Panasonic®

Installation Instruction

Local Management Server Software

Thank you for purchasing this Panasonic product.
Please read this manual carefully before using this product and save this manual for future use.

Document Description

This document describes in detail the installation of local management software server and the Linux system. You can follow the relevant instructions in this document to complete the configuration of related products.

This document is mainly aimed at engineering installation personnel, system configuration and joint debugging personnel, after-sales maintenance personnel and actual system management personnel. Relevant personnel should read this manual carefully first and then carry out actual engineering construction and device configuration.

Version Update List

Version	Date & Time	Description
V1.0	13-July-2022	Published the first version
V1.1	04-Apr-2025	Added Repos replacement information

Table of Contents

Section 1

Description of Work Flow

The 「Local Management Server Software」needs to be installed on Linux system. Its main functions include System Setting, House Management, Residents Management, Access Control Management, Device Management, Video Surveillance, Record Management function and Security Alarm, etc. After the installation is completed, users can access the service software through the client software or web.

Section 2

Preparation Before Installation

In this section, the document shows the preparations before using the「Local Management Server Software」.

2.1 Confirm the Specification of the Computers

Before installation, confirm that the required equipment has arrived, including a server which running CentOS for Local Management Server and a standard computer for community managers. Additionally, please ensure that the computer' s configuration meets the project requirements. The configuration requirements for the server and computer are as follows:

Local Server

Sum of Door/Lobby/Guard Station	CPU	Memory	Storage
≤200	i5 3.2GHz, quad-core and 8-thread (intel 9th gen)	8G	512G (SSD recommended)
≤500	i5 3.2GHz, 6-core (intel 9th gen)	8G	2T (SSD recommended)
≤2000	Xeon E-2236 3.4GHz 6-core and 12-thread (or better)	8G	2T (SSD recommended)

Community Manager PC

CPU	Memory	Storage
i5 3.2GHz, quad-core and 8-thread (intel 9th gen or newer)	8G	512GB (SSD recommended)

2.2 Confirm the Network Running Status

Before installation, ensure that the community' s network functions properly during joint debugging of the equipment. Additionally, confirm that the computers in the community, and all intercom devices can connect to the Internet, and verify that the uplink bandwidth meets the relevant design requirements.

In general, a one-way cloud intercom requires approximately 1 Mbps of uplink bandwidth. If users need to monitor IP cameras (IPC), the bandwidth required for video uploads from each IPC to the Internet should also be estimated at 1 Mbps per camera. Estimate the total uplink bandwidth required for the community based on the expected concurrency during regular use.

Section 3

Install the Local Management Server Software

In this section, the「Local Management Server Software」installation consists of two parts: the first part involves installing the CentOS operating system, and the second part involves installing the「Local Management Server Software」on the CentOS system.

3.1 Install the Linux System

3.3.1 Prepare Works

Before the installation, please make sure you have the following items ready:

1) A USB disk with at least 2GB of storage capacity
2) A Windows PC
3) The CentOS 7.6 ISO file
4) The Etcher Tool for creating bootable USB drives

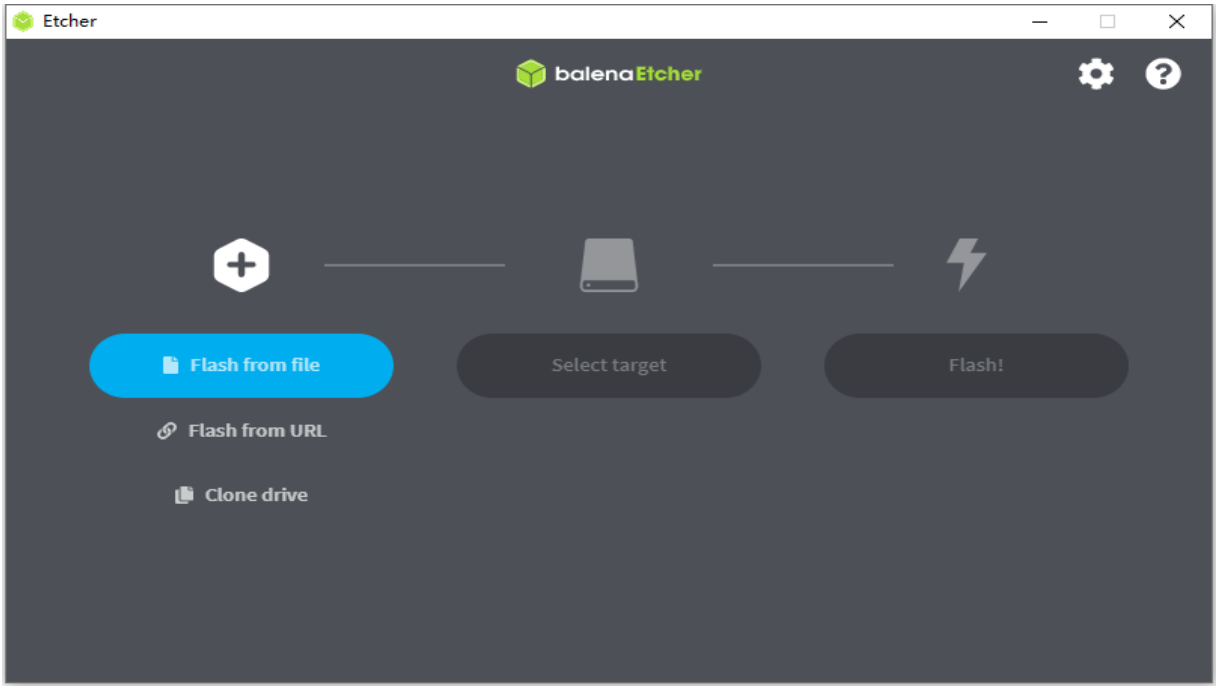
Both the Etcher Tool and the CentOS 7.6 ISO image file, provided by the product supplier. Please download the CentOS 7.6 ISO file and the Etcher tool installation package to your computer before proceeding with the installation.

3.3.2 Make the USB Disk as CentOS Install Disk

The user needs to create a CentOS installation USB disk by following these steps:

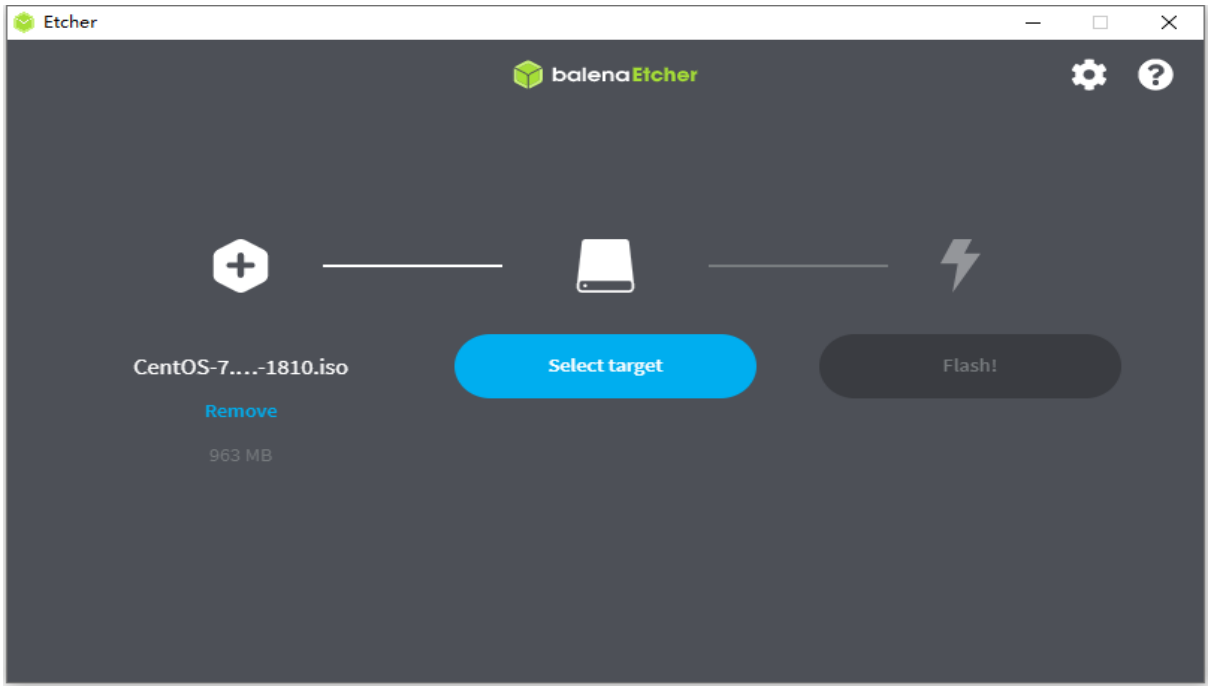
Step 1: Run the Etcher Tool installation program and follow the on-screen instructions to complete the installation.

Step 2: After the installation is complete, run the Etcher Tool.



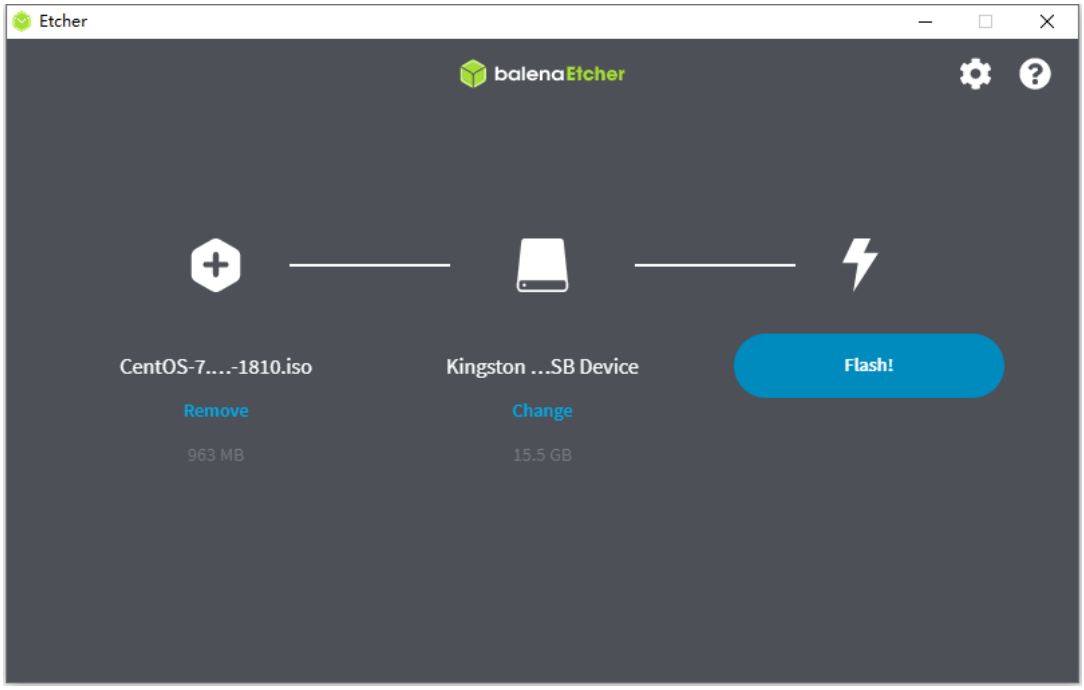
P3-1

Step 3: Click the「Flash from file」button and select the CentOS 7.6 ISO file stored on the computer.



