



System Installation Guide

Yeastar K2 IP-PBX

Version: 2.0

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System Installation Guide

About this guide

This guide describes how to install Yeastar K2 IPPBX system in your own physical machine or virtual machine. In this guide, we also provide procedures of K2 system activation and expansion.

Audience

This guide is for the person who only buys Yeastar K2 IPPBX software, and wants to install the K2 IPPBX system in his/her own machine.

Hardware and System Requirements

This topic provides the hardware system requirements, the tested and supported Virtual Machine (VM) Platforms for installing Yeastar K2 IPPBX system.

Hardware Requirements

System performance depends on the following key factors:

- How many concurrent calls will the system handle
- Which codecs are used to make calls
- If call recording is used.

Based on the factors, your system hardware should meets the minimal requirements:

Table 1:

Hardware	200 Concurrent Calls	300 Concurrent Calls	500 Concurrent Calls
Recommended Server	Dell EMC PowerEdge R240		
CPU	Intel(R) Xeon(R) CPU E-2124 <ul style="list-style-type: none">• Cores: 4• Threads: 4• CPU Frequency: 3.4GHz	Intel(R) Xeon(R) CPU E-2124 <ul style="list-style-type: none">• Cores: 4• Threads: 4• CPU Frequency: 3.4GHz	Intel(R) Xeon(R) CPU E-2144G <ul style="list-style-type: none">• Cores: 4• Threads: 8• CPU Frequency: 3.6GHz
RAM	8 GB	8 GB	8 GB
Hard Disk (Call Recording Disabled)	50 GB	50 GB	50 GB
Hard Disk (Call Recording Enabled)	1 TB	1 TB	1 TB

Supported Virtual machine (VM) Platforms

The tested and supported VM platforms:

- VMware 12.0 or later
- Hyper-v-6.3.9600.16384 or later
- KVM 2.5.0 or later

Install K2 System on a Virtual Machine

Install Yeastar K2 System on VMware Workstation

This topic describes how to install Yeastar K2 IPPBX system on VMware workstation 12.0.

Before You Begin

To install the K2 system on a virtual machine, make sure that both the Virtual machine and the hardware meets the requirements.

- [Hardware requirements](#)
- [Supported virtual machine platforms](#)

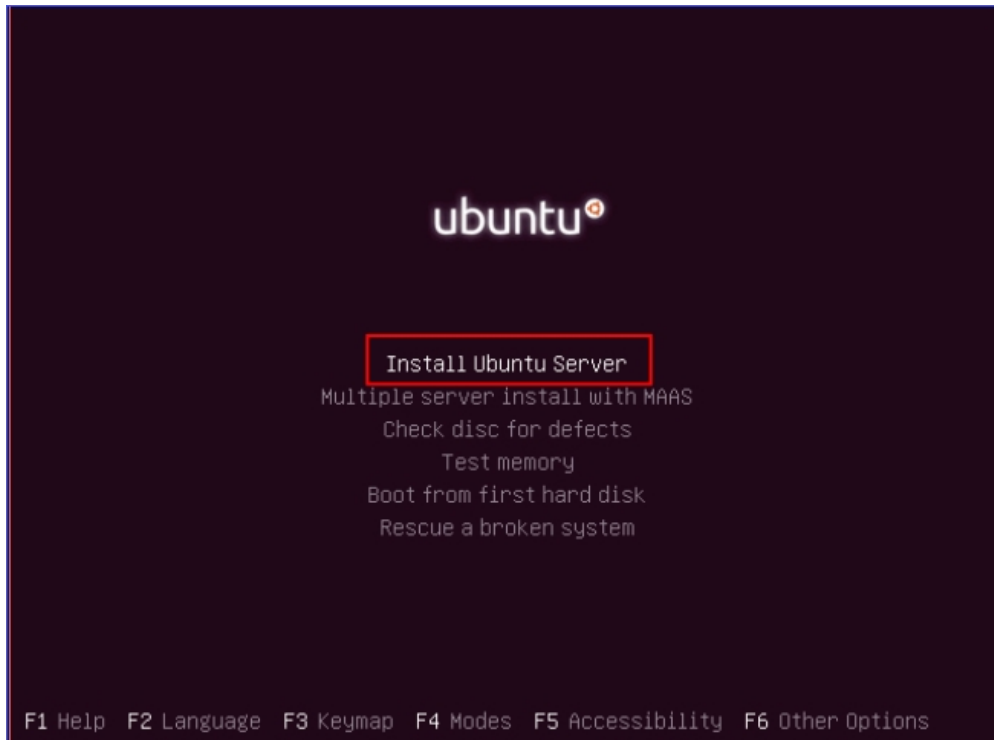
Step 1. Configure language and location

The installer will begin with a prompt to select a language for the installation wizard.

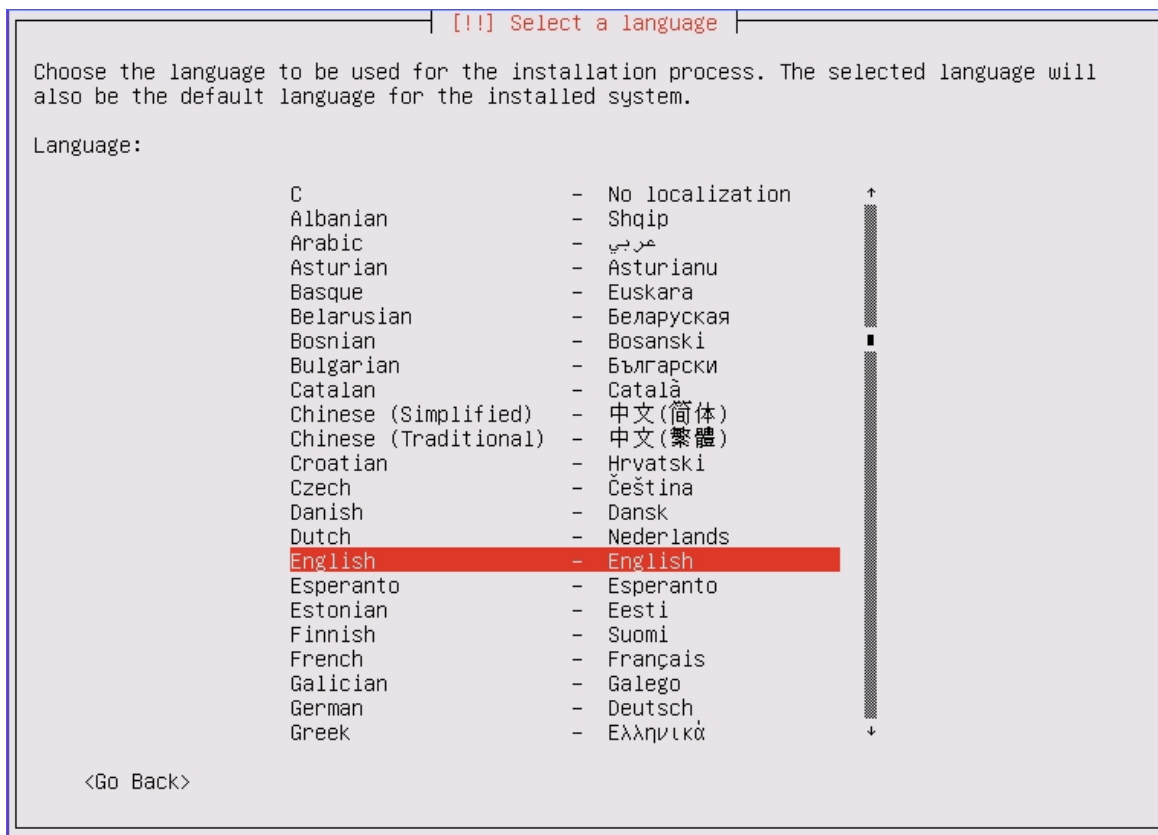
1. Select a language for the installation wizard.



2. Select Install Ubuntu Server.



3. Select a language to be used for the installation process and installed system.



4. Select your location based on the language you selected.

!!! 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

New Zealand

Nigeria

Philippines

Singapore

South Africa

United Kingdom

United States

Zambia

Zimbabwe

other

<Go Back>

Step 2. Configure the keyboard

1. Select **NO**, not to do keyboard layout detection.

!!! Configure the keyboard

You can try to have your keyboard layout detected by pressing a series of keys. If you do not want to do this, you will be able to select your keyboard layout from a list.

Detect keyboard layout?

<Go Back>

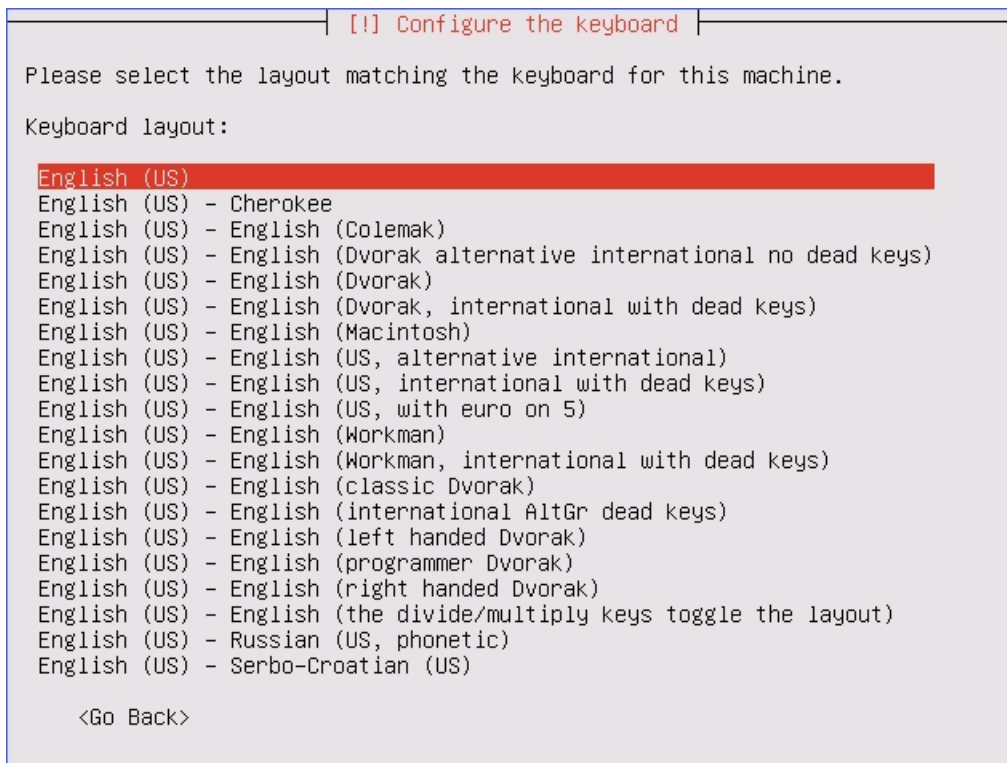
<Yes>

<No>

2. Select a country of origin for the keyboard of this computer.

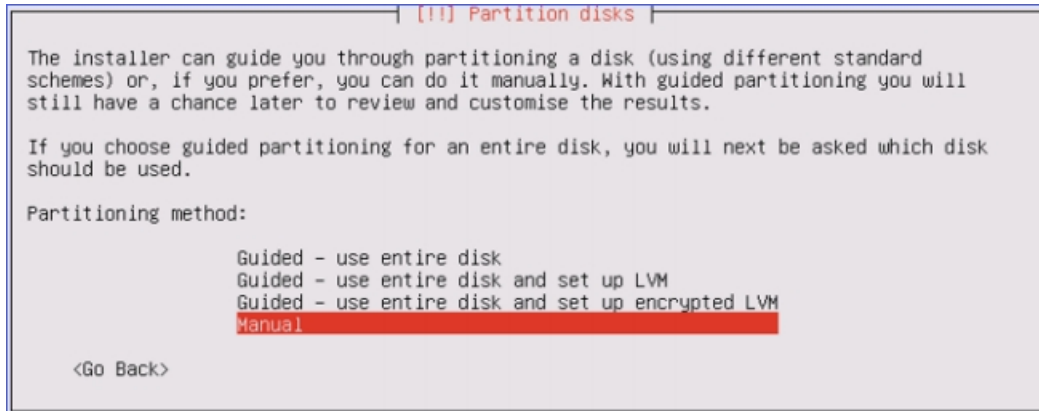


3. Select the layout matching the keyboard for your machine.

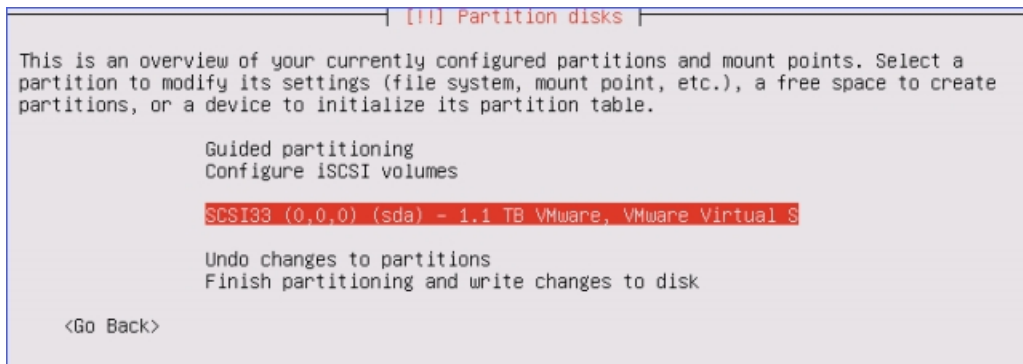


Step 3. Plan and create partition disk

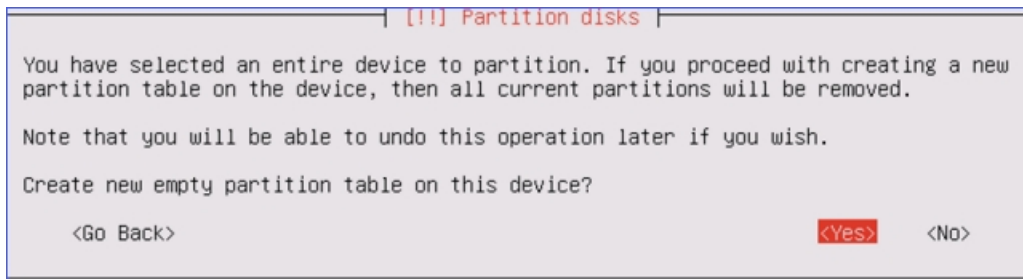
1. Select **Manual** partitioning method.



