. If you are setting up a home network, you can make something up, but make sure you use the same domain name on all your computers.

Domain name:

<Go Back>   <Continue>

Root password: Lev##20202

┤ [!!] Set up users and passwords ├

You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in dictionaries, or a word that could be easily associated with you.

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

The root user should not have an empty password. If you leave this empty, the root account will be disabled and the system's initial user account will be given the power to become root using the "sudo" command.

Note that you will not be able to see the password as you type it.

Root password:

[ ] Show Password in Clear

<Go Back>   <Continue>

Verify root password: Lev##20202

┤ [!!] Set up users and passwords ├

Please enter the same root password again to verify that you have typed it correctly.

Re-enter password to verify:

[ ] Show Password in Clear

<Go Back>   <Continue>

Full name for the new user: Evangelene

Username for your account: evong

Password: Cayo##5782

Verify user password: Cayo##5782

Partitioning disk:

Set up #1 Primary partition:

Set up #5 Logical partition:

─┤ [!!] Partition disks ├─

This is an overview of your currently configured partitions and mount points. Select a
partition to modify its settings (file system, mount point, etc.), a free space to create
partitions, or a device to initialize its partition table.

        Guided partitioning
        Configure software RAID
        Configure the Logical Volume Manager
        Configure encrypted volumes
        Configure iSCSI volumes

        SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
            #1 primary 499.1 MB   f ext4   /boot
                pri/log   8.1 GB   FREE SPACE

        Undo changes to partitions
        Finish partitioning and write changes to disk

    <Go Back>

─┤ [!!] Partition disks ├─

How to use this free space:

    Create a new partition
    Automatically partition the free space
    Show Cylinder/Head/Sector information

        <Go Back>

─┤ [!!] Partition disks ├─

The maximum size for this partition is 8.1 GB.

Hint: "max" can be used as a shortcut to specify the maximum size, or enter a percentage
(e.g. "20%") to use that percentage of the maximum size.

New partition size:

max

    <Go Back>   <Continue>

─┤ [!!] Partition disks ├─

Type for the new partition:

        Primary
        Logical

    <Go Back>

─┤ [!!] Partition disks ├─

You are editing partition #5 of SCSI3 (0,0,0) (sda). No existing file system was detected
in this partition.

Partition settings:

        Use as: Ext4 journaling file system

        Mount point: /home
        Mount options: defaults
        Label: none
        Reserved blocks: 5%
        Typical usage: standard
        Bootable flag: off

        Delete the partition
        Done setting up the partition

    <Go Back>

─┤ [!!] Partition disks ├─

Mount point for this partition:

  / - the root file system
  /boot - static files of the boot loader
  /home - user home directories
  /tmp - temporary files
  /usr - static data
  /var - variable data
  /srv - data for services provided by this system
  /opt - add-on application software packages
  /usr/local - local hierarchy
  Enter manually
  Do not mount it

    <Go Back>

─┤ [!!] Partition disks ├─

You are editing partition #5 of SCSI3 (0,0,0) (sda). No existing file system was detected
in this partition.

Partition settings:

        Use as: Ext4 journaling file system

        Mount point: none
        Mount options: defaults
        Label: none
        Reserved blocks: 5%
        Typical usage: standard
        Bootable flag: off

        Delete the partition
        Done setting up the partition

    <Go Back>

Encrypt #5 Logical partition:

─┤ [!!] Partition disks ├─

This is an overview of your currently configured partitions and mount points. Select a
partition to modify its settings (file system, mount point, etc.), a free space to create
partitions, or a device to initialize its partition table.

        Guided partitioning
        Configure software RAID
        Configure the Logical Volume Manager
        Configure encrypted volumes
        Configure iSCSI volumes

        SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
            #1 primary 499.1 MB   f ext4   /boot
            #5 logical   8.1 GB   f ext4

        Undo changes to partitions
        Finish partitioning and write changes to disk

    <Go Back>

─┤ [!!] Partition disks ├─

Before encrypted volumes can be configured, the current partitioning scheme has to be
written to disk. These changes cannot be undone.

After the encrypted volumes have been configured, no additional changes to the partitions
on the disks containing encrypted volumes are allowed. Please decide if you are satisfied
with the current partitioning scheme for these disks before continuing.

The partition tables of the following devices are changed:
    SCSI3 (0,0,0) (sda)

The following partitions are going to be formatted:
    partition #1 of SCSI3 (0,0,0) (sda) as ext4
    partition #5 of SCSI3 (0,0,0) (sda) as ext4

Write the changes to disk and configure encrypted volumes?

    <Yes>   <No>

─┤ [!!] Partition disks ├─

This menu allows you to configure encrypted volumes.

Encryption configuration actions

            Create encrypted volumes
            Finish

    <Go Back>

─┤ [!!] Partition disks ├─

Please select the devices to be encrypted.

You can select one or more devices.

Devices to encrypt:

    [ ] /dev/sda1   (499MB; ext4)
    [*] /dev/sda5   (8087MB; ext4)

    <Go Back>   <Continue>

─┤ [!!] Partition disks ├─

You are editing partition #5 of SCSI3 (0,0,0) (sda). No existing file system was detected
in this partition.

