MAIPU

Maipu Matrix Center

Installation/Uninstallation Manual

V2.3.0

Security Statement

Important! Before powering on and starting the product, please read the security and compatibility information of the product.

Environmental Protection

This product has been designed to comply with the environmental protection requirements. The storage, use, and disposal of this product must meet the applicable national laws and regulations.

Preface

Manual Introduction

This manual mainly describes the installation and uninstallation of Maipu Matrix Center. This manual tries to put each function of the system in the same chapter, so that when you need to use a certain function, you only need to refer to the corresponding chapter. For the use of some interleaving functions, if they cannot be put together, this manual will specifically indicate.

Hope this manual can be helpful to your work!

Product Version

The product version corresponding to this manual is shown below.

Product Name	Product Version
Maipu Matrix Center, Maipu Integrated Business Management Center	V2.3.0

Readers

This manual is mainly applicable to the following persons:

● Software commissioning engineer

● On-site maintenance engineer

● System maintenance engineer

Conventions

Conventions of screen output format:

Format	Description
Screen print	Represents the output information of the screen
Keywords of Screen print	The red part represents the key information in the screen output

Symbol conventions:

Format	Description
Note	An alert that contains additional or supplementary information.
Caution	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
Warning	An alert that calls attention to important information that if not understood or followed can result in personal injury or device damage.

Command conventions:

Convention	Description
Boldface	Bold text represents commands and keywords that you enter literally as shown.
Italic	Italic text represents arguments that you replace with actual values.
[ ]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x	y	... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x	y	...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x	y	... } *	Asterisk marked braces enclose a set of required syntax choices separated by vertical bars, from which you select at least one.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.

The icons used in the manual and the meanings:

Icon	Description
	Represents a generic switch
	Represents a generic router

Product Supporting Manual

The accompanying manuals for this product are as follows:

Manual Name	Overview
Maipu Matrix Center User Manual V2.3.0	User Guide
Maipu Matrix Center Troubleshooting Manual V2.3.0	Troubleshooting Guide

Data Acquisition Method

Obtain the latest product manuals from Maipu's website (www.maipu.com).

Technical Support

If you encounter difficult-to-determined or difficult-to-solve problems in the process of equipment operation and maintenance, and you still cannot solve them through the guidance of the manual, please contact Maipu Technology Service Center directly, and we will provide you with technical support services.

Contents

1 Installation of Maipu Matrix Center System

1.1 Configuration Requirements

1.1.1 Environmental Requirements

Maipu Matrix Center system, 16GB memory server hardware resource requirements and management scale description

Maipu Matrix Center management scale						
NEs	IP phones	Terminals	Received syslog per second	Received traps per second	Monitoring instances	Remarks
<=2000	1000	30000	<=120 per second	<=30 per second	<=20000	1. A single network element is calculated as 24 physical ports 2. An instance is a performance indicator application, such as counting the "interface inbound traffic" of an interface or the "CPU utilization" of a device as an instance.

Linux server hardware requirements (recommended to install suse12 sp5 64bit operating system)					
Recommended server: Maipu Hardware Server (V4), Maipu Matrix 210					
NEs	CPU (lowest configuration)	Memory (lowest configuration)	Disk Performance Parameters (lowest configuration)	Disk space (lowest configuration)	Network card
<=2000	Model: Hygon C86 3285 8-core Processors Main frequency: 3.0GHz Number of cores: 8 Number of threads: 16	>=16GB	Disk type: SATA/SAS/SSD	>=512GB	Gigabit

Maipu Matrix Center system, 32GB memory server hardware resource requirements and management scale description

Maipu Matrix Center management scale						
NEs	IP phones	Terminals	Received syslog per second	Received traps per second	Monitoring instances	Remarks
<=5000	1000	30000	<=300 per second	<=30 per second	<=50000	1. A single network element is calculated as 24 physical ports 2. An instance is a performance indicator application, such as counting the "interface inbound traffic" of an interface or the "CPU utilization" of a device as an instance.

Linux server hardware requirements (recommended to install suse12 sp5 64bit operating system)					
Recommended server: Maipu Matrix 210					
NEs	CPU (lowest configuration)	Memory (lowest configuration)	Disk Performance Parameters (lowest configuration)	Disk space (lowest configuration)	Network card
<=5000	Model: Intel(R) Xeon(R) Silver 4110 CPU Main frequency: 2.1GHz Number of cores: 8 Number of threads: 16	>=32GB	Disk type: SAS/SSD Support RAID group (raid1/raid5).	>=1TB	Gigabit

How to check the version number of the server operating system

```
mmc230:/home # cat /etc/SuSE-release

SUSE Linux Enterprise Server 12 (x86_64)

VERSION = 12

PATCHLEVEL = 5

# This file is deprecated and will be removed in a future service pack or release.

# Please check /etc/os-release for details about this release.

mmc230:/home#
```

⚠ Caution

The operating system connected to the R&D room is suse12 sp5. Other operating systems do not ensure that the functions are correct completely.

How to view server cpu model parameters

```
[root@secserver-1 ~]# cat /proc/cpuinfo | grep name | uniq -c

16 model name    : Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz

[root@secserver-1 ~]#
```

How to Check the Logical Core Number of Server CPU

```
[root@secserver-1 ~]# cat /proc/cpuinfo | grep name | wc -l

16 # Echo 16, indicating that there are 16 logical threads in the cpu on this host
```

How to check server memory model

Omitted; It is recommended to confirm through the supporting manual of the server

How to check server disk type

Omitted; It is recommended to confirm through the supporting manual of the server

How to check server disk space

Omitted; It is recommended to confirm through the supporting manual of the server

1.1.2 Installation Preparation

Relevant software packages need to be prepared before installing the Maipu Matrix Center system.

Package Name	Remarks

Maipu-Matrix-Center-EN-SUSE-x86-suse-12-V002R003C00B *** .sh	Management Center installation package

📝**Note**

- The installation of Maipu Matrix Center system requires a root account, and non-root accounts are not supported to install the system at the moment;

- Before installing Maipu Matrix Center system, please ensure that no other software is installed on the linux server to be installed to avoid port conflicts/service conflicts;

- Maipu Matrix Center system supports deployment on virtual machines (the virtualization platform has no special requirements) and physical machines;

- When installing the suse12 sp5 operating system, please refer to Chapter 3.1 for the precautions and specific operations;

- Before installing the Maipu Matrix Center system, please ensure that the network connection (IP/mask/default gateway), system time zone, and system time of the linux host are correctly configured.

1.1.3 Firewall Configuration

The firewall interface list of Maipu Matrix Center system, if there are restrictions in the environment, the administrator needs to manually configure the firewall entries:

Source Address	Destination Address	Type	Destination Address Open Port
Maipu Matrix Center System	managed network device	TCP	ftp:21 ssh;22 telnet:23
Maipu Matrix Center System	managed network device	UDP	snmp:161
Managed network device	Maipu Matrix Center System	TCP	ftp:21 sftp:22
Managed network device	Maipu Matrix Center System	UDP	trap: 162 syslog:514
Manager PC	Maipu Matrix Center system	TCP	Web platform: 443
Maipu Matrix Center system	Mail Server	TCP	SMTP: 25
Maipu Matrix Center system	IP phone	UDP	DHCP: 68
IP phone	Maipu Matrix Center System	UDP	DHCP:67

| Source Address	Destination Address	Type	Destination Address Open Port
			ftp:21 http:80
VC8100 series SIP server	Maipu Matrix Center system	TCP	http:80,443
Maipu Matrix Center system	VC8100 series SIP server	TCP	http:80,443

⚠ Caution

If Maipu Matrix Center system is connected to a third-party email/SMS platform, the port opened by the Maipu Matrix Center system is subject to the port activated by the actual email/SMS platform. The default mail server protocol type supported by Maipu Matrix Center system is SMTP, and the default supported SMS gateway is the third party. Other mail servers, SMS gateways/SMS platforms need to be connected for secondary development. Need to import MMC-SMS license.