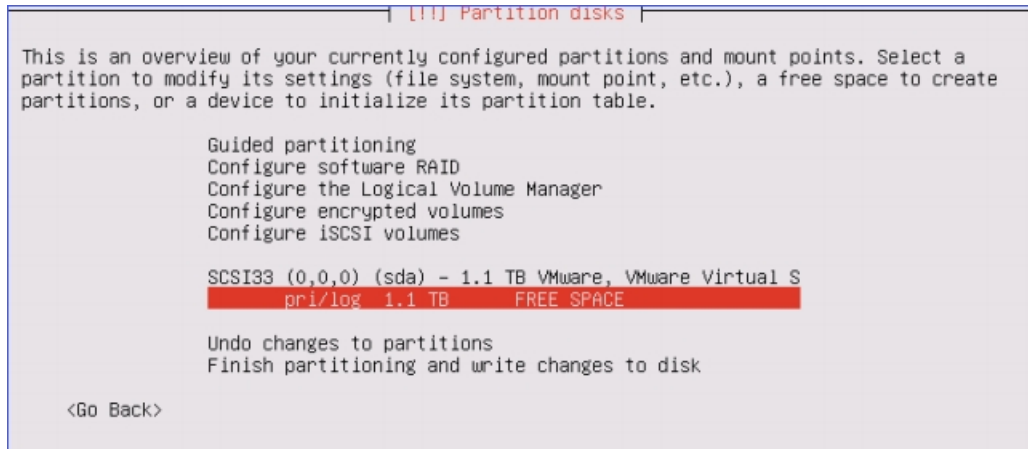
2. Delete all the existed partition disk.
3. Select the partition of the virtual machine.



4. Select **Yes** to create new empty partition table on this device.



5. Create partition 1: root directory for system files
 - a. Select the **FREE SPACE** to create partition 1.

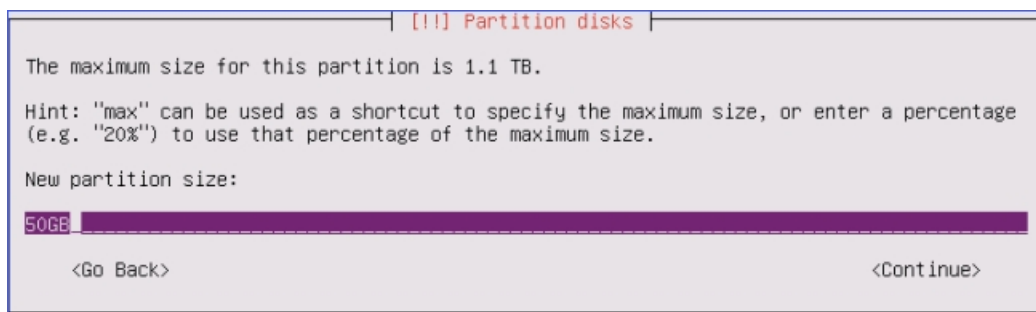


- b. Select **Create a new partition**.

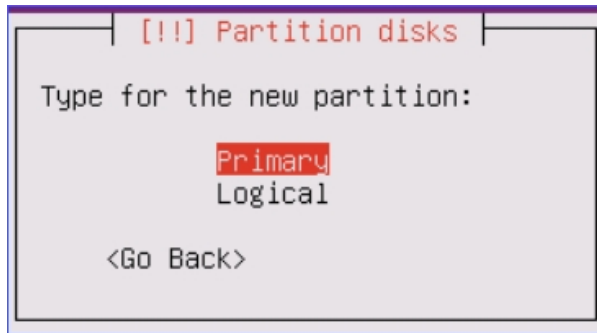


- c. Set the partition size.

Partition size recommend: 50GB.



- d. Choose the partition type as **Primary**.

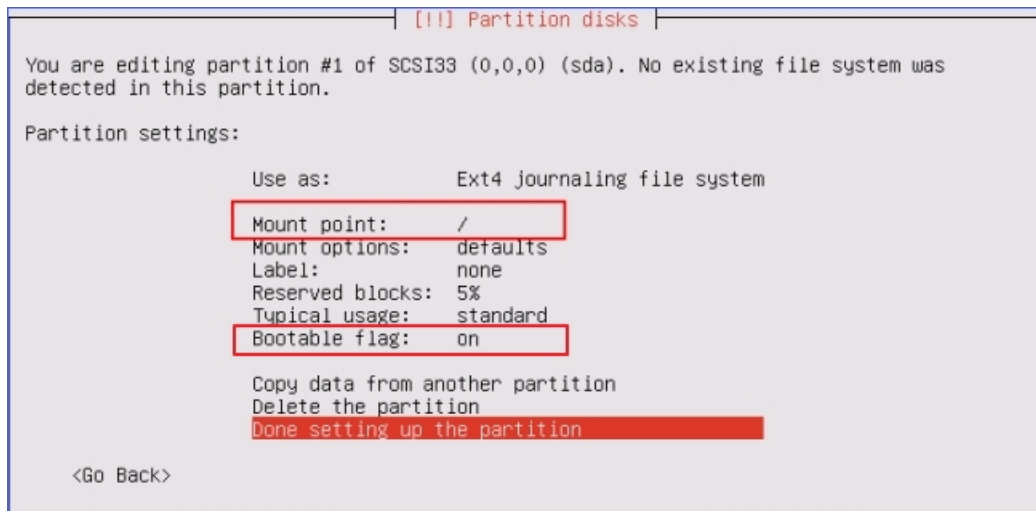


- e. Select location for the partition as **Beginning**.



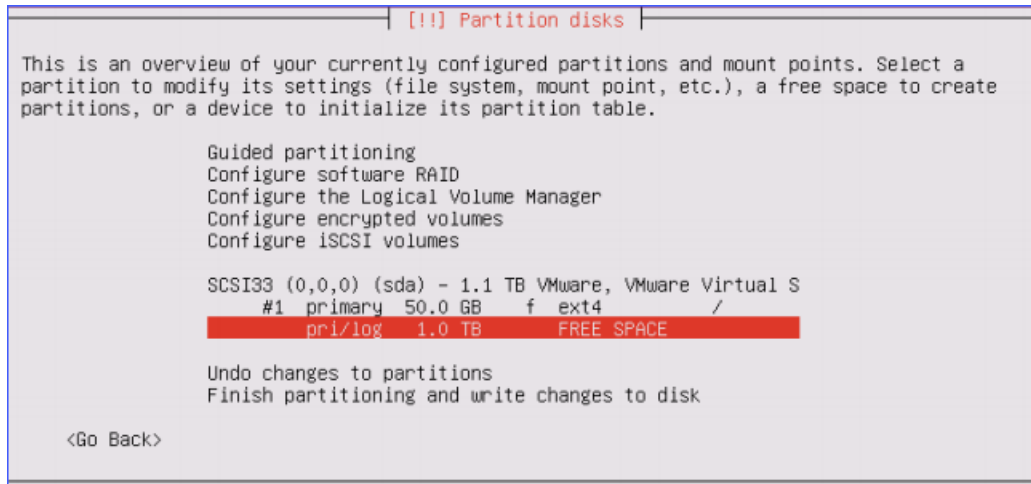
- f. Set **Use as** and **Mount point** for the partition 1, then select **Done settings up the partition**.

- **Use as:** Ext4 journaling file system
- **Mount point:** /
- **Bootable flag:** on

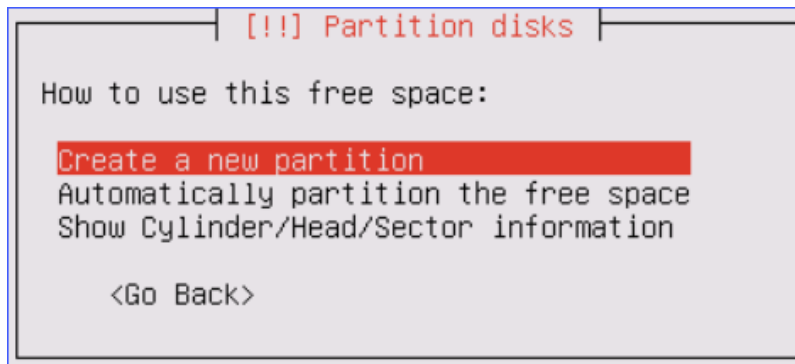


6. Create partition 2: home directory for data and recordings.

- a. Select the **FREE SPACE** to create partition 2.



- b. Select **Create a new partition**.

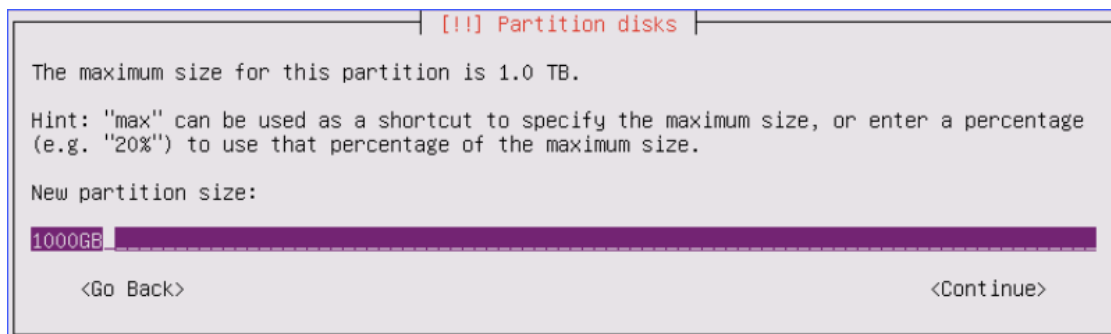


- c. Set the partition size.



Note:

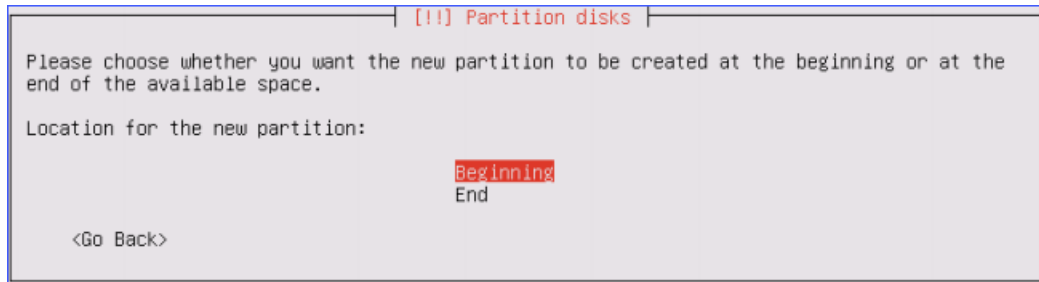
- 1000-minute recordings require about 1GB space.
- We recommend that you set a larger space for the partition to have more space to store your recordings and other data.



- d. Choose the partition type as **Logical**.

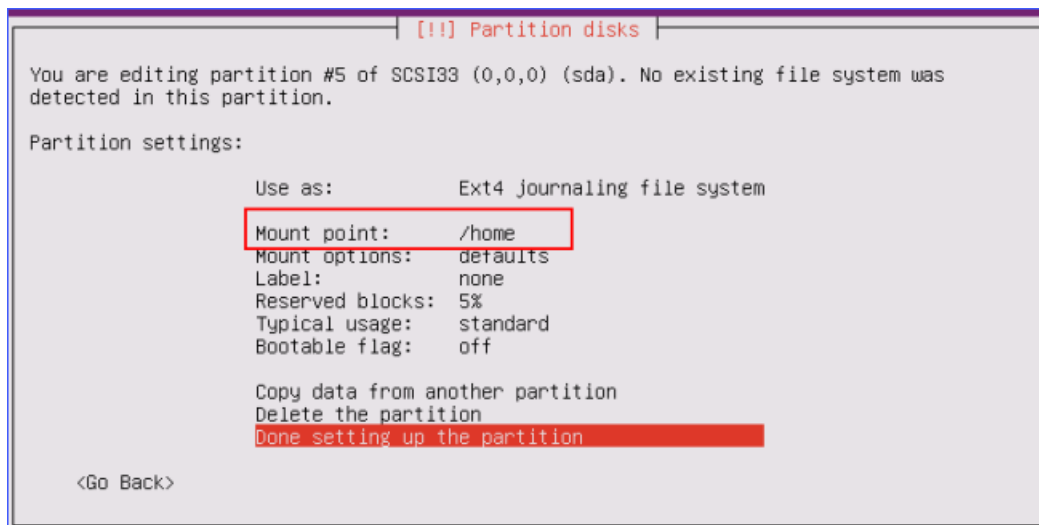


- e. Select location for the partition as **Beginning**.

