

# System Installation Guide

## Yeastar S1000-P IPPBX

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☎ Support: +86-592-5503301  
✉ Support: [support@yeastar.com](mailto:support@yeastar.com)  
🌐 <https://www.yeastar.com>

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# System Installation Guide

## About this guide

This guide describes how to install Yeastar S1000-P IPPBX system on Huawei 1288H V5 server. In this guide, we also provide procedures of S1000-P system activation and expansion.

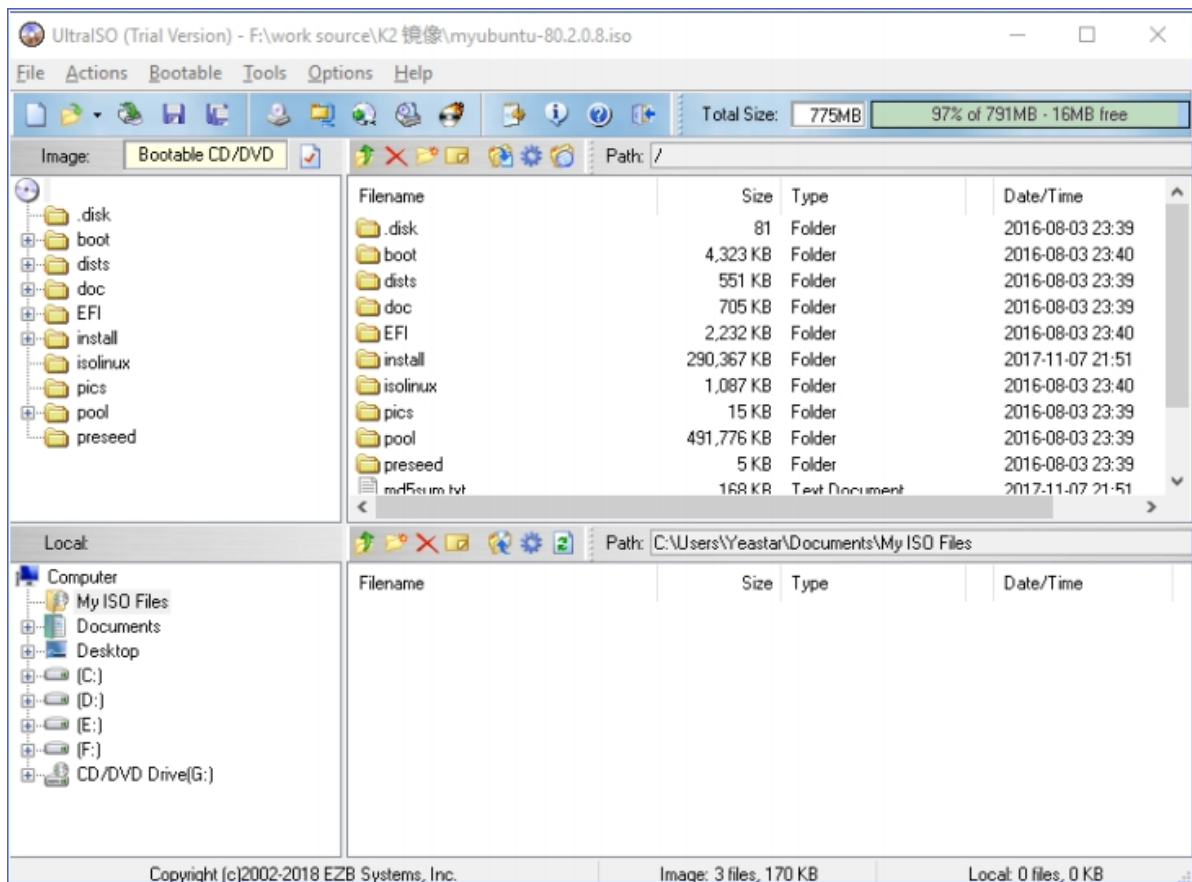
## Audience

This guide is for the person who only buys Yeastar S1000-P IPPBX software, and wants to install the S1000-P IPPBX system on Huawei 1288H V5 server.

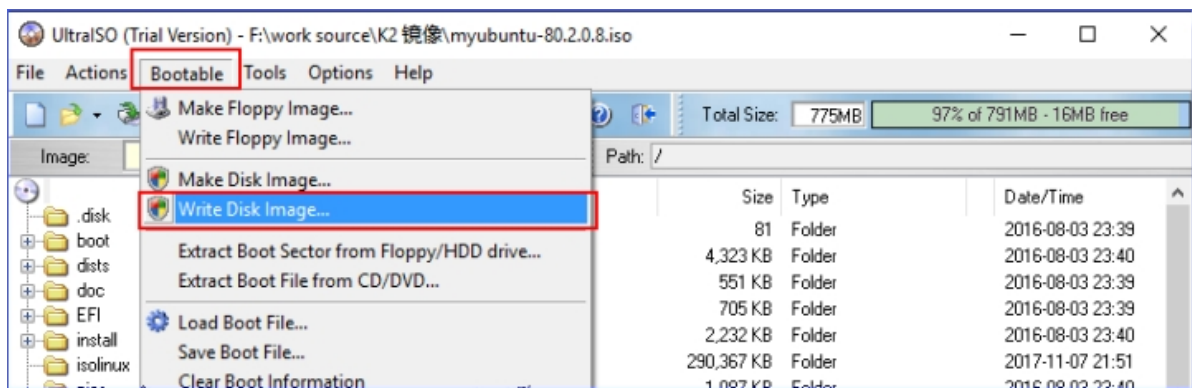
## *Write Yeastar S1000-P Image in a USB*

If you choose to install Yeastar S1000-P IPPBX system on a physical machine, you need to write S1000-P image in the USB in advance. The instructions below introduces how to write S1000-P image in a USB via UltraISO.

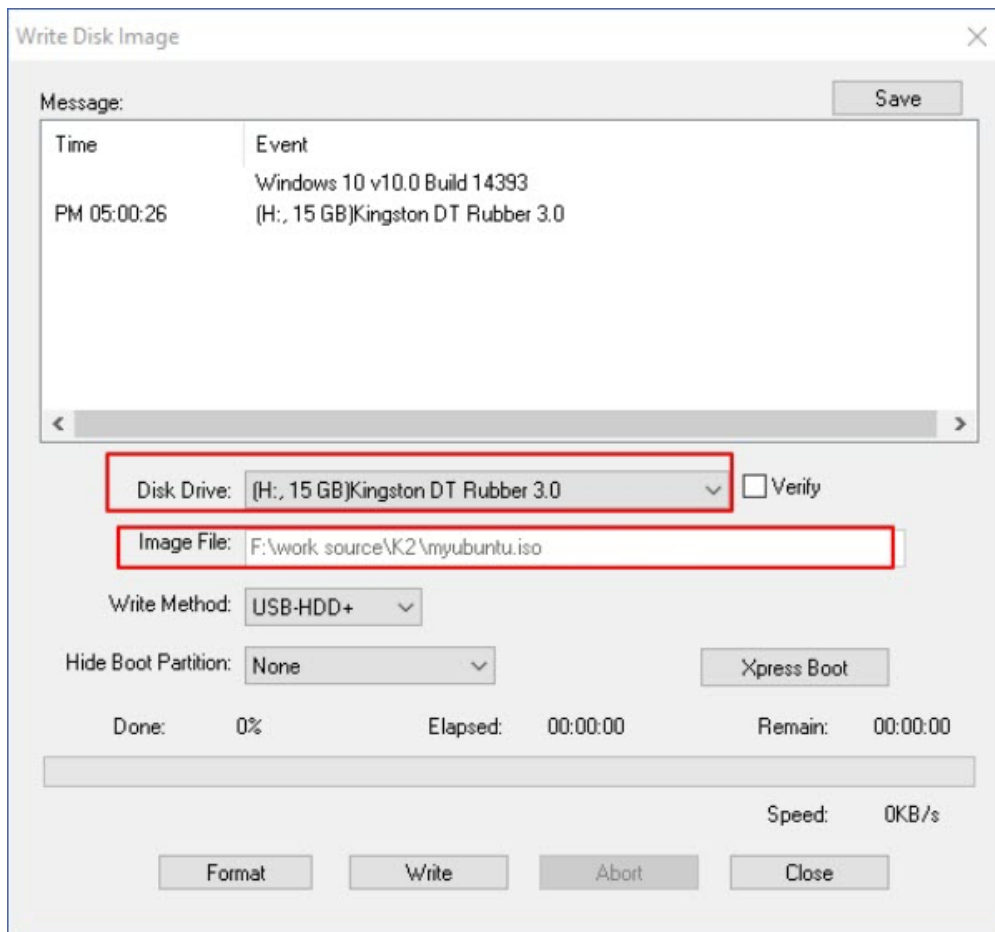
1. Format your USB with FAT32.
2. Open the S1000-P image file via UltraISO.