P3-2

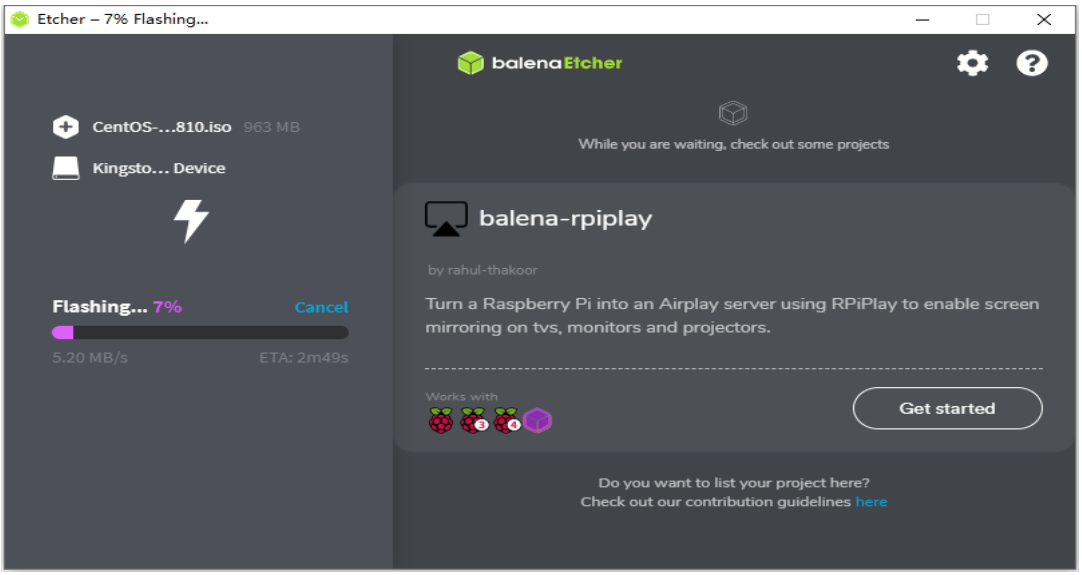
Step 4: Insert the USB disk



P3-3

Before inserting the USB disk, ensure that all important data has been backed up, as writing the ISO file will erase all existing data on the USB disk, and it cannot be recovered. Additionally, in this step, make sure that the USB disk name displayed on the interface matches the one you intend to use. If multiple USB disks are connected to the computer, click the「Change」button to select the correct USB disk and re-confirm it.

Step 5: Click the「Flash!」button to write the ISO file to the USB disk.



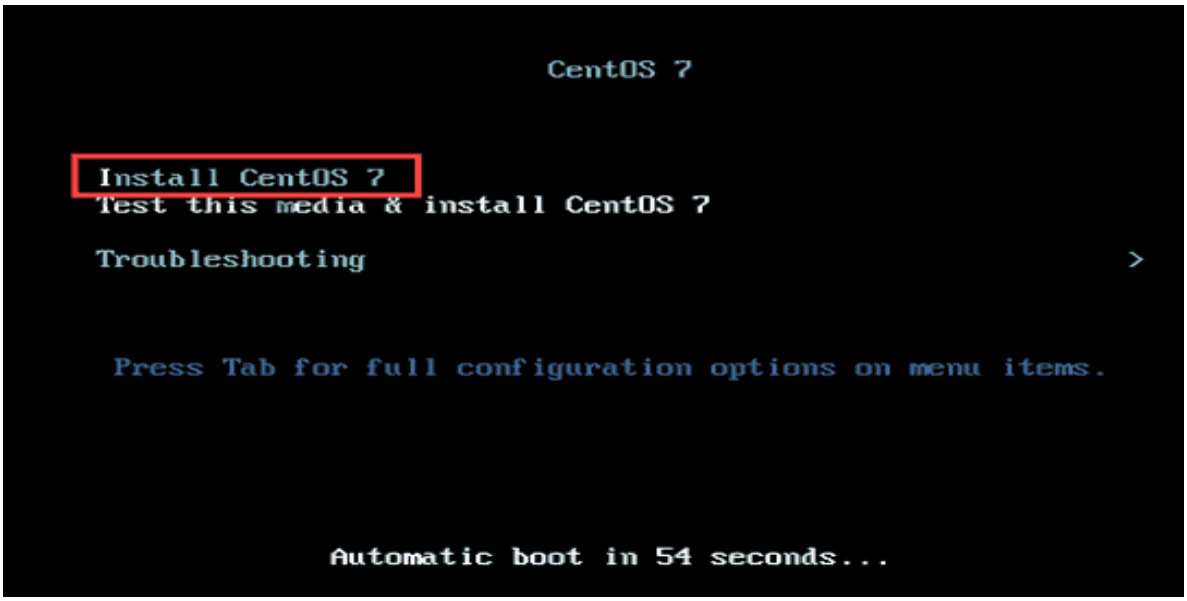
P3-4

Step 6: After the writing process is complete, close the Etcher Tool and safely remove the USB disk. The USB disk is now a bootable CentOS installation disk.

3.2.3 Install CentOS System

The CentOS operating system steps are as follows:

Step 1: Insert the USB disk into the computer, then restart the system. As the computer starts, press the appropriate key (commonly F2 or F12) to enter the BIOS or boot menu. In the BIOS/UEFI settings, set the USB disk as the first boot device. Save the settings and restart the computer to boot from the USB disk. Note: Different computers have different settings, please refer to your computer’ s manual for specific instructions.

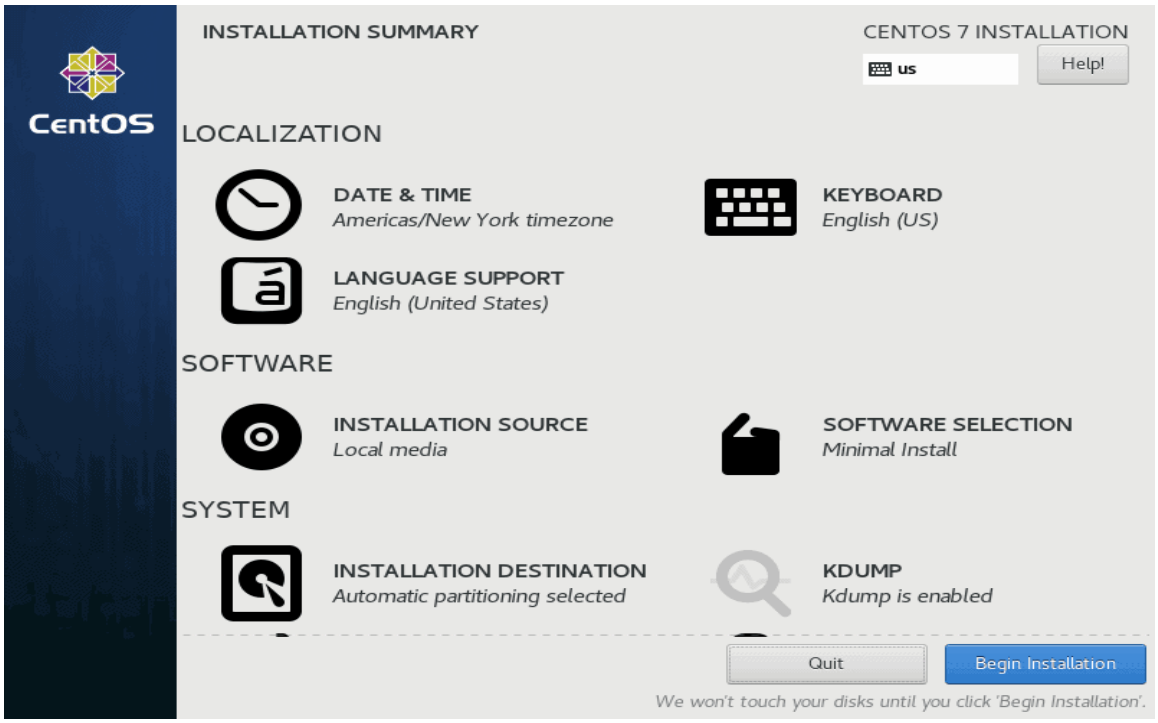


P3-5

Step 2: After the computer boots from the USB disk, use the arrow keys on the keyboard to select 「Install CentOS 7」, then press Enter to begin the installation. If the USB fails to boot and instead shows a boot selection screen or an error, the USB disk may not have been created properly. In that case, try recreating the USB installation disk and repeat the boot process.

P3-6

Step 3: The default option is English, but you may choose any language from the list. Once selected, click Continue to proceed.



P3-7

There are a few settings you will need to configure. All items marked with a warning icon must be completed before you can begin the installation. Please note that the required system configurations may vary depending on your specific use case. Click each section to review or modify the settings accordingly.

Step 4: Set Date & Time, Keyboard, Language, Software Selection, Installation Destination, KDUMP, Network and Host name, and Security Policy.

1. Set Date and Time

P3-8

To set a date and time for the system, click the Date & Time icon under the Localization heading. Select a region/time zone on the map of the world as seen below. Once you have selected your time zone, hit Done to save your changes.

2. Keyboard Layout

Select the Keyboard option under the Localization heading to set the keyboard layout. The system default is English (US) and the language you selected in the initial window.

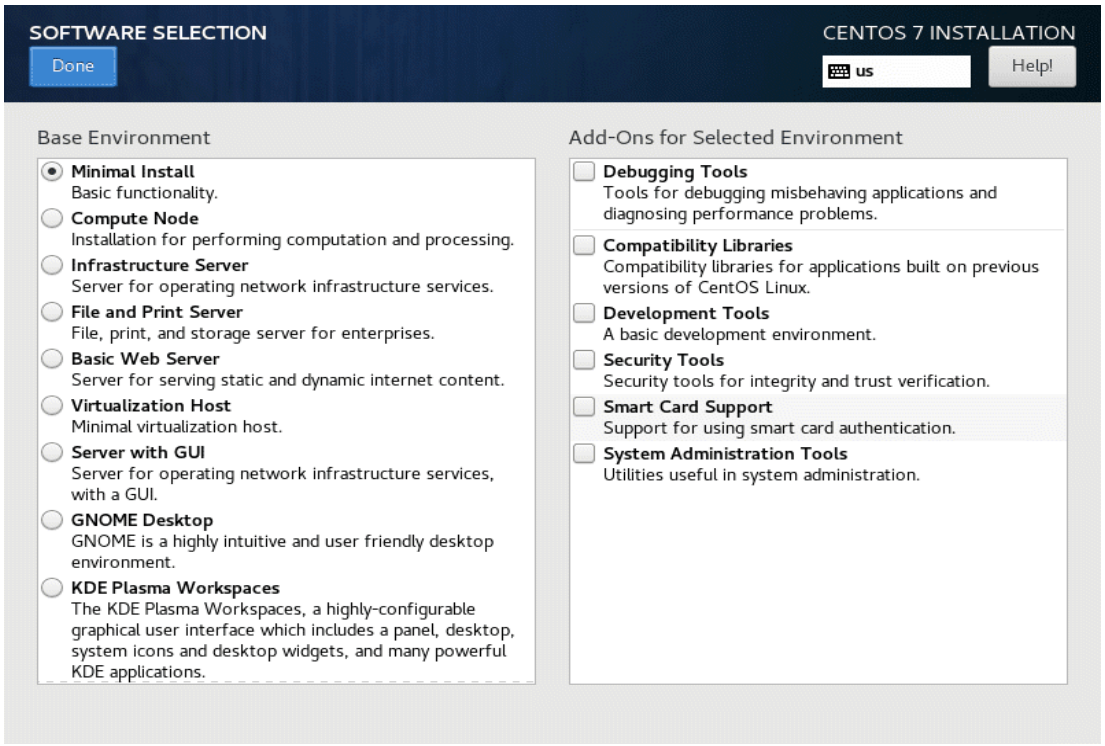
Click the plus icon to add more layouts. Move a layout to the top of the list to make it the default option.