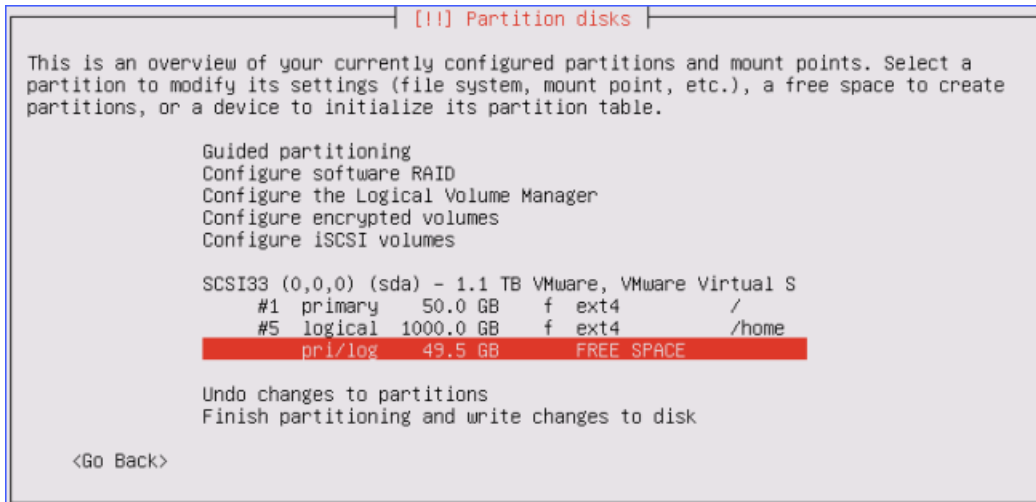


- f. Set **Use as** and **Mount point** for the partition 2, then select **Done settings up the partition**.

- Use as: Ext4 journaling file system
- Mount point: /home



7. Create partition 3: swap area for storing data when system hibernates.
- a. Select the **FREE SPACE** to create a new partition.

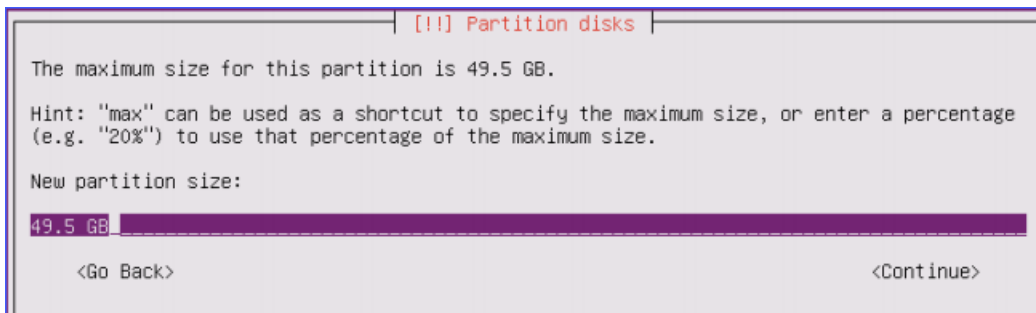


- b. Select **Create a new partition**.

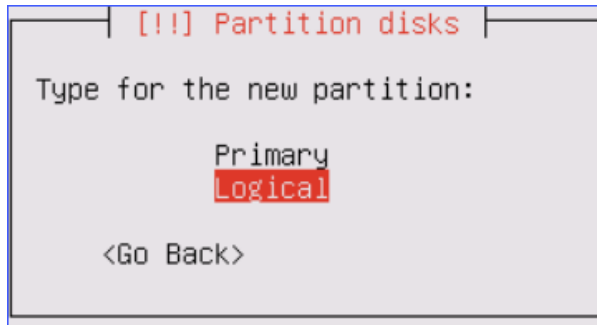


- c. Set the partition size.

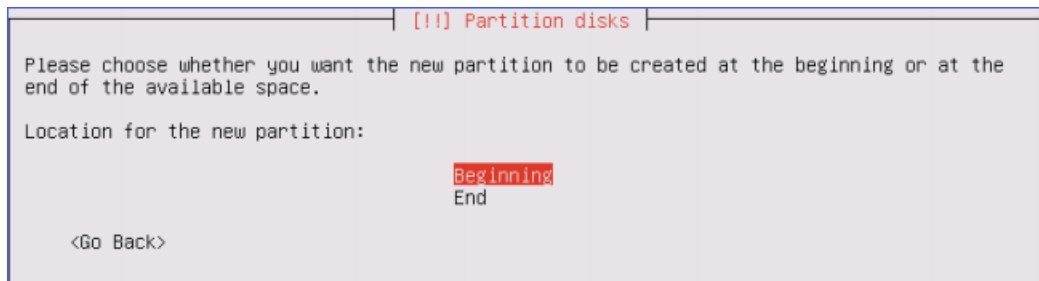
Partition size recommend: 10G.



- d. Choose the partition type as **Logical**.

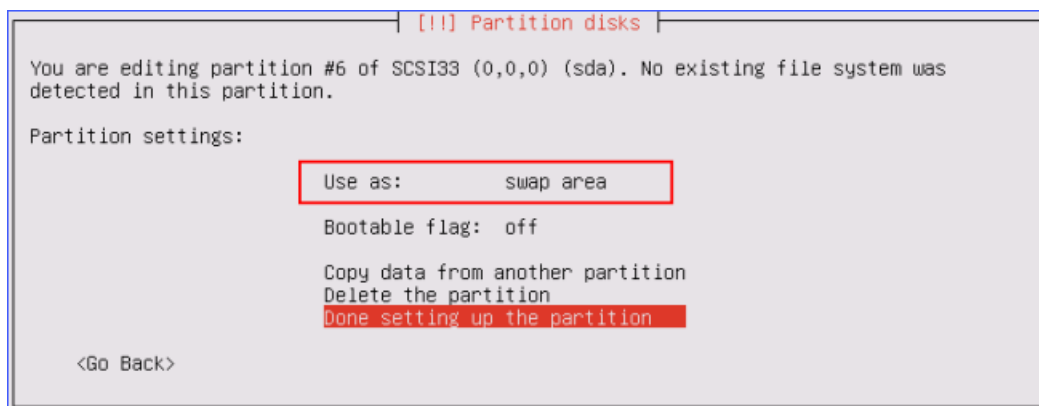


- e. Select location for the partition as **Beginning**.



- f. Set **Use as** for the partition 3, then select **Done settings up the partition**.

- Use as: swap area



8. Select **Finish partitioning and write changes to disk**.

```

[!!] 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

SCSI33 (0,0,0) (sda) - 1.1 TB VMware, VMware Virtual S
#1 primary 50.0 GB f ext4 /
#5 logical 1000.0 GB f ext4 /home
#6 logical 49.5 GB f swap swap

Undo changes to partitions
Finish partitioning and write changes to disk

<Go Back>

```

9. Select **Yes**, write the changes to disks.

```

[!!] 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:
    SCSI33 (0,0,0) (sda)

The following partitions are going to be formatted:
    partition #1 of SCSI33 (0,0,0) (sda) as ext4
    partition #5 of SCSI33 (0,0,0) (sda) as ext4
    partition #6 of SCSI33 (0,0,0) (sda) as swap

Write the changes to disks?


    <Yes>
    <No>

```

Step 4. Install the IPPBX System

After finishing partitioning and write changes to disk, the virtual machine starts to install the system. Wait for a few minutes for the installation.

1. Select **No automatic updates**.

 **Important:** Do not select other options.

```

[!] Configuring tasksel

Applying updates on a frequent basis is an important part of keeping your system secure.

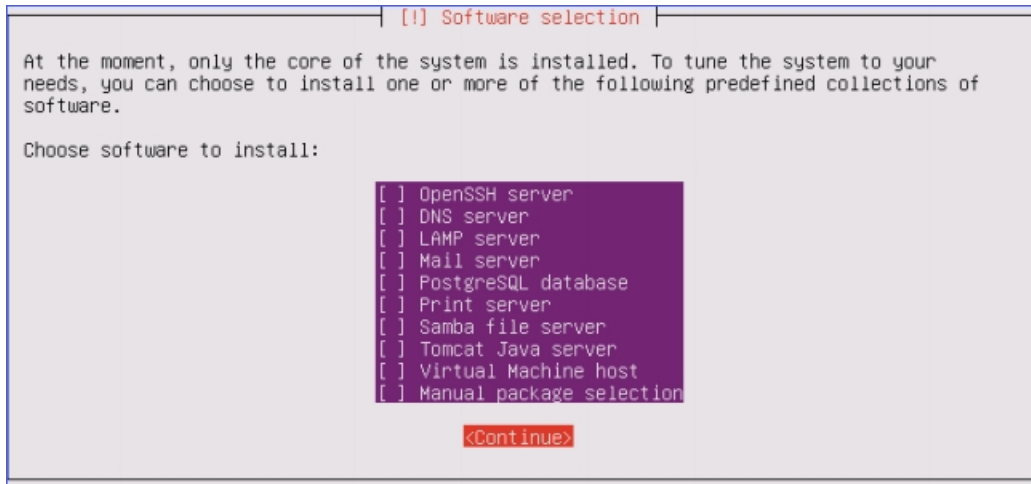
By default, updates need to be applied manually using package management tools.
Alternatively, you can choose to have this system automatically download and install
security updates, or you can choose to manage this system over the web as part of a group
of systems using Canonical's Landscape service.

How do you want to manage upgrades on this system?

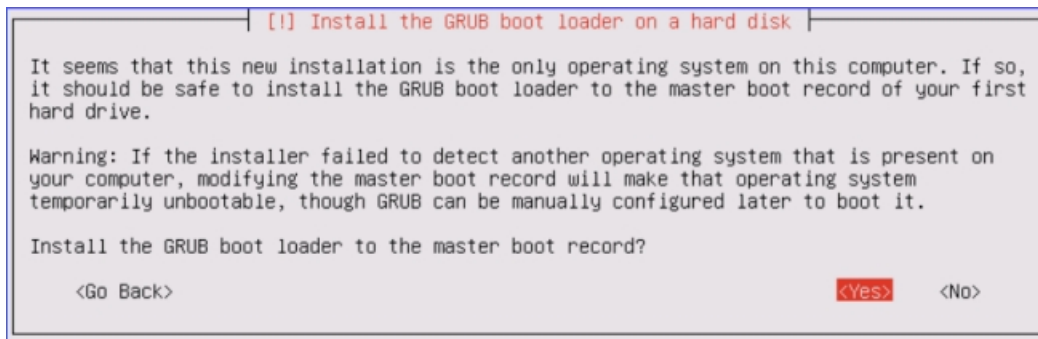
    No automatic updates
    Install security updates automatically
    Manage system with Landscape

```

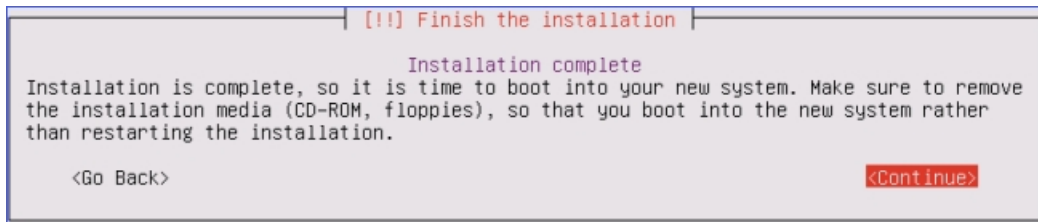
2. Press **Tab** to select **Continue** to skip this step.



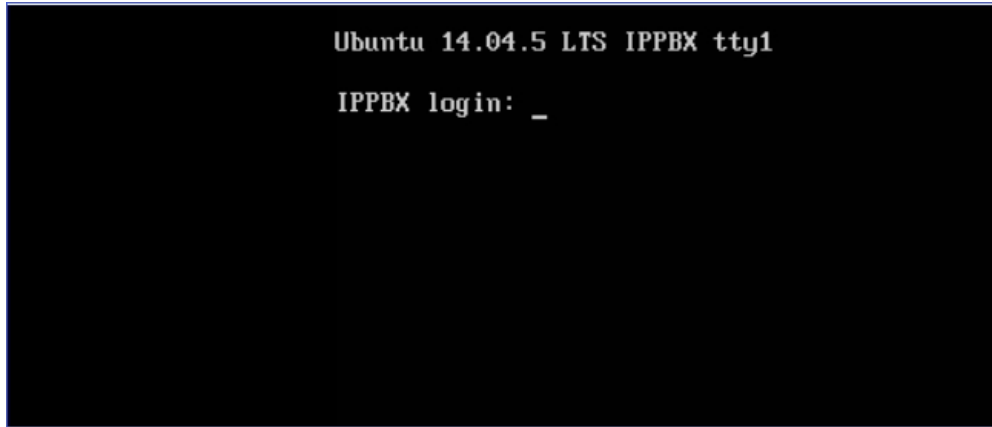
3. Select **Yes** to install the GRUB boot loader.



