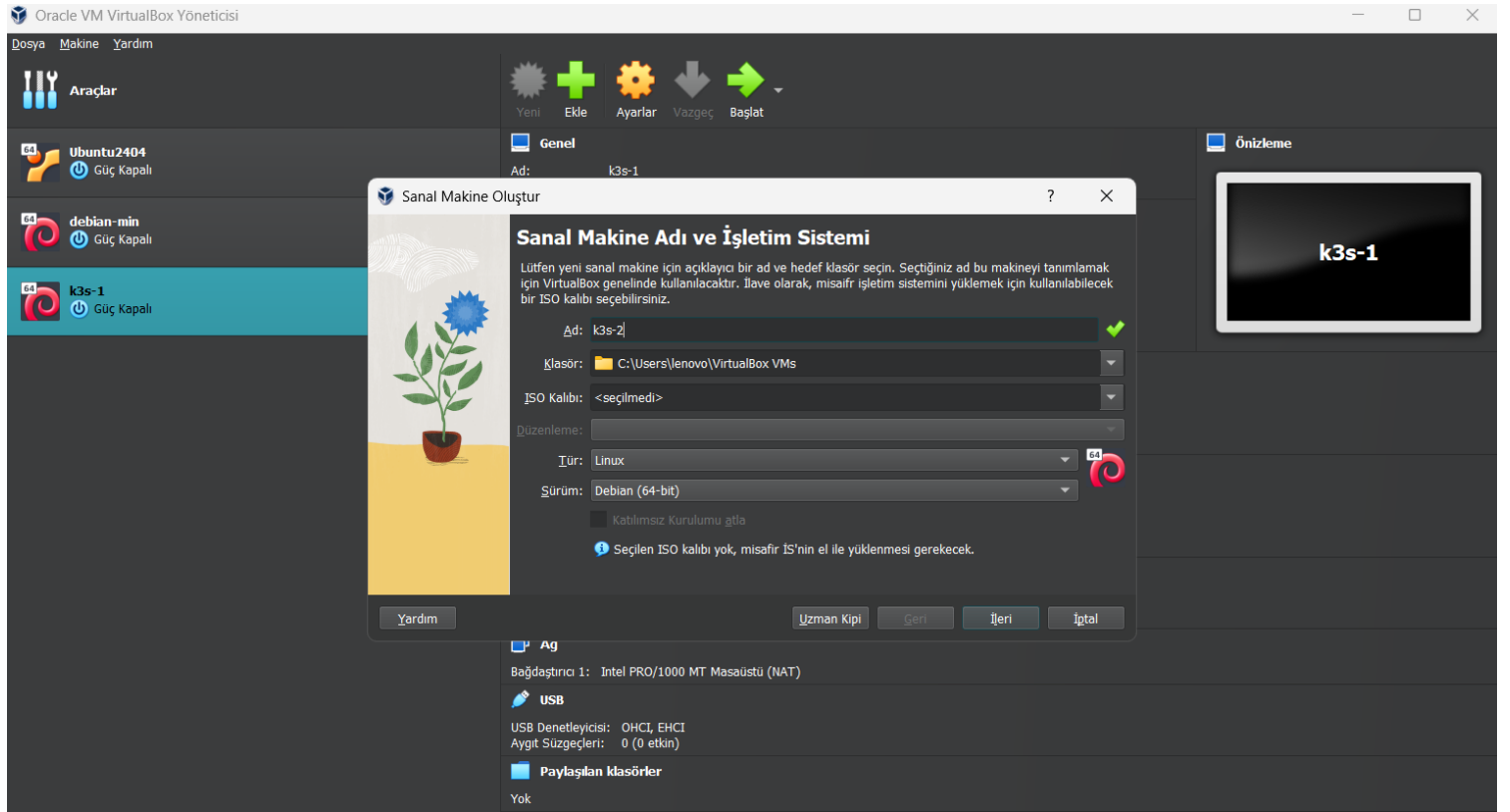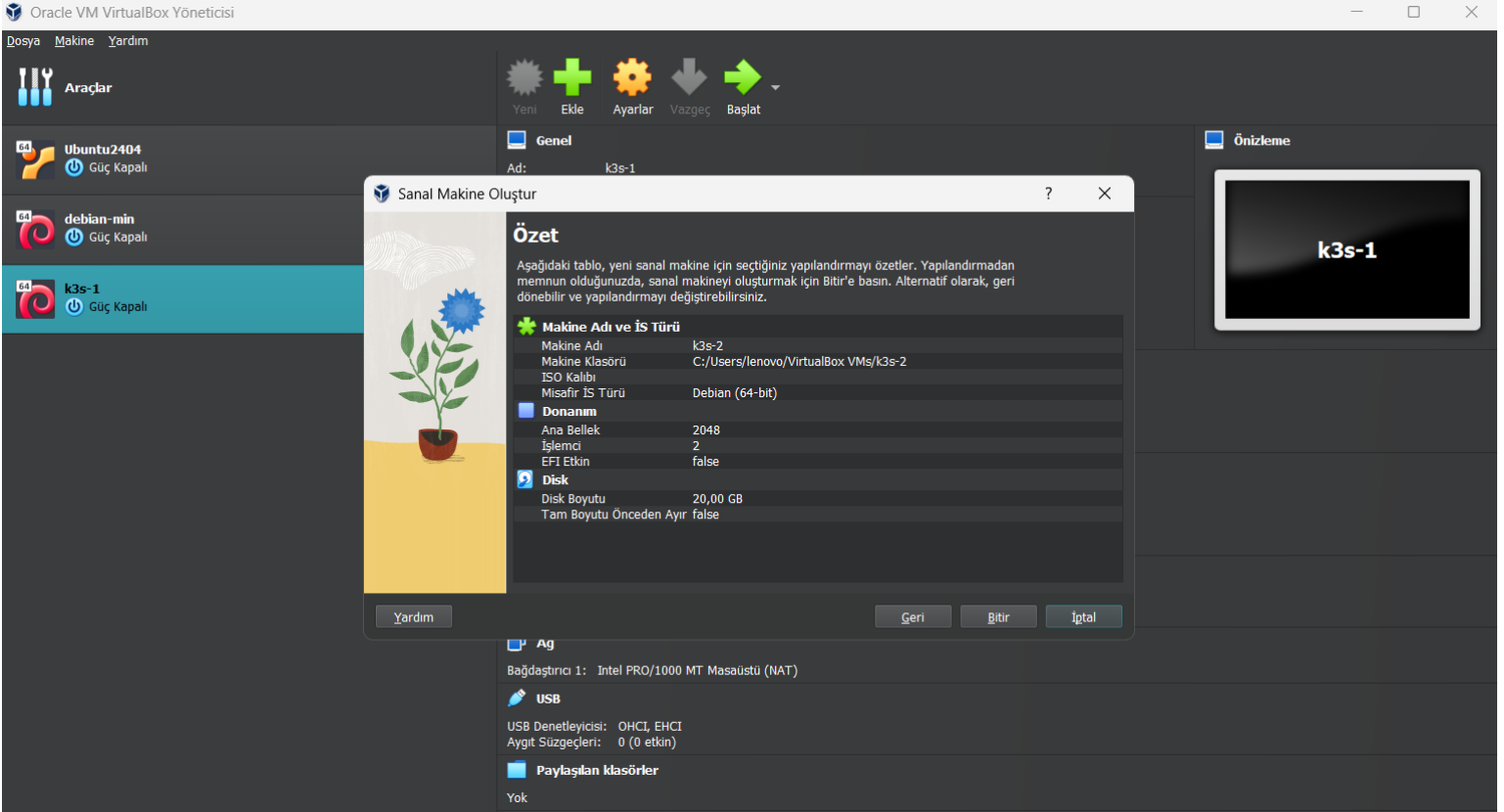