Click the Options button to define a key combination for switching between keyboard layouts. When you are satisfied with the settings defined, select the Done button to confirm the changes.'

3. System Language

Select the Language Support option under the Localization heading. The language selected in the Welcome to CentOS 7 window will be the default system language. If necessary, select additional languages and hit the Done button once you are finished.

4. Software Selection



P3-9

Select the Software Selection option under the Software heading. You will see a list of predefined Base Environment options and optional add-ons. This part entirely depends on your needs.

A. Minimal Install. This is the most flexible and least resource-demanding option. Excellent for production environment servers. Be prepared to customize the environment.

B. Predefined Server Options. If you are 100% certain about the role of your server and don’ t want to customize it for its role, select one of the predefined server environments.

C. GNOME Desktop and KDE Plasma Work spaces. These environments include a full graphical user interface.

In fact, the CentOS 7.6.ISO file that in the USB disk is the minimal version, so on this page there is only one option (Minimal Install) can select.

5. Select Installation Destination

Click the Installation Destination option under the System heading. Check your machine’ s storage under the Local Standard Disks heading. CentOS 7 will be installed on the selected disk.

Partitioning

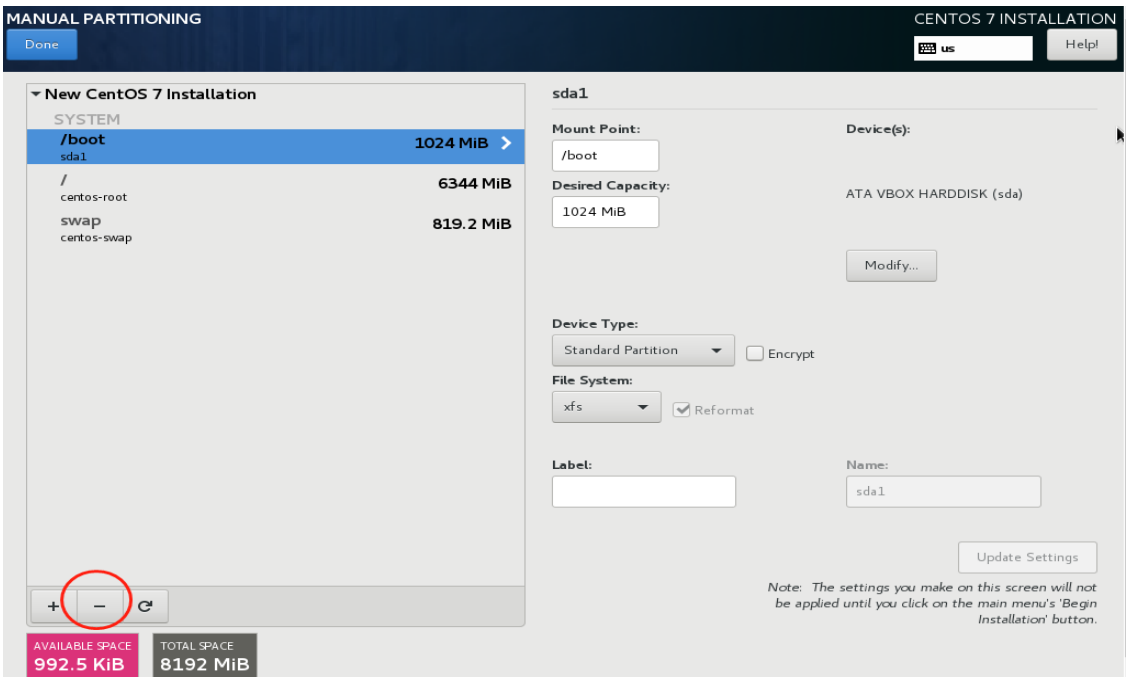
Option 1: Automatic Partitioning

Under the Other Storage Options heading, select the Automatically configure partitioning check box. This ensures the selected destination storage disk will automatically partition with the /(root), /home and swap partitions. It will automatically create an LVM logical volume in the XFS file system. If you do not have enough free space, you can reclaim disk space and instruct the system to delete files. When finished, click the [**Done**] button.

Option 2: Manual Partitioning

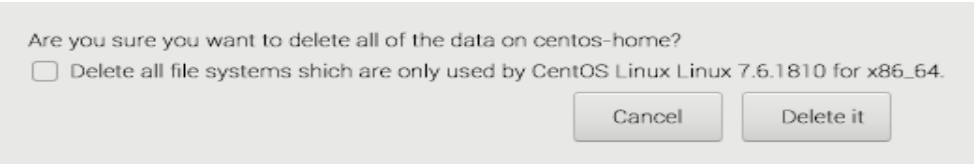
Select the I will configure partitioning check box and choose Done. If you want to use other file systems (such as ext4 and vfat) and a non-LVM partitioning scheme, such as btrfs. This will initiate a configuration pop-up where you can set up your partitioning manually. This is an advanced option that depends on your requirements. But we suggest select the automatic partitioning option.

If you are re-install the CentOS, you need delete the current partition, click [**Installation Destination**] and select each partition, click the [**delete**] button to delete it.



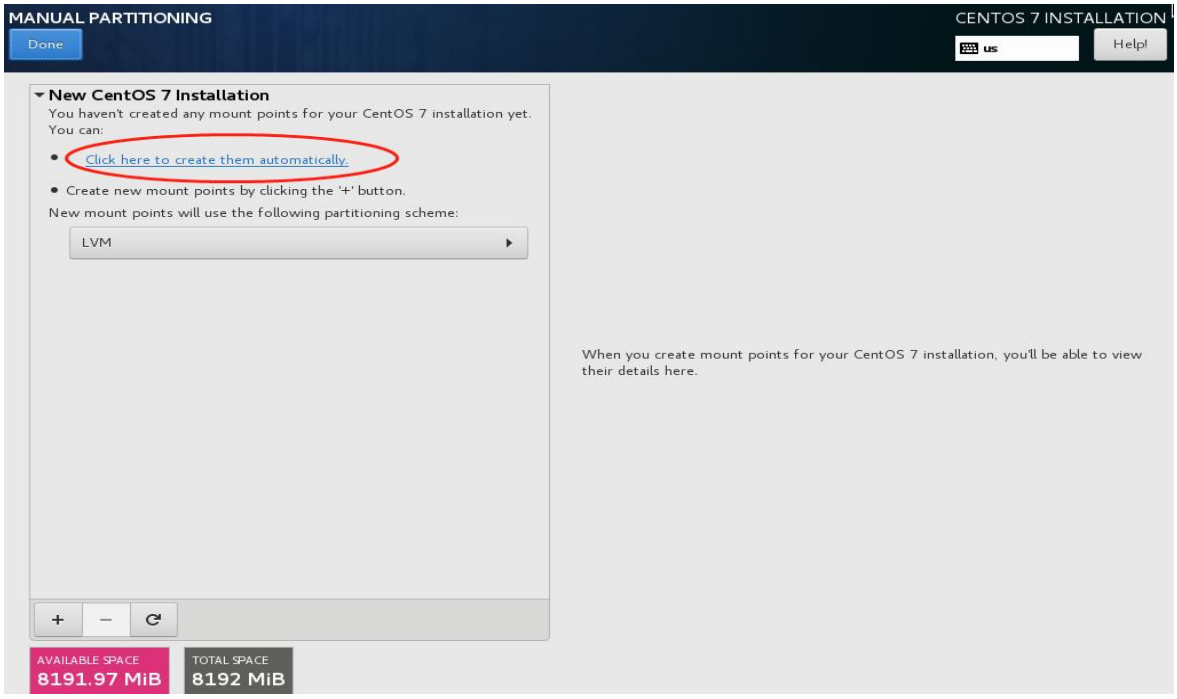
P3-10

In the window popping up, click [**Delete It**] button.



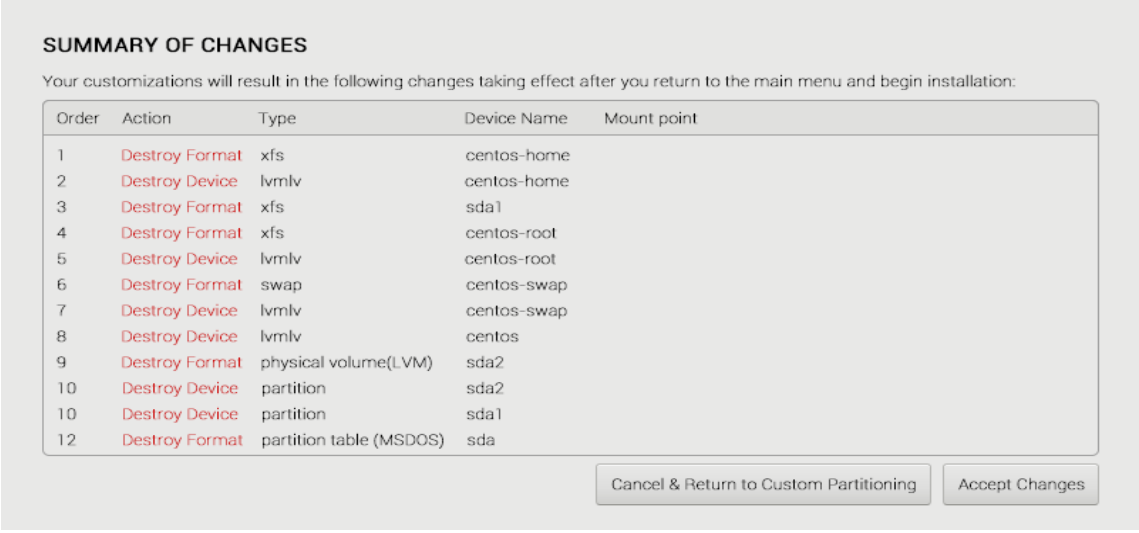
P3-11

After all partition delete, click [**Click here to create them automatically**] and create new partition.



P3-12

Then new partition is created. And click [**Done**] button, in pop window, click [**Accept Changes**] then all the old partition is delete and new partition is created.