Partition settings:

        Use as: physical volume for encryption
        Encryption method: Device-mapper (dm-crypt)

        Encryption: aes
        Mount point: none
        Mount options: defaults
        Key size: 256
        IV algorithm: xts-plain64
        Encryption key: Passphrase
        Erase data: yes
        Bootable flag: off

        Erase data on this partition
        Delete the partition
        Done setting up the partition

    <Go Back>

─┤ [!!] Partition disks ├─

This menu allows you to configure encrypted volumes.

Encryption configuration actions

            Create encrypted volumes
            Finish

    <Go Back>

The data on SCSI3 (0,0,0), partition #5 (sda) will be overwritten with random data. It can no longer be recovered after this step has completed. This is the last opportunity to abort the erase.

Really erase the data on SCSI3 (0,0,0), partition #5 (sda)?

    <Go Back>   <Yes>   <No>

```
┤ Erasing data on SCSI3 (0,0,0), partition #5 (sda) ├
```

```
10%
```

The installer is now overwriting SCSI3 (0,0,0), partition #5 (sda) with random data to prevent meta-information leaks from the encrypted volume. This step may be skipped by cancelling this action, albeit at the expense of a slight reduction of the quality of the encryption.

    <Cancel>

Encryption passphrase: Asher#5782

```
┤ [!!] Partition disks ├
```

You need to choose a passphrase to encrypt SCSI3 (0,0,0), partition #5 (sda).

The overall strength of the encryption depends strongly on this passphrase, so you should take care to choose a passphrase that is not easy to guess. It should not be a word or sentence found in dictionaries, or a phrase that could be easily associated with you.

A good passphrase will contain a mixture of letters, numbers and punctuation. Passphrases are recommended to have a length of 20 or more characters.

Encryption passphrase:

    ****

[ ] Show Password in Clear

    <Go Back>   <Continue>

```
┤ [!!] Partition disks ├
```

Please enter the same passphrase again to verify that you have typed it correctly.

Re-enter passphrase to verify:

    ****

[ ] Show Password in Clear

    <Go Back>   <Continue>

Configure Logical Volume Manager:

```
┤ [!!] Partition disks ├
```

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

        Guided partitioning
        Configure software RAID
        Configure the Logical Volume Manager
        Configure encrypted volumes
        Configure iSCSI volumes

        Encrypted volume (sda5_crypt) - 8.1 GB Linux device-mapper (crypt)
            #1   8.1 GB   f ext4
        SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
            #1 primary 499.1 MB   F ext4   /boot
            #5 logical   8.1 GB   K crypto   (sda5_crypt)

        Undo changes to partitions
        Finish partitioning and write changes to disk

    <Go Back>

```
┤ [!!] Partition disks ├
```

Before the Logical Volume Manager can be configured, the current partitioning scheme has to be written to disk. These changes cannot be undone.

After the Logical Volume Manager is configured, no additional changes to the partitioning scheme of disks containing physical volumes are allowed during the installation. Please decide if you are satisfied with the current partitioning scheme before continuing.

The partition tables of the following devices are changed:
    Encrypted volume (sda5_crypt)

The following partitions are going to be formatted:
    Encrypted volume (sda5_crypt) as ext4

Write the changes to disks and configure LVM?

    <Yes>   <No>

```
┤ [!!] Partition disks ├
```

Summary of current LVM configuration:

 Free Physical Volumes: 0
 Used Physical Volumes: 0
 Volume Groups: 0
 Logical Volumes: 0

LVM configuration action:

        Display configuration details
        Create volume group
        Finish

    <Go Back>

Volume group name: LVMGroup

```
┤ [!!] Partition disks ├
```

Please enter the name you would like to use for the new volume group.

Volume group name:

LVMGroup

    <Go Back>   <Continue>

```
┤ [!!] Partition disks ├
```

Please select the devices for the new volume group.

You can select one or more devices.

Devices for the new volume group:

    [*] /dev/mapper/sda5_crypt   (8070MB; ext4)
    [ ] /dev/sda1   (499MB; ext4)

    <Go Back>   <Continue>

Logical volume name/size: root/2G

```
┤ [!!] Partition disks ├
```

Summary of current LVM configuration:

 Free Physical Volumes: 0
 Used Physical Volumes: 1
 Volume Groups: 1
 Logical Volumes: 0

LVM configuration action:

        Display configuration details
        Create volume group
        Create logical volume
        Delete volume group
        Extend volume group
        Finish

    <Go Back>

```
┤ [!!] Partition disks ├
```

Please select the volume group where the new logical volume should be created.

Volume group:

        LVMGroup   (8069MB)

    <Go Back>

```
┤ [!!] Partition disks ├
```

Please enter the name you would like to use for the new logical volume.

Logical volume name:

root

    <Go Back>   <Continue>

```
┤ [!!] Partition disks ├
```

Please enter the size of the new logical volume. The size may be entered in the following formats: 10K (Kilobytes), 10M (Megabytes), 10G (Gigabytes), 10T (Terabytes). The default unit is Megabytes.