1.2　Maipu Matrix Center System Installation (Single Mode Mode)

Before installation, please configure the IP address of the network interface of the host in advance (that is, ipaddr_1 in the network address plan, ipaddr_2 does not need to be configured in advance, just enter according to the prompt information during the network management installation process)/subnet mask/default gateway, DNS, System time zone/time value.

1.2.1 Network Topology
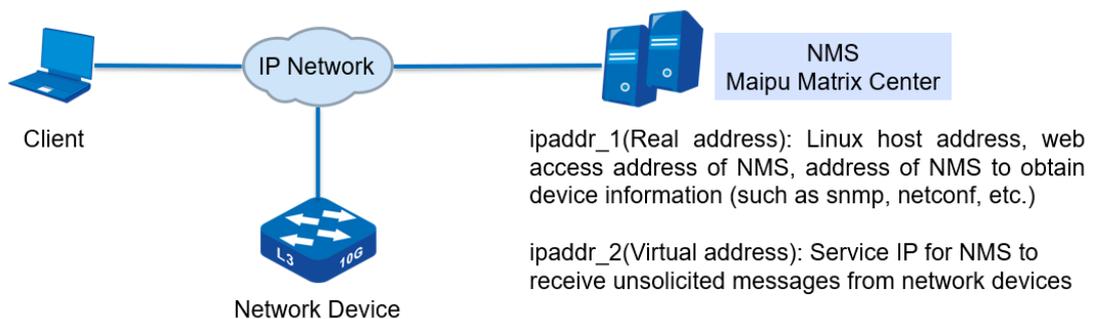
1.2.2 Network Address Planning (Single Node Mode)

Category	Attributes	Description

IPv4 address 1	required	ipaddr_1 (address 1 is the access address of MMC management center)
IPv4 address 2	required	ipaddr_2 (address 2 is the service address of MMC management center)
DNS	optional	If the mail service and SMS service address is a domain name, it needs to be configured

1.2.3 Modify Host hostname

The Linux host name is recommended to contain only letters, as follows:

```
linux-m7e2:~ # hostnamectl set-hostname mmc230 # Modify the host name
linux-m7e2:~ # cat /etc/hostname                # Check the hostname modification result
mmc230
linux-m7e 2:~ #
```

1.2.4 Get Installation File

File acquisition

Refer to Section 1.1.2

Installation preparation

Step 1: Check whether the hardware resources of the linux server meet the installation requirements, and refer to chapter 1.1.1 for parameter indexes;

Step 2: Upload the installation package to the directory of the Linux host.

1.2.5 Installation and Deployment

1.2.5.1 Check Package Integrity

```
mmc230:/home # sh Maipu-Matrix-Center -EN -SUSE-x86-suse-12-V002R003C00B *** .sh --check

[basicscene] Verifying archive integrity...

[ basicscene ] MD 5 checksums are OK.

All good.          # Return All good. Indicates that there is no problem with the software
package uploaded to the server

mmc230:/home#
```

1.2.5.2 Package Installation

```
mmc230:/home # sh Maipu-Matrix-Center- EN- SUSE-x86-suse-12-V002R003C00B *** .sh install

Creating directory /tmp/selfgz387628311

[basicscene] Verifying archive integrity...

All good.

[basicscene] Uncompressing basicscene V002R003C00B098 installer  # Here you need to wait for
a few minutes (compressed package unpacking process, no intervention required)

\ Done

Input setup dest path: [/home/up/up]    # Software installation location, if no modification
is required, press Enter by default.

[basicscene] DO CBK preinstall

[basicscene] level=[INFO] Extract pkg 0 . /pkgs/Maipu-Matrix-Center-Kuboard- EN- V006R002C13B
*** .sh / Done
```

```
[basicscene] level=[INFO] Call scene ./_callbackscript/cbkscene.sh ()

-------------------------------------------------- ------------------------------

Setup for Maipu-Matrix-Center

-------------------------------------------------- ------------------------------

The setup program will install files, strongly recommend that you backup data!!!

Confirm install [y/n]? : [y]    # Confirm the installation operation, press the Enter key to
return

[basicscene] DO CBK install

. . .

[basicscene] [INFO] [INSTALL] Run postscript '_syssetupscene.sh' ...

[basicscene] level=[INFO] Call scene ./_callbackscript/cbkscene.sh (install)

[basicscene] [INFO] [INSTALL] Backup setup files...

[basicscene] [INFO] [INSTALL] Finished

[basicscene]  INFO  all  packages  have  been  installed  successfully! # Return "  installed
successfully! " to indicate successful installation

removed '/tmp/PKG___GLOBAL__.lock'

mmc230:/home#
```

1.2.5.3   Service Initialization

```
mmc230:/home # upshell srvmgt init   # Perform service initialization

[UP] Stop srvmgt service ... [ UP] done

[UP] ######################## Network config ####################

[UP] Found Multi-Ethernet Interfaces:

Index IfName MAC IPv4 Linked IPv6

[0] eth0 00:50:56:A5:19:D9 11.6.253.215 yes

[1] eth1 00:50:56:A5:4F :00 1.2.2.5 yes

[2] eth2 00:0C: 29:C1:0E :F9 12.12.1.2 yes

Please input the index of the eth interface for service (0 - 2): [0]: # Select ipaddr_1 in
network planning

business https port: 8443...

[ UP ] * Stop system firewall ...

[UP] Config srvmgt enable...

Synchronizing state of srvmgt.service with SysV init with /usr/lib/systemd/systemd-sysv-
install...

Executing /usr/lib/systemd/systemd-sysv-install enable srvmgt

Created symlink from /etc/systemd/system/multi-user.target.wants/srvmgt.service to
/usr/lib/systemd/system/srvmgt.service.

Configure application servers? (y/n) [y]:  #Confirm initialization operation; By default,
press Enter

* execute init script '30-init-cluster.conf' ...

generate my ssh key into ~/.ssh/

Generating public/private rsa key pa

. . .

[kuboard] sleep 0...

[kuboard] sleep 1...

[kuboard] sleep 2...

[kuboard] sleep 3...

[kuboard] sleep 4...

[kuboard] Init nginx-ingress kuboard ip 11.6.253.215 ...

Create up up...

* chown files for up(up) ...  #Return "chown files for up(up)" to indicate the end of the
```

```
initialization operation
mmc230:/home#
```

1.2.5.4   Execute Service Start

```
mmc230:/home # upshell srvmgt start        # Execute the service start operation
* Refresh database sync...
no crontab for root
* Start 'sshd' service...
Start watchdog for 'sshd'...done
* Start 'mysql' service...
Start watchdog for 'mysql'...done
* Start 'nginx' service...
Start watchdog for 'nginx'...done
* Start 'kuboard' service...
Start watchdog for 'kuboard'...done
mmc230:/home#
mmc230:/home # upshell srvmgt health #Service status query, "HealthStatus" all return
HealthOK , indicating that the service is started successfully
+----------------------+------------------+------- --------+------------------------+
| ServiceName | MonitorStatus | ServiceStatus | HealthStatus |
+----------------------+------------------+------- --------+------------------------+
| sshd | running( 10360) | up | HealthOK |
| mysql | running( 11647) | up | HealthOK |
| nginx | running( 12126) | up | HealthOK |
| kuboard | running( 12409) | up | HealthOK |
+------------------------------------------------ --------------------------------+
mmc230:/home#
```