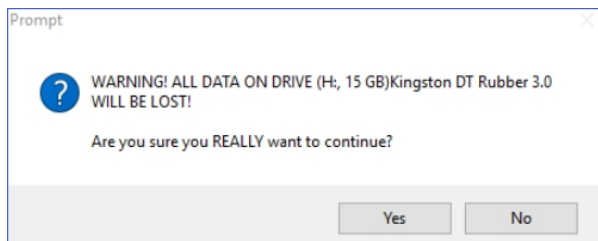
3. Click **Bootable > Write Disk Image**.



4. Choose your USB drive as **Disk Drive**, and choose the S1000-P image file, then click **Write**.

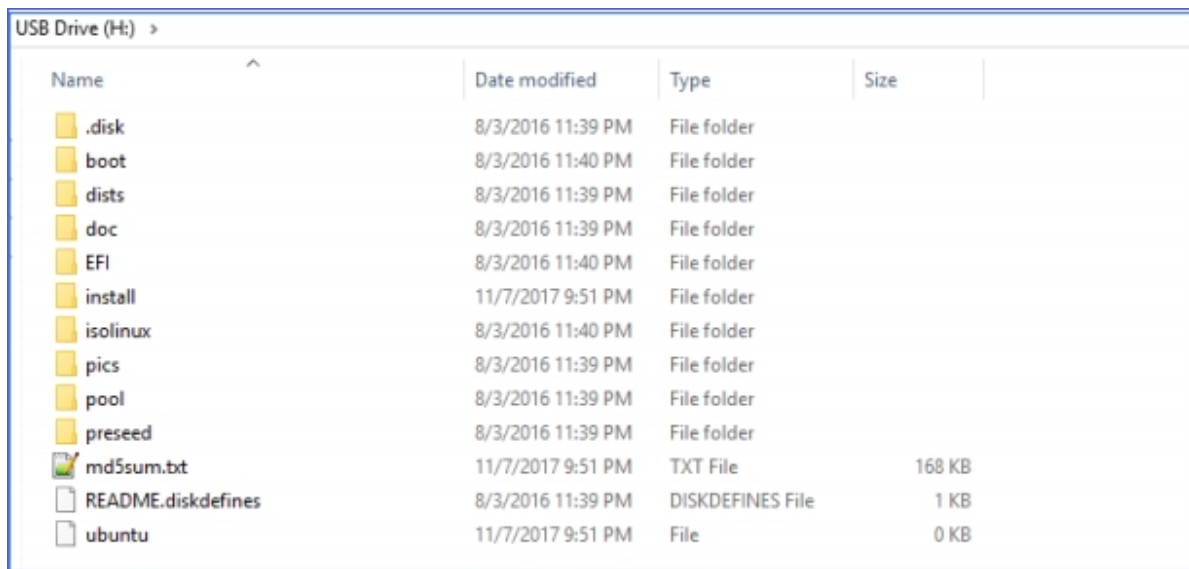


5. Click **Yes** to start writing image.



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.



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

## Set up RAID Controller Cards

RAID is a data backup technology that uses a RAID controller card to combine multiple hard drives into a virtual large-capacity hard drive, providing higher storage and I/O performance and reliability than single traditional hard drive. This topic describes how to create RAID 0 on Avago SAS3408 controller card and install drivers for this card.

1. Press the power button to power on the device.
2. When you see the startup screen shown as bellow, press **Delete** immediately to go to **Setup Utility**.

```
Loading EFI driver. It may take several minutes.

BIOS Version : 00000000

BIOS Release Date : 02/27/2020

Processor Type : 00000000000000000000000000000000


Total memory size : 32768 MB

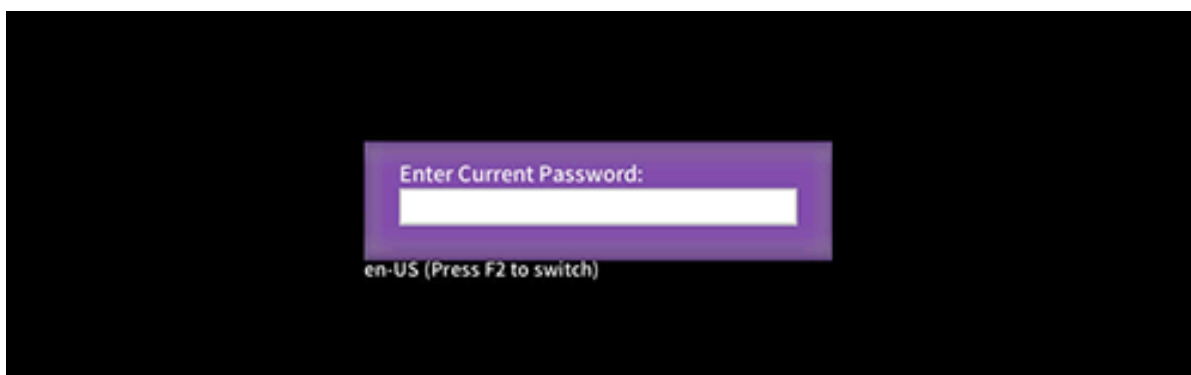
iBMC Version : 3.74
iBMC IP : 192.168.123.47

After installing OS, remember to install drivers and upgrade firmware!

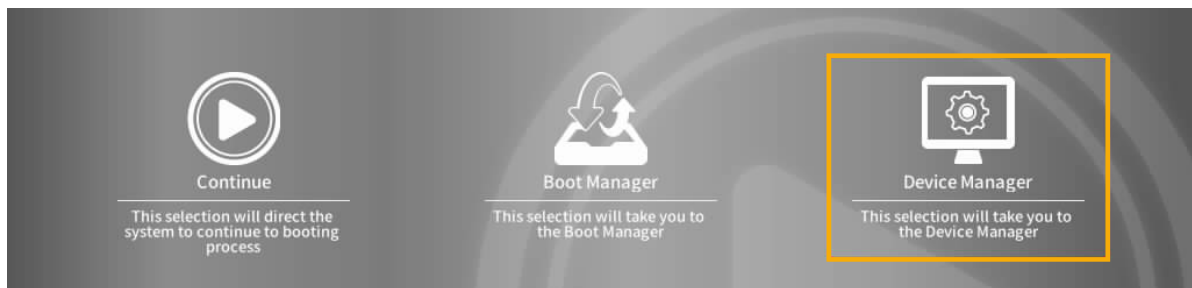
Press Del go to Setup Utility
Press F11 go to Boot Manager
Press F12 go to PXE
Press F3 go to Boot Manager on Remote Keyboard
Press F4 go to Setup Utility on Remote Keyboard
Press F6 go to SP Boot
```