Logical volume size:

2G

    <Go Back>   <Continue>

Logical volume name/size: swap/1024M

```
┤ [!!] Partition disks ├

 Summary of current LVM configuration:

  Free Physical Volumes:   0
  Used Physical Volumes:   1
  Volume Groups:           1
  Logical Volumes:         1

 LVM configuration action:

        Display configuration details
        Create volume group
        Create logical volume
        Delete logical volume
        Extend volume group
        Finish

        <Go Back>
```

```
┤ [!!] Partition disks ├
Please select the volume group where the new logical volume should be created.
Volume group:
           LVMGroup                (6073MB)
     <Go Back>
```

```
┤ [!!] Partition disks ├
Please enter the name you would like to use for the new logical volume.
Logical volume name:
swap
     <Go Back>                                  <Continue>
```

```
┤ [!!] Partition disks ├
Please enter the size of the new logical volume. The size may be entered in the following
formats: 10K (Kilobytes), 10M (Megabytes), 10G (Gigabytes), 10T (Terabytes). The default
unit is Megabytes.
Logical volume size:
1024M
     <Go Back>                                  <Continue>
```

Logical volume name/size: home/1G

```
┤ [!!] Partition disks ├

 Summary of current LVM configuration:

  Free Physical Volumes:   0
  Used Physical Volumes:   1
  Volume Groups:           1
  Logical Volumes:         2

 LVM configuration action:

        Display configuration details
        Create volume group
        Create logical volume
        Delete logical volume
        Extend volume group
        Finish

        <Go Back>
```

```
┤ [!!] Partition disks ├
Please select the volume group where the new logical volume should be created.
Volume group:
           LVMGroup                (5049MB)
     <Go Back>
```

```
┤ [!!] Partition disks ├
Please enter the name you would like to use for the new logical volume.
Logical volume name:
home
     <Go Back>                                  <Continue>
```

```
┤ [!!] Partition disks ├
Please enter the size of the new logical volume. The size may be entered in the following
formats: 10K (Kilobytes), 10M (Megabytes), 10G (Gigabytes), 10T (Terabytes). The default
unit is Megabytes.
Logical volume size:
1G
     <Go Back>                                  <Continue>
```

Logical volume name/size: var/1G

```
┤ [!!] Partition disks ├

 Summary of current LVM configuration:

  Free Physical Volumes:   0
  Used Physical Volumes:   1
  Volume Groups:           1
  Logical Volumes:         3

 LVM configuration action:

        Display configuration details
        Create volume group
        Create logical volume
        Delete logical volume
        Extend volume group
        Finish

        <Go Back>
```

```
┤ [!!] Partition disks ├
Please select the volume group where the new logical volume should be created.
Volume group:
           LVMGroup                (4051MB)
     <Go Back>
```

```
┤ [!!] Partition disks ├
Please enter the name you would like to use for the new logical volume.
Logical volume name:
var
     <Go Back>                                  <Continue>
```

```
┤ [!!] Partition disks ├
Please enter the size of the new logical volume. The size may be entered in the following
formats: 10K (Kilobytes), 10M (Megabytes), 10G (Gigabytes), 10T (Terabytes). The default
unit is Megabytes.
Logical volume size:
1G
     <Go Back>                                  <Continue>
```

Logical volume name/size: srv/1G

```
┤ [!!] Partition disks ├

 Summary of current LVM configuration:

  Free Physical Volumes:   0
  Used Physical Volumes:   1
  Volume Groups:           1
  Logical Volumes:         4

 LVM configuration action:

        Display configuration details
        Create volume group
        Create logical volume
        Delete logical volume
        Extend volume group
        Finish

        <Go Back>
```

```
┤ [!!] Partition disks ├
Please select the volume group where the new logical volume should be created.
Volume group:
           LVMGroup                (3053MB)
     <Go Back>
```

Please enter the name you would like to use for the new logical volume.

Logical volume name:

srv

<Go Back>   <Continue>

┤ [!!] Partition disks ├

Please enter the size of the new logical volume. The size may be entered in the following
formats: 10K (Kilobytes), 10M (Megabytes), 10G (Gigabytes), 10T (Terabytes). The default
unit is Megabytes.

Logical volume size:

1G

<Go Back>   <Continue>

Logical volume name/size: tmp/1G

┤ [!!] Partition disks ├

Summary of current LVM configuration:

Free Physical Volumes: 0
Used Physical Volumes: 1
Volume Groups: 1
Logical Volumes: 5

LVM configuration action:

        Display configuration details
        Create volume group
        Create logical volume
        Delete logical volume
        Extend volume group
        Finish

        <Go Back>

┤ [!!] Partition disks ├

Please select the volume group where the new logical volume should be created.

Volume group:

        LVMGroup   (2055MB)

        <Go Back>

┤ [!!] Partition disks ├

Please enter the name you would like to use for the new logical volume.

Logical volume name:

tmp

<Go Back>   <Continue>

┤ [!!] Partition disks ├

Please enter the size of the new logical volume. The size may be entered in the following
formats: 10K (Kilobytes), 10M (Megabytes), 10G (Gigabytes), 10T (Terabytes). The default
unit is Megabytes.

Logical volume size:

1G

<Go Back>   <Continue>

Logical volume name/size: var-log/1056MB
Here, type in only one dash '-' between var and log.
Output will eventually show two dashes.