4. Select **Continue** to boot into your system.



When the following screen displays, the IPPBX system is successfully installed.

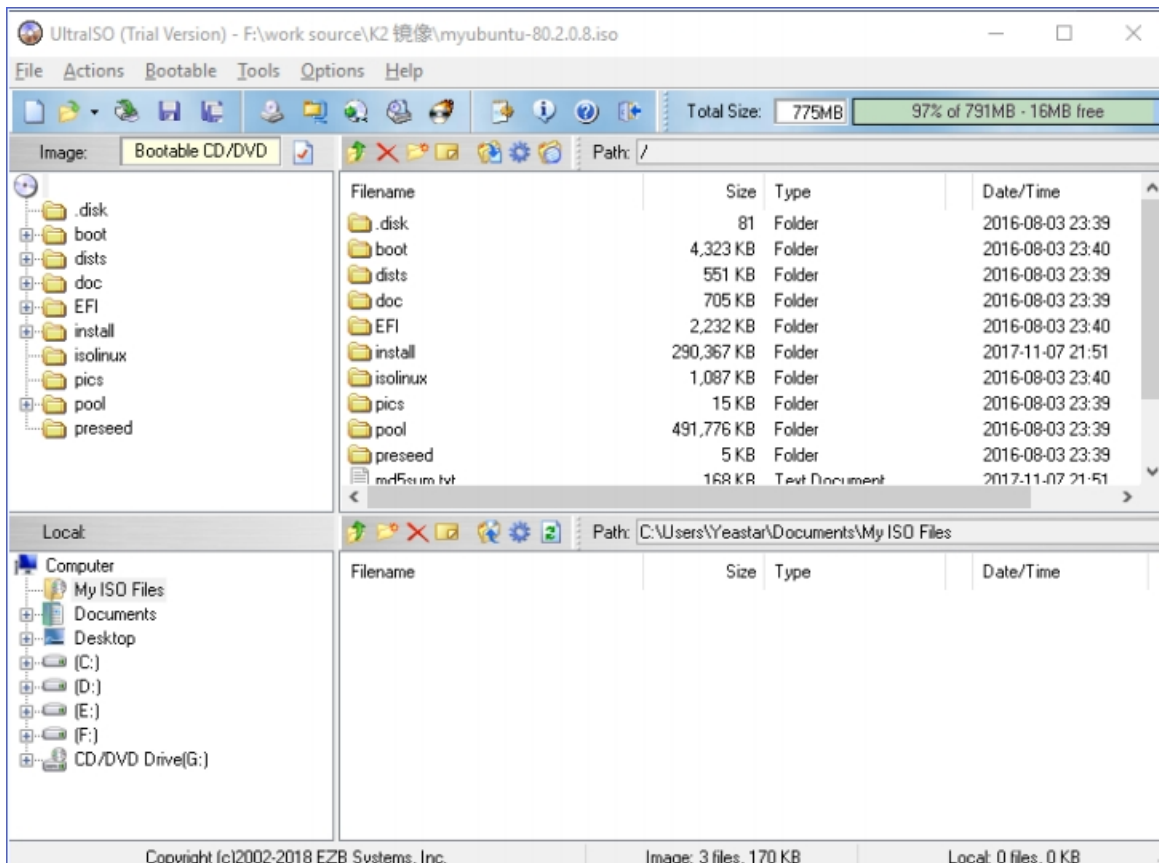


Install K2 System on a Physical Machine

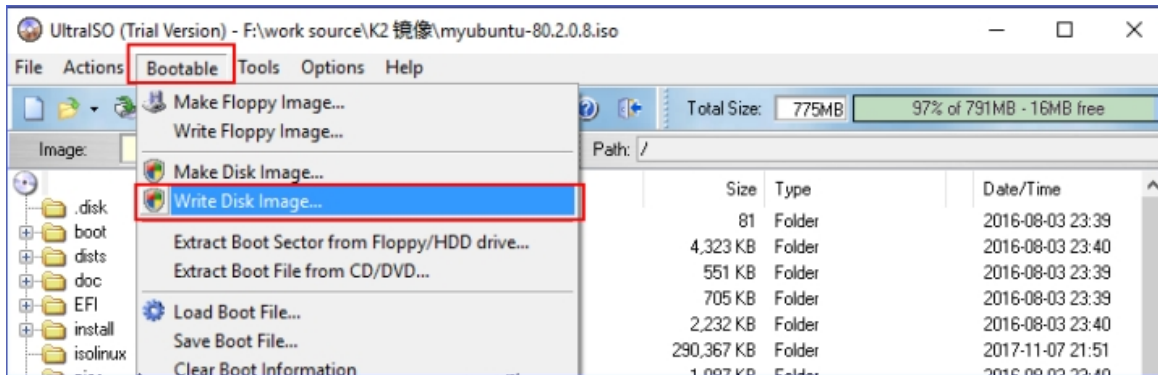
Write Yeastar K2 Image in a USB

If you choose to install Yeastar K2 IPPBX system on a physical machine, you need to write K2 image in the USB in advance. The instructions below introduces how to write K2 image in a USB via UltraISO.

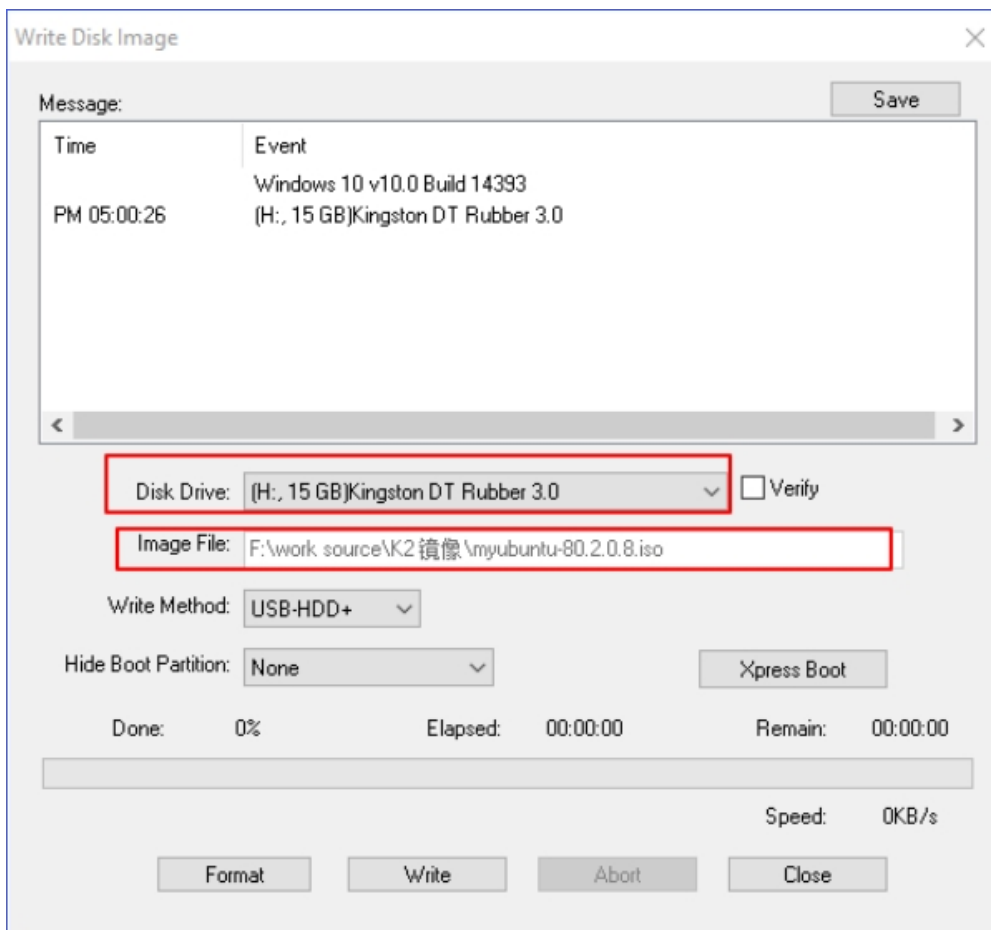
1. Format your USB with FAT32.
2. Open the K2 image file via UltraISO.



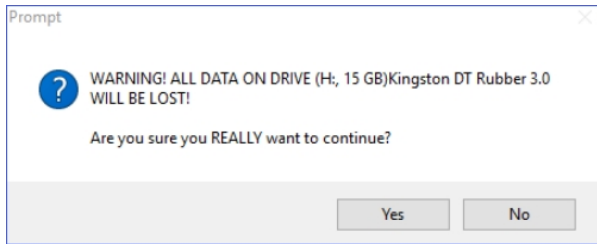
3. Click **Bootable**→**Write Disk Image**.



4. Choose your USB drive as **Disk Drive**, and choose the K2 image file, then click **Write**.



5. Click **Yes** to start writing image.



6. After the process of writing image is completed, you can check your USB drive.
The USB should contain the files as the following figure shows.

USB Drive (H:) >				
Name		Date modified	Type	Size
.disk		8/3/2016 11:39 PM	File folder	
boot		8/3/2016 11:40 PM	File folder	
dists		8/3/2016 11:39 PM	File folder	
doc		8/3/2016 11:39 PM	File folder	
EFI		8/3/2016 11:40 PM	File folder	
install		11/7/2017 9:51 PM	File folder	
isolinux		8/3/2016 11:40 PM	File folder	
pics		8/3/2016 11:39 PM	File folder	
pool		8/3/2016 11:39 PM	File folder	
preseed		8/3/2016 11:39 PM	File folder	
md5sum.txt		11/7/2017 9:51 PM	TXT File	168 KB
README.diskdefines		8/3/2016 11:39 PM	DISKDEFINES File	1 KB
ubuntu		11/7/2017 9:51 PM	File	0 KB

What's Next:

[Install Yeastar K2 System on VMware Workstation](#)

Install Yeastar K2 IPPBX System on Dell EMC PowerEdge R240 Server

This topic describes how to install Yeastar K2 system on Dell EMC PowerEdge R240 server.

Before You Begin

You need to [write Yeastar K2 image in a USB](#), then connect the USB driver to the physical machine to start installing the K2 system.

Step1. Prepare before Installation Process



Note: Do not connect Dell EMC PowerEdge R240 Server to network, or problems may occur during the installation process.

1. Connect the USB driver to the USB 2.0 port on Dell EMC PowerEdge R240 Server.



Note:

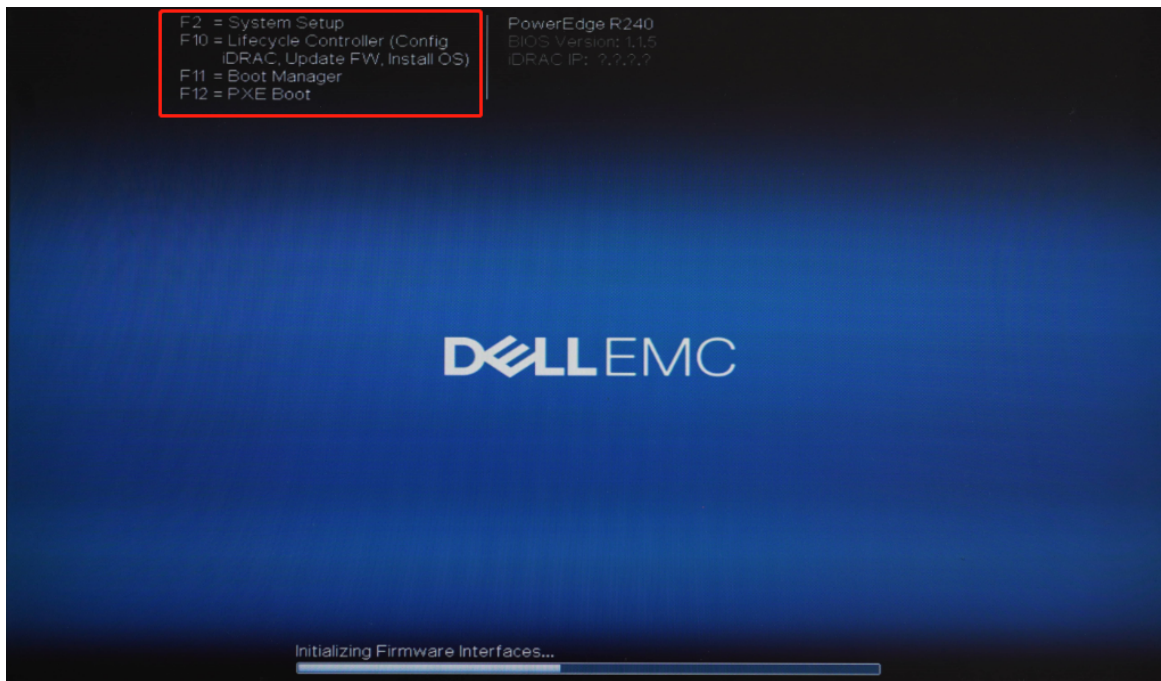
- The USB 2.0 port is at the right side of the front panel.
- The installation process cannot work with USB 3.0.