Remarks: Status query (HealthStatus is HealthOK, indicating that the service startup is complete. This process needs to wait for 1~2 minutes)

1.2.5.5   Service Application Deployment

```
mmc230:/home # upshell srvmgt deploy  # Execute service deployment
***************Node config******************** # Cluster plus node host
No DNS is available, Please input ipv4 DNS address: [Not required]: 10.10.1.30  #DNS
address, you cannot configure it, just press Enter
Please choose ipv4 address:      # Select ipaddr_1 in network planning. When the server has
multiple network cards, the program will automatically identify them. The administrator
selects the network card id
Found Multi-Ethernet Interfaces:
Index IfName MAC IPv4 Linked IPv6
[0] eth0 00:50:56:A5:19:D9 11.6.253.215 yes
[1] eth1 00:50:56:A5:4F :00 1.2.2.5 yes
[2] eth2 00:0C: 29:C1:0E :F9 12.12.1.2 yes
Please input the index of the eth interface for service (0 - 2): [0]: # When there are
multiple network cards, just select the index of the network card here (such as 0, 1, 2, 3
in the example )
Ipv4 address: 11.6.253.215
Please input port: [22]:    # ssh port
Please input username: []: root   # root account
Please input passwd: []:        # root password
node check pass
```

```
***********************END************************

Please choose manager ip:         # Configure manager address

Found Multi-Ethernet Interfaces:

Index IfName MAC IPv4 Linked IPv6

[0] eth0 00:50:56:A5:19:D9 11.6.253.215 yes

[1] eth1 00:50:56:A5:4F :00 1.2.2.5 yes

[2] eth2 00:0C: 29:C1:0E :F9 12.12.1.2 yes

Please input the index of the eth interface for service (0 - 2): [0]: # ipaddr_1 in network
planning, when there are multiple network cards, fill in the index here, if you don't want
to modify it, just press Enter

Please input service ip: []: 11.6.253.216   # ipaddr_2 in network planning, manually input

Check whether to continue the deployment after the configuration is correct (y/n) [n]: y  #
After confirming the parameters, enter y

NODES_IP_LIST=11.6.253.215

NODE_LIST=1

NODE_LIST_R=1

* add node 11.6.253.215...

. . .

NODES_IP_LIST=11.6.253.215

NODE_LIST=1

NODE_LIST_R=1

* add node 11.6.253.215...

nodeenv.sh 100% 669 0.7KB/s 00:00 # This takes about 10 minutes, please wait patiently

* setup etcd 11.6.253.215...

found /home/up/updefault/var/pkgs/Maipu-Matrix-Center-EN-2.3.0-230211001935.tar.gz _

Resolve namespace............

PRODUCT_NAME="Maipu-Matrix-Center -EN "

PRODUCT_VERSION="2.3.0"

BUILDTIME="230211001935"

PRODUCT_V="2"

PRODUCT_R="3"

PRODUCT_C="0"

INSTALLER_VER="v2"

BUILD_ARCH="x86-suse-12"

SCENE_PKG_TYPENAME="Nmsight"

SWAP_TOTAL="0"

INSTALL_MEM="8000000"

BUILD_LANGUAGE=" en "

SCENE_NAME="Nmsight"

DEF_PARAM_USE_MPSECSRV="0"

maipu-matrix-center- en- env.sh 100% 393 0.4KB/s 00:00 # This takes about 10 minutes,
please wait patiently

* /usr/local/bin/clsmaster install product 11.6.253.215 ...

cluster: install-namespace maipu-matrix-center -en pass.

. . .

cluster: install-ha slave is empty, work as single node.

cluster: install-ha pass     # Return " cluster: install-ha pass " to indicate successful
deployment. The operation ends

mmc230:/home#
```

1.2.5.6 Service Status Inquiry

```
mmc230:/home # kubectl get pods -A    #Execute kubectl get pods –A to query the service
status.
NAMESPACE NAME READY STATUS RESTARTS AGE
kube-system calico-kube-controllers-59cdc5cc59-6hsg5 1/1 Running 0 28m
kube-system calico-node-m74mp 1/1 Running 0 28m
kube-system coredns-74ff55c5b-vslnd 1/1 Running 0 27m
kube-system coredns-7d7668df67-l8l5g 0/1 Pending 0 27m
kube-system coredns-7d7668df67-pds8d 0/1 Pending 0 27m
kube-system kube-apiserver-mmc230 1/1 Running 0 28m
kube-system kube-controller-manager-mmc230 1/1 Running 0 28m
kube-system kube-proxy-m96k4 1/1 Running 0 26m
kube-system kube-scheduler-mmc230 1/1 Running 0 28m
kube-system kubernetes-dashboard-66ff55bf6b-6n6lm 1/1 Running 0 25m
maipu-matrix-center initjob-nm-core-skwg2 0/1 Completed 0 25m
maipu-matrix-center initjob-plat-core-bgkds 0/1 Completed 0 25m
maipu-matrix-center initjob-plat-example-42brh 0/1 Completed 0 25m
maipu-matrix-center initjob-plat-license-s9s4q 0/1 Completed 0 25m
maipu-matrix-center kafka-0 1/1 Running 0 26m
maipu-matrix-center minio-cluster-0 1/1 Running 0 26m
maipu-matrix-center nginx-ingress-controller-5r8v4 1/1 Running 0 25m
maipu-matrix-center nm-core-b47769585-2cqdp 1/1 Running 0 25m
maipu-matrix-center plat-core-5c457f5c9-vztg2 0/1 Init:0/2 0 20s
maipu-matrix-center plat-license-79d8df6b98-xvxdm 1/1 Running 0 25m
maipu-matrix-center redis-cluster-0 1/1 Running 0 26m
maipu-matrix-center webapp-75c966bc95-stbzc 1/1 Running 0 25m
maipu-matrix-center zk-0 1/1 Running 0 26m
mmc230:/home#
```

#Check service startup success

(1) In the record line of the service process, the value of the " STATUS " field is not init ("STATUS" is init, indicating that the process is still being initialized)

(2) In the record line of the service process, the value of the " STATUS " field is " Running ", and the value of the " READY " field is "1/1"

If the above 2 points are met, web access can be performed.