┤ [!!] Partition disks ├

Summary of current LVM configuration:

Free Physical Volumes: 0
Used Physical Volumes: 1
Volume Groups: 1
Logical Volumes: 6

LVM configuration action:

        Display configuration details
        Create volume group
        Create logical volume
        Delete logical volume
        Extend volume group
        Finish

        <Go Back>

┤ [!!] Partition disks ├

Please select the volume group where the new logical volume should be created.

Volume group:

        LVMGroup   (1056MB)

        <Go Back>

┤ [!!] Partition disks ├

Please enter the name you would like to use for the new logical volume.

Logical volume name:

var-log

<Go Back>   <Continue>

┤ [!!] Partition disks ├

Please enter the size of the new logical volume. The size may be entered in the following
formats: 10K (Kilobytes), 10M (Megabytes), 10G (Gigabytes), 10T (Terabytes). The default
unit is Megabytes.

Logical volume size:

1056MB

<Go Back>   <Continue>

┤ [!!] Partition disks ├

Summary of current LVM configuration:

Free Physical Volumes: 0
Used Physical Volumes: 1
Volume Groups: 1
Logical Volumes: 7

LVM configuration action:

        Display configuration details
        Create volume group
        Delete logical volume
        Extend volume group
        Finish

        <Go Back>

Edit home partition

┤ [!!] Partition disks ├

This is an overview of your currently configured partitions and mount points. Select a
partition to modify its settings (file system, mount point, etc.), a free space to create
partitions, or a device to initialize its partition table.

```
        Guided partitioning
        Configure software RAID
        Configure the Logical Volume Manager
        Configure encrypted volumes
        Configure iSCSI volumes

        LVM VG LVMGroup, LV home - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB
        LVM VG LVMGroup, LV root - 2.0 GB Linux device-mapper (linear)
            #1        2.0 GB
        LVM VG LVMGroup, LV srv - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB
        LVM VG LVMGroup, LV swap - 1.0 GB Linux device-mapper (linear)
            #1        1.0 GB
        LVM VG LVMGroup, LV tmp - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB
        LVM VG LVMGroup, LV var - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB
        LVM VG LVMGroup, LV var-log - 1.1 GB Linux device-mapper (linear)
            #1        1.1 GB
        Encrypted volume (sda5_crypt) - 8.1 GB Linux device-mapper (crypt)
            #1        8.1 GB    K   lvm
        SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
            #1 primary 499.1 MB    F ext4    /boot

    <Go Back>
```

┤ [!!] Partition disks ├

You are editing partition #1 of LVM VG LVMGroup, LV home. No existing file system was
detected in this partition.

Partition settings:

```
                    Use as:  do not use

                    Erase data on this partition
                    Done setting up the partition

    <Go Back>
```

┤ [!!] Partition disks ├

How to use this partition:

```
    Ext4 journaling file system
    Ext3 journaling file system
    Ext2 file system
    btrfs journaling file system
    JFS journaling file system
    XFS journaling file system
    FAT16 file system
    FAT32 file system
    swap area
    physical volume for encryption
    do not use the partition

        <Go Back>
```

┤ [!!] Partition disks ├

You are editing partition #1 of LVM VG LVMGroup, LV home. No existing file system was
detected in this partition.

Partition settings:

```
            Use as:         Ext4 journaling file system

            Mount point:    none
            Mount options:  defaults
            Label:          none
            Reserved blocks: 5%
            Typical usage:  standard

            Erase data on this partition
            Done setting up the partition

    <Go Back>
```

┤ [!!] Partition disks ├

Mount point for this partition:

```
    / - the root file system
    /boot - static files of the boot loader
    /home - user home directories
    /tmp - temporary files
    /usr - static data
    /var - variable data
    /srv - data for services provided by this system
    /opt - add-on application software packages
    /usr/local - local hierarchy
    Enter manually
    Do not mount it

        <Go Back>
```

┤ [!!] Partition disks ├

You are editing partition #1 of LVM VG LVMGroup, LV home. No existing file system was
detected in this partition.

Partition settings:

```
            Use as:         Ext4 journaling file system

            Mount point:    /home
            Mount options:  defaults
            Label:          none
            Reserved blocks: 5%
            Typical usage:  standard

            Erase data on this partition
            Done setting up the partition

    <Go Back>
```

Edit root partition

┤ [!!] Partition disks ├

This is an overview of your currently configured partitions and mount points. Select a
partition to modify its settings (file system, mount point, etc.), a free space to create
partitions, or a device to initialize its partition table.

```
        Guided partitioning
        Configure software RAID
        Configure the Logical Volume Manager
        Configure encrypted volumes
        Configure iSCSI volumes

        LVM VG LVMGroup, LV home - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB   f ext4    /home
        LVM VG LVMGroup, LV root - 2.0 GB Linux device-mapper (linear)
            #1        2.0 GB
        LVM VG LVMGroup, LV srv - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB
        LVM VG LVMGroup, LV swap - 1.0 GB Linux device-mapper (linear)
            #1        1.0 GB
        LVM VG LVMGroup, LV tmp - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB
        LVM VG LVMGroup, LV var - 998.2 MB Linux device-mapper (linear)
            #1        998.2 MB
        LVM VG LVMGroup, LV var-log - 1.1 GB Linux device-mapper (linear)
            #1        1.1 GB
        Encrypted volume (sda5_crypt) - 8.1 GB Linux device-mapper (crypt)
            #1        8.1 GB    K   lvm
        SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
            #1 primary 499.1 MB    F ext4    /boot

    <Go Back>
```

┤ [!!] Partition disks ├

You are editing partition #1 of LVM VG LVMGroup, LV home. No existing file system was
detected in this partition.