# DEBIAN MINIMAL SERVER INSTALLATION GUIDE ON VIRTUAL MACHINE
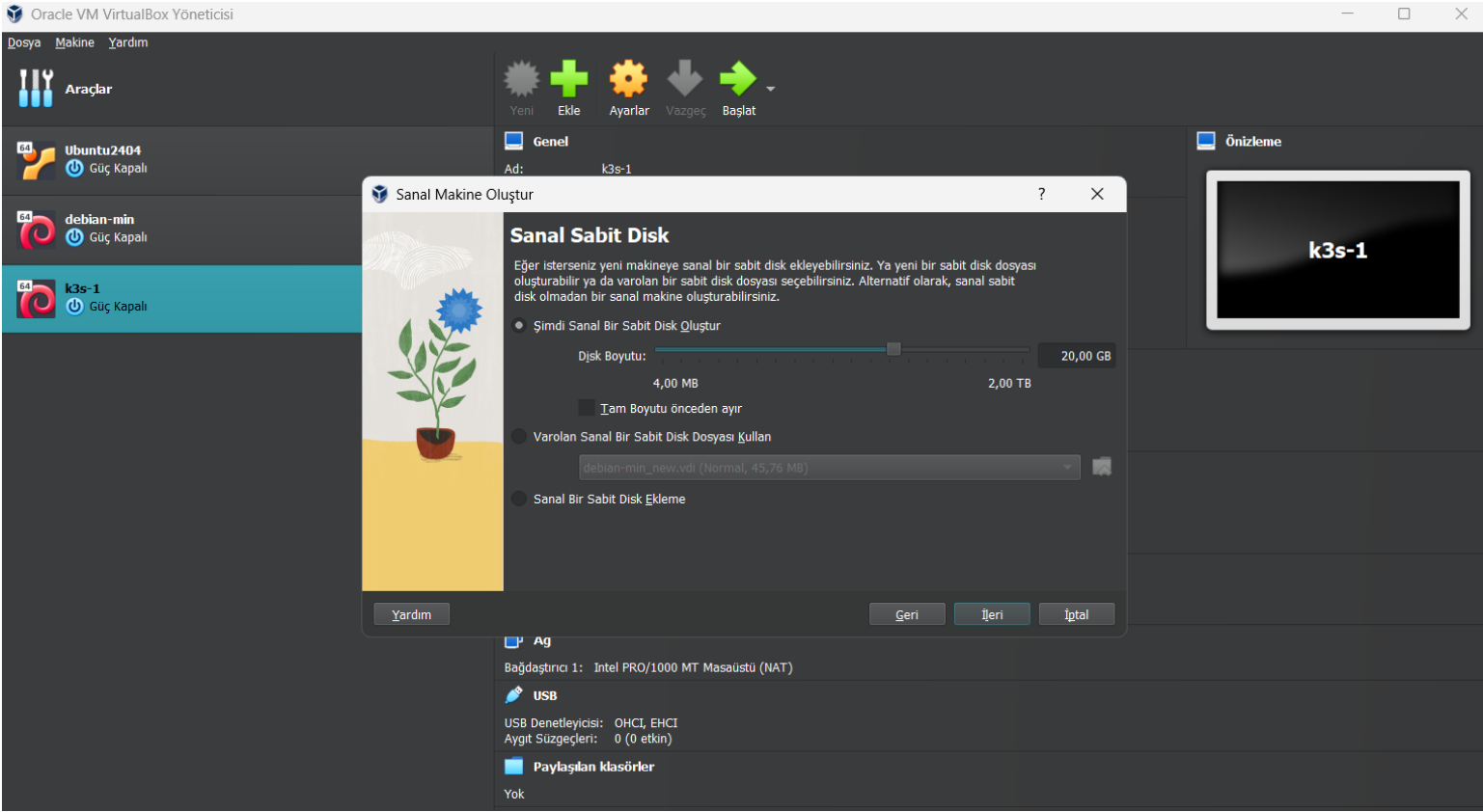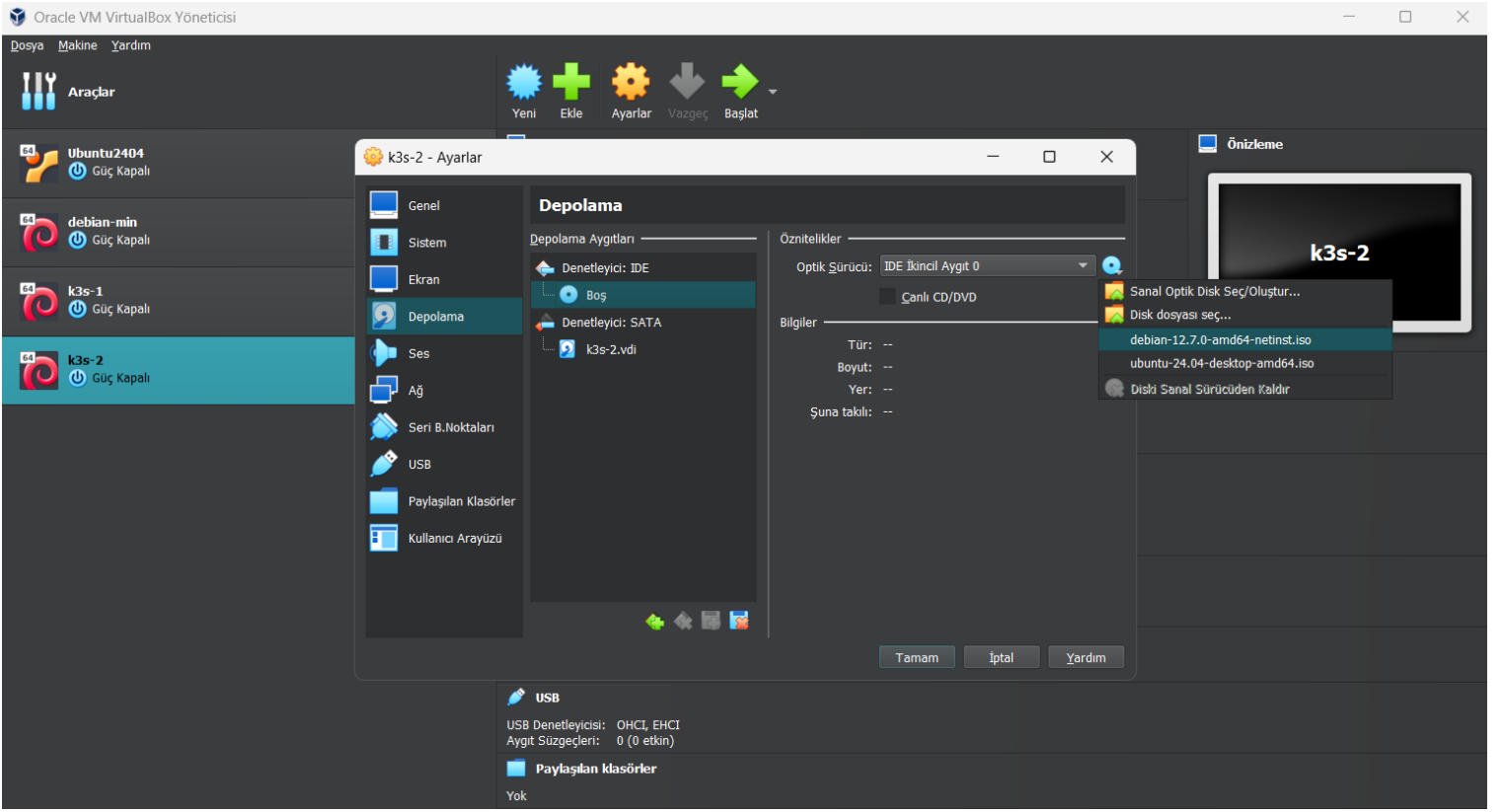