The correct one is as follows:

```
mmc230:/home # kubectl get pods -A
NAMESPACE NAME READY STATUS RESTARTS AGE
kube-system calico-kube-controllers-59cdc5cc59-6hsg5 1/1 Running 0 26m
kube-system calico-node-m74mp 1/1 Running 0 26m
kube-system coredns-74ff55c5b-vslnd 1/1 Running 0 25m
kube-system coredns-7d7668df67-l8l5g 0/1 Pending 0 25m
kube-system coredns-7d7668df67-pds8d 0/1 Pending 0 25m
kube-system kube-apiserver-mmc230 1/1 Running 0 26m
kube-system kube-controller-manager-mmc230 1/1 Running 0 26m
kube-system kube-proxy-m96k4 1/1 Running 0 24m
kube-system kube-scheduler-mmc230 1/1 Running 0 26m
kube-system kubernetes-dashboard-66ff55bf6b-6n6lm 1/1 Running 0 23m
maipu-matrix-center initjob-nm-core-skwg2 0/1 Completed 0 23m
```

```
maipu-matrix-center initjob-plat-core-bgkds 0/1 Completed 0 23m

maipu-matrix-center initjob-plat-example-42brh 0/1 Completed 0 23m

maipu-matrix-center initjob-plat-license-s9s4q 0/1 Completed 0 23m

maipu-matrix-center kafka-0 1/1 Running 0 24m

maipu-matrix-center minio-cluster-0 1/1 Running 0 24m

maipu-matrix-center nginx-ingress-controller-5r8v4 1/1 Running 0 23m

maipu-matrix-center nm-core-b47769585-2cqdp 1/1 Running 0 23m

maipu-matrix-center plat-core-5c457f5c9-x9c45 1/1 Running 0 23m

maipu-matrix-center plat-license-79d8df6b98-xvxdm 1/1 Running 0 23m

maipu-matrix-center redis-cluster-0 1/1 Running 0 24m

maipu-matrix-center webapp-75c966bc95-stbzc 1/1 Running 0 23m

maipu-matrix-center zk-0 1/1 Running 0 24m

mmc230:/home#
```

1.2.6 Client WEB Access

Maipu Matrix Center Maipu Integrated Service Management Center, the user WEB access link is https://*ipaddr_1*:443 (default user name and password: admin/Admin@123). The client PC browser is recommended to use Google Chrome (version 93 and above is recommended), and other browsers are not currently supported. The recommended resolution of the PC client is 1920*1080 or above

Step 1:
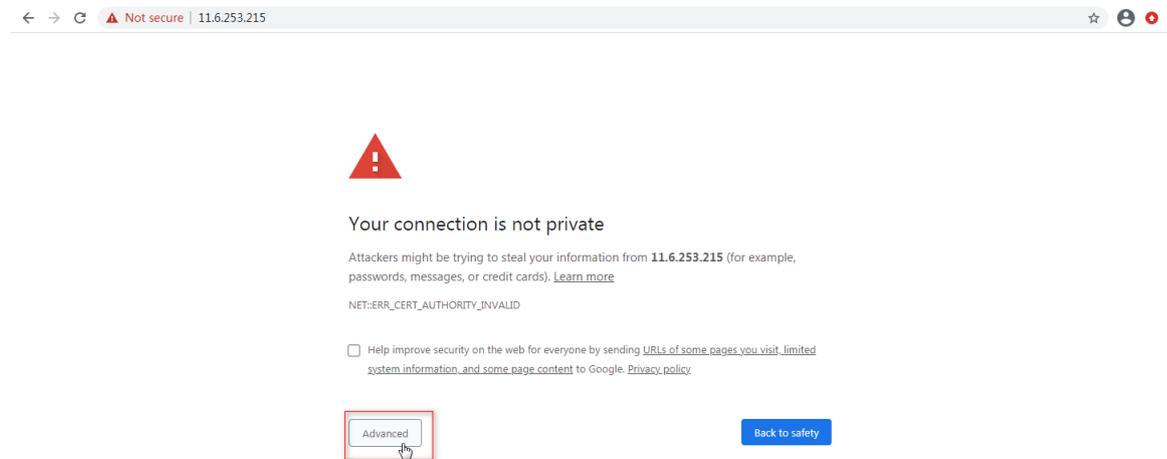
Step 2:
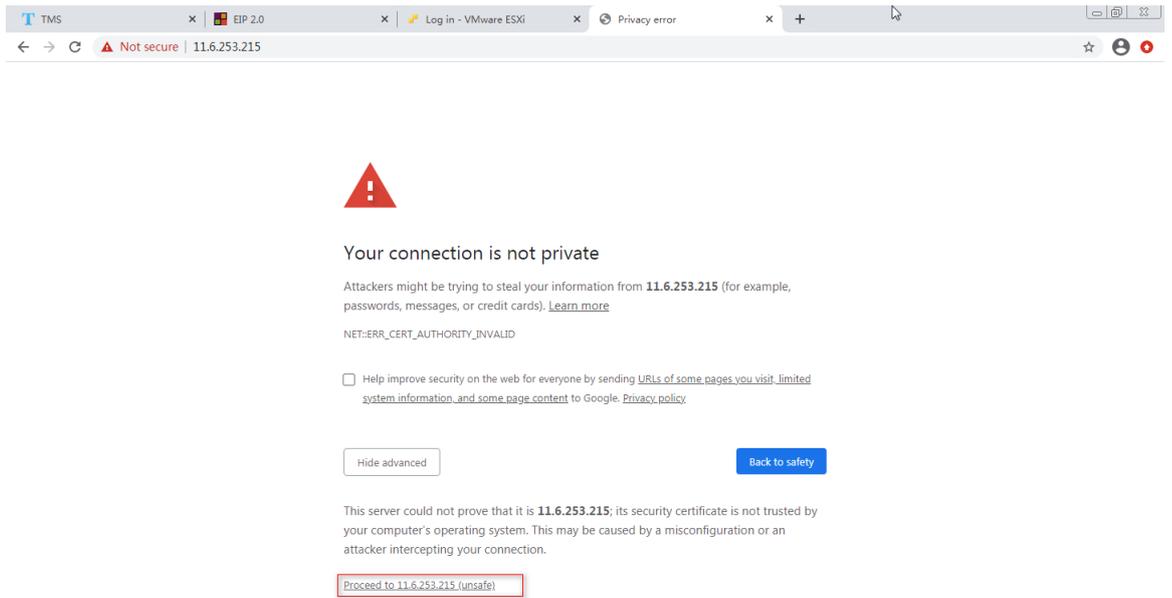
Step 3: Enter the default username and password (admin/Admin@123)
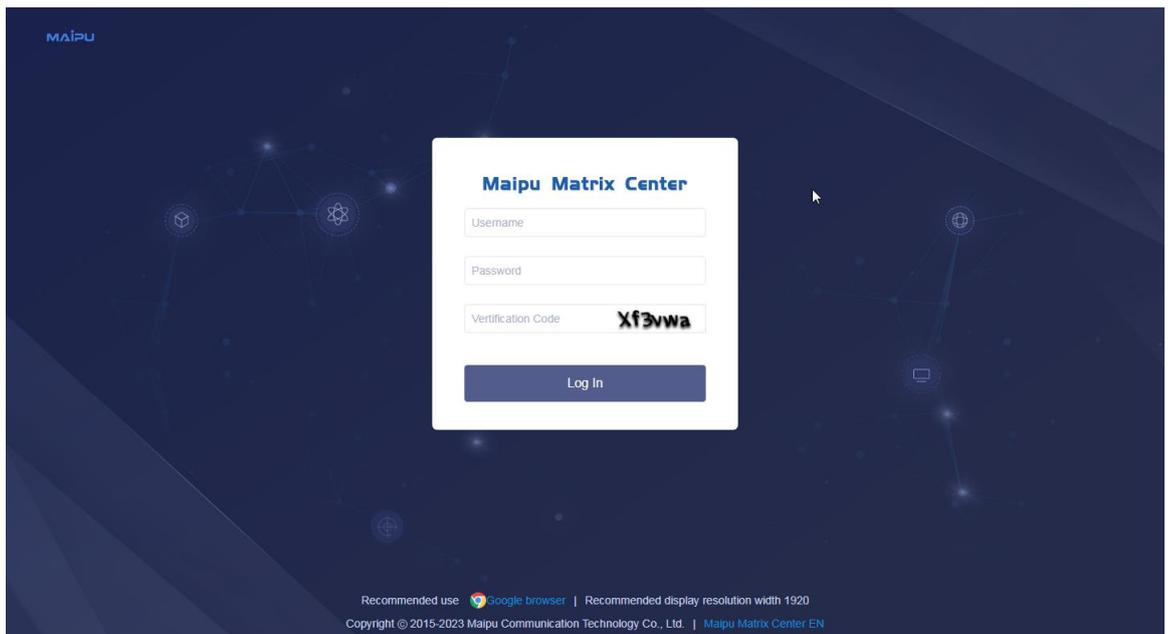
After logging in, it is as follows (note: for the first time logging in, the password of the account needs to be changed forcibly):
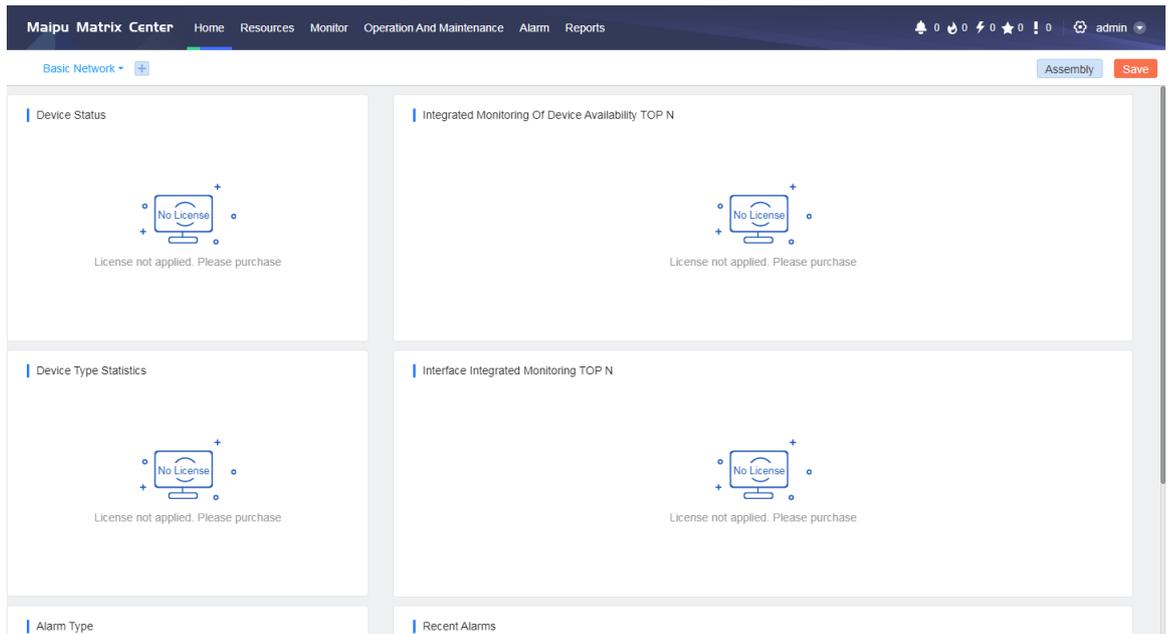
1.3 License Installation