3. Enter the password as prompted, and press **Enter**.

 **Note:** The default password is Admin@9000.



4. In the **Setup Utility** screen, use the arrow keys to select **Device Manager** and press **Enter**.

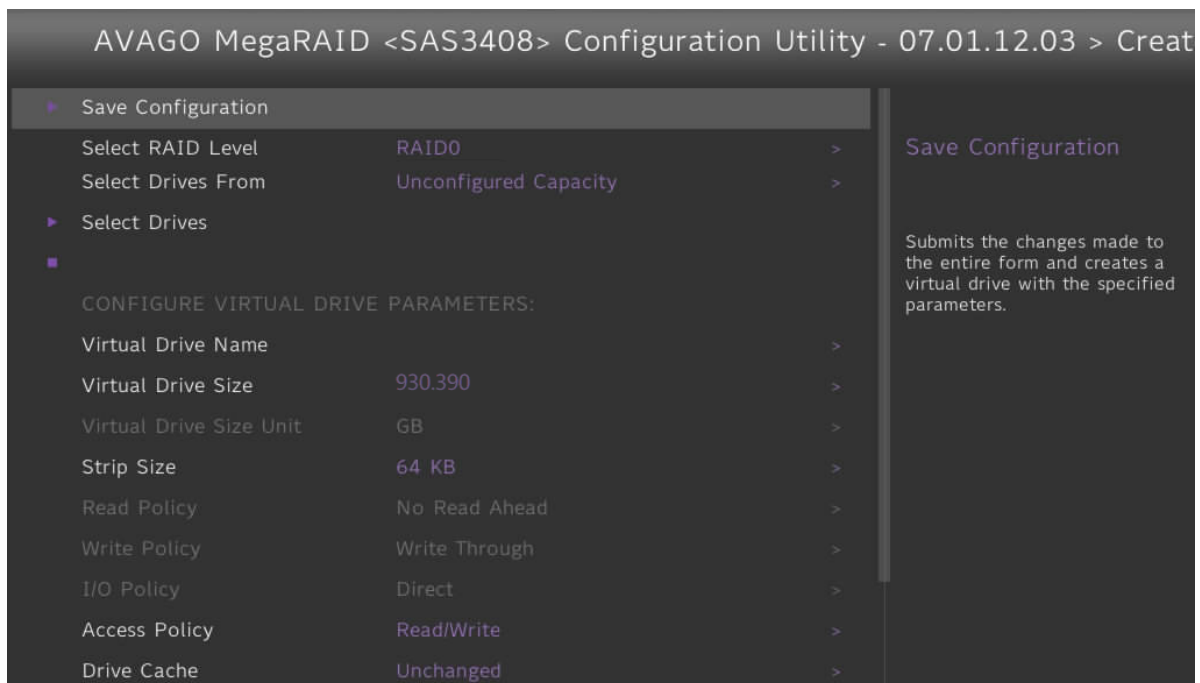


5. Select **AVAGO MegaRAID<sas3408> Configuration Utility**, and press **Enter**.

The main screen is displayed.

6. Go to **Main Menu > Configuration Management > Create Virtual Drive**.

The RAID array configuration screen is displayed as below.



7. Select a RAID level.
  - a. Use the arrow keys to select **Select RAID Level** and press **Enter**.
  - b. Select a RAID level **RAID 0** and press **Enter**.
8. Add member drives.
  - a. Use the arrow keys to select **Select Drives From** and press **Enter**.
  - b. Select the source of member drives and press **Enter**.

In this example, **Unconfigured Capacity** is selected.



c. Select the drive to be added and press **Enter**.

A hard drive is selected if its state is **Enabled**.

d. Select **Apply Changes** and press **Enter**.

a. Select **OK** and press **Enter**.

9. Save the settings.

a. Select **Save Configuration**, and press **Enter**.

The confirmation screen is displayed.

b. Select **Confirm** and press **Enter**.

The message "The operation has been performed successfully" is displayed.

c. Select **OK** and press **Enter**.

10. Check the configuration result.

a. Press **Esc** to return to the previous screen.

b. Select **Virtual Drive Management** and press **Enter**.

Current RAID information is displayed.


## *Install Yeastar S1000-P IPPBX System on Huawei 1288H V5 Server*

This topic describes how to install Yeastar S1000-P system on Huawei 1288H V5 Server.

### **Before You Begin**

- Write Yeastar S1000-P image in a USB.
- [Set up RAID controller card](#).

### **Step1. Prepare before installation process**

 **Note:** Do not connect Huawei Server to network, or problems may occur during the installation process.

1. Connect the USB driver to the USB 2.0 port on Huawei 1288T V5 Server.

 **Note:**

- The USB 2.0 port is on 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 startup screen shown as bellow, press F11 immediately to go to **Boot Manager**.

```
Loading EFI driver. It may take several minutes.

BIOS Version : 
BIOS Release Date : 02/27/2020


Processor Type : 
Total memory size : 32768 MB

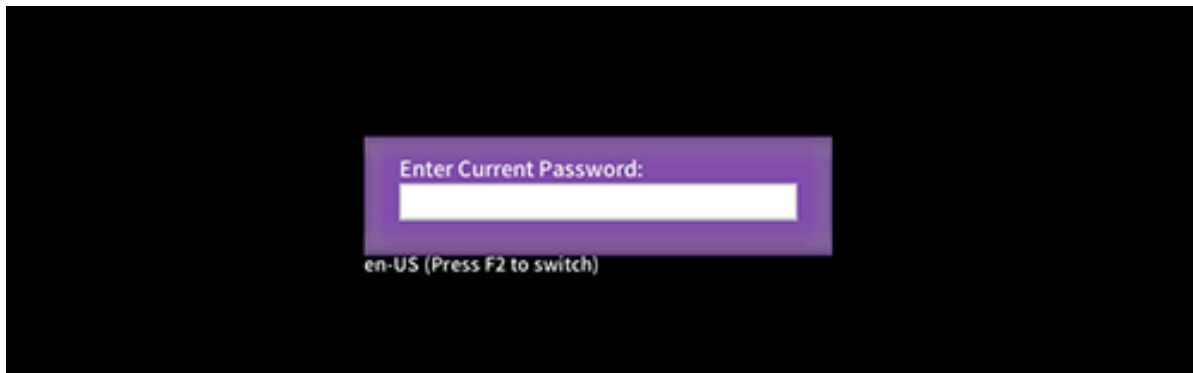
iBMC Version : 3.74
iBMC IP : 192.168.123.47

After installing OS, remember to install drivers and upgrade firmware!

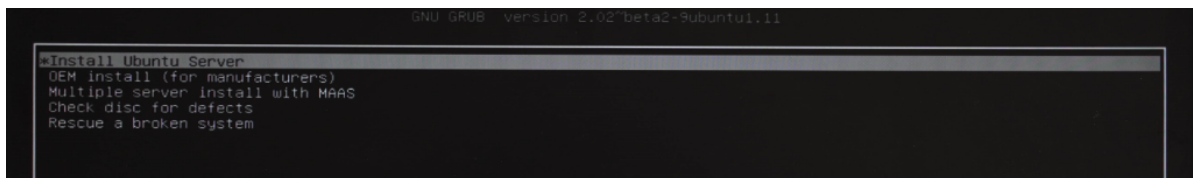
Press Del go to Setup Utility
Press F11 go to Boot Manager
Press F12 go to PXE
Press F3 go to Boot Manager on Remote Keyboard
Press F4 go to Setup Utility on Remote Keyboard
Press F6 go to SP Boot
```

4. Enter the password as prompted.

 **Note:** The default password is Admin@9000.



5. Use the arrow keys to select **Boot Manager**, and press **Enter**.
6. Select **SP OP (the name of your USB driver)**, and press **Enter**.
7. Select **Install Ubuntu Server** to install S1000-P system.



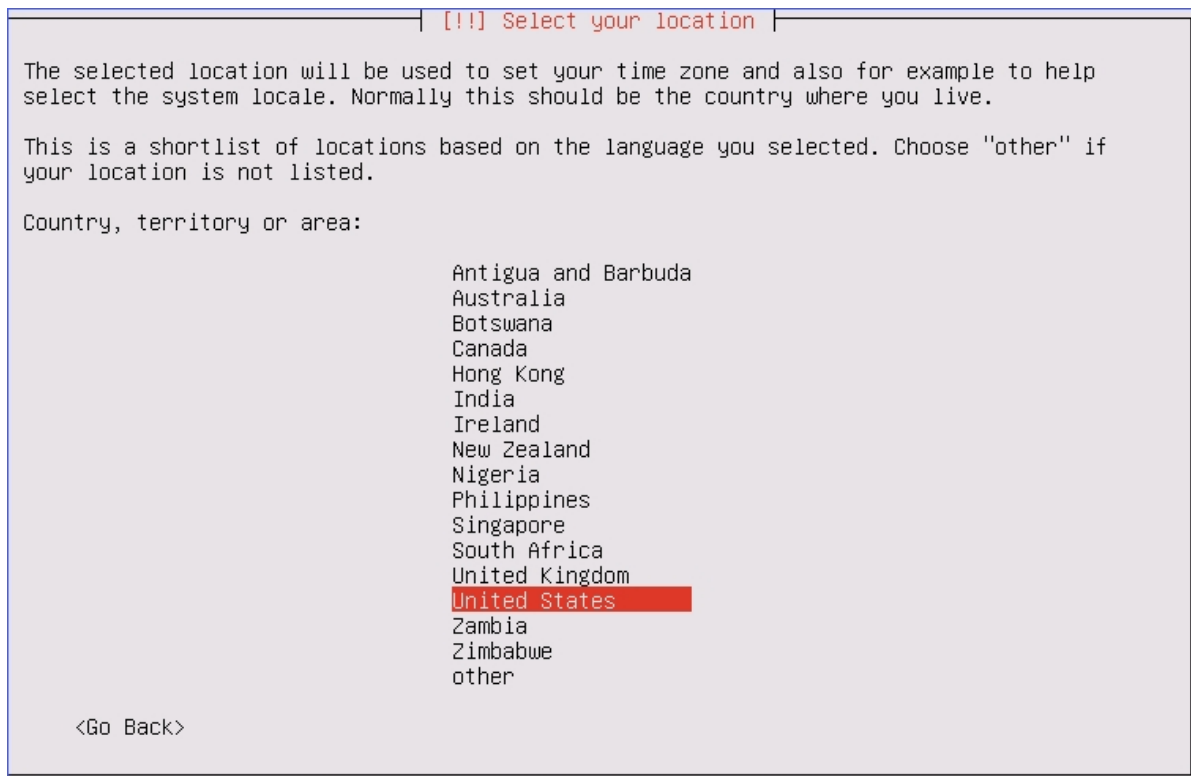
## Step2. Configure language and location

The installer begins with a prompt to ask you to select a language for the installation process.