P3-13

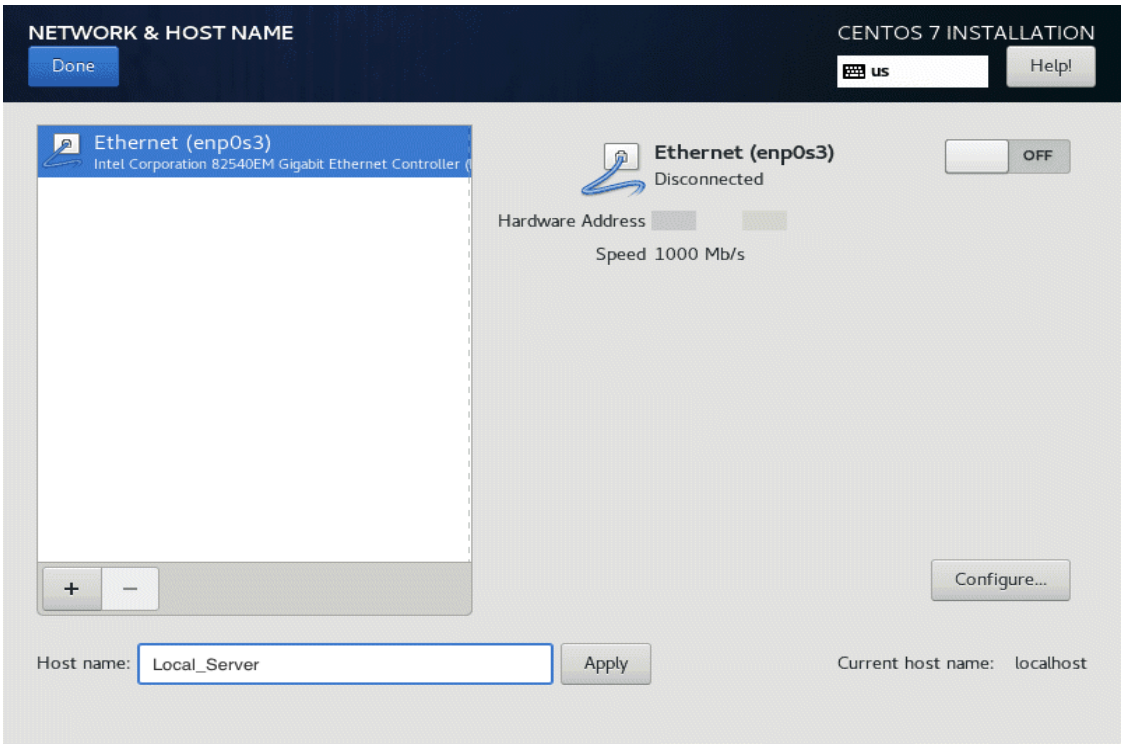
6. Configuring KDUMP

   To disable the KDUMP kernel crash dumping mechanism, select the KDUMP option under the System heading and Un-tick the Enable kdump check box. Click the [**Done**] button to confirm

your changes. Note: KDUMP captures system information at the time of a crash. It helps you diagnose the cause of the crash. When enabled, kdump reserves a portion of system memory.

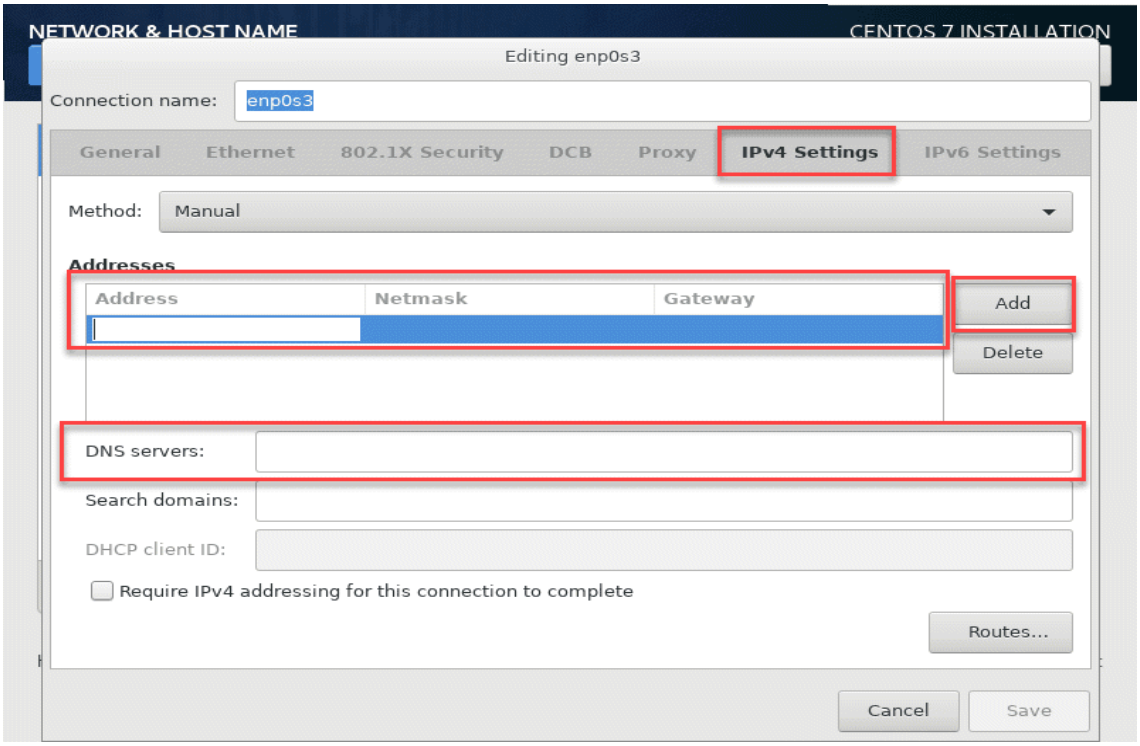
7. Network and Host name

Click the Network & Host Name option under the System heading.



P3-14

For the host name, type in the fully qualified domain name of your system. In our example, we will set the Host name as Local Server. Select Configure… and select to add IPv4 settings or IPv6 settings depending on what you have. Add static IP addresses to help identify your computer on the network. Bear in mind that your network environment’ s settings define these values.



P3-15

To add a static IP address:

1). Select Manual from the Method drop-down.

2). Click [**Add**] button to add a static IP address.

3). Enter the information for your network domain, include IP Address, Netmask Address, Gateway Address, DNS Server Address.

4). Click [**Save**] to confirm your changes.

By default, all detected Ethernet connections are disabled. Click the ON/OFF toggle to enable the connection.

8. Security Policy

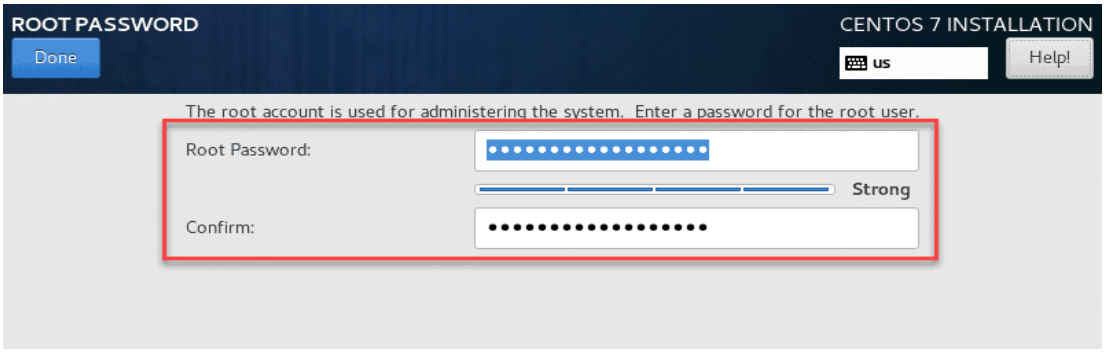
Select the Security Policy option under the System heading. Choose a profile from the list and hit Select profile. Hit the Done button to confirm your selection.

9. Start the Installation Process. Once everything is set up according to your liking, hit Begin Installation to start the install. This will start the initial installation process.

P3-16

To define the root user, select the Root Password icon. To create user, select the User Creation option.

10. Define Root Password

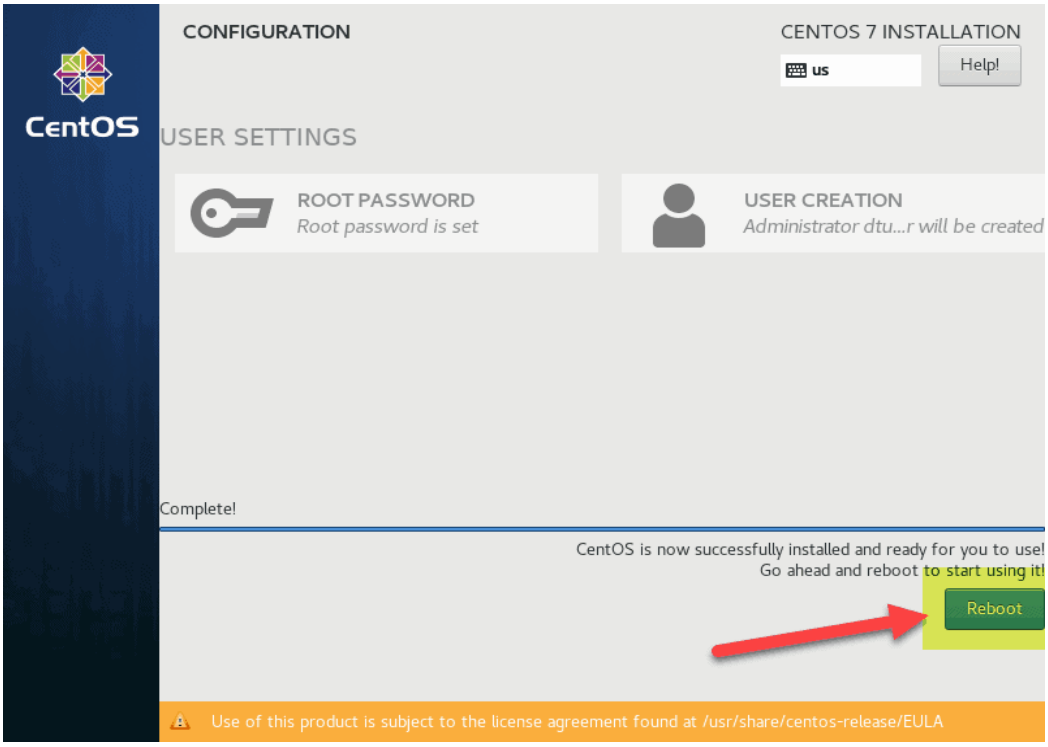


P3-17

Select a Root Password and re-enter it in Confirm field. Root user accounts should consist of at least 12 characters, including uppercase and lowercase letters, numbers, and special characters. We cannot stress enough the importance of a well-defined root password. Click the [**Done**] button to proceed.

11. Create User. Add a new system user by entering the full name, username, and password. We recommend checking the make this user an administrator and require a password to use this account checkboxes to grant the user root privileges. After completing the fields and setting a secure password, click Done in the upper-left corner to save the account.