1.3.1 License Module Authorization

Module Name	Usage
MMC-AM	MMC-AM, application monitoring function authorization, providing server monitoring function
MMC-SMS	SMS docking service (MMC-SMS, SMS docking service, providing user-specified SMS gateway, alarm docking development service once)
MMC-TM	Terminal resource function authorization (MMC-TM, terminal resource function authorization, providing terminal resource management functions, supporting terminal type identification, terminal access monitoring, IP address management, asset management and other functions.)
MMC-VOM	Voice network management function authorization (MMC-VOM, voice network management function authorization, providing voice service management functions such as SIP server, voice gateway, phone, etc.) Note: voice network management is required.
MMC-WSM	Wireless device function authorization (MMC-WSM, wireless device function authorization, providing wireless device management functions, supporting AC, AP device status monitoring, wireless access user monitoring, terminal traffic monitoring, etc.)

1.3.2 License Quantity Authorization

Module Name	Usage

MMC-AM-10	MMC-AM-10, application monitoring quantity authorization, 10-node application monitoring authorization, including servers and other equipment
MMC-TM- 10	Terminal resource quantity authorization (MMC-TM-10, terminal resource quantity authorization, 10-node terminal resource management authorization)
MMC-L-10	Basic resource quantity authorization (MMC-L-10, basic resource quantity authorization, 10-node basic resource management authorization, including switches, routers, security devices, wireless devices, voice gateways and other equipment; one node can manage 2 AP devices.)
MMC-VOM-P-10	Phone quantity authorization (MMC-VOM-P-10, phone quantity authorization, 10-node phone management authorization.)
MMC-MMV-UPDATE	Maipu Integrated Business Management Center Software V2.0 (MMC-MMV-UPDATE, MMV product upgrade authorization, supports Maipu Matrix View product upgrade to Maipu Matrix Center, compatible with the original Matrix View sales authorization, and provides Matrix View with richer management Function)

1.3.3 Machine Code Acquisition

After logging into Maipu Matrix Center Maipu Integrated Service Management Center, enter the license page to view the machine code

Step 1: Enter the license list
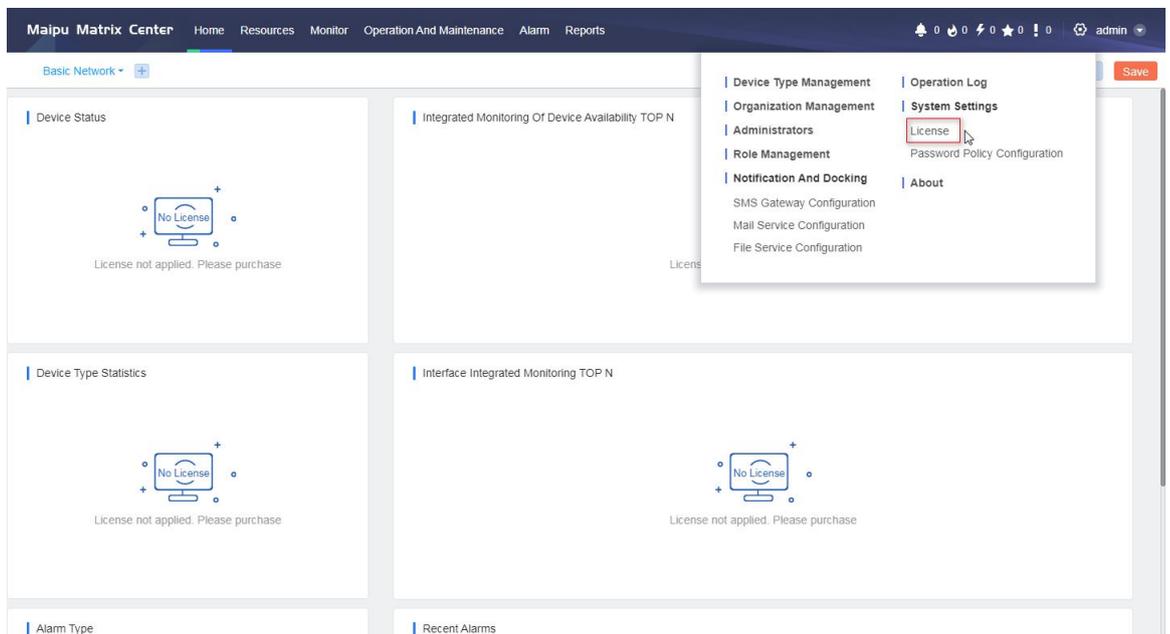
Step 2: Check the module name and machine code

Send the machine code (in the above example: 448E47F9AFB91105E1CAB2D45) and the required module name to the relevant staff of Maipu to apply for the license file.