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

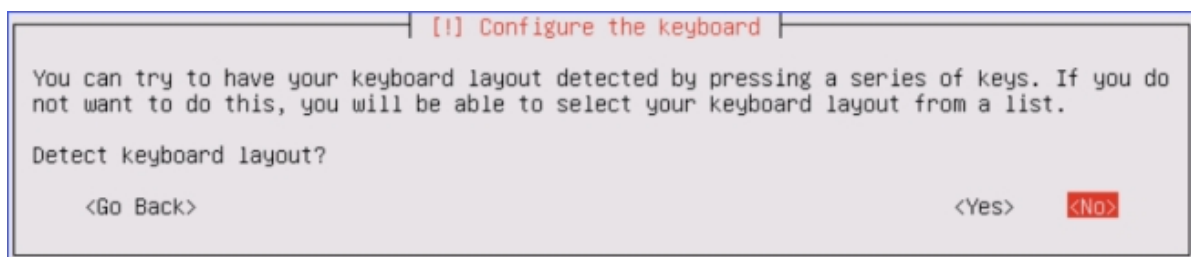


2. Select your location based on the language you selected.



### Step3. Configure the keyboard

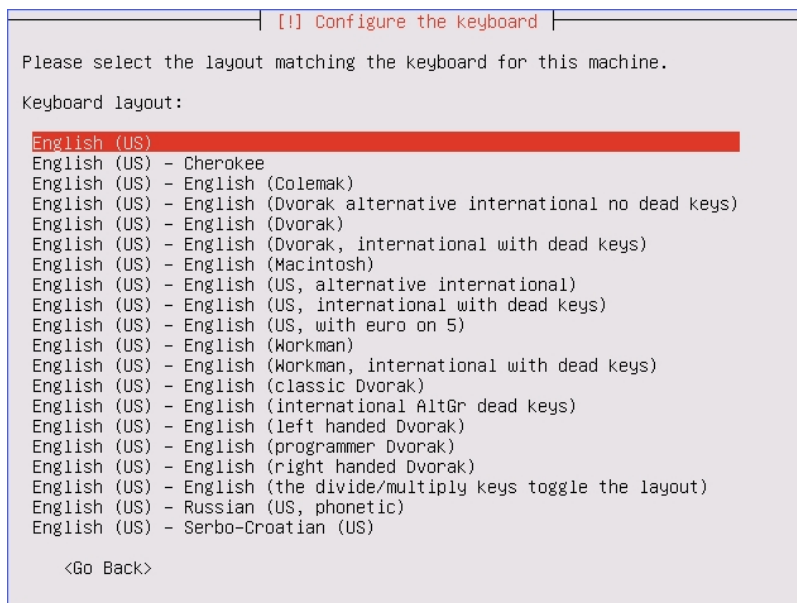
1. Select **NO**, not to do keyboard layout detection.



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

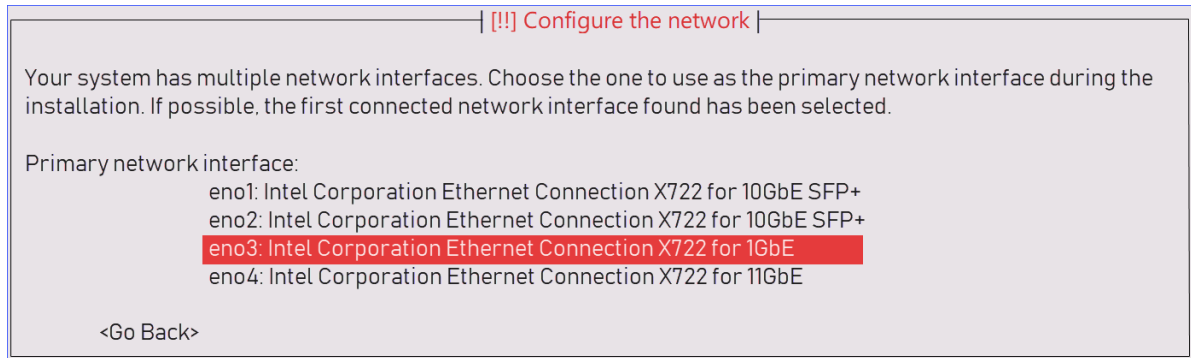


### 3. Select the layout matching of the keyboard for your machine.

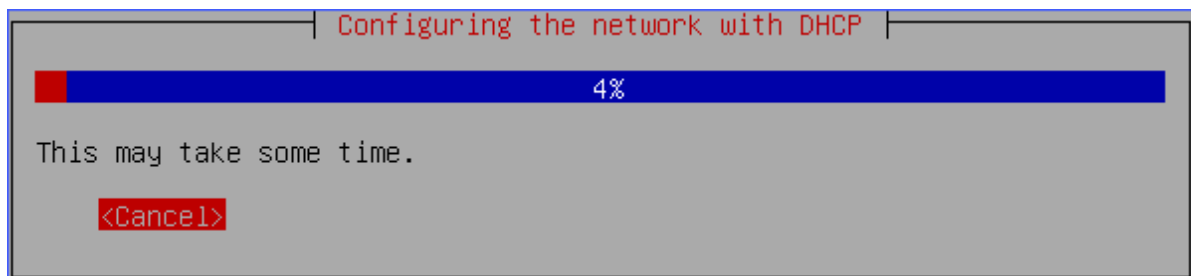


## Step4. Skip network configuration

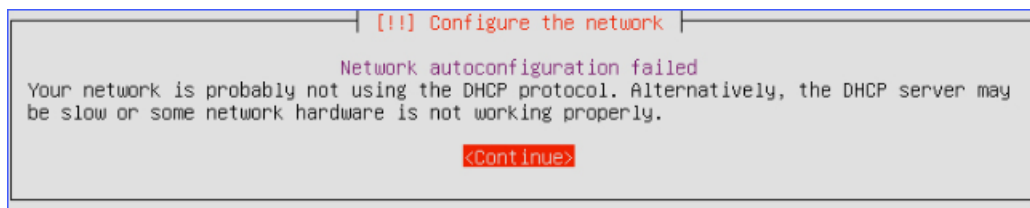
1. Select the primary network interface.



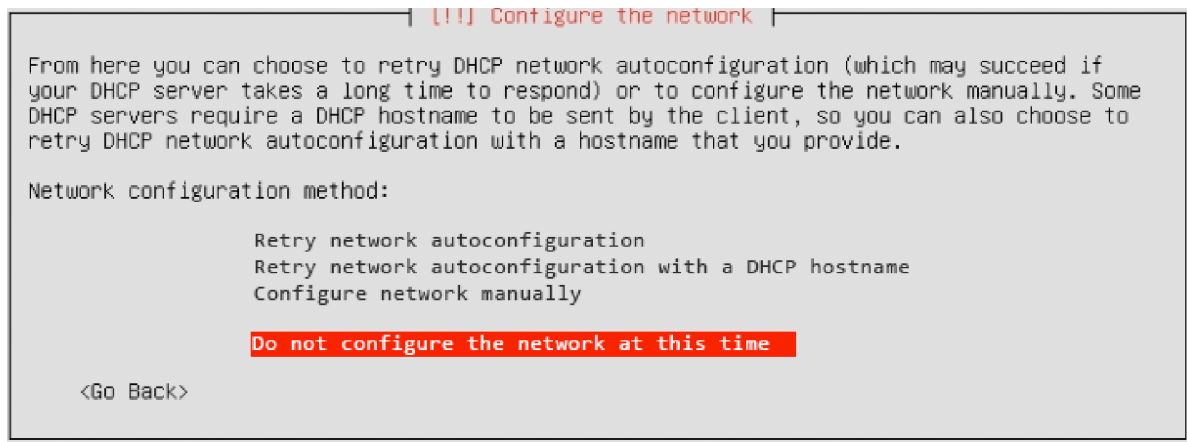
2. When you see the DHCP configuration process, press **Enter** key to cancel.