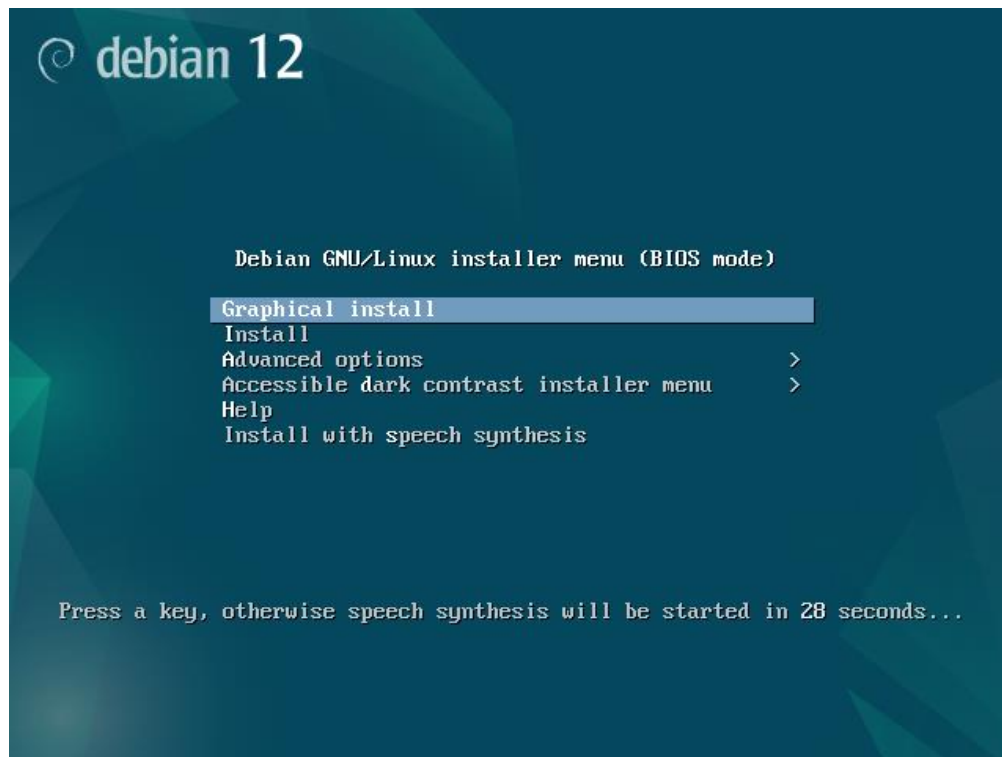Ahmet Oğuz Ergin