1.3.4 Authorization File Import

Maipu Matrix Center Maipu Integrated Service Management Center, the administrator login page, just import the applied official license file.

Step 1: Upload

Step 2: Import

2 Uninstallation of Maipu Matrix Center System

2.1 Uninstall System Services

```
mmc230:~# cd /home/    # Enter the /home directory

mmc230:/home#

mmc230:/home # upshell srvmgt uninstall    # Enter the uninstall command to perform the
uninstall version operation

node:11.6.253.215

Confirm uninstall cluster and node (y/n )?[ n] y # Confirm the node uninstall operation,
just press Enter

/home/up/updefault/plugins/kuboard/script/clsmaster cluster uninstall maipu-matrix-center -
en

/home/up/updefault/plugins/kuboard/script/clsmaster node uninstall 11.6.253.215 22 root

node-uninstall: clean 11.6.253.215 pass

Warning: setup will uninstall all the follow packages

* ab768687a283 Maipu-Matrix-Center-Kuboard -EN V006R002C13B197-230211000031

*c4226d8d0abe Maipu-Matrix-Center -EN 2.3.0-230211001935

Confirm uninstall these packages (y/n )? [ n] y   # Confirm the package uninstall
operation, just press Enter

* Stop 'kuboard' service...

Stop watchdog for 'kuboard'...done

* Stop 'nginx' service...

Stop watchdog for 'nginx'...done

* Stop 'mysql' service...

Stop watchdog for 'mysql'...done

* Stop 'sshd' service...

Stop watchdog for 'sshd'...done

Warning!!!

Confirm clear the installation directory, include all program and datas (y/n )?[ y]  #
Delete the installation directory, just press Enter

* Remove install directory /home/up/up

* Clean tmp...    #uninstalling completed

mmc230:/home#
```

2.2 Delete Redundant Directories

Execute the following command to delete redundant directories

```
mmc230:/home # rm -rf /home/up

mmc230:/home#
```

3 FAQ

3.1 How to Choose System Role during SUSE Installation?

Answer: Select "System Role", and adopt the default value Default System.

3.2 Maipu Matrix Center System Is Successfully Deployed, Increase/Decrease Network Cards?

A: Do not support changes currently. An increase or decrease in the number of network cards may invalidate the license authorization file imported into the system.

3.3 Maipu Matrix Center System Access IP, Service IP, DNS Change?

Precautions:

- The server where Maipu Matrix Center is located is relocated, or the planned network parameters need to be changed after system deployment (ipaddr_1, ipaddr_2, dns);

- To change the IP address of the server where Maipu Matrix Center is located, you need to use the upshell command set provided by the Maipu Matrix Center system to modify it. You cannot use the related commands that come with the Linux operation to modify it. Otherwise, the Maipu Matrix Center system cannot perceive it, which may lead to service abnormalities;

Answer:

Step 1: kubectl get pods -A to view the current status of network management services

```
mmc230:/home # kubectl get pods -A

NAMESPACE NAME READY STATUS RESTARTS AGE

kube-system calico-kube-controllers-59cdc5cc59-858t6 1/1 Running 0 8m28s

kube-system calico-node-h2wch 1/1 Running 0 8m28s

kube-system coredns-74ff55c5b-97jkr 1/1 Running 0 8m10s

kube-system coredns-7d7668df67-hpq44 0/1 Pending 0 8m10s

kube-system coredns-7d7668df67-mk4vm 0/1 Pending 0 8m10s

kube-system kube-apiserver-mmc230 1/1 Running 0 8m35s

kube-system kube-controller-manager-mmc230 1/1 Running 0 8m35s

kube-system kube-proxy-kgc5n 1/1 Running 0 6m35s

kube-system kube-scheduler-mmc230 1/1 Running 0 8m35s

kube-system kubernetes-dashboard-66ff55bf6b-cwrzl 1/1 Running 0 6m11s

maipu-matrix-center-en initjob-nm-core-bfjjg 0/1 Completed 0 6m4s

maipu-matrix-center-en initjob-plat-core-wczdm 0/1 Completed 0 5m51s

maipu-matrix-center-en initjob-plat-example-9znzg 0/1 Completed 0 5m41s

maipu-matrix-center-en initjob-plat-license-b55s6 0/1 Completed 0 5m35s

maipu-matrix-center-en kafka-0 1/1 Running 0 6m26s
```

maipu-matrix-center-en minio-cluster-0 1/1 Running 0 6m36s

maipu-matrix-center-en nginx-ingress-controller-knc9x 1/1 Running 0 6m14s

maipu-matrix-center-en nm-core-55975dc586-gx9hb 1/1 Running 0 6m6s

maipu-matrix-center-en plat-core-6b5cdbf848-sxzf6 1/1 Running 0 5m51s

maipu-matrix-center-en plat-license-6f5dcffc5d-c2ggw 1/1 Running 0 5m36s

maipu-matrix-center-en redis-cluster-0 1/1 Running 0 6m21s

maipu-matrix-center-en webapp-d67b5c5f8-mh5cd 1/1 Running 0 5m31s

maipu-matrix-center-en zk-0 1/1 Running 0 6m32s

mmc230:/home#

mmc230:~#

Note:

#Criteria for judging that the network management service status is normal

(1) In the record line of the service process, the value of the "STATUS" field does not have init ("STATUS" is init, indicating that the process is still being initialized)

(2) In the record line of the service process, the value of the "STATUS" field is "Running", and the value of the "READY" field is "1/1"

Step 2: View the configuration information of the existing parameters of the current server network interface

mmc230:~ # ip addr list | grep *eth (eth indicates the network card name of the current host, you can also use ip addr list to view)*

2: eth0: < BROADCAST,MULTICAST ,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000

link/ether 00:50:56:a 5:58:14 brd ff:ff:ff:ff:ff:ff

inet 192.168.1.203/24 brd 192.168.1.255 scope global eth0

3: eth1: < BROADCAST,MULTICAST ,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000

link/ether 00:50:56:a 5:52:33 brd ff:ff:ff:ff:ff:ff

inet 192.168.11.198/24 brd 192.168.1.255 scope global eth1

4: eth2: < BROADCAST,MULTICAST ,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000

link/ether 00:50:56:a 5:dc:e4 brd ff:ff:ff:ff:ff:ff

inet 11.6.255.5/22 brd 11.6.255.255 scope global eth2

inet 11.6.255.6/22 scope global secondary eth2:6

link/ether a2:c 2:e 6:19:bb:b2 brd ff:ff:ff:ff:ff:ff

link/ether ea:5f:9d:05:c1:16 brd ff:ff :ff:ff:ff:ff

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 0

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 1

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 2

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 3

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 4

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 5

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 6

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 7

link/ether ee:ee:ee:ee:ee:ee brd ff:ff:ff:ff:ff:ff link-netnsid 8

. . .

mmc230:~#

Step 3: Use **upshell config cluster network node** to modify network interface IP and other parameters

mmc230:~ # **upshell config cluster network node**

Call: /home/up/updefault/bin/config_cluster_network.sh node ...

[2023-02-15 14:15:47] Check environment before config network...

pass

[2023-02-15 14:15:48] info nodes check pass.