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.**

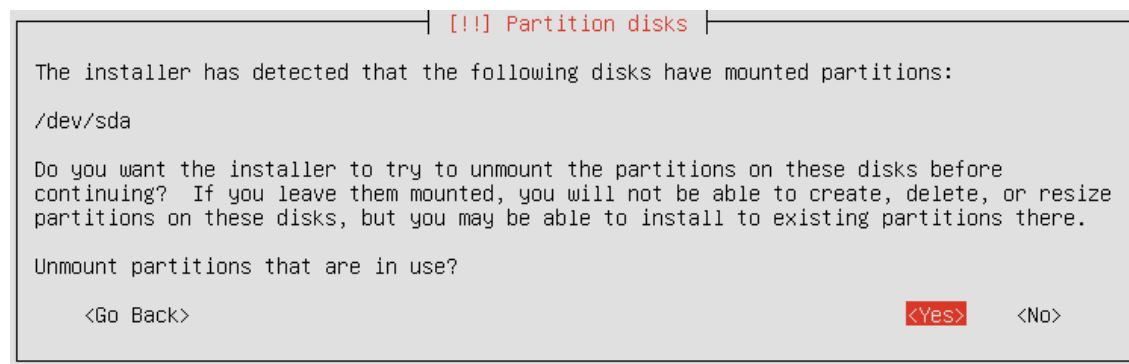


#### 4. Select the time zone.



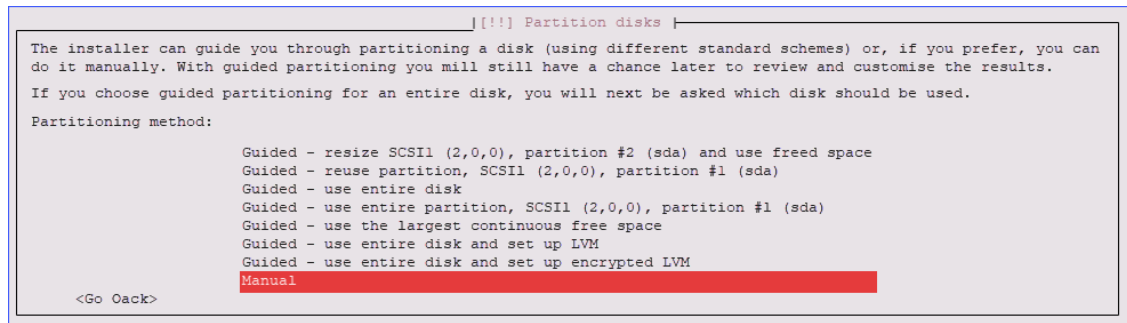
### Step5. Plan and create partition disk

1. **Optional:** If it is not the first time to install system on the server, unmount partitions that are in use.
  - a. Select **Yes** to unmount the partitions.

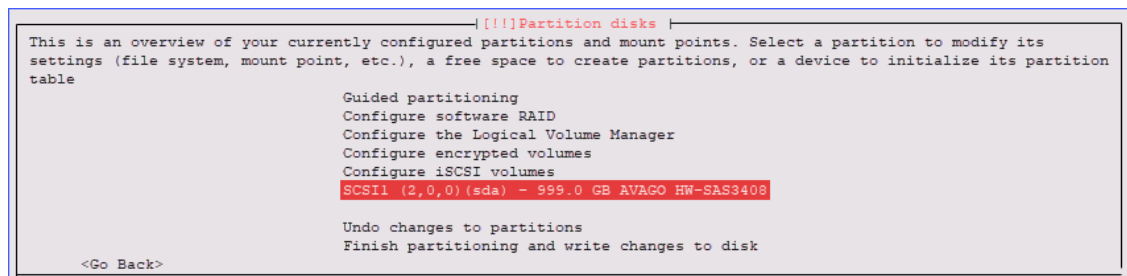


- b. Select **Manual** partitioning method.

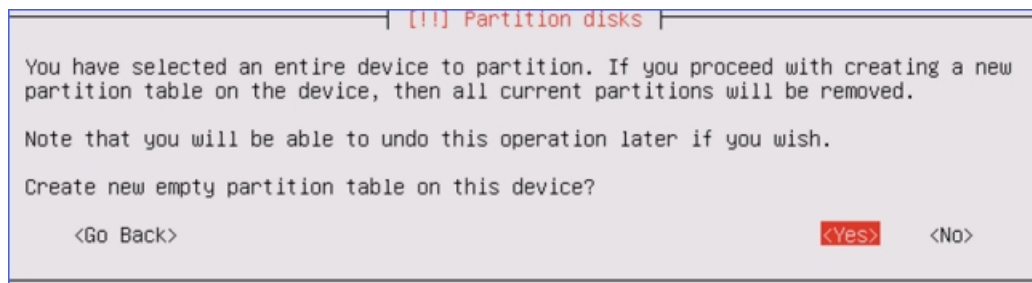




c. Select the partition of the system.

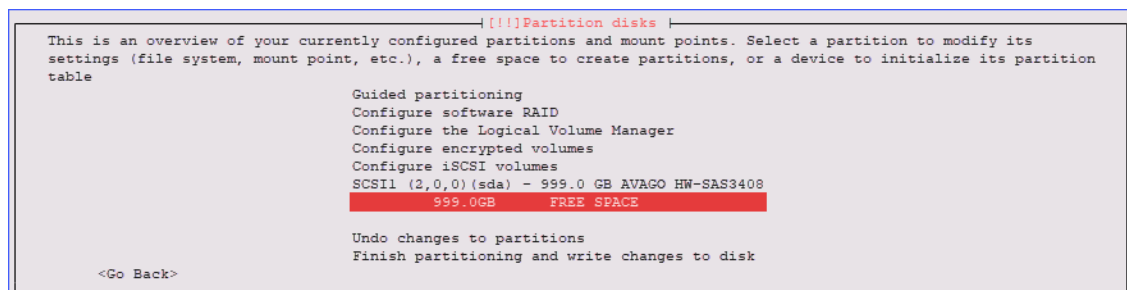


d. Select **Yes** to create new empty partition table on this device.



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.

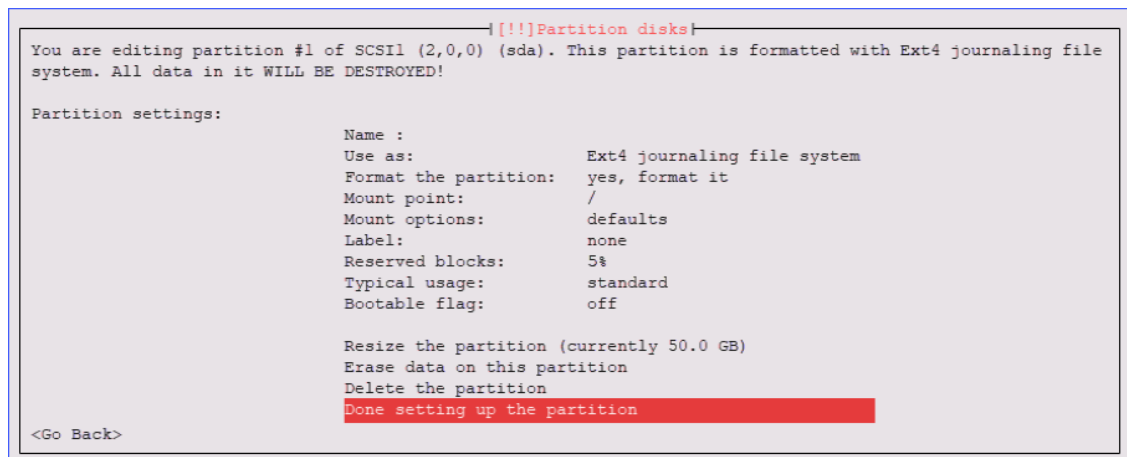


d. Select location for the partition as **Beginning**.