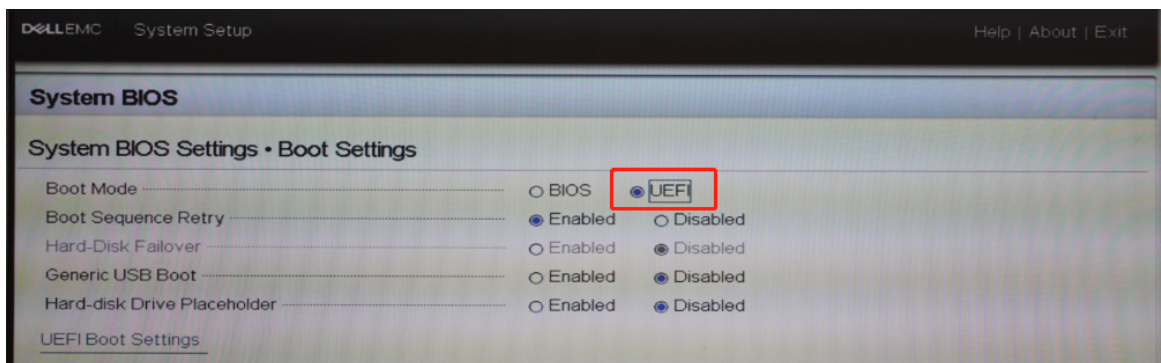
2. Press the power button to power on the device.
3. When you see the following figure, press F2 immediately to enter system setup.



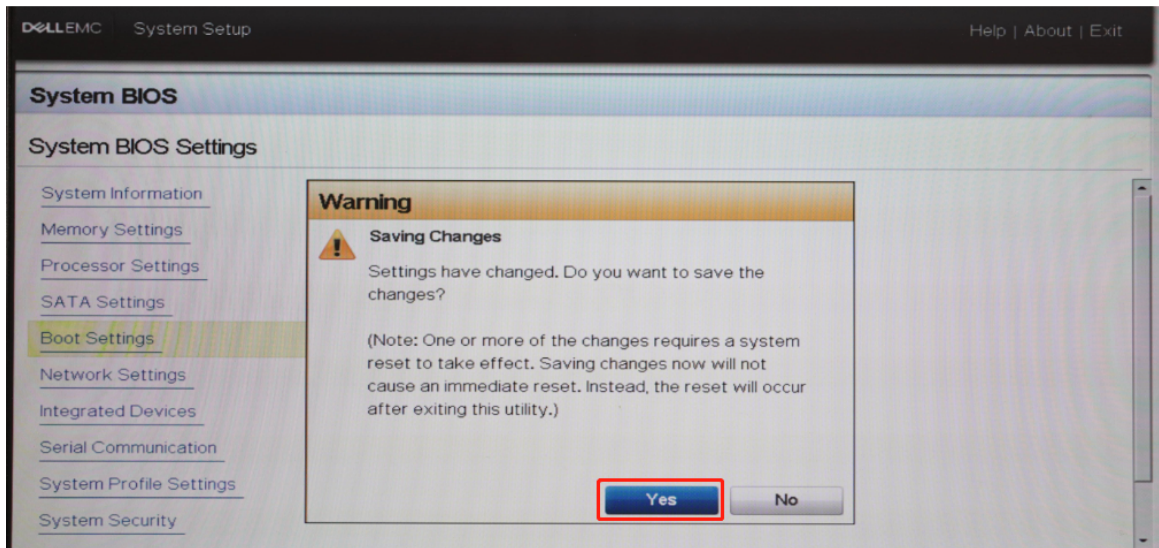
Note: If you don't press F2 in time to enter the system setup, reboot the device to try again.



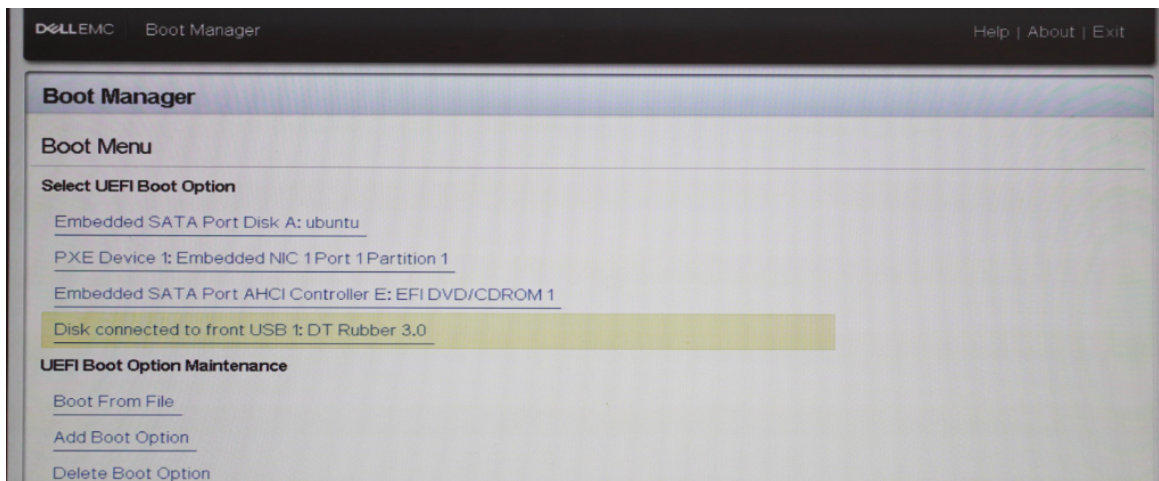
4. Go to **System BIOS** → **Boot Settings**, set the **Boot Mode** to **UEFI**.



5. Press **Esc** key twice to exist **System BIOS Settings**, then select **Yes** to save the setting.



6. Press **Ctrl + Alt + Delete** key to reboot the sever.
7. During boot, press **F11** to enter the **Boot Manager**.
8. Select **One-shot UEFI Boot Menu**, then select **Disk connected to front USB 1: DT Rubber 3.0**.



9. Select **Install Ubuntu Server** to install K2 system.



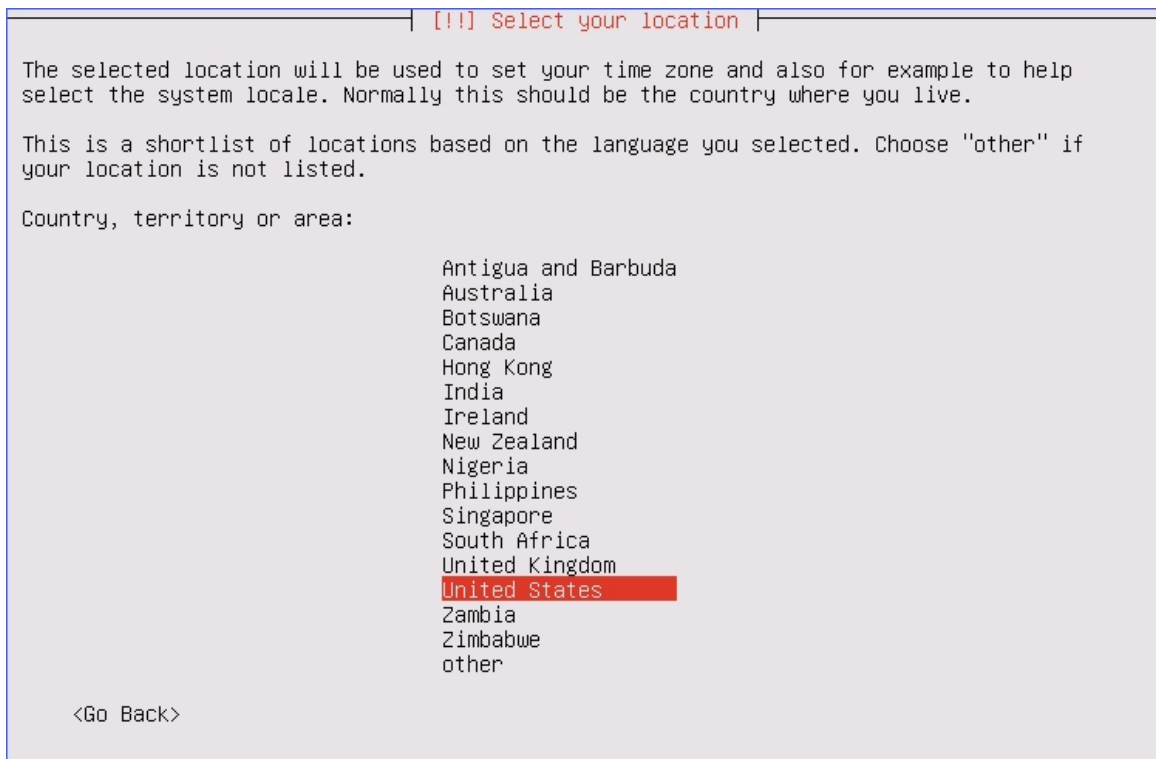
Step 2. Configure language and location

The installer will begin with a prompt to select a language for the installation process.

1. Select a language to be used for the installation process and installed system.

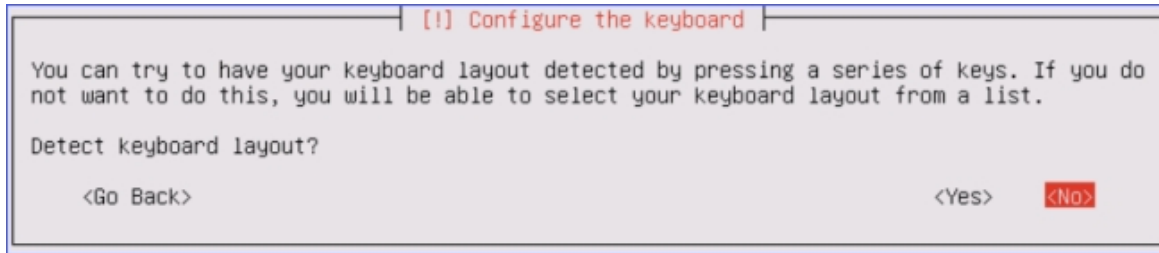


2. Select your location based on the language you selected.



Step 2. Configure the keyboard

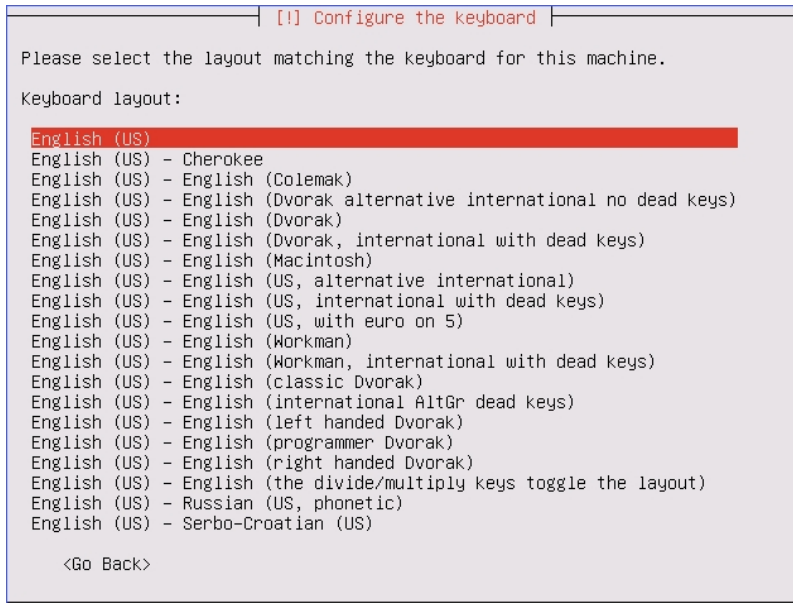
1. Select **NO**, not to do keyboard layout detection.



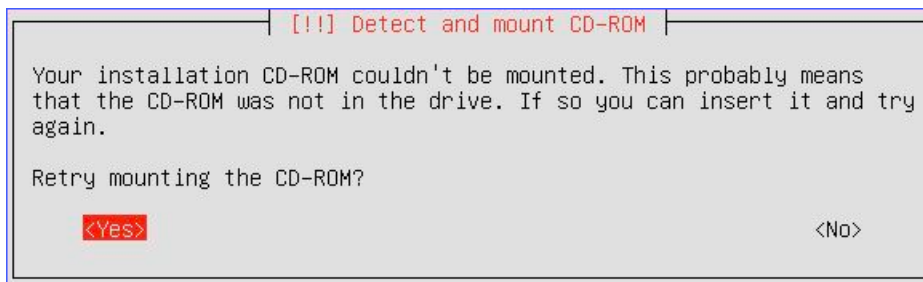
2. Select a country of origin for the keyboard of this computer.