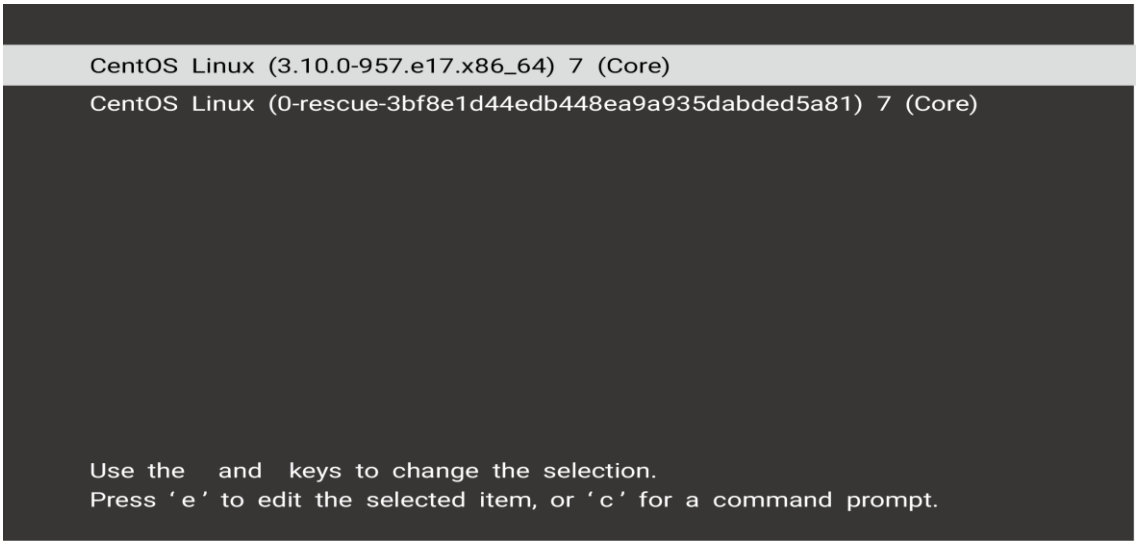
12. Wait for the installation process to complete.



P3-18

13. Reboot the computer. Before you start using your new CentOS installation, reboot the system. Click the [**Reboot**] button. Then Log into the system by using the credentials you defined previously.

14. Start Cent OS



P3-19

When the computer start, user up or down key to select the first item(CentOS Linux (3.10.0 - 957.e17.x86_64) 7 (Core) and press enter to enter Cent OS.

P3-20

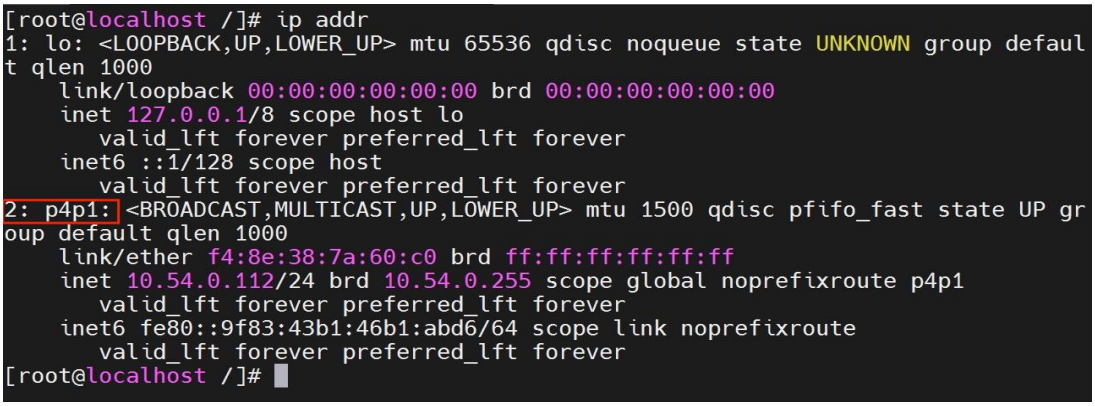
Then input the user name and passwords (such as 'root' or the user you created in install progress) and press enter key to enter the CentOS.

3.2.4 Config the IP Address

After the CentOS system installed, you need to confirm whether the IP address of the device is correct. If not, you need to reconfigure the IP address. The steps are as follows:

1. After the Linux server computer started, login with ''root'' and input the password.
2. Check if the net card is OK, use ''***ip addr***'' command to show the net card info.

ip addr



P3-21

In this interface, the ''**2: p4p1: <. >**'' part is the net card information, where ''p4p1'' is the name of the net card and ''INET'' is the device IP address information.The net card names of different servers are different. You need remember this net card name, it will be used in step 3.

Please confirm whether the IP address is consistent with the project network planning. If not, please follow the following steps to configure.

Note:

All the net card names in this document are ''p4p1''. In practice, you need to replace it with the net card name of your server.

3. Enter the ***/etc/sysconfig/network-scripts/*** folder and edit the net card file .

Use the ''***cd /etc/sysconfig/network-scripts/***'' command to the folder, and then use the ''***ls***'' command to view the name of the net card file.

cd /etc/sysconfig/network-scripts

ls -l

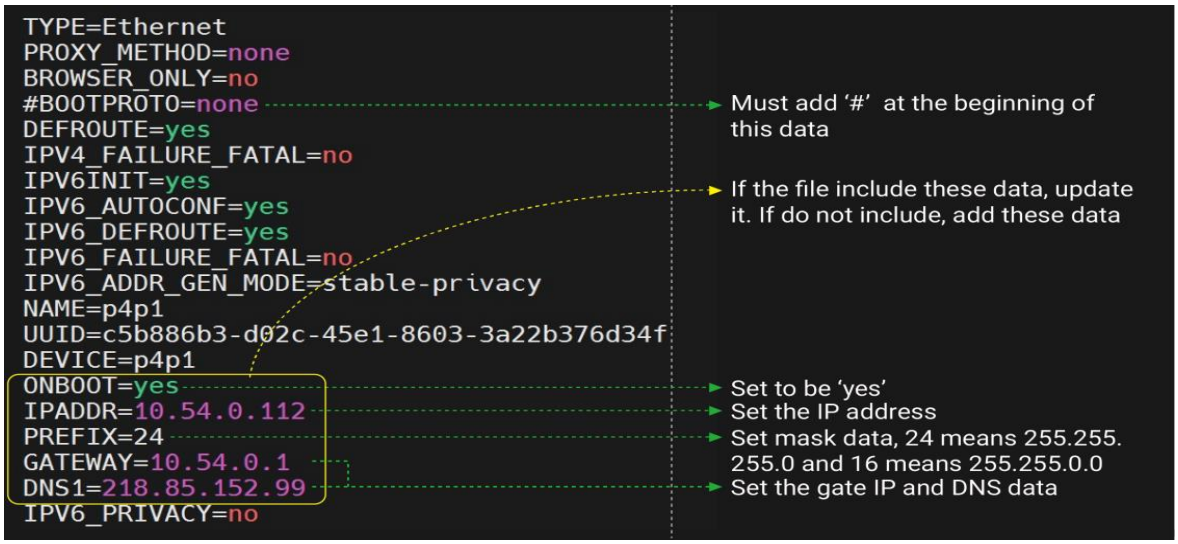
```
[root@localhost /]# cd /etc/sysconfig/network-scripts/
[root@localhost network-scripts]# ls
ifcfg-lo      ifdown-ppp       ifup-eth     ifup-sit
ifcfg-p4p1    ifdown-routes    ifup-ippp    ifup-Team
ifdown        ifdown-sit       ifup-ipv6    ifup-TeamPort
ifdown-bnep   ifdown-Team      ifup-isdn    ifup-tunnel
ifdown-eth    ifdown-TeamPort  ifup-plip    ifup-wireless
ifdown-ippp   ifdown-tunnel    ifup-plusb   init.ipv6-global
ifdown-ipv6   ifup             ifup-post    network-functions
ifdown-isdn   ifup-aliases     ifup-ppp     network-functions-ipv6
ifdown-post   ifup-bnep        ifup-routes
[root@localhost network-scripts]#
```

P3-22

4. Use the ''***vi***'' command to modify the file, and enter the ''***vi ifcfg-p4p1***'' command to modify the net configuration file according to the data in the figure below (the IP address, mask, gateway and DNS data need to consult the network administrator or obtain the information that the computer should be configured according to the pre prepared supporting files).

'***vi ifcfg-"XXXX"***

"XXXX" = Follow the file name from the list



P3-23

After enter the ''***vi***'' function , now you are in ''View Mode'', press ''***i***'' to enter the the ''Edit Mode'' first, then use the keyboard to change the data.

i

After edit finished, press ''***ESC***'' key to enter ''Command Mode'', and input ''***:wq***'' to save and quit. If you do not want to save when quit vi function, in ''command Mode'', input ''***:q!***'' to quit without save.

ESC	***:wq***	or	***:q!***

5. Save the data after modification and exit.

6. Restart the computer, log in as root, and then use the ''***ip addr***'' command to check if the device IP address is in effect.

ip addr

7. Consult the administrator of the network to confirm whether this computer can connect to the Internet. If yes, use the ''***ping***'' command to try to connect to the *google.com* If an IP address is returned, it means that the computer can connect to the Internet.

8. If the computer can not connect to the Internet, you need use the ''***ping***'' command to test the connection status with other computers in the LAN. If the connection is OK, you need check the configuration of the router. If the connection is not OK, you need check whether the network cable is connected to the switch, and consult the network manager for troubleshooting.\

ping xxx.xxx.xxx.xxx

```
[root@localhost ~]# ping 10.54.0.1
PING 10.54.0.1 (10.54.0.1) 56(84) bytes of data.
64 bytes from 10.54.0.1: icmp_seq=1 ttl=255 time=0.788 ms
64 bytes from 10.54.0.1: icmp_seq=2 ttl=255 time=0.719 ms
64 bytes from 10.54.0.1: icmp_seq=3 ttl=255 time=0.752 ms
64 bytes from 10.54.0.1: icmp_seq=4 ttl=255 time=0.742 ms
```

P3-24

3.2.5 Set Date Time of the Local Server

After the CentOS system is installed, it is necessary to check whether the date and time information of the computer is correct, because many functions of the intercom system are based on the correct date and time. If the date and time are wrong, some functions of the system will be abnormal or can not be used.

1. After the CentOS started, log in with the root account, and then use the "***timedatectl***" command to view the current date and time information of the computer.

```
[root@localhost ~]# timedatectl
      Local time: Fri 2022-02-25 08:50:38 +08
  Universal time: Fri 2022-02-25 00:50:38 UTC
        RTC time: Fri 2022-02-25 08:50:38
       Time zone: Asia/Singapore (+08, +0800)
     NTP enabled: yes
NTP synchronized: yes
 RTC in local TZ: yes
      DST active: n/a

Warning: The system is configured to read the RTC time in the local time zone.
         This mode can not be fully supported. It will create various problems
         with time zone changes and daylight saving time adjustments. The RTC
         time is never updated, it relies on external facilities to maintain it.
         If at all possible, use RTC in UTC by calling
         'timedatectl set-local-rtc 0'.
```

P3-25

2. Check whether the date and time are correct, whether the time zone data is correct, whether NTP is enabled, and whether RTC in local TZ is turned off. If the relevant data is incorrect, it needs to be modified.

3. You can use the command "***timedatectl set-time HH: mm: SS yyyy-mm-dd***". For example, to set the computer time to 18:08:55 21st may 2022, the input command is: "***timedatectl set-time 18:08:55 2022-05-21***".