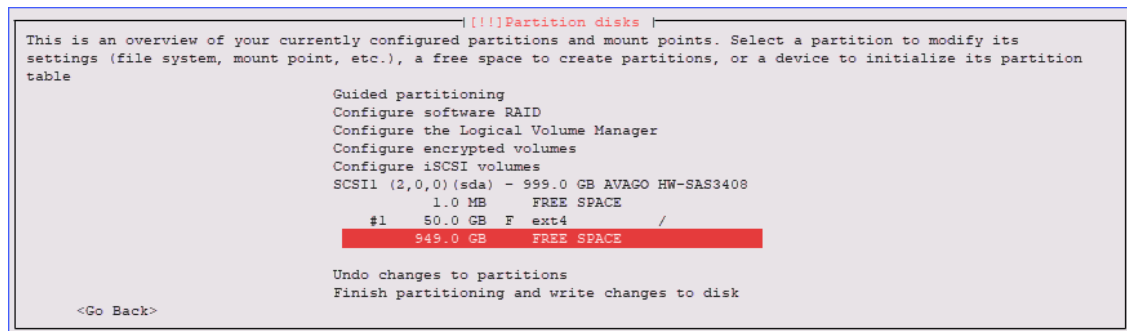


e. Set **Use as** and **Mount point** for the partition 1, then select **Done setting up the partition**.

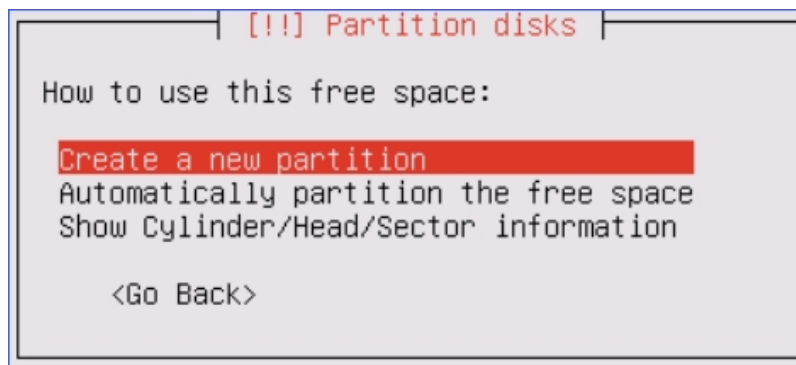
- **Use as:** Ext4 journaling file system
- **Mount point:** /



3. 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.

The maximum size for this partition is 949.0 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:

940GB

<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 2, then select **Done setting up the partition**.

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

```

[!!!]Partition disks!
You are editing partition #2 of SCSI1 (2,0,0) (sda). This partition is formatted with Ext4 journaling file
system. All data in it WILL BE DESTROYED!

Partition settings:

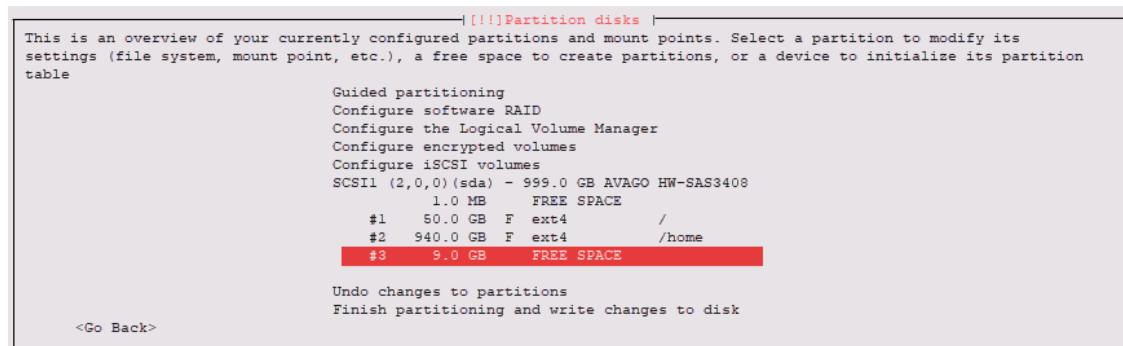
Name :
Use as:                               Ext4 journaling file system
Format the partition:                 yes, format it
Mount point:                          /home
Mount options:                        defaults
Label:                                none
Reserved blocks:                      5%
Typical usage:                        standard
Bootable flag:                        off

Resize the partition (currently 940.0 GB)
Erase data on this partition
Delete the partition
Done setting up the partition
<Go Back>

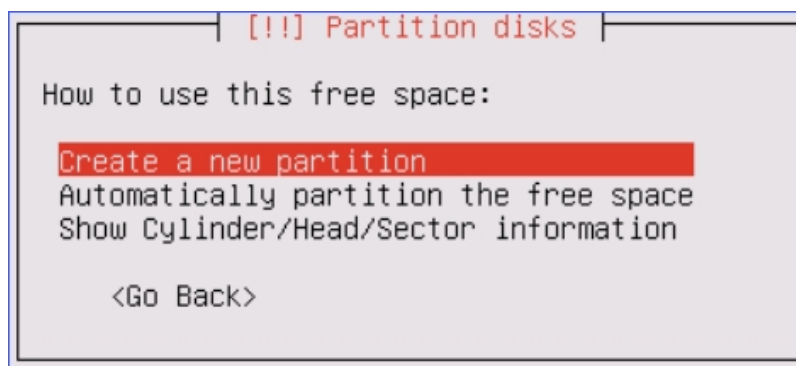
```

4. Create partition 3: EFI system partition.

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

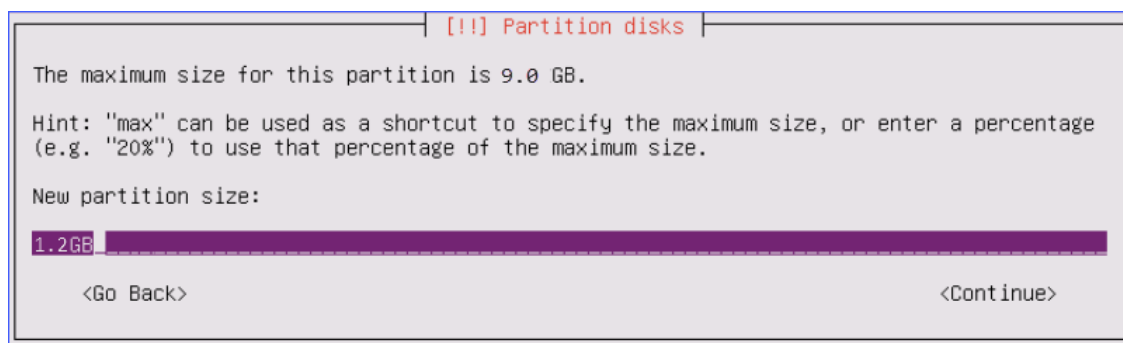


b. Select **Create a new partition**.



c. Set the partition size.

Recommended size : 1.2 GB.



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 setting up the partition**.
- Use as: EFI System Partition

```

[!!]Partition disks
You are editing partition #2 of SCSI1 (2,0,0) (sda). This partition is formatted with Ext4 journaling file
system. All data in it WILL BE DESTROYED!

Partition settings:

Name :
Use as:                               EFI System Partition

Bootable flag:                        on

Resize the partition (currently 1.2 GB)
Erase data on this 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.

```

[!!!]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

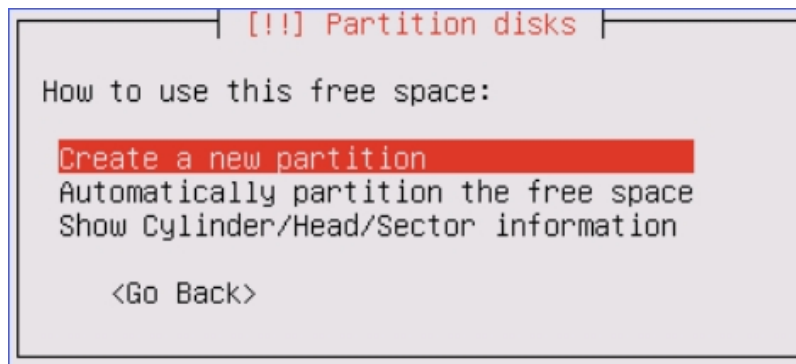
Guided partitioning
Configure software RAID
Configure the Logical Volume Manager
Configure encrypted volumes
Configure iSCSI volumes
SCSI1 (2,0,0) (sda) - 999.0 GB AVAGO HW-SAS3408
    1.0 MB      FREE SPACE
#1    50.0 GB   F   ext4      /
#2    940.0 GB F   ext4      /home
#3    1.2 GB   B   K   ESP
#4    7.8 GB   FREE SPACE