Partition settings:

```
                    Use as:  do not use

                    Erase data on this partition
                    Done setting up the partition

    <Go Back>
```

┤ [!!] Partition disks ├

How to use this partition:

```
    Ext4 journaling file system
    Ext3 journaling file system
    Ext2 file system
    btrfs journaling file system
    JFS journaling file system
    XFS journaling file system
    FAT16 file system
    FAT32 file system
    swap area
    physical volume for encryption
    do not use the partition

        <Go Back>
```

┤ [!!] Partition disks ├

You are editing partition #1 of LVM VG LVMGroup, LV root. No existing file system was
detected in this partition.

Partition settings:

```
            Use as:         Ext4 journaling file system

            Mount point:    none
            Mount options:  defaults
            Label:          none
            Reserved blocks: 5%
            Typical usage:  standard

            Erase data on this partition
            Done setting up the partition

    <Go Back>
```

```
                  ┤ [!!] Partition disks ├
                                                        ┤ [!!] Partition disks ├
  Mount point for this partition:                 You are editing partition #1 of LVM VG LVMGroup, LV srv. No existing file system was
                                                  detected in this partition.

  / - the root file system                        Partition settings:
  /boot - static files of the boot loader
  /home - user home directories                            Use as:         Ext4 journaling file system
  /tmp - temporary files
  /usr - static data                                       Mount point:    none
  /var - variable data                                     Mount options:  defaults
  /srv - data for services provided by this system         Label:          none
  /opt - add-on application software packages              Reserved blocks: 5%
  /usr/local - local hierarchy                             Typical usage:  standard
  Enter manually
  Do not mount it                                          Erase data on this partition
                                                           Done setting up the partition
      <Go Back>
                                                      <Go Back>

                  ┤ [!!] Partition disks ├
                                                                  ┤ [!!] Partition disks ├
  You are editing partition #1 of LVM VG LVMGroup, LV root. No existing file system was
  detected in this partition.                     Mount point for this partition:

  Partition settings:                               / - the root file system
                                                    /boot - static files of the boot loader
          Use as:         Ext4 journaling file system   /home - user home directories
                                                    /tmp - temporary files
          Mount point:    /                         /usr - static data
          Mount options:  defaults                  /var - variable data
          Label:          none                      /srv - data for services provided by this system
          Reserved blocks: 5%                       /opt - add-on application software packages
          Typical usage:  standard                  /usr/local - local hierarchy
                                                    Enter manually
          Erase data on this partition              Do not mount it
          Done setting up the partition
                                                        <Go Back>
      <Go Back>
```