4. You can use "***timedatectl list-timezones***" to list all settable time zones, and then use the "***timedatectl set-timezones***" command to set time zones.

```
[root@localhost ~]# timedatectl list-timezones
Africa/Abidjan
Africa/Accra
Africa/Addis_Ababa
Africa/Algiers
Africa/Asmara
Africa/Bamako
Africa/Bangui
Africa/Banjul
Africa/Bissau
Africa/Blantyre
Africa/Brazzaville
Africa/Bujumbura
Africa/Cairo
Africa/Casablanca
Africa/Ceuta
Africa/Conakry
Africa/Dakar
Africa/Dar_es_Salaam
Africa/Djibouti
Africa/Douala
```

P3-26

When displaying the time zone list, you can use the ''up'' and ''down'' key on the keyboard to display more information. When setting the time zone, you must set the city where you are located, because different cities (countries) may have different settings for DST. If you set the time zone to the cities of other countries in the same time zone, it may lead to DST problems.

The command to set the time zone is ''***timedatectl set-timezone***''. For example, to set the time zone to Melbourne, Australia, use the command: ''***timedatectl set-timezone-Australia/Melbourne***''.

5. Check the NTP function and RTC in local TZ function. You need to enable NTP function and set RTC in local TZ to off. You can use ''***timedatectl set-NTP 1***'' to enable NTP function, and ''***timedatectl set-local-RTC 0***'' to turn off RTC in local TZ.

```
[root@localhost ~]# timedatectl set-ntp 1
[root@localhost ~]# timedatectl set-local-rtc 0
[root@localhost ~]# timedatectl
      Local time: Mon 2022-02-28 19:05:12 AEDT
  Universal time: Mon 2022-02-28 08:05:12 UTC
        RTC time: Mon 2022-02-28 19:05:12
       Time zone: Australia/Melbourne (AEDT, +1100)
     NTP enabled: yes
NTP synchronized: yes
 RTC in local TZ: no
      DST active: yes
 Last DST change: DST began at
                  Sun 2021-10-03 01:59:59 AEST
                  Sun 2021-10-03 03:00:00 AEDT
 Next DST change: DST ends (the clock jumps one hour backwards) at
                  Sun 2022-04-03 02:59:59 AEDT
                  Sun 2022-04-03 02:00:00 AEST
```

P3-27

After the setup is completed, please re-use ''***timedatectl***'' command to check if the data is set OK.

Section 4

Install the Local Manager Software

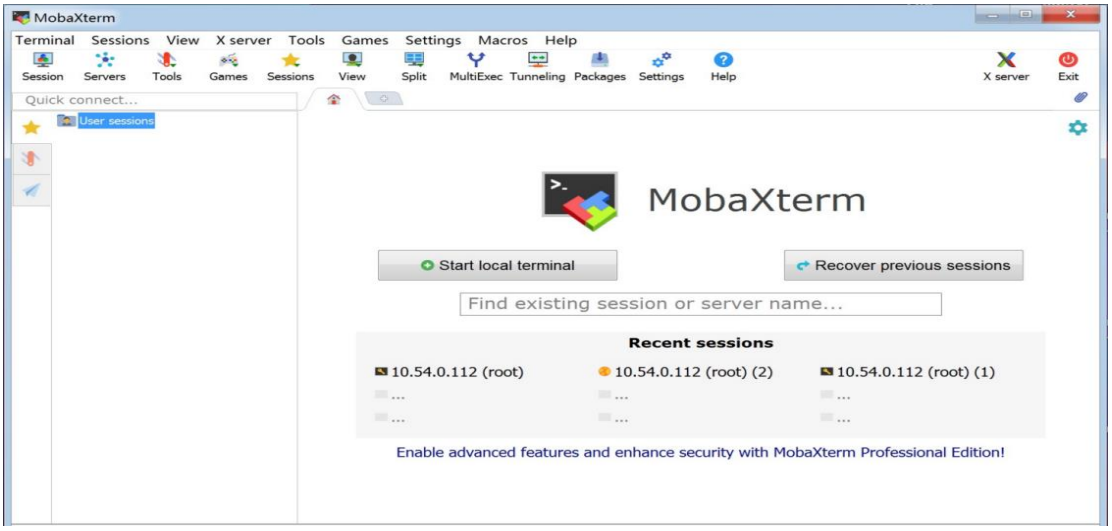
4.1 Install the Local Manager Software

After the CentOS system is installed, the local management software can be installed as the following steps.

1. Prepare a PC with Windows operating system and pre installed Mobaxterm software. Ensure that the PC can connect to the local management server and the local management server can connect to the Internet.If the construction site does not have an environment connected to the Internet, it is recommended that the local management server be installed in the office in advance, and then transported to the site for commissioning.

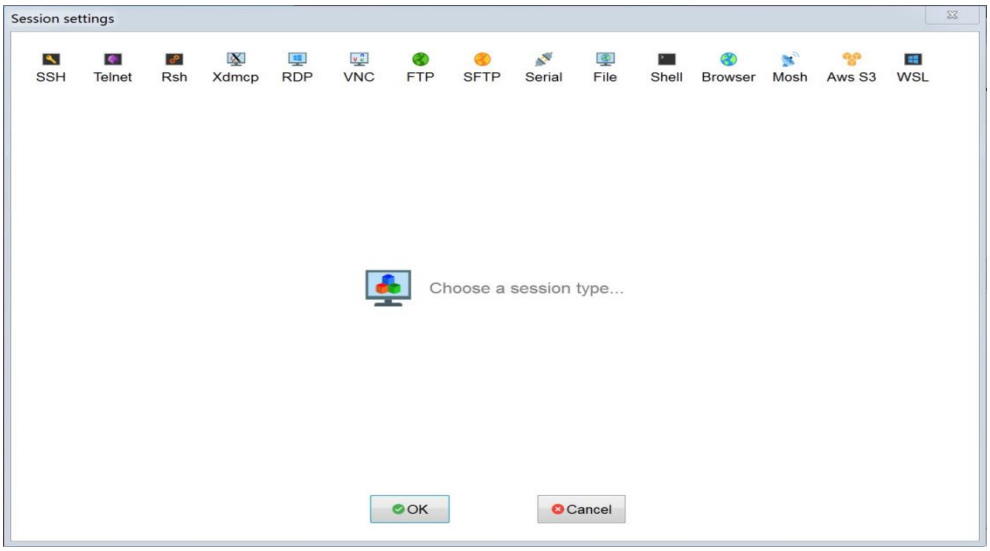
Note: The Mobaxterm Tool can be downloaded from *https://mobaxterm.mobatek.net*.

2. Start Mobaxterm Tool on PC.



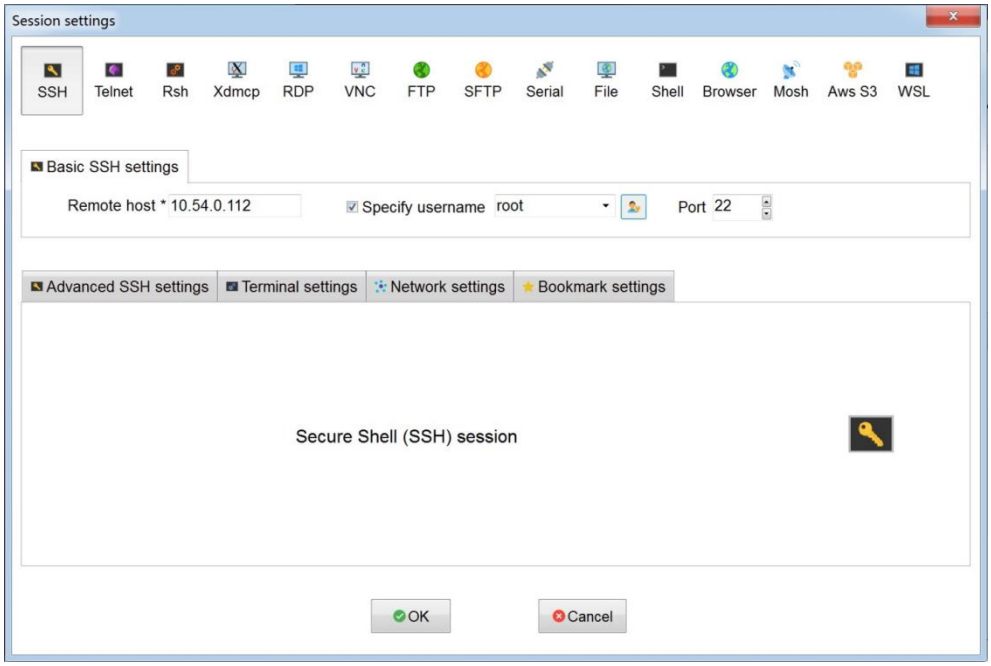
P4-1

3. Click [**Session**] Icon to create a new Session.



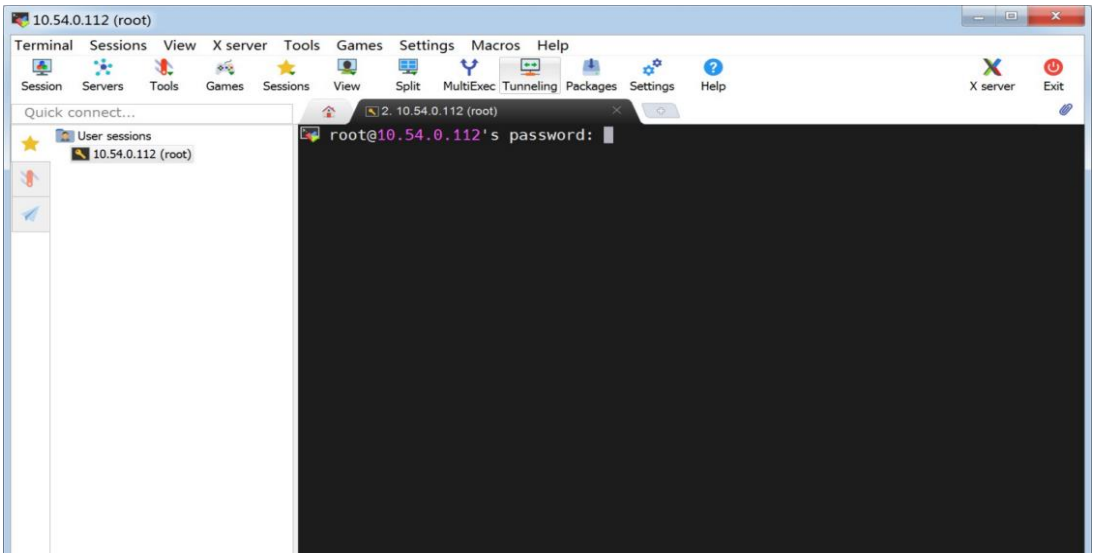
P4-2

4. Click on SSH Icon，Input the Remote host name(the IP of the Local Management Server), the user name(root) and the port(22) and click [**OK**] button.