# Creating Virtual Machine in VirtualBox

# Minimal Debian Installation

# debian 12
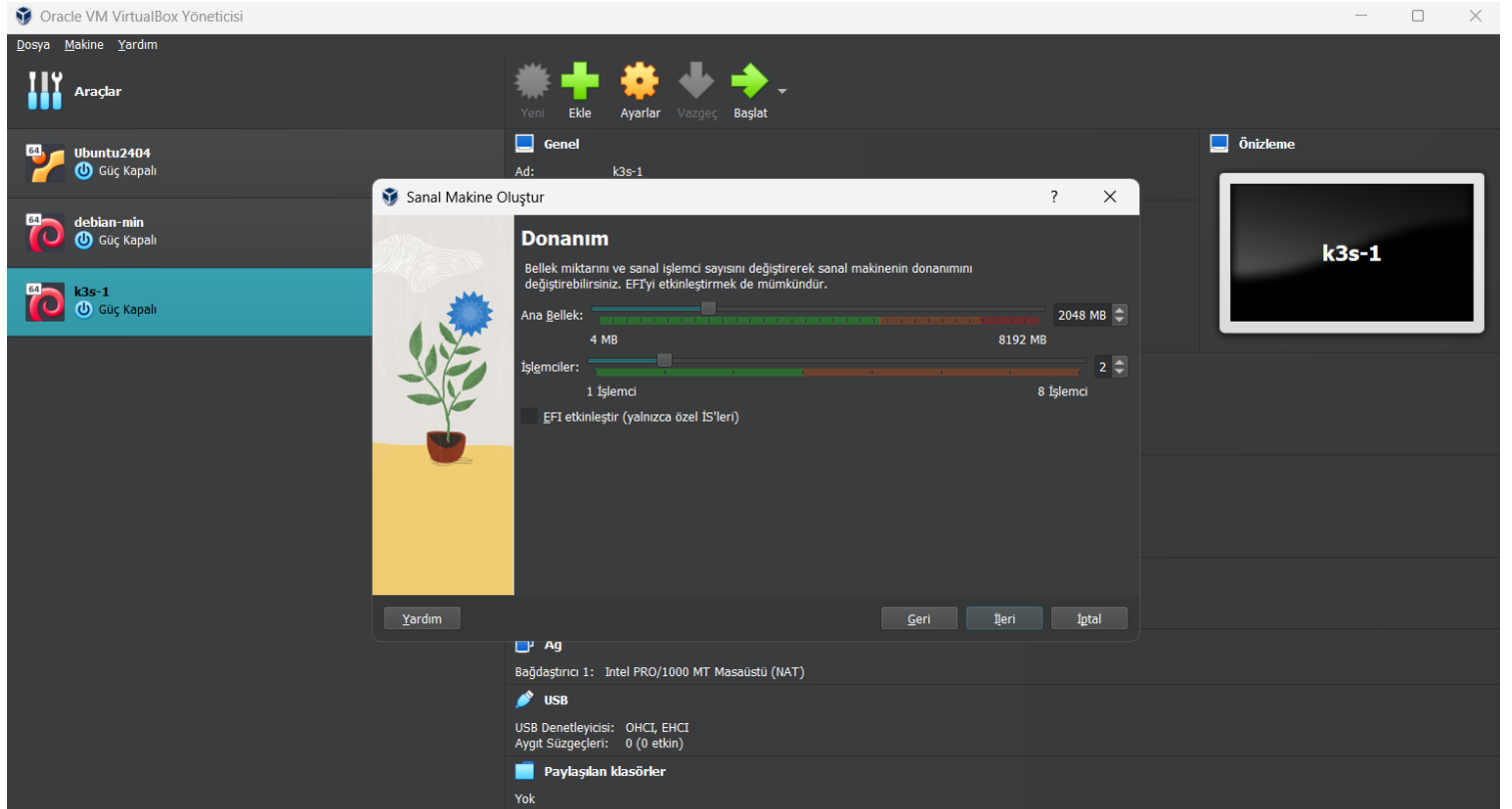
**Select your location**

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:*

India
Ireland
Israel
New Zealand
Nigeria
Philippines
Seychelles
Singapore
South Africa
United Kingdom
**United States**
Zambia
Zimbabwe
other

Screenshot                                    Go Back    Continue

---

# debian 12

**Configure the keyboard**

*Keymap to use:*

Sinhala
Slovak
Slovenian
Spanish
Swedish
Swiss French
Swiss German
Tajik
Tamil
Telugu
Thai
Tibetan
Turkish (F layout)
**Turkish (Q layout)**
Ukrainian
Uyghur
Vietnamese

Screenshot                                    Go Back    Continue

## debian 12

**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:*

k3s-2

Screenshot       Go Back    Continue

---

## debian 12

**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:*

Screenshot       Go Back    Continue

## debian 12

**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

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

Re-enter password to verify:

●●●●

☐ Show Password in Clear

Screenshot                                          Go Back        Continue

---

## debian 12

**Set up users and passwords**

A user account will be created for you to use instead of the root account for non-administrative activities.

Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.

Full name for the new user:

ahmet

Screenshot                                          Go Back        Continue

## debian 12

**Set up users and passwords**

Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.

*Username for your account:*

ahmet

Screenshot        Go Back   Continue

---

## debian 12

**Set up users and passwords**

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

*Choose a password for the new user:*

●●●●●

☐ Show Password in Clear

**Please enter the same user password again to verify you have typed it correctly.**

*Re-enter password to verify:*

●●●●●

☐ Show Password in Clear

Screenshot        Go Back   Continue

## debian 12

**Configure the clock**

If the desired time zone is not listed, then please go back to the step "Choose language" and select a country that uses the desired time zone (the country where you live or are located).

*Select your time zone:*

| |
|---|
| **Eastern** |
| **Central** |
| **Mountain** |
| **Pacific** |
| **Alaska** |
| **Hawaii** |
| **Arizona** |
| **East Indiana** |
| **Samoa** |

Screenshot         Go Back    Continue

---

## debian 12

**Partition disks**

The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results.

If you choose guided partitioning for an entire disk, you will next be asked which disk should be used.

*Partitioning method:*

| |
|---|
| **Guided - use entire disk** |
| **Guided - use entire disk and set up LVM** |
| **Guided - use entire disk and set up encrypted LVM** |
| **Manual** |

Screenshot         Go Back    Continue

## debian 12

**Partition disks**

Note that all data on the disk you select will be erased, but not before you have confirmed that you really want to make the changes.