3. Select the layout matching the keyboard for your machine.

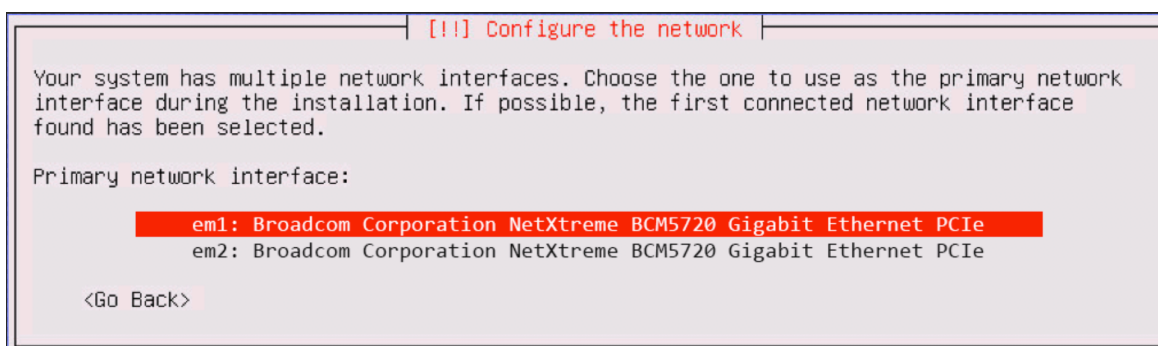


4. If it is the first time to install K2 on R240 server, you may be prompted that the installation CD-ROM couldn't be mounted. To solve this issue, disconnect your USB driver and reconnect it again.

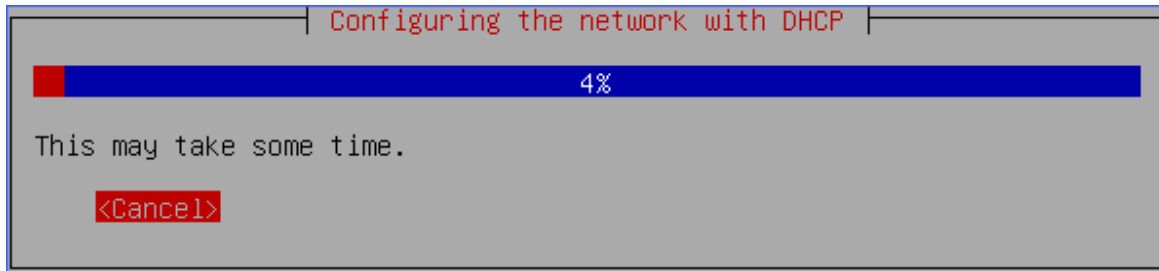


Step 3. Skip network configuration

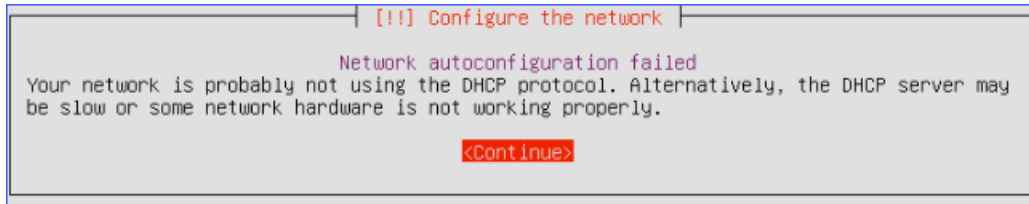
1. Select the primary network interface.



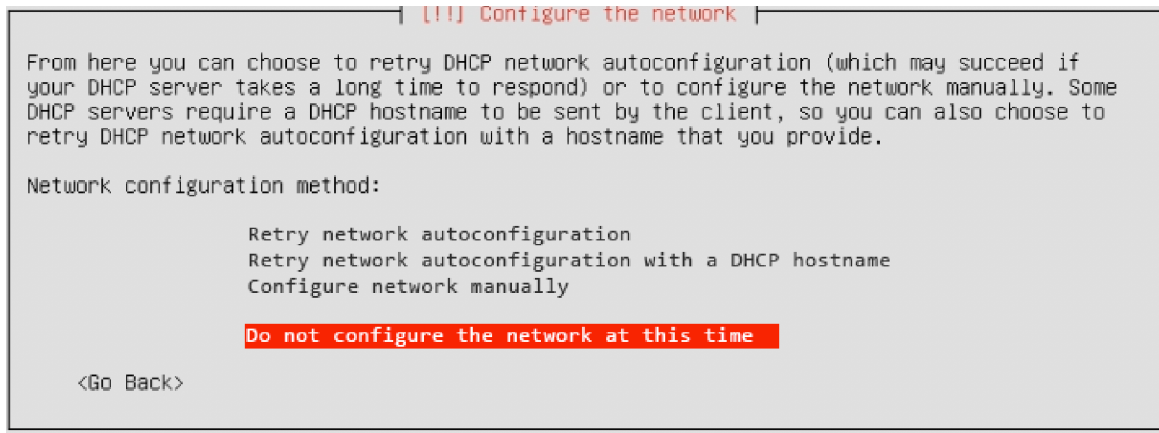
2. When you see the DHCP configuration process, press **Enter** key to cancel.



You will be prompted that the network auto configuration failed, press **Enter** key to continue.



3. Select **Do not configure the network at this time**.

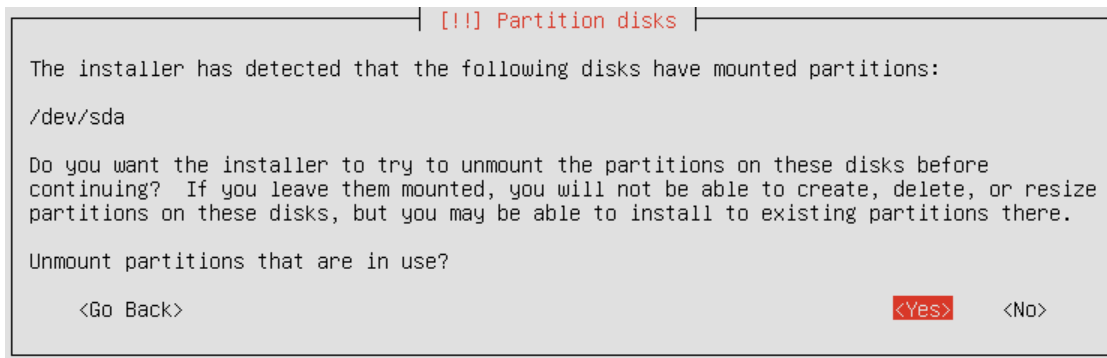


4. Select the time zone.

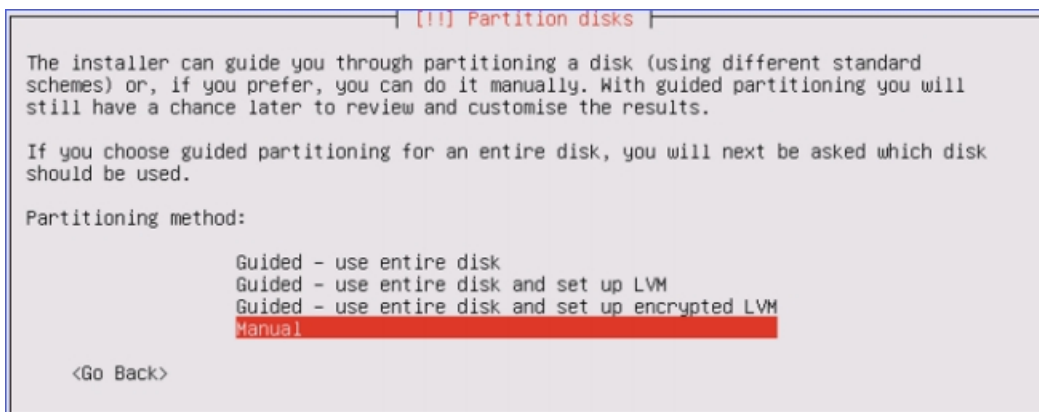


Step 4. Plan and create partition disk

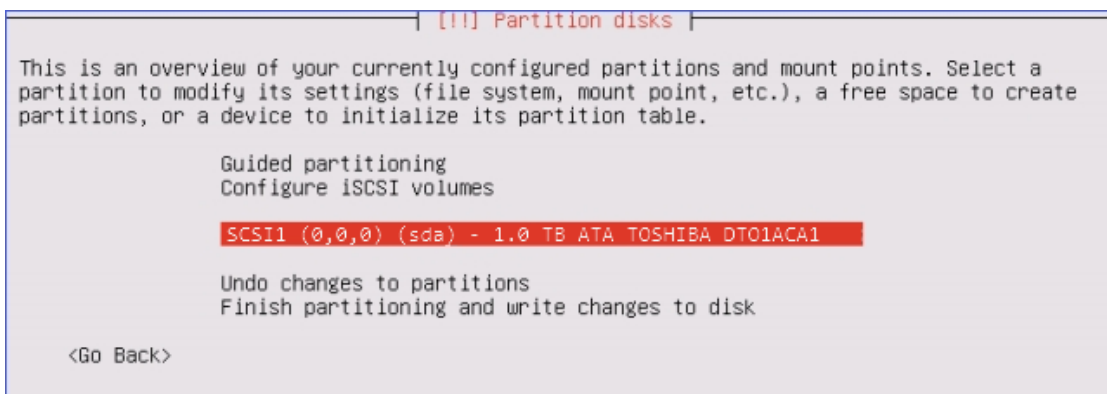
1. Unmount partitions that are in use.
 - a. Select **Yes** to unmount the partitions.



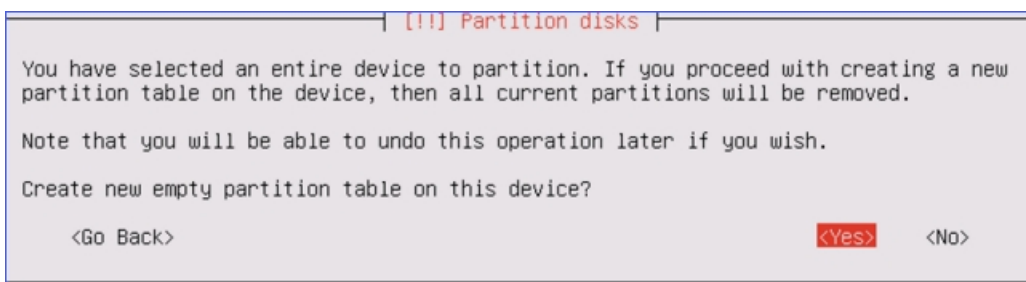
b. Select **Manual** partitioning method.



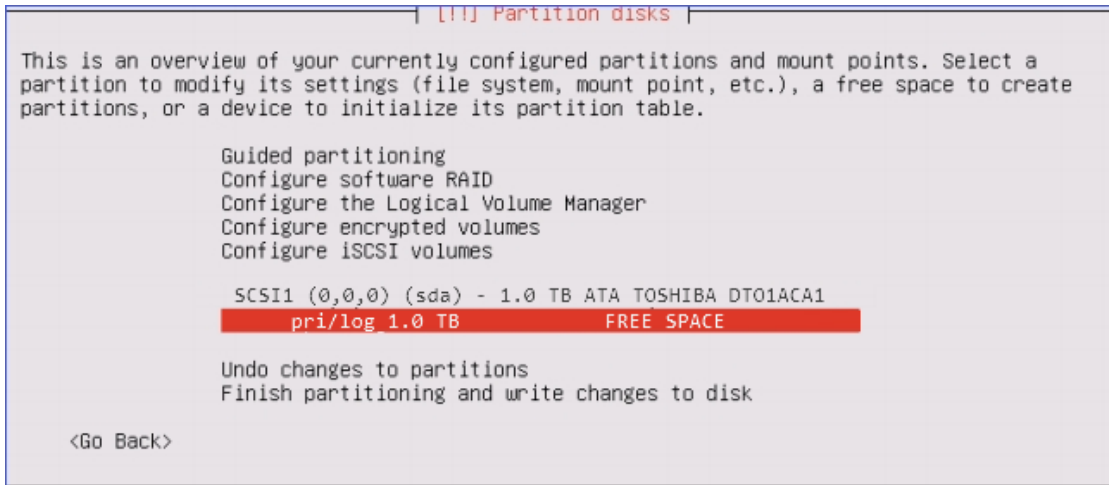
c. Select the partition of the system.



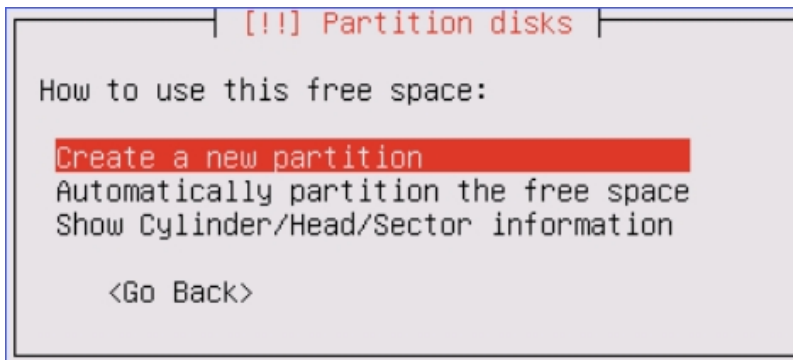
d. Select **Yes** to create new empty partition table on this device.