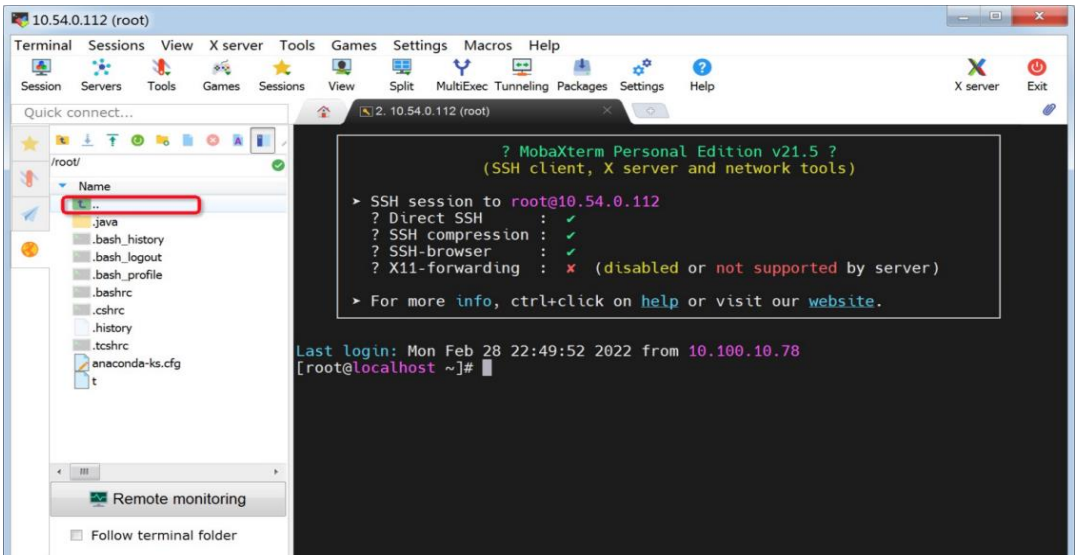
P4-3

5. Input the password(3.1.3 step15) of the root user and press enter.



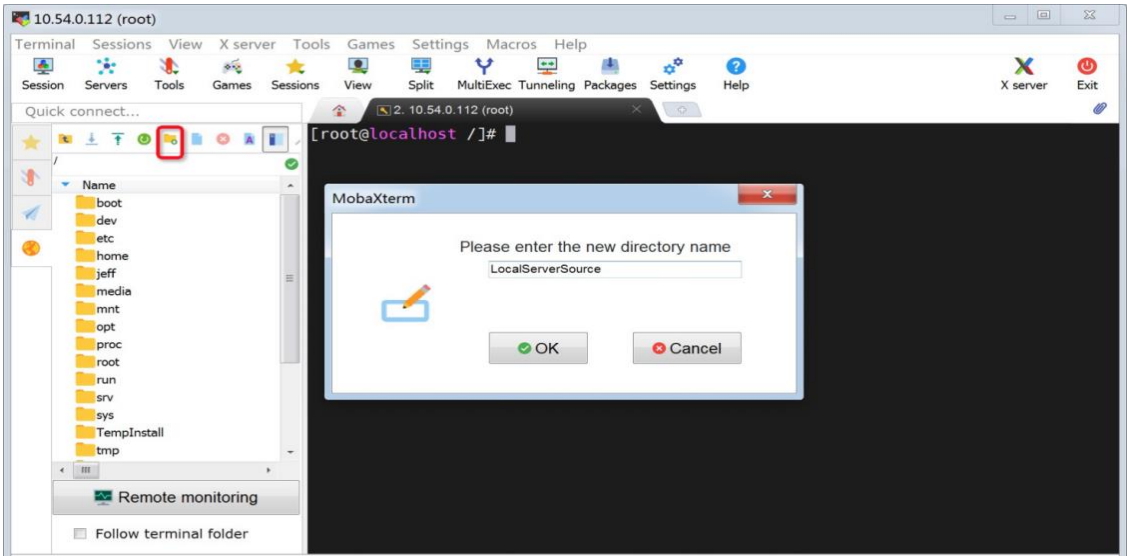
P4-4

6. Click the [**Up**] Icon to go to the root directory



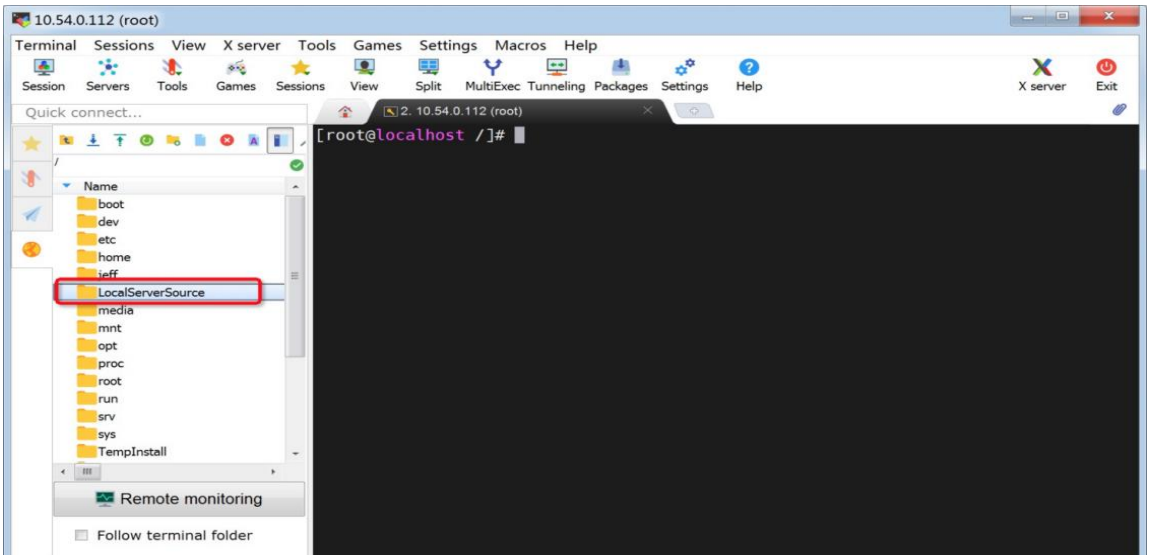
P4-5

7. In the root directory, click [**Create a new directory**] icon to create a temp directory to upload the local manager software install file, the temp directory name can be such as ''LocalServerSource''.



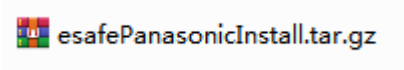
P4-6

8. Double-click on the new directory name that you created to enter this directory.

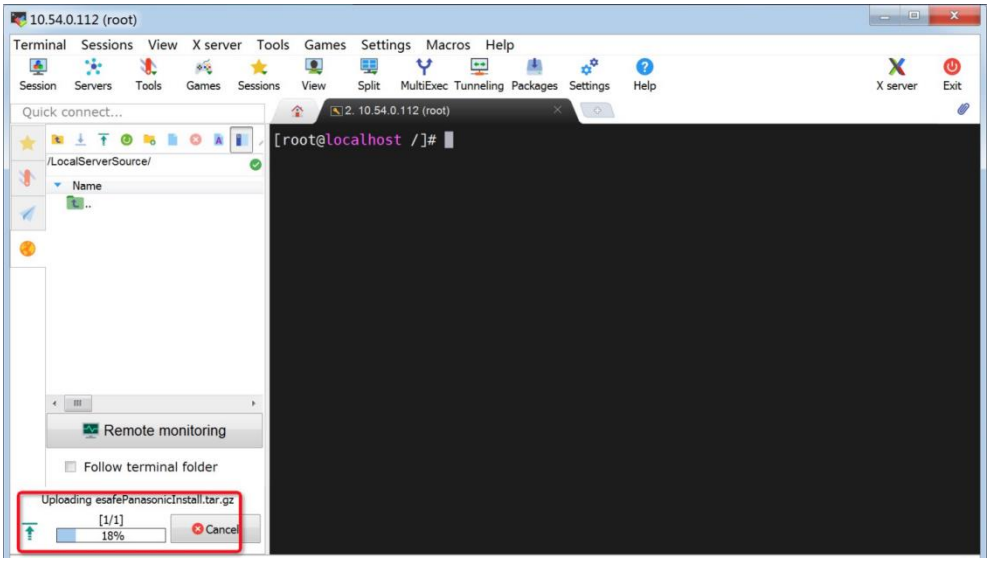


P4-7

9. Click [**Upload file**] Icon and select the local serer install file(tar.gz format file) and click the [**Open**] button to upload it.



After click [**Open**], the file will start to upload. See the figure below.

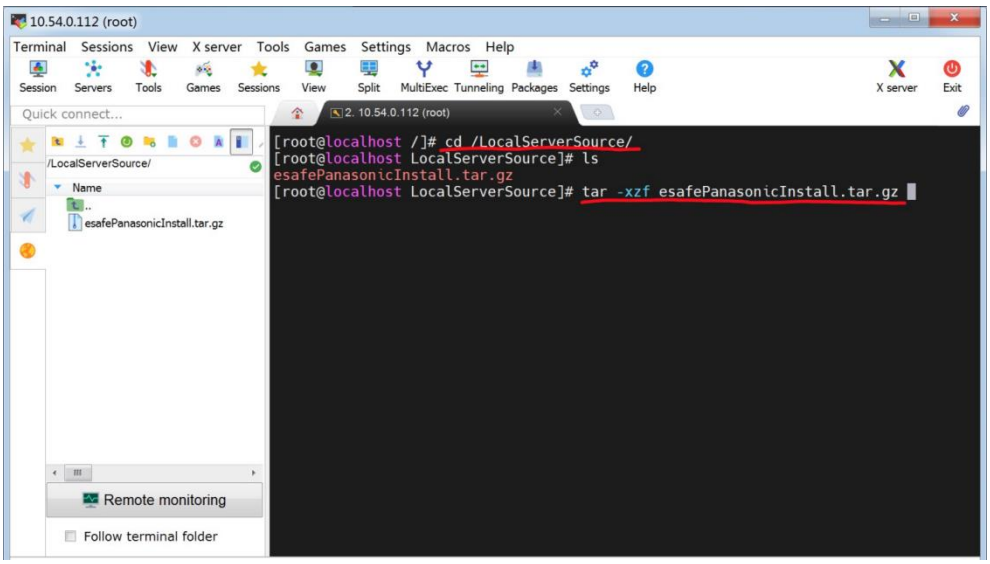


P4-8

10. After upload the file, use the ''***cd /LocalServerSource/***'' command to go to the directory that the

install file uploaded, use ''***ls***'' command to check if the file in this directory, then use ''***tar –zxf***

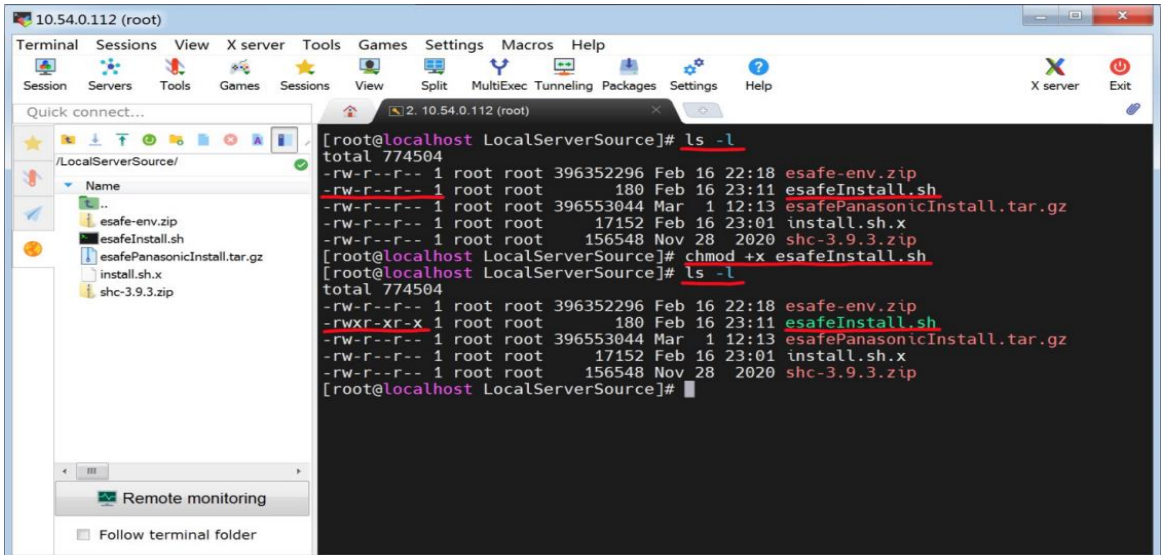
esafePanasonicInstall.tar.gz'' command to unzip this file.