*Select disk to partition:*

> **SCSI2 (0,0,0) (sda) - 21.5 GB ATA VBOX HARDDISK**

Screenshot                                                    Go Back     Continue

## debian 12

**Partition disks**

**Selected for partitioning:**

**SCSI2 (0,0,0) (sda) - ATA VBOX HARDDISK: 21.5 GB**

The disk can be partitioned using one of several different schemes. If you are unsure, choose the first one.

*Partitioning scheme:*

> **All files in one partition (recommended for new users)**

**Separate /home partition**

**Separate /home, /var, and /tmp partitions**

Screenshot                                                    Go Back     Continue

10

## debian 12

**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**

▽ **SCSI2 (0,0,0) (sda) - 21.5 GB ATA VBOX HARDDISK**
> **#1  primary    20.4 GB      f   ext4      /**
> **#5  logical     1.0 GB       f   swap      swap**

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

Screenshot | Help | Go Back | Continue

---

## debian 12

**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:
  SCSI2 (0,0,0) (sda)

The following partitions are going to be formatted:
  partition #1 of SCSI2 (0,0,0) (sda) as ext4
  partition #5 of SCSI2 (0,0,0) (sda) as swap

Write the changes to disks?

○ **No**
◉ **Yes**

Screenshot | Continue

## debian 12

**Configure the package manager**

Scanning your installation media finds the label:

Debian GNU/Linux 12.7.0 _Bookworm_ - Official amd64 NETINST with firmware 20240831-10:38

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?

⦿ No

◯ Yes

Screenshot                                                    Go Back      Continue

---

## debian 12

**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:

| |
|---|
| Slovakia |
| Slovenia |
| South Africa |
| South Korea |
| Spain |
| Sweden |
| Switzerland |
| Taiwan |
| Thailand |
| Türkiye |
| Ukraine |
| United Kingdom |
| **United States** |
| Uruguay |
| Vietnam |

Screenshot                                                    Go Back      Continue

## debian 12

**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:*

- deb.debian.org
- ftp.us.debian.org
- debian.csail.mit.edu
- mirrors.lug.mtu.edu
- debian.cc.lehigh.edu
- mirror.us.oneandone.net
- mirrors.bloomu.edu
- mirrors.namecheap.com
- mirrors.ocf.berkeley.edu
- debian.mirror.constant.com
- mirrors.advancedhosters.com
- mirror.cogentco.com
- mirror.us.leaseweb.net
- mirrors.accretive-networks.net

[Screenshot]     [Go Back]  [Continue]

---

## debian 12

**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):*

[                                                                              ]

[Screenshot]     [Go Back]  [Continue]

## debian 12

**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?*

⦿ **No**

◯ **Yes**

Screenshot                                                      Continue

---

## debian 12

**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**

Screenshot                                                      Continue

14

**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?*

○ No

⊙ Yes

Screenshot                                                    Go Back    Continue