Edit srv partition

```
                  ┤ [!!] Partition disks ├
                                                                  ┤ [!!] Partition disks ├
  This is an overview of your currently configured partitions and mount points. Select a
  partition to modify its settings (file system, mount point, etc.), a free space to create   You are editing partition #1 of LVM VG LVMGroup, LV srv. No existing file system was
  partitions, or a device to initialize its partition table.                                  detected in this partition.

      Guided partitioning                          Partition settings:
      Configure software RAID
      Configure the Logical Volume Manager                 Use as:         Ext4 journaling file system
      Configure encrypted volumes
      Configure iSCSI volumes                              Mount point:    /srv
                                                           Mount options:  defaults
      LVM VG LVMGroup, LV home - 998.2 MB Linux device-mapper (linear)   Label:          none
          #1        998.2 MB    f  ext4    /home            Reserved blocks: 5%
      LVM VG LVMGroup, LV root - 2.0 GB Linux device-mapper (linear)     Typical usage:  standard
          #1        2.0 GB      f  ext4    /
      LVM VG LVMGroup, LV srv - 998.2 MB Linux device-mapper (linear)    Erase data on this partition
          #1        998.2 MB                                Done setting up the partition
      LVM VG LVMGroup, LV swap - 1.0 GB Linux device-mapper (linear)
          #1        1.0 GB                             <Go Back>
      LVM VG LVMGroup, LV tmp - 998.2 MB Linux device-mapper (linear)
          #1        998.2 MB
      LVM VG LVMGroup, LV var - 998.2 MB Linux device-mapper (linear)   Edit swap partition
          #1        998.2 MB
      LVM VG LVMGroup, LV var-log - 1.1 GB Linux device-mapper (linear)            ┤ [!!] Partition disks ├
          #1        1.1 GB
      Encrypted volume (sda5_crypt) - 8.1 GB Linux device-mapper (crypt)   This is an overview of your currently configured partitions and mount points. Select a
          #1        8.1 GB      K  lvm                    partition to modify its settings (file system, mount point, etc.), a free space to create
      SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK      partitions, or a device to initialize its partition table.
          #1 primary 499.1 MB  F  ext4    /boot
                                                           Guided partitioning
      <Go Back>                                            Configure software RAID
                                                           Configure the Logical Volume Manager
                                                           Configure encrypted volumes
                  ┤ [!!] Partition disks ├                 Configure iSCSI volumes

  You are editing partition #1 of LVM VG LVMGroup, LV srv. No existing file system was       LVM VG LVMGroup, LV home - 998.2 MB Linux device-mapper (linear)
  detected in this partition.                                  #1        998.2 MB    f  ext4    /home
                                                           LVM VG LVMGroup, LV root - 2.0 GB Linux device-mapper (linear)
  Partition settings:                                          #1        2.0 GB      f  ext4    /
                                                           LVM VG LVMGroup, LV srv - 998.2 MB Linux device-mapper (linear)
          Use as: do not use                                   #1        998.2 MB    f  ext4    /srv
                                                           LVM VG LVMGroup, LV swap - 1.0 GB Linux device-mapper (linear)
          Erase data on this partition                         #1        1.0 GB
          Done setting up the partition                    LVM VG LVMGroup, LV tmp - 998.2 MB Linux device-mapper (linear)
                                                               #1        998.2 MB
      <Go Back>                                            LVM VG LVMGroup, LV var - 998.2 MB Linux device-mapper (linear)
                                                               #1        998.2 MB
                                                           LVM VG LVMGroup, LV var-log - 1.1 GB Linux device-mapper (linear)
                                                               #1        1.1 GB
             ┤ [!!] Partition disks ├                      Encrypted volume (sda5_crypt) - 8.1 GB Linux device-mapper (crypt)
                                                               #1        8.1 GB      K  lvm
                                                           SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
  How to use this partition:                                   #1 primary 499.1 MB  F  ext4    /boot

                                                           <Go Back>
  Ext4 journaling file system
  Ext3 journaling file system                                       ┤ [!!] Partition disks ├
  Ext2 file system
  btrfs journaling file system                     You are editing partition #1 of LVM VG LVMGroup, LV swap. No existing file system was
  JFS journaling file system                       detected in this partition.
  XFS journaling file system
  FAT16 file system                                Partition settings:
  FAT32 file system
  swap area                                                Use as: do not use
  physical volume for encryption
  do not use the partition                                 Erase data on this partition
                                                           Done setting up the partition
      <Go Back>
                                                      <Go Back>
```

Edit tmp partition

Edit var partition

[!!] Partition disks

How to use this partition:

    Ext4 journaling file system
    Ext3 journaling file system
    Ext2 file system
    btrfs journaling file system
    JFS journaling file system
    XFS journaling file system
    FAT16 file system
    FAT32 file system
    swap area
    physical volume for encryption
    do not use the partition

        <Go Back>

[!!] Partition disks

You are editing partition #1 of LVM VG LVMGroup, LV var. No existing file system was detected in this partition.

Partition settings:

    Use as: Ext4 journaling file system

    Mount point: none
    Mount options: defaults
    Label: none
    Reserved blocks: 5%
    Typical usage: standard

    Erase data on this partition
    Done setting up the partition

    <Go Back>

[!!] Partition disks

Mount point for this partition:

    / - the root file system
    /boot - static files of the boot loader
    /home - user home directories
    /tmp - temporary files
    /usr - static data
    /var - variable data
    /srv - data for services provided by this system
    /opt - add-on application software packages
    /usr/local - local hierarchy
    Enter manually
    Do not mount it

        <Go Back>

[!!] Partition disks

You are editing partition #1 of LVM VG LVMGroup, LV var. No existing file system was detected in this partition.

Partition settings:

    Use as: Ext4 journaling file system

    Mount point: /var
    Mount options: defaults
    Label: none
    Reserved blocks: 5%
    Typical usage: standard

    Erase data on this partition
    Done setting up the partition

    <Go Back>

Edit var-log partition

[!!] Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

    Guided partitioning
    Configure software RAID
    Configure the Logical Volume Manager
    Configure encrypted volumes
    Configure iSCSI volumes

    LVM VG LVMGroup, LV home - 998.2 MB Linux device-mapper (linear)
        #1   998.2 MB   f ext4   /home
    LVM VG LVMGroup, LV root - 2.0 GB Linux device-mapper (linear)
        #1   2.0 GB   f ext4   /
    LVM VG LVMGroup, LV srv - 998.2 MB Linux device-mapper (linear)
        #1   998.2 MB   f ext4   /srv
    LVM VG LVMGroup, LV swap - 1.0 GB Linux device-mapper (linear)
        #1   1.0 GB   f swap   swap
    LVM VG LVMGroup, LV tmp - 998.2 MB Linux device-mapper (linear)
        #1   998.2 MB   f ext4   /tmp
    LVM VG LVMGroup, LV var - 998.2 MB Linux device-mapper (linear)
        #1   998.2 MB   f ext4   /var
    LVM VG LVMGroup, LV var-log - 1.1 GB Linux device-mapper (linear)
        #1   1.1 GB
    Encrypted volume (sda5_crypt) - 8.1 GB Linux device-mapper (crypt)
        #1   8.1 GB   K lvm
    SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
        #1 primary 499.1 MB   F ext4   /boot

    <Go Back>

[!!] Partition disks

You are editing partition #1 of LVM VG LVMGroup, LV var-log. No existing file system was detected in this partition.