Undo changes to partitions
Finish partitioning and write changes to disk

<Go Back>

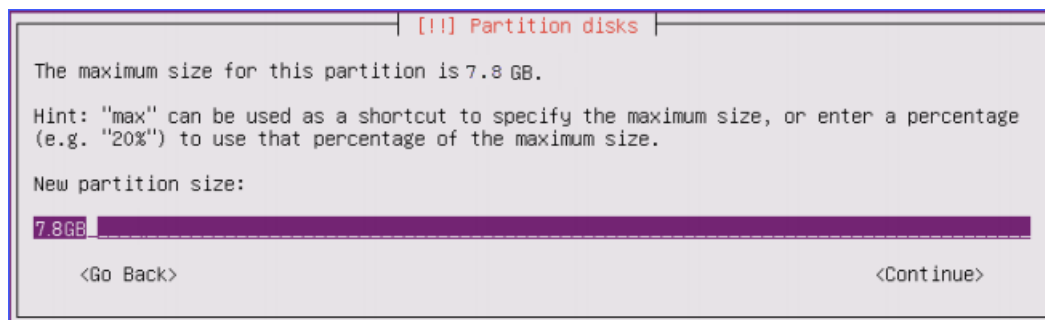
```

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



c. Set the partition size.

Recommended size : 10 GB.

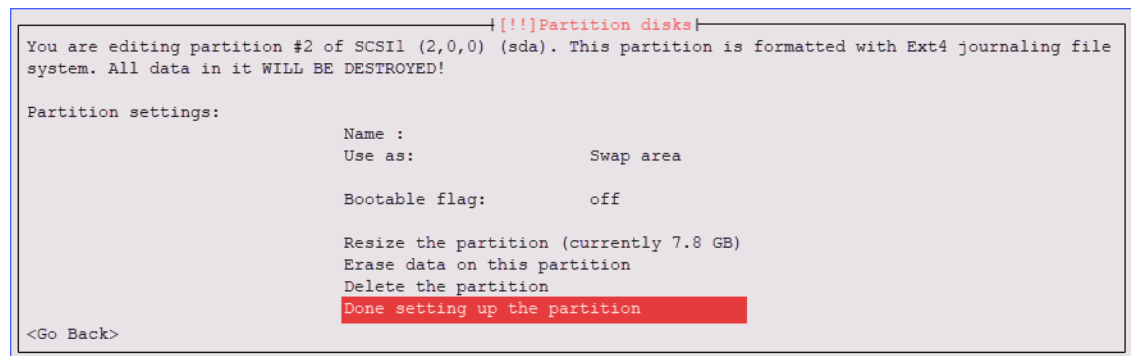


d. Select location for the partition as **Beginning**.

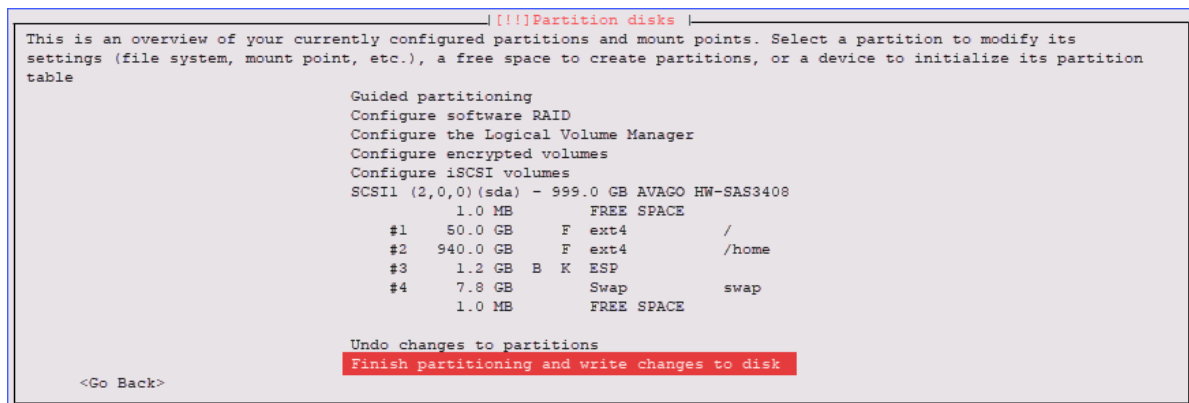


e. Set **Use as** and **Mount point** for the partition 4, then select **Done setting up the partition**.

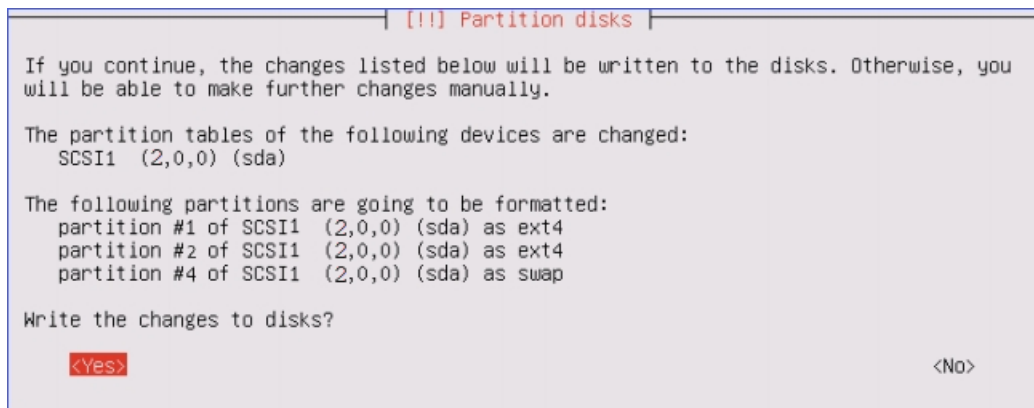
- Use as: swap area



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



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



## Step6. Install the IPPBX system

After finishing partitioning and writing changes to disk, the S1000-P 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 taskel

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 completed, disconnect your USB driver, then select **Continue** to boot into your system.

```

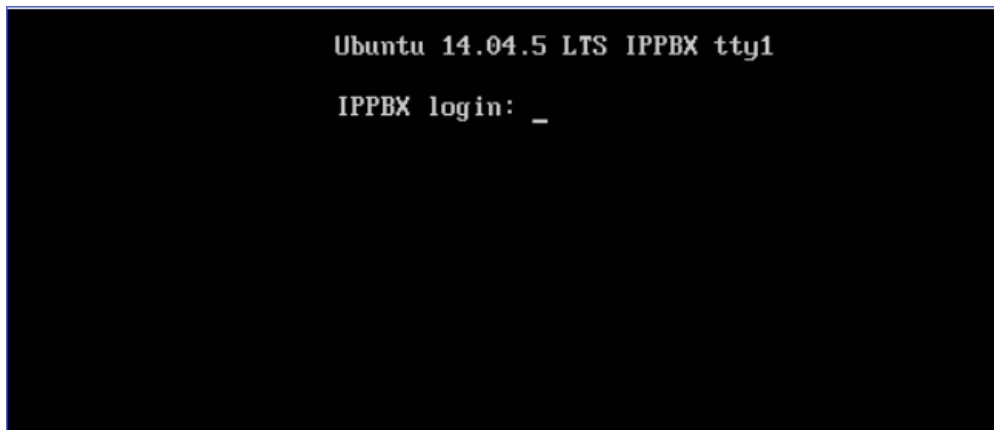
[!!!] Finish the installation

Installation complete

Installation is complete, so it is time to boot into your new system. Make sure to remove
the installation media (CD-ROM, floppies), so that you boot into the new system rather
than restarting the installation.

<Go Back> <Continue>
  
```

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



## What to do next

Connect PBX to the network.

## Connect Server to Network

After installing Yeastar S1000-P IPPBX system successfully, you can connect the Huawei server to the network.

### Background information

Huawei 1288H V5 server supports 4 network interface cards (NIC): Port 1(eth0), Port 2(eth1), Port 3(eth2), and Port 4(eth3).

The following figure shows the NIC name corresponding to each network port.



The default names of network interface card (NIC) recognized by Yeastar S1000-P IPPBX are eth0 and eth1. It means you can connect a network cable to Port 1(eth0) or Port2(eth1) directly to access the network.

If you want to use Port 3(eth2) or Port 4(eth3) to connect your server to network, you need to change the NIC name to eth0 and eth1.

## Change the NIC name of Port 3 and Port 4

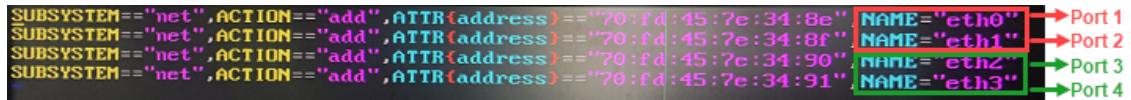
1. Log in to your PBX with root privileges.

 **Note:** For the root password, contact Yeastar support.

2. Change the NIC name.

- a. Run command `vi /etc/udev/rules.d/70-persistent-net.rules`.

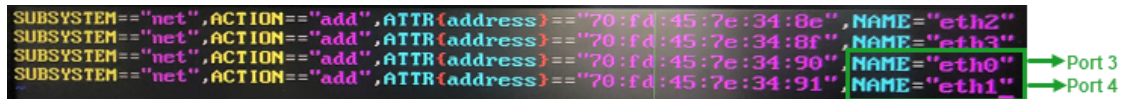
The NIC information is displayed as below:



```
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:8e",NAME="eth0"
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:8f",NAME="eth1"
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:90",NAME="eth2"
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:91",NAME="eth3"
```

- b. Press `i` to edit the NIC name.

As the following figure shows, change the NIC names of Port3 and Port 4 to eth0 and eth1; change the NIC names of Port 1 and Port 2 to eth2 and eth3.