[2023-02-15 14:15:48] check pass.

[2023-02-15 14:15:48] Backup config info...

Backup list to /home/up/updefault/back/cluster/202302151415:

  /opt/*env.sh

  /opt/monitor/items/node_ip.sh

  /var/lib/kubelet/resolv.conf

  /usr/bin/kubelet-srcip.sh

  /etc/kubernetes/manifests/*.yaml

  /etc/etcd/etcd.conf

  /etc/sysconfig/network/ifcfg-*

  /etc/sysconfig/network-scripts/ifcfg-*

  /etc/sysconfig/network/routes

  /etc/hosts

  /etc/systemd/system/kubelet.service.d/10-kubeadm.conf

  /home/up/updefault/datas/sqlite/kuboardDB.db

  /home/up/updefault/datas/etcd

  /home/up/updefault/plugins/nginx/conf/server.d/https_ingress.conf

[2023-02-15 14:15:49] backup pass.

The next step is [Stop cluster]. Do you want to continue? (y/n) : [n] **y** # Stop the service, confirm

[2023-02-15 14:15:53] Stop cluster...

statefulset.apps /kafka scaled

statefulset.apps /minio-cluster scaled

statefulset.apps /redis-cluster scaled

statefulset.apps /zk scaled

deployment.apps /nm-core scaled

deployment.apps /plat-core scaled

deployment.apps /plat-example scaled

deployment.apps /plat-license scaled

deployment.apps /webapp scaled

[2023-02-15 14:15:56] stop cluster pass.

[2023-02-15 14:15:56] Stop srvmgt and clear iptables rule ...

[2023-02-15 14:16:05] stop srvmgt pass.

Whether you need to modify the node network configuration? (y/n) : [y] # Configure the network card parameters and confirm the operation

[2023-02-15 14:16:09] Config node network...

Call: /home/up/updefault/bin/config_cluster_network.sh nodeip ...

The current hostname is [mmc230], the NIC list is:

[1] eth 0

[2] eth 1

Please enter the number of the NIC you need to modify? : [1] 2 # Select the required network interface

Current NIC is eth1: IP: 1.2.2.5 MASK: 255.255.255.0 GATEWAY:

Select the action you want to take:

[1] Configure the NIC // Configure the IP, mask, and default gateway parameters of the network interface

[2] Clear the NIC // Clear the existing IP, mask, and default gateway parameters of the selected network interface

Please enter the number: : [1] # Fill in the target network interface id

Please input the new ip for [eth1] : [1.2.2.5] # Configure ip address (ipaddr_1)

Please input the new mask for [eth1] : [255.255.255.0] # Configuration mask

Please input the new gateway for [eth1]. If you do not want to set this parameter, enter 0.0.0.0 instead : 1.2.2.254 # Configure the default gateway

The current NIC has been modified, do you want to modify the current host continue? (y/n) : [y] **n** #Exit network interface parameter configuration

[2023-02-15 14:17:49] config node network pass.

[2023-02-15 14:17:49] Begin config cluster network...

Please replace node ip(11.6.253.215) to : [11.6.253.215] 1.2.2.5 # Configure the node_ip address of the cluster service (ipaddr_1)

Please input node ip(1.2.2.5) netmask : [22] 24 # Configuration mask (mask corresponding to ipaddr_1)

Please input kubelet dns ip : [10.10.1.30] 1.2.3.254 # Configure DNS

Please input internal LBS service ip : [11.6.253.216] 1.2.2.6 # Configure the service_ip of the cluster service (ipaddr_2)

The manager ip is : 1.2.2.5 //Automatically echo the network management access ip, that is, ipaddr_1 (network management system, cluster node_ip, manager_ip use the same one)

The service ip is : 1.2.2.6 //The automatically echoed network management service ip, namely ipaddr_2

The host [mmc230] network changes as follows:

name old_addr old_gateway old_mask -> new_addr new_gateway new_mask

eth 1 1.2.2.5 1.2.2.254 255.255.255.0 -> 1.2.2.5 1.2.2.254 255.255.255.0

The old network information of the nodes as follows:

Node [1]: ip is 11.6.253.215, mask length is 22, net number is 11.6.252.0

The old management address of the maipu-matrix-center is 11.6.253.215 and the service address is 11.6.253.216

The new network information of the nodes as follows:

Node [1]: ip is 1.2.2.5, mask length is 24, net number is 1.2.2.0, gateway is 1.2.2.254

The new management address of the maipu-matrix-center is 1.2.2.5 and the service address is 1.2.2.6

[2023-02-15 14:18:20] Wait for confirm the config...

....

Please confirm that the configuration is correct. Confirm the change? (y/n) : y # Operation confirmation

[2023-02-15 14:19:17] Start update etcd member...

Member 15de0fda81afc9b5 updated in cluster d62aac7dfe155624

[2023-02-15 14:19:17] Stop node k8s srv...

If you modified the network, whether restart the network service? (y/n) : [y] y # Operation confirmation

[2023-02-15 14:19:34] After restarting the network, please execute the command [upshell config cluster network service]. # Print this line, indicating that the first step is successful

Step 4: Restart the network service

mmc230:~ # **upshell config cluster network service**

Call: /home/up/updefault/bin/config_cluster_network.sh service ...

[2023-02-15 14:19:51] Config service start...

[2023-02-15 14:19:51] Start config cluster network nodesrv...

Call: /home/up/updefault/bin/config_cluster_network.sh nodesrv ...

[2023-02-15 14:19:52] Update kubelet dns...

[2023-02-15 14:19:52] Update kubelet manifest...

[2023-02-15 14:19:52] Update /etc/hosts...

[2023-02-15 14:19:52] Update kuboard nginx server...

[2023-02-15 14:19:53] config cluster network nodesrv pass.

[2023-02-15 14:19:53] Start docker etcd k8s...

[2023-02-15 14:20:11] Start srvmgt service...

* Start 'sshd' service...

Start watchdog for 'sshd'...done

* Start 'mysql' service...

Start watchdog for 'mysql'...done

* Start 'nginx' service...

Start watchdog for 'nginx'...done

* Start 'kuboard' service...

Start watchdog for 'kuboard'...done

[2023-02-15 14:20:24] warn Waiting for kubelet...

. . .

deployment.apps /plat-license scaled

deployment.apps /webapp scaled

[2023-02-15 14:20:38] start cluster service pass.

[2023-02-15 14:20:38] Config ha...

cluster: install-ha slave is empty, work as single node.

cluster: install-ha pass

[2023-02-15 14:20:41] Config service success!!!   # Return "Config service success !!!" to indicate successful startup

mmc230:~#

Step 3: Wait for 5-10 minutes, and use kubectl get pods -A to check whether the network management service is started successfully

mmc230:/home # kubectl get pods -A # Execute kubectl get pods –A to query the service status.