Partition settings:

    Use as: do not use

    Erase data on this partition
    Done setting up the partition

    <Go Back>

[!!] Partition disks

How to use this partition:

    Ext4 journaling file system
    Ext3 journaling file system
    Ext2 file system
    btrfs journaling file system
    JFS journaling file system
    XFS journaling file system
    FAT16 file system
    FAT32 file system
    swap area
    physical volume for encryption
    do not use the partition

        <Go Back>

[!!] Partition disks

You are editing partition #1 of LVM VG LVMGroup, LV var-log. No existing file system was detected in this partition.

Partition settings:

    Use as: Ext4 journaling file system

    Mount point: none
    Mount options: defaults
    Label: none
    Reserved blocks: 5%
    Typical usage: standard

    Erase data on this partition
    Done setting up the partition

    <Go Back>

[!!] Partition disks

Mount point for this partition:

    / - the root file system
    /boot - static files of the boot loader
    /home - user home directories
    /tmp - temporary files
    /usr - static data
    /var - variable data
    /srv - data for services provided by this system
    /opt - add-on application software packages
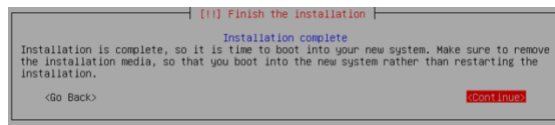   /usr/local - local hierarchy
    Enter manually
    Do not mount it

        <Go Back>

[!!] Partition disks

Mount point for this partition:

```
/var/log_____
```

<Go Back>   <Continue>

[!!] Partition disks

You are editing partition #1 of LVM VG LVMGroup, LV var-log. No existing file system was
detected in this partition.

Partition settings:

```
        Use as:              Ext4 journaling file system

        Mount point:         /var/log
        Mount options:       defaults
        Label:               none
        Reserved blocks:     5%
        Typical usage:       standard

        Erase data on this partition
        Done setting up the partition
```

<Go Back>

[!!] Partition disks

This is an overview of your currently configured partitions and mount points. Select a
partition to modify its settings (file system, mount point, etc.), a free space to create
partitions, or a device to initialize its partition table.

```
        Configure iSCSI volumes

        LVM VG LVMGroup, LV home - 998.2 MB Linux device-mapper (linear)
            #1          998.2 MB   f  ext4        /home
        LVM VG LVMGroup, LV root - 2.0 GB Linux device-mapper (linear)
            #1          2.0 GB     f  ext4        /
        LVM VG LVMGroup, LV srv - 998.2 MB Linux device-mapper (linear)
            #1          998.2 MB   f  ext4        /srv
        LVM VG LVMGroup, LV swap - 1.0 GB Linux device-mapper (linear)
            #1          1.0 GB     f  swap        swap
        LVM VG LVMGroup, LV tmp - 998.2 MB Linux device-mapper (linear)
            #1          998.2 MB   f  ext4        /tmp
        LVM VG LVMGroup, LV var - 998.2 MB Linux device-mapper (linear)
            #1          998.2 MB   f  ext4        /var
        LVM VG LVMGroup, LV var-log - 1.1 GB Linux device-mapper (linear)
            #1          1.1 GB     f  ext4        /var/log
        Encrypted volume (sda5_crypt) - 8.1 GB Linux device-mapper (crypt)
            #1          8.1 GB     K  lvm
        SCSI3 (0,0,0) (sda) - 8.6 GB ATA VBOX HARDDISK
            #1  primary  499.1 MB  F  ext4        /boot
            #5  logical  8.1 GB    K  crypto      (sda5_crypt)

        Undo changes to partitions
        Finish partitioning and write changes to disk
```

<Go Back>

[!!] Partition disks

If you continue, the changes listed below will be written to the disks. Otherwise, you
will be able to make further changes manually.

The partition tables of the following devices are changed:
    LVM VG LVMGroup, LV home
    LVM VG LVMGroup, LV root
    LVM VG LVMGroup, LV srv
    LVM VG LVMGroup, LV swap
    LVM VG LVMGroup, LV tmp
    LVM VG LVMGroup, LV var
    LVM VG LVMGroup, LV var-log

The following partitions are going to be formatted:
    LVM VG LVMGroup, LV home as ext4
    LVM VG LVMGroup, LV root as ext4
    LVM VG LVMGroup, LV srv as ext4
    LVM VG LVMGroup, LV swap as swap
    LVM VG LVMGroup, LV tmp as ext4
    LVM VG LVMGroup, LV var as ext4
    LVM VG LVMGroup, LV var-log as ext4

Write the changes to disks?

    <Yes>   <No>

[!] Configure the package manager

Scanning your installation media finds the label:

Debian GNU/Linux 11.2.0 _Bullseye_ - Official amd64 NETINST 20211218-11:12

You now have the option of scanning additional media for use by the package manager
(apt). Normally these should be from the same set as the one you booted from. If you do
not have any additional media, this step can just be skipped.

If you wish to scan more media, please insert another one now.

Scan extra installation media?