---

**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:*
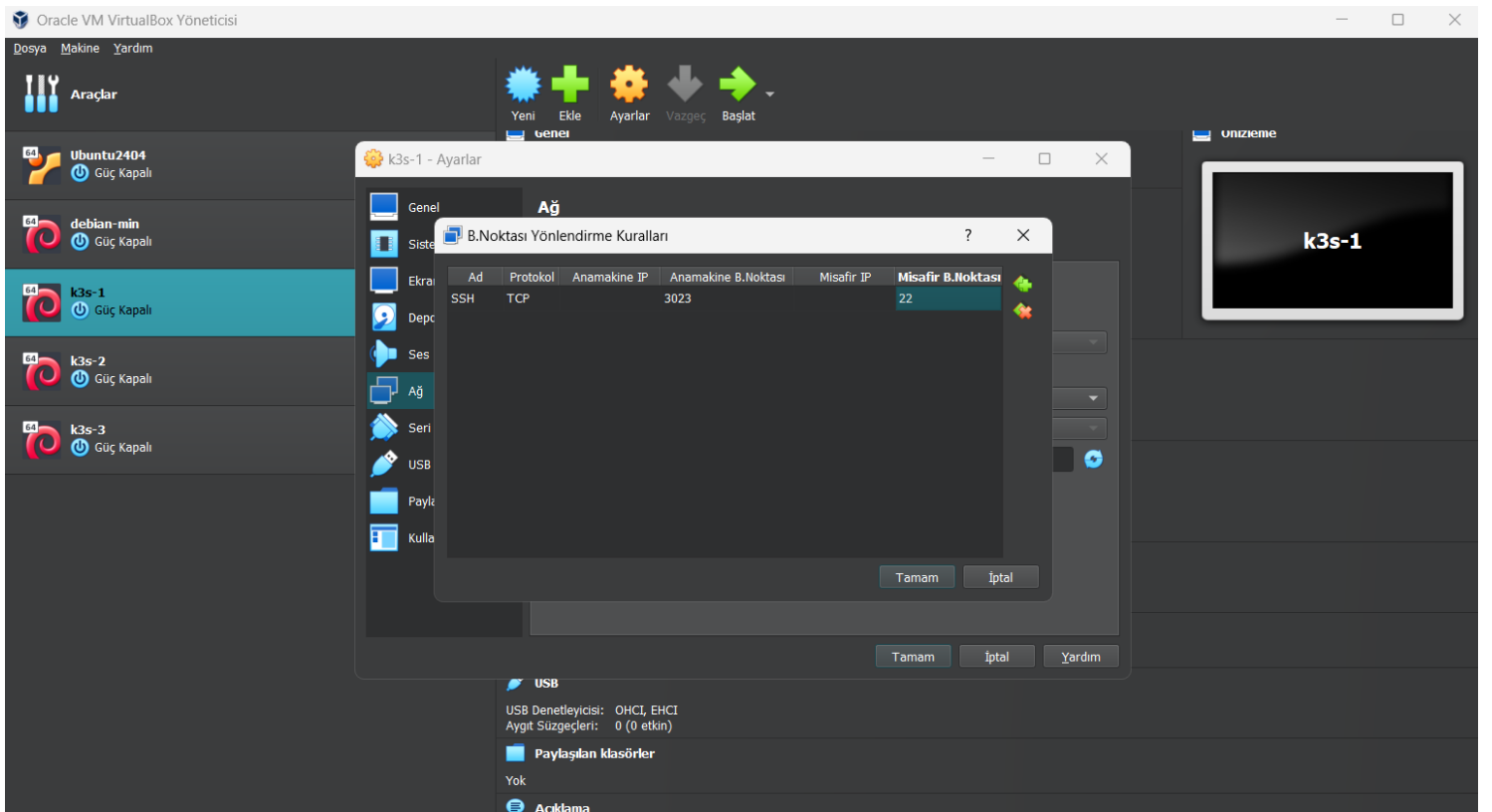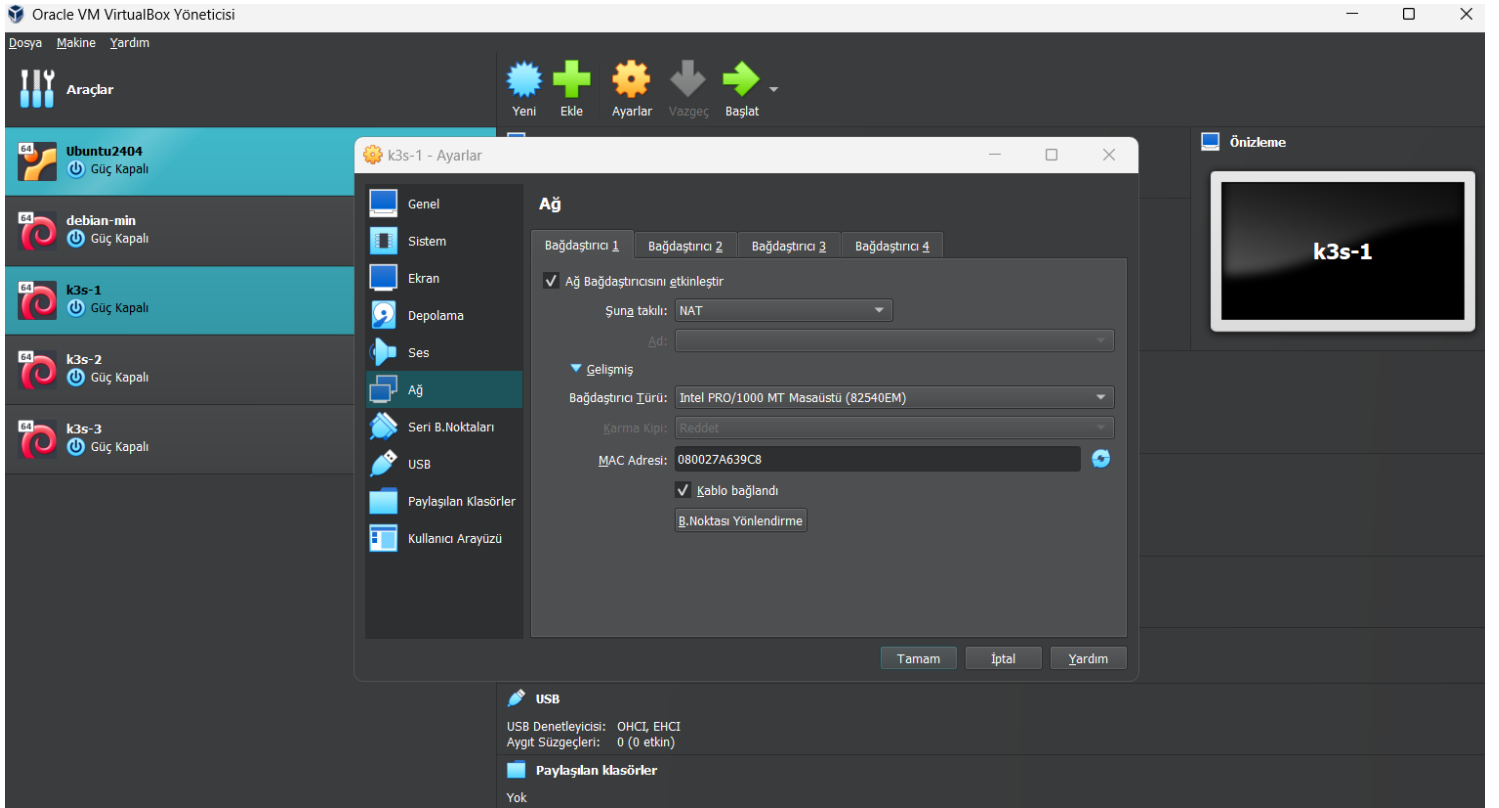
**Enter device manually**