P4-9

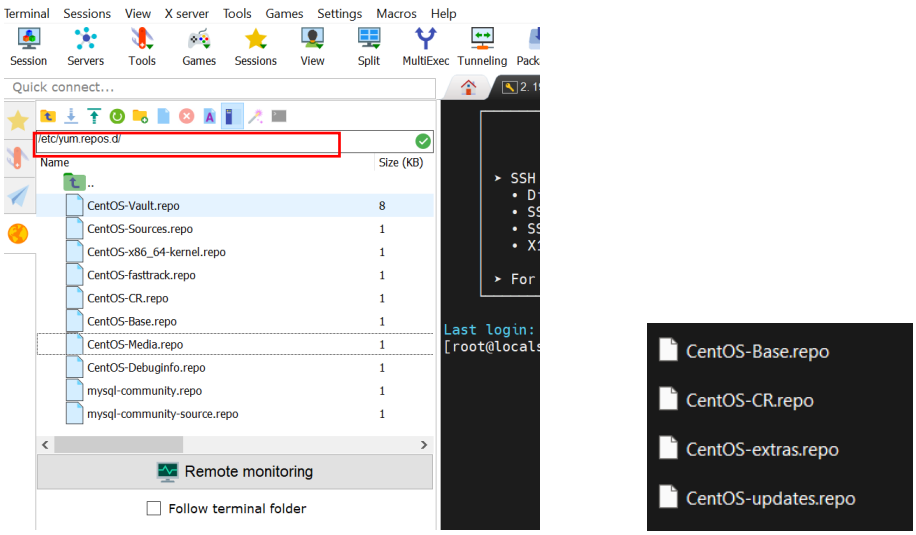
11. After unzip the file, use ''***ls***'' command to check if the file is unzip success. There should have several files include ''**esafeInstall.sh**''.

12. Use ''***ls -l***'' command to Check if the ''**esafeInstall.sh**'' file can be execute(there should have ''x'' property), if not, use ''***chmod +x esafeInstall.sh***'' command to add execute permission to this file.



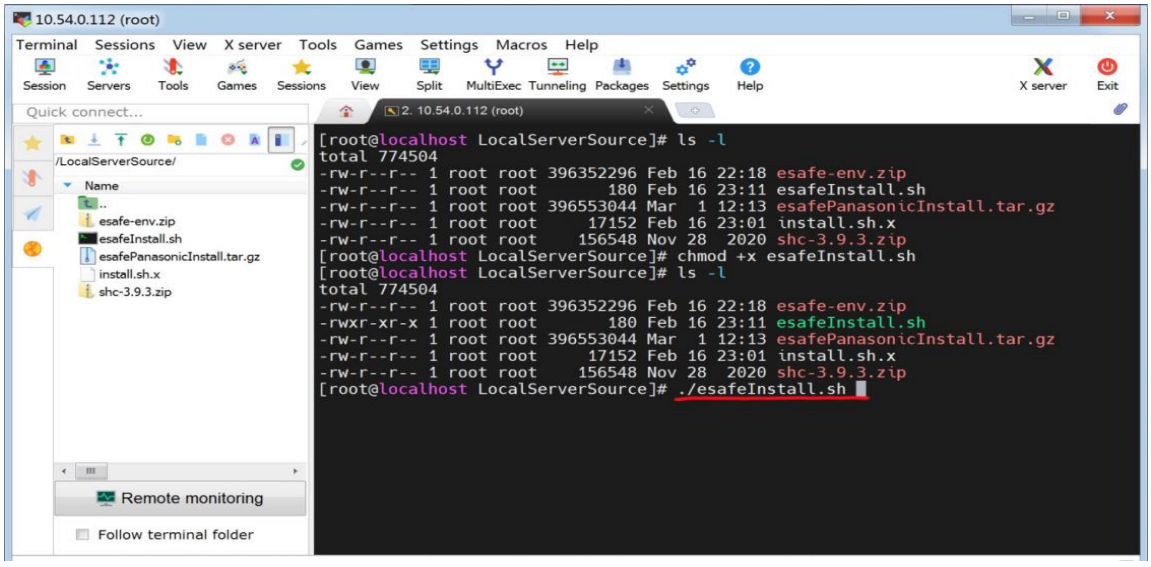
P4-10

13. Replace the Repo files. The files include: “CentOS-Base.repo”, “CentOS-CR.repo”, “CentOS-extras.repo”, and “CentOS-updates.repo”. Navigate to /etc/yum.repos.d/, delete the existing files and upload the new files.



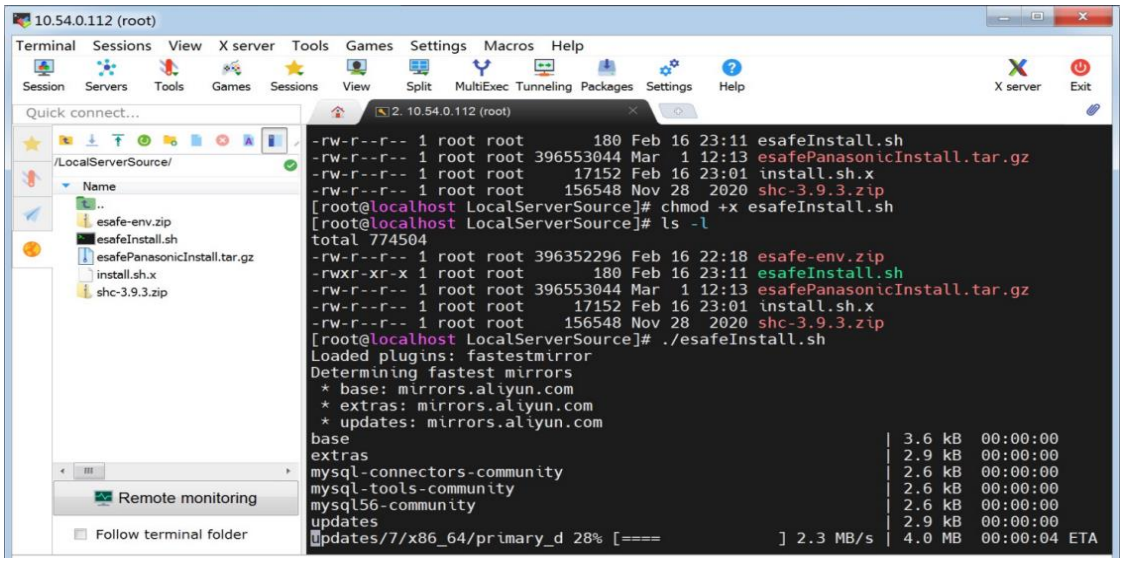
P4-11

14. Before installing this file, confirm that the local server can connect to the Internet, because During the installation, the install program need download some compile tool from the internet. So If the construction site does not have an environment connected to the Internet, the local management server should be installed in the office first.



P4-12

15. Use "***./esafeInstall.sh***", then the local manager server software is starting to install.



P4-13

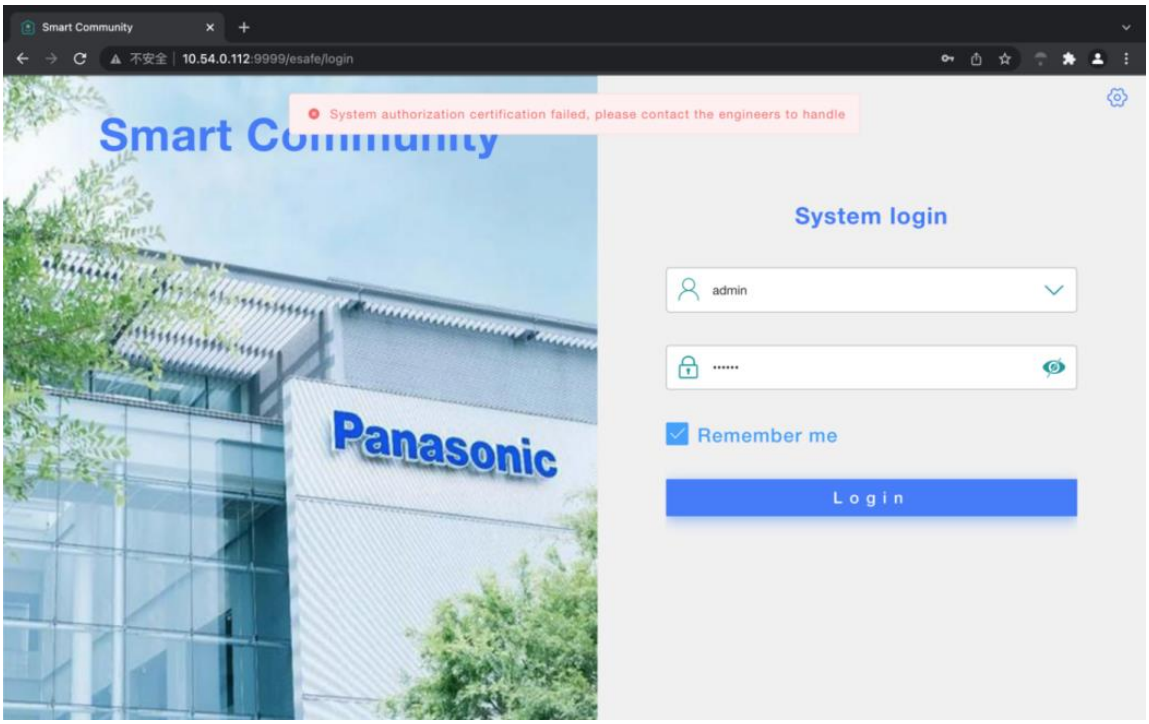
16. When the installation is completed, the Local Server will restart, so the MobaXterm will show the connect is lost info. You can close the MobaXterm now, or after the Local Server restart, press ''R'' key to reconnect.

17. Confirm that the ''connect is lost'' info is showed in this session. Because there are several software are installed and will show ''install finish'' info. And confirm that the Internet connect is OK during the install process, because some software is download from the Internet, otherwise the local server will not installed success though the install is complete.

After the install complete and the Local Management Server will restart.

18. Open the Browser(such as Chrome, Edge, Safari) on the windows PC, input the ''*http://IP:9999/esafe*'', the IP is the address of the Local Management Server, then press enter key, the login form is showed. It means the install is OK.

19. Contact your distributor for the Local Management Software activation.



P4-14

Attention:

If you input the username and password to login, the system will show system authorization certification failed. For this step, please check the **''Local eSafe Smart Community Client''** document.