```
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:8e",NAME="eth2"
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:8f",NAME="eth3"
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:90",NAME="eth0"
SUBSYSTEM=="net",ACTION=="add",ATTR{address}=="70:fd:45:7e:34:91",NAME="eth1"
```

- c. Press **Esc** after editing.
  - d. Run `:wq` to save the changes.


## Log in to the Yeastar S1000-P IPPBX

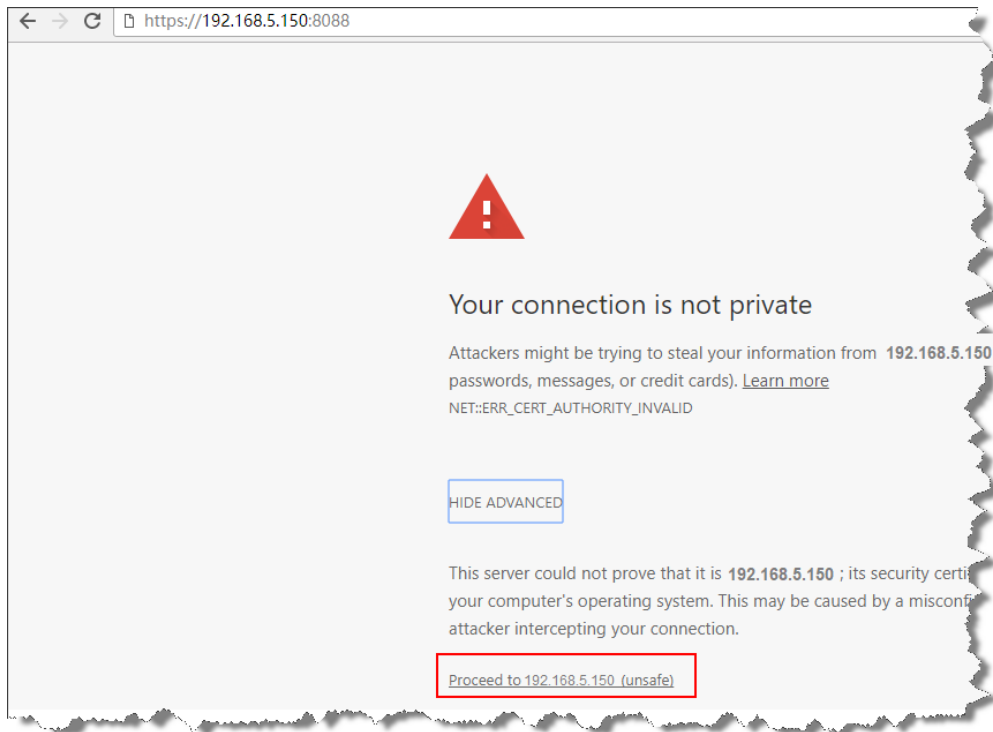
After installing Yeastar IPPBX system successfully, you can log in your PBX using a local browser.

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.

 **Note:** Your connection is secure. The warning is caused by the certificate that is installed for remote management. You can purchase a third party trusted certificate to avoid getting this message.



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

- Username: admin
- Password: password

## Activate Yeastar IPPBX

After installing the Yeastar system 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 IPPBX


Table 1.


Feature	Max number
Extension	10
Concurrent call	5

Feature	Max number
Trunk	1
Ring Group	1
RingGroup Member	1
Queue	1
Queue Member	1
Conference	1
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

## Activate Yeastar IPPBX by USB Key

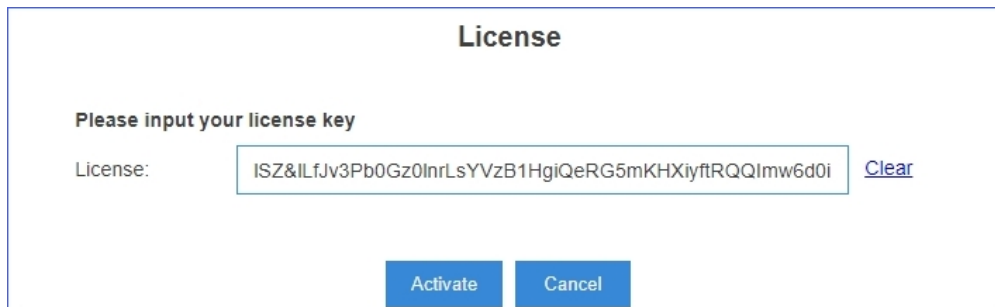
To secure your phone system, you may install a Yeastar IPPBX that has no ability to access the Internet. In this scenario, Yeastar will provide a USB license key to help you activate your PBX.

 **Note:** The USB key is programmed with your required PBX capacity, and can be used for one device only.

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

1. Connect the USB Key to your computer where the Yeastar 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**.



The screenshot shows a web form titled "License". Below the title, it says "Please input your license key". There is a text input field labeled "License:" containing the alphanumeric string "ISZ&ILfJv3Pb0Gz0InrLsYVzB1HglQeRG5mKHxiftRQQImw6d0i". To the right of the input field is a blue link labeled "Clear". At the bottom of the form are two blue buttons: "Activate" and "Cancel".

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.

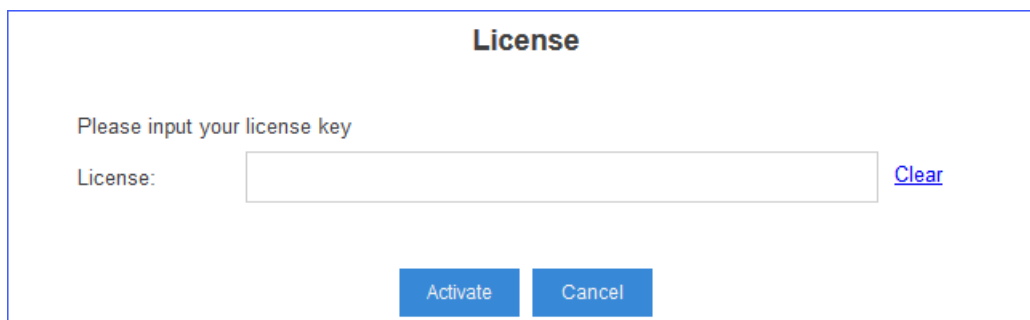
## *Expand System Capacity of Yeastar IPPBX*

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 license by USB Key**

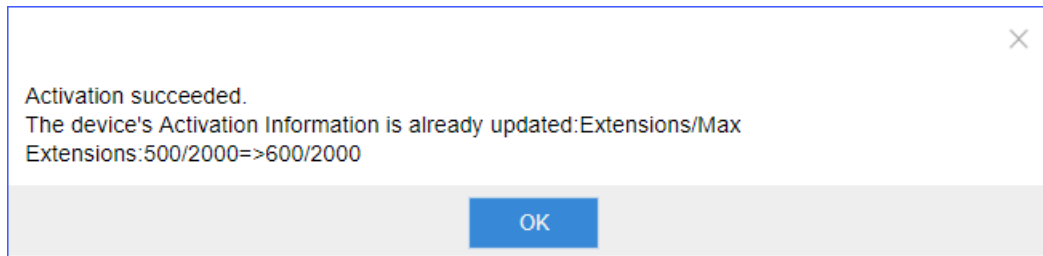
Contact Yeastar to update your license, you will get a new license, enter the new license on your PBX.


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



The screenshot shows a web form titled "License". Below the title, it says "Please input your license key". There is a text input field labeled "License:" which is currently empty. To the right of the input field is a blue link labeled "Clear". At the bottom of the form are two blue buttons: "Activate" and "Cancel".

3. Click **OK** after update.



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