    <Go Back>   <Yes>   <No>

[!] Configure the package manager

The goal is to find a mirror of the Debian archive that is close to you on the network --
be aware that nearby countries, or even your own, may not be the best choice.

Debian archive mirror country:

```
                    Latvia
                    Lithuania
                    Luxembourg
                    Moldova
                    Monaco
                    Netherlands
                    New Caledonia
                    New Zealand
                    North Macedonia
                    Norway
                    Philippines
                    Poland
                    Portugal
                    Romania
                    Russian Federation
                    Réunion
                    Serbia
                    Singapore
                    Slovakia
                    Slovenia
                    South Africa
                    Spain
                    Sweden
```

    <Go Back>

[!] Configure the package manager

Please select a Debian archive mirror. You should use a mirror in your country or region
if you do not know which mirror has the best Internet connection to you.

Usually, deb.debian.org is a good choice.

Debian archive mirror:

```
                    ftp.se.debian.org
                    ftp.acc.umu.se
                    ftp.fi.debian.org
                    debian.lth.se
                    deb.debian.org
                    debian-archive.trafficmanager.net
                    mirrors.glesys.net
                    debian.mirror.su.se
                    mirror.zetup.net
                    mirror.linux.pizza
                    ftpmirror1.infania.net
```

    <Go Back>

[!] Configure the package manager

If you need to use a HTTP proxy to access the outside world, enter the proxy information
here. Otherwise, leave this blank.

The proxy information should be given in the standard form of
"http://[[user][:pass]@]host[:port]/".

HTTP proxy information (blank for none):

```
_____
```

    <Go Back>   <Continue>

[!] Configuring popularity-contest

The system may anonymously supply the distribution developers with statistics about the
most used packages on this system. This information influences decisions such as which
packages should go on the first distribution CD.

If you choose to participate, the automatic submission script will run once every week,
sending statistics to the distribution developers. The collected statistics can be viewed
on https://popcon.debian.org/.

This choice can be later modified by running "dpkg-reconfigure popularity-contest".

Participate in the package usage survey?

    <Yes>   <No>

[!] Software selection

At the moment, only the core of the system is installed. To tune the system to your
needs, you can choose to install one or more of the following predefined collections of
software.

Choose software to install:

```
                    [ ] Debian desktop environment
                    [ ] ... GNOME
                    [ ] ... Xfce
                    [ ] ... GNOME Flashback
                    [ ] ... KDE Plasma
                    [ ] ... Cinnamon
                    [ ] ... MATE
                    [ ] ... LXDE
                    [ ] ... LXQt
                    [ ] web server
                    [ ] SSH server
                    [*] standard system utilities
```

                              <Continue>

[!] Install the GRUB boot loader

It seems that this new installation is the only operating system on this computer. If so,
it should be safe to install the GRUB boot loader to your primary drive (UEFI
partition/boot record).

Warning: If your computer has another operating system that the installer failed to
detect, this will make that operating system temporarily unbootable, though GRUB can be
manually configured later to boot it.

Install the GRUB boot loader to your primary drive?

    <Go Back>   <Yes>   <No>

[!] Install the GRUB boot loader

You need to make the newly installed system bootable, by installing the GRUB boot loader
on a bootable device. The usual way to do this is to install GRUB to your primary drive
(UEFI partition/boot record). You may instead install GRUB to a different drive (or
partition), or to removable media.

Device for boot loader installation:

```
                    Enter device manually
                    /dev/sda  (ata-VBOX_HARDDISK_VB1bf876a5-a10e75ae)
```

    <Go Back>

Finishing the installation

```
[                              23%                                    ]
```

Running hw-detect...

After installation of OS:
- Enter encryption passphrase: Asher#5782
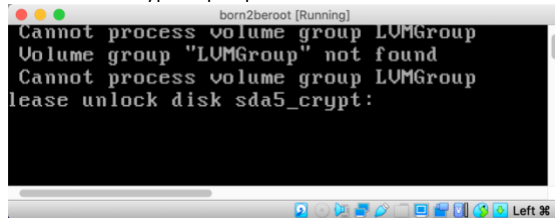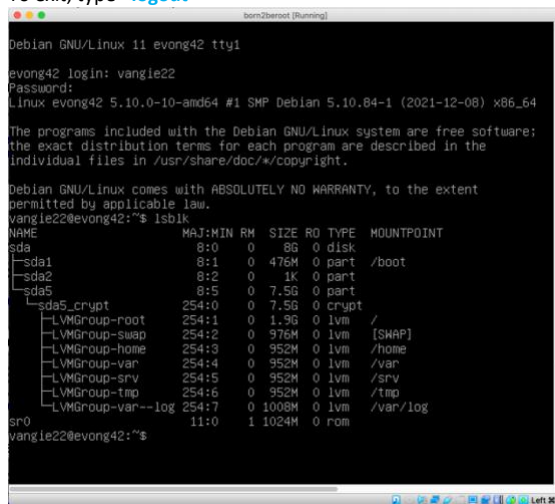

Log in as <evong>
Type <**lsblk**> to see the partition
(lsblk = list block devices)
To exit, type <**logout**>

After installing VirtualBox and VirtualMachine, use Born2beroot
Part 2 to configure the VirtualMachine.