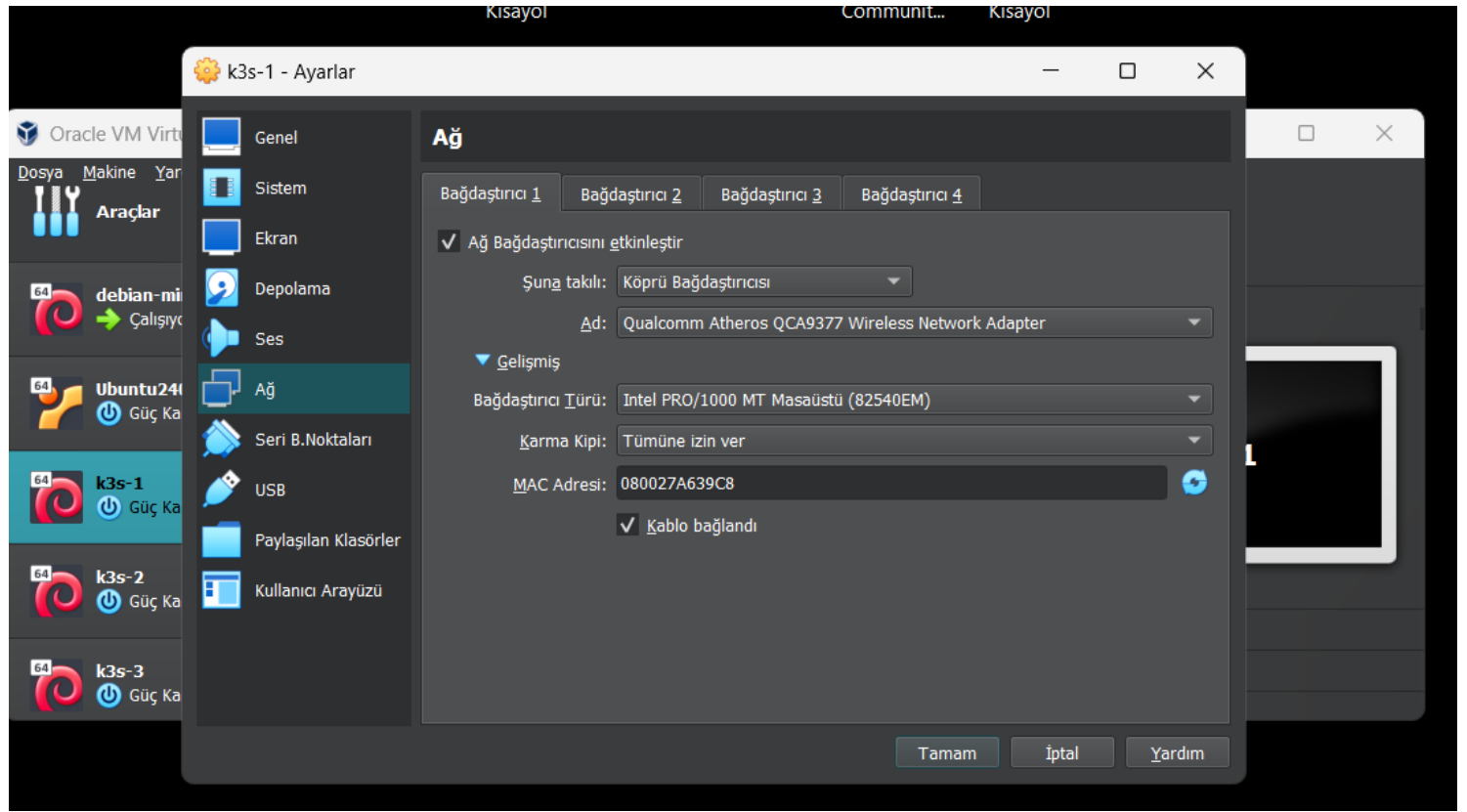**/dev/sda  (ata-VBOX_HARDDISK_VB2f036c33-e31d8697)**

Screenshot                                                    Go Back    Continue

# SSH Connection With NAT





**ssh -p 3023 ahmet@localhost**

# SHH Conneciton with Bride



**ssh ahmet@139.179.104.156**