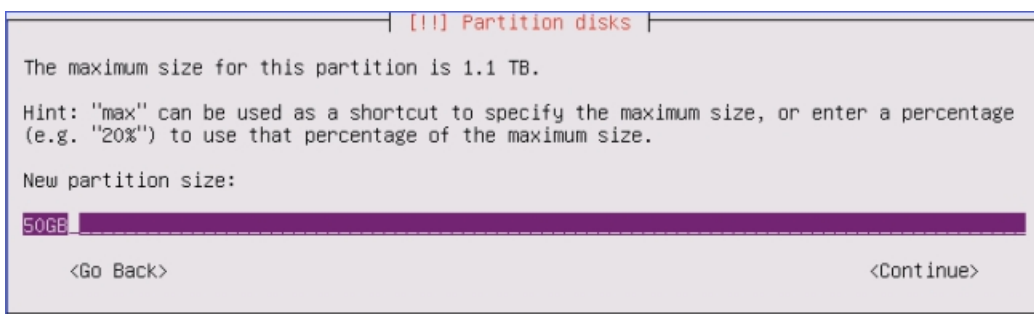
2. Create partition 1: root directory for system files.
 - a. Select the **FREE SPACE** to create partition 1.



- b. Select **Create a new partition**.



- c. Set the partition size.
Recommended size: 50 GB.



- d. Select location for the partition as **Beginning**.

[!] Partition disks

Please choose whether you want the new partition to be created at the beginning or at the end of the available space.

Location for the new partition:

Beginning
End

<Go Back>

e. Set **Use as** and **Mount point** for the partition 1, then select **Done settings up the partition**.

- **Use as:** Ext4 journaling file system
- **Mount point:** /
- **Bootable flag:** on

[!] Partition disks

You are editing partition #1 of SCSI33 (0,0,0) (sda). No existing file system was detected in this partition.

Partition settings:

Use as: Ext4 journaling file system

Mount point: /

Mount options: defaults

Label: none

Reserved blocks: 5%

Typical usage: standard

Bootable flag: on

Copy data from another partition

Delete the partition

Done setting up the partition

<Go Back>

3. Create partition 2: home directory for data and recordings.

a. Select the **FREE SPACE** to create partition 2.

[!] 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

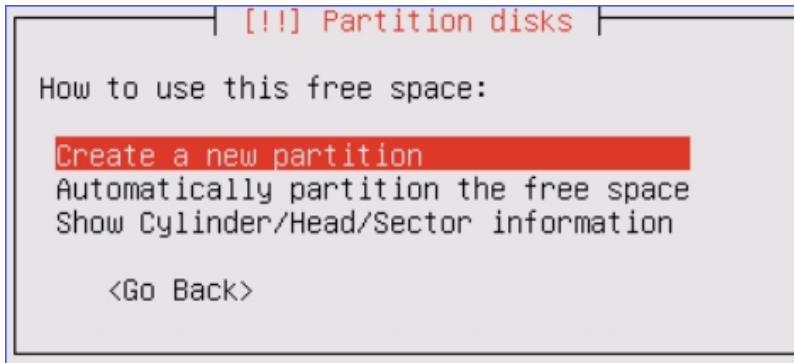
SCSI1 (0,0,0) (sda) - 1.0 TB ATA TOSHIBA DT01ACA1

	1.0 MB			FREE SPACE	
#1	50.0 GB	B	F	ext4	/
	950.2 GB			FREE SPACE	

Finish partitioning and write changes to disk

<Go Back>

b. Select **Create a new partition**.

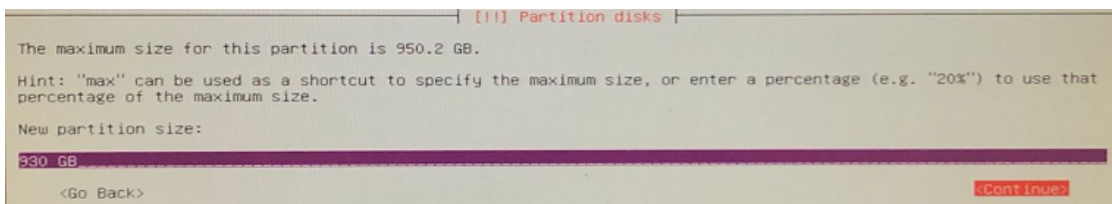


c. Set the partition size.

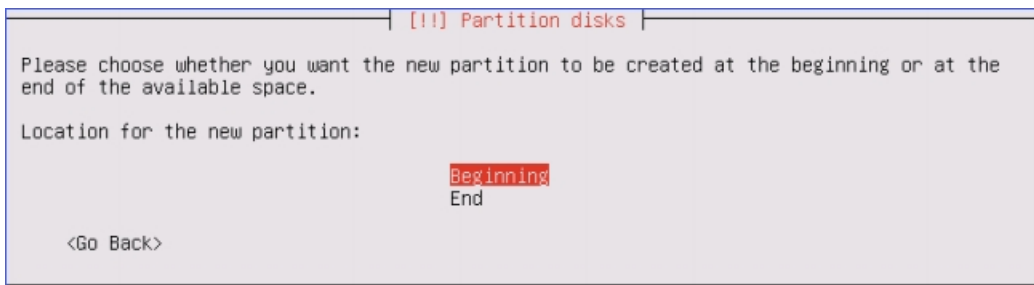


Note:

- 1000-minute recordings require about 1GB space.
- We recommend that you set a larger space for the partition to have more space to store your recordings and other data.

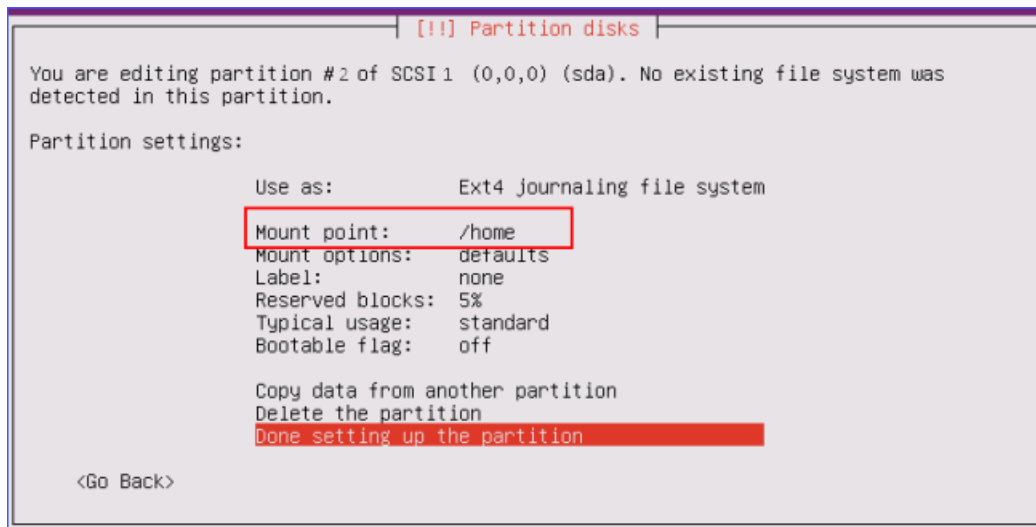


d. Select location for the partition as **Beginning**.

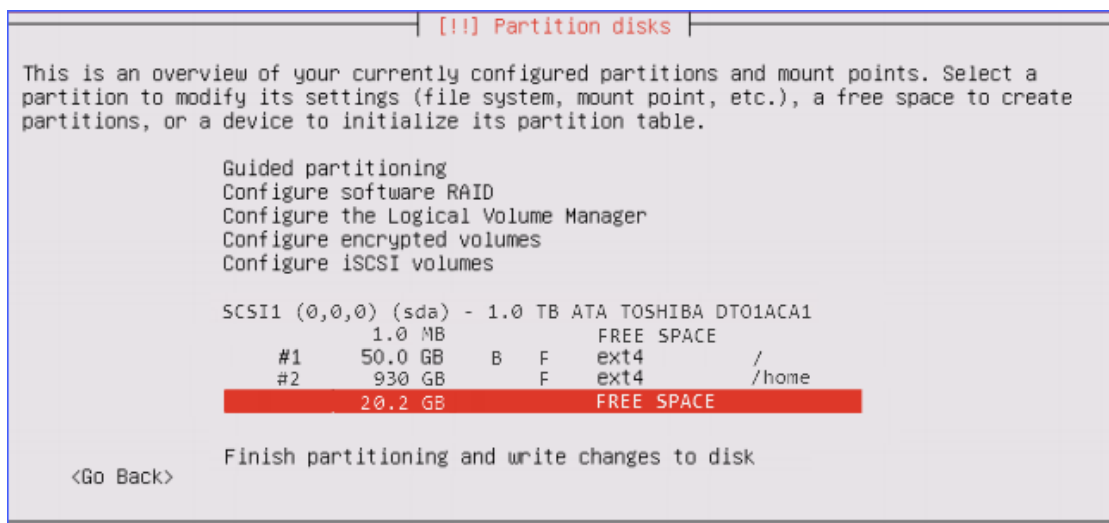


e. Set **Use as** and **Mount point** for the partition 2, then select **Done settings up the partition**.

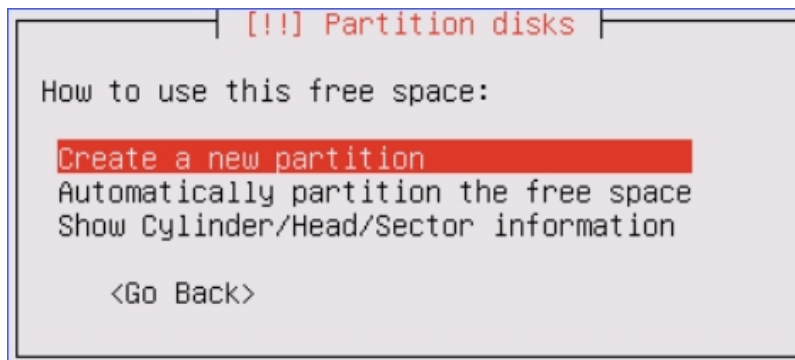
- Use as: Ext4 journaling file system
- Mount point: /home



4. Create partition 3: EFI boot for UEFI boot mode.
 - a. Select the **FREE SPACE** to create a new partition.



- b. Select **Create a new partition**.



- c. Set the partition size.
- Recommended size : 1.2 GB.

[!!] Partition disks

The maximum size for this partition is 20.2GB.

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:

1.2GB

<Go Back> <Continue>

- d. Select location for the partition as **Beginning**.

[!!] Partition disks

Please choose whether you want the new partition to be created at the beginning or at the end of the available space.

Location for the new partition:

Beginning
End

<Go Back>

- e. Set **Use as** and **Mount point** for the partition 3, then select **Done settings up the partition**.

- Use as: EFI boot partition

[!!] Partition disks

You are editing partition #3 of SCSI1 (0,0,0) (sda). No existing file system was detected in this partition.

Partition settings:

Use as: EFI boot partition

Bootable flag: on

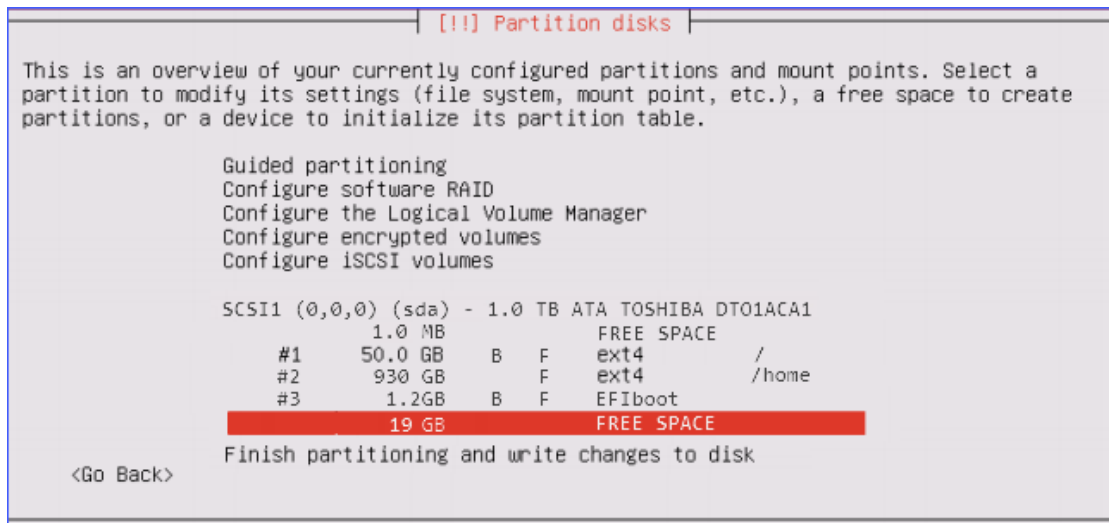
Copy data from another partition

Delete the partition

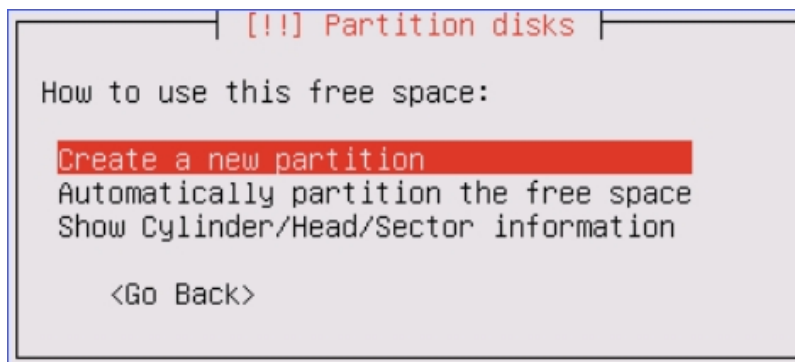
Done setting up the partition

<Go Back>

5. Create partition 4: swap area for storing data when system hibernates.
 - a. Select the **FREE SPACE** to create a new partition.

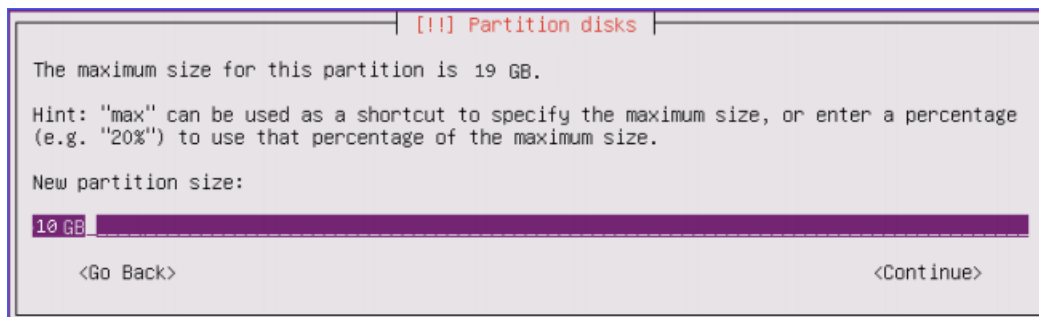


- b. Select **Create a new partition**.



- c. Set the partition size.

Recommended size : 10 GB.



- d. Select location for the partition as **Beginning**.

```

[!!!] Partition disks

Please choose whether you want the new partition to be created at the beginning or at the
end of the available space.

Location for the new partition:

Beginning
End

<Go Back>

```

- e. Set **Use as** and **Mount point** for the partition 4, then select **Done settings up the partition**.
- Use as: swap area

```
[!!] Partition disks
```

You are editing partition #4 of SCSI1 (0,0,0) (sda). No existing file system was detected in this partition.

Partition settings:

Use as: swap area

Bootable flag: off

Copy data from another partition

Delete the partition

Done setting up the partition

<Go Back>

- 6. Select **Finish** partitioning and write changes to disk.**

```

[!!] 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

SCSI1 (0,0,0) (sda) - 1.0 TB ATA TOSHIBA DT01ACA1
    1.0 MB      FREE SPACE
#1   50.0 GB   B   F   ext4      /
#2   930 GB   F   F   ext4      /home
#3   1.2GB    B   F   EFIboot
#4   10GB     F   F   swap      swap
      9GB     FREE SPACE

Undo changes to partitions
Finish partitioning and write changes to disk
<Go Back>

```

7. Select **Yes**, write the changes to disks.

```

[!!] 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:
  SCSI1  (0,0,0) (sda)

The following partitions are going to be formatted:
  partition #1 of SCSI33 (0,0,0) (sda) as ext4
  partition #2 of SCSI33 (0,0,0) (sda) as ext4
  partition #4 of SCSI33 (0,0,0) (sda) as swap

Write the changes to disks?


<Yes>                                     <No>

```

Step 5. Install the IPPBX System

After finishing partitioning and write changes to disk, the K2 system starts to be installed on the server. Wait for a few minutes for the installation.

1. Select **No automatic updates**.

 **Important:** Do not select other options.

```

[!] Configuring tasksel

Applying updates on a frequent basis is an important part of keeping your system secure.

By default, updates need to be applied manually using package management tools.
Alternatively, you can choose to have this system automatically download and install
security updates, or you can choose to manage this system over the web as part of a group
of systems using Canonical's Landscape service.

How do you want to manage upgrades on this system?

No automatic updates
Install security updates automatically
Manage system with Landscape

```

2. Press **Tab** to select **Continue** to skip this step.

The system installation starts.

```

[!] 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.

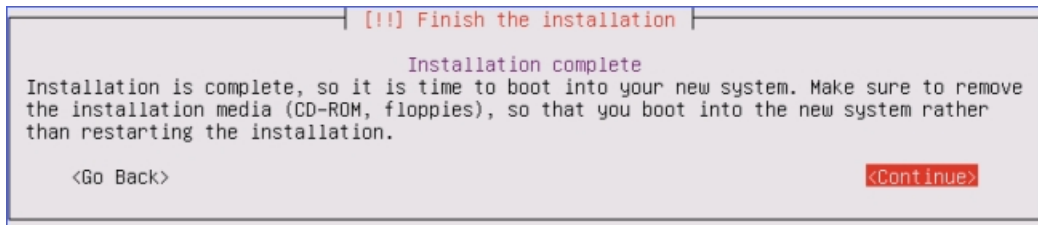
Choose software to install:

[ ] OpenSSH server
[ ] DNS server
[ ] LAMP server
[ ] Mail server
[ ] PostgreSQL database
[ ] Print server
[ ] Samba file server
[ ] Tomcat Java server
[ ] Virtual Machine host
[ ] Manual package selection

<Continue>

```

3. When you are prompted that the installation is complete, disconnect your USB driver, then select **Continue** to boot into your system.



When the following screen displays, the IPPBX system is successfully installed.



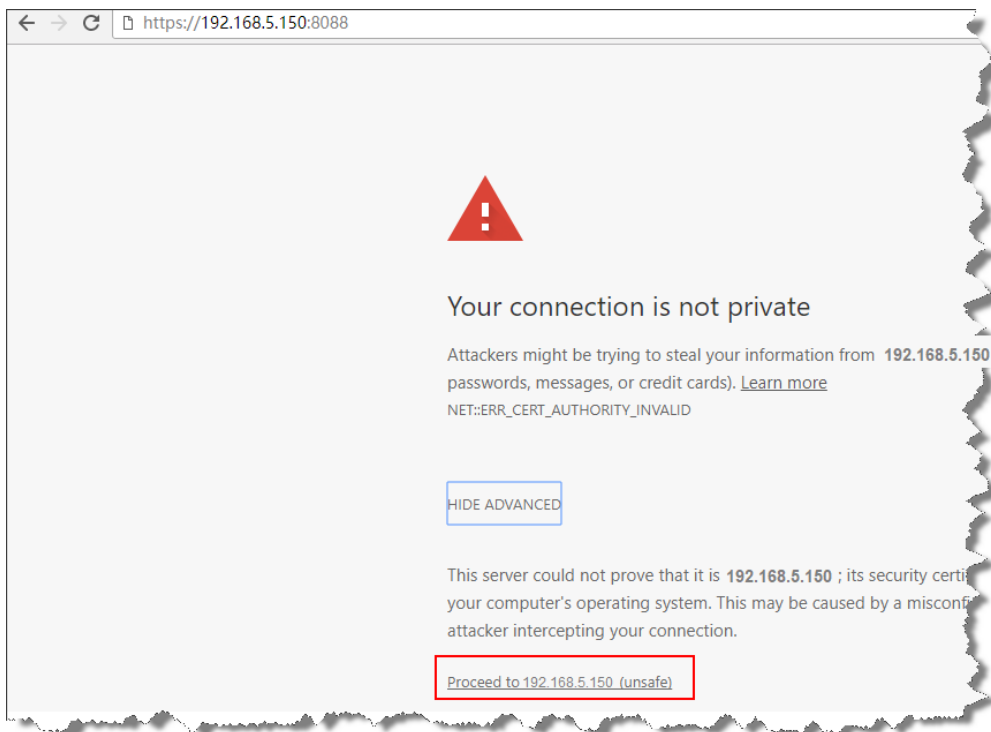
Log in the Yeastar K2 IPPBX

After installing Yeastar K2 IPPBX system successfully, you can log in your PBX using a local browser.

The default IP address of the PBX is 192.168.5.150. To log in the PBX, you need to make sure that your server is in the same network segment of 192.168.5.X.

1. Launch your Web browser, enter the default IP address, and press **Enter**.

A connection warning appears. Ignore the warning and proceed to the Yeastar IPPBX web page.



2. Enter the default user name and password, click **Login**.

- Username: admin
- Password: password

Activate Yeastar K2 IPPBX

After installing the Yeastar K2 Software, you can try out all the PBX features free without time limit. However, the inactivated PBX has a limit on the number of extensions, concurrent calls, VoIP trunks, ring groups, etc. Contact Yeastar to buy the license according to how many extensions, concurrent calls, and other features you need on the PBX.


Limitation of an inactivated Yeastar K2 IPPBX

Table 2:

Feature	Max number
Extension	10
Concurrent call	5
Trunk	1
Ring Group	1
RingGroup Member	1
Queue	1
Queue Member	1
Conference	1

Feature	Max number
Conference Member	1
Pickup Group	1
Paging/Intercom	1
Paging/Intercom Member	1
Speed Dial	1
Callback	1
DISA	1
Inbound Routes	1
Outbound Routes	1
SLA	1
Time Condition	1
Holiday	1
IVR	1
Blacklist/Whitelist	1
PIN List	1
PIN List Number	1

Activation methods

Method	Environment	Description
Online activation	PBX can access to the internet	Keep your PBX connected to the internet to access the Yeastar activation server.
Offline activation	PBX cannot access to the internet	<p>To secure your phone system, you may install a Yeastar K2 IPPBX that has no ability to access the Internet. In this scenario, Yeastar will provide a USB license key to help you activate your PBX.</p> <p> Note: The USB key is programmed with your required PBX capacity, and can be used for one device only.</p>



Important: If you reinstall your PBX, you need to contact Yeastar to get a new license, and reactivate your PBX.

Activate Yeastar K2 IPPBX online

1. Log in the PBX web interface, go to **Maintenance**→**Activation**, Click **Activate**.
2. Enter your license in the **License** field, click **Activate**.

3. Click **OK** and reboot the PBX to take effect.



Note: After activating the PBX, keep your PBX connected to the Internet, or the PBX will be detected as an abnormal device.

Activate Yeastar K2 IPPBX offline (USB Key)

1. Connect the USB Key to your computer where the Yeastar K2 IPPBX is installed.
2. Log in the PBX web interface, go to **Maintenance**→**Activation**, click **Activate**.
3. Enter your license in the **License** field, click **Activate**.

4. Click **OK** and reboot the PBX to take effect.



Note: After activating the PBX, keep the USB Key connected to the PBX, or the PBX will be detected as activation abnormality.

Expand System Capacity of Yeastar K2 IPPBX

If you need to expand the number of extensions, concurrent calls or other features, contact Yeastar to upgrade your license, and then update your license on your PBX.

Update methods

Choose the same update method as the one you choose to update the license according to the environment of your PBX.

- [Update license online](#)
- [Update license offline \(USB Key\)](#)

Update license online

Contact Yeastar to update your license, and confirm the license update on your PBX.

1. Log in the PBX web interface, go to **Maintenance**→**Activation**, click **Update**.

2. Click **OK** after update.



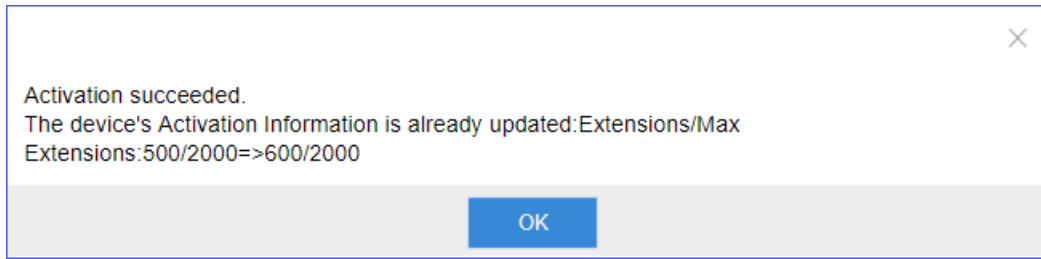
Note: Keep your PBX connected to the internet, or the PBX will be detected as an abnormal device.

Update license offline (USB Key)

Contact Yeastar to update your license, you will get a new license, enter the new license on your PBX.

1. Log in the PBX web interface, go to **Maintenance**→**Activation** , click **Update**.
2. Enter your new license, click **Activate**.

3. Click **OK** after update.



Note: Keep the USB Key connected to the PBX, or the PBX will be detected as an abnormal device.