NAMESPACE NAME READY STATUS RESTARTS AGE

kube-system calico-kube-controllers-59cdc5cc59-xtslt 1/1 Running 0 67s

kube-system calico-node-dcwqm 1/1 Running 0 67s

kube-system coredns-7d7668df67-8tktk 1/1 Running 0 67s

kube-system coredns-7d7668df67-vrslv 0/1 Pending 0 67s

kube-system kube-apiserver-mmc230 1/1 Running 0 5s

kube-system kube-controller-manager-mmc230 1/1 Running 0 22s

kube-system kube-proxy-668bv 1/1 Running 0 67s

kube-system kube-scheduler-mmc230 1/1 Running 0 3s

kube-system kubernetes-dashboard-66ff55bf6b-qpt58 1/1 Running 0 67s

maipu-matrix-center-en initjob-nm-core-bfjjg 0/1 Completed 0 11m

maipu-matrix-center-en initjob-plat-core-wczdm 0/1 Completed 0 11m

maipu-matrix-center-en initjob-plat-example-9znzg 0/1 Completed 0 11m

maipu-matrix-center-en initjob-plat-license-b55s6 0/1 Completed 0 11m

maipu-matrix-center-en kafka-0 1/1 Running 0 67s

maipu-matrix-center-en minio-cluster-0 1/1 Running 0 67s

maipu-matrix-center-en nginx-ingress-controller-cbhvg 1/1 Running 0 67s

maipu-matrix-center-en nm-core-55975dc586-s89sd 0/1 Init:1/2 0 67s

maipu-matrix-center-en plat-core-6b5cdbf848-74nss 0/1 Init: 1/2 0 67s

maipu-matrix-center-en plat-license-6f5dcffc5d-5dzfs 0/1 Init:1/2 0 67s

maipu-matrix-center-en redis-cluster-0 1/1 Running 0 67s

maipu-matrix-center-en webapp-d67b5c5f8-zxzzd 1/1 Running 0 67s

maipu-matrix-center-en zk-0 1/1 Running 0 67s

mmc230:/home#

#Check service startup success

(1) In the record line of the service process, the value of the "STATUS" field does not have init ("STATUS" is init, indicating that the process is still being initialized)

(2) In the record line of the service process, the value of the "STATUS" field is "Running", and the value of the "READY" field is "1/1"

If the above 2 points are met, web access can be performed.

The correct one is as follows:

```
mmc230:/home # kubectl get pods -A

NAMESPACE NAME READY STATUS RESTARTS AGE

kube-system calico-kube-controllers-59cdc5cc59-xtslt 1/1 Running 0 4m10s

kube-system calico-node-dcwqm 1/1 Running 0 4m10s

kube-system coredns-7d7668df67-8tktk 1/1 Running 0 4m10s

kube-system coredns-7d7668df67-vrslv 0/1 Pending 0 4m10s

kube-system kube-apiserver-mmc230 1/1 Running 0 3m8s

kube-system kube-controller-manager-mmc230 1/1 Running 0 3m25s

kube-system kube-proxy-668bv 1/1 Running 0 4m10s

kube-system kube-scheduler-mmc230 1/1 Running 0 3m6s

kube-system kubernetes-dashboard-66ff55bf6b-qpt58 1/1 Running 0 4m10s

maipu-matrix-center-en initjob-nm-core-bfjjg 0/1 Completed 0 14m

maipu-matrix-center-en initjob-plat-core-wczdm 0/1 Completed 0 14m

maipu-matrix-center-en initjob-plat-example-9znzg 0/1 Completed 0 14m

maipu-matrix-center-en initjob-plat-license-b55s6 0/1 Completed 0 14m

maipu-matrix-center-en kafka-0 1/1 Running 0 4m10s

maipu-matrix-center-en minio-cluster-0 1/1 Running 0 4m10s

maipu-matrix-center-en nginx-ingress-controller-cbhvg 1/1 Running 0 4m10s

maipu-matrix-center-en nm-core-55975dc586-s89sd 1/1 Running 0 4m10s

maipu-matrix-center-en plat-core-6b5cdbf848-74nss 1/1 Running 0 4m10s

maipu-matrix-center-en plat-license-6f5dcffc5d-5dzfs 1/1 Running 0 4m10s

maipu-matrix-center-en redis-cluster-0 1/1 Running 0 4m10s

maipu-matrix-center-en webapp-d67b5c5f8-zxzzd 1/1 Running 0 4m10s

maipu-matrix-center-en zk-0 1/1 Running 0 4m10s

mmc230:/home#
```

3.4 After Maipu Matrix Center System Is Successfully Deployed, the Server Time Rolls Back?

Question: When the CentOS operating system is installed, the server time/time zone is configured incorrectly. After reconfiguring the time zone, the server time needs to be rolled back (that is, adjusted to the historical time).

Answer: It is not recommended to do this. The server time rollback may cause the license authorization to become invalid. Therefore, when installing for the first time, you need to configure the host NTP Server and other information in advance.

3.5 After Maipu Matrix Center System Is Successfully Deployed, how to Configure NTP Synchronization?

Answer: Under special circumstances, the system time of the host computer where Maipu Matrix Center is located must be modified. The operation steps are as follows

Step 1: Confirm whether the system time zone of the host is correct, such as East Eighth District

```
mmc230:~# date -R
```

Sat, 18 Feb 2023 17:56:28 **+0800**

```
mmc230:~#
```

Step 2: Use the upshell command set to manually modify the system time

```
mmc230:~ # upshell config cluster time # Modify the time directly on the linux host, MMC
cannot perceive it, you need to use this command to modify the time

* Do you want to modify time?[ y|n] [n]: y #Confirm the modification operation

node:11.6.253.105

namespace:kube -system maipu-matrix-center

* Please enter the modification time, format[Ymd h:m:s]: yyyy-mm-dd hh:mm:ss # Required
time

* Remote exec cmd 11.6.253.105: '/home/up/updefault/bin/change_node_date.sh --stop-service'

-> stop service kubelet

-> stop service etcd

-> stop service docker

. . .

pod "calico-kube-controllers-59cdc5cc59-96vlc" force deleted

pod "calico-node-w25h6" force deleted

pod "coredns-74ff55c5b-rbm82" force deleted

pod "coredns-7d7668df67-fn7vp" force deleted

pod "coredns-7d7668df67-pr8fj" force deleted

pod "kube-apiserver-mmc230" force deleted

pod "kube-controller-manager-mmc230" force deleted

pod "kube-proxy-bfqjk" force deleted

pod "kube-scheduler-mmc230" force deleted

. . .

pod "kafka-0" force deleted

pod "minio-cluster-0" force deleted

pod "nginx-ingress-controller-fd2vp" force deleted

pod "nm-core-66d95c9f5-92b6n" force deleted

pod "plat-core-58fb8789b5-9dh64" force deleted

pod "plat-license-74fdb4ccb8-4qj6g" force deleted

pod "redis-cluster-0" force deleted

pod "webapp-7ff8fc8698-kctnf" force deleted

pod "zk-0" force deleted

* Finish. #Print this message to indicate the operation is successful

mmc230:~#
```

Wait for 5 to 10 minutes, and use **kubectl get pods -A** to check whether the network management service is started successfully

```
mmc230:/home # kubectl get pods -A # Execute kubectl get pods -A to query the service
status.

NAMESPACE NAME READY STATUS RESTARTS AGE

kube-system calico-kube-controllers-59cdc5cc59-xtslt 1/1 Running 0 67s

kube-system calico-node-dcwqm 1/1 Running 0 67s

kube-system coredns-7d7668df67-8tktk 1/1 Running 0 67s

kube-system coredns-7d7668df67-vrslv 0/1 Pending 0 67s

kube-system kube-apiserver-mmc230 1/1 Running 0 5s

kube-system kube-controller-manager-mmc230 1/1 Running 0 22s

kube-system kube-proxy-668bv 1/1 Running 0 67s

kube-system kube-scheduler-mmc230 1/1 Running 0 3s

kube-system kubernetes-dashboard-66ff55bf6b-qpt58 1/1 Running 0 67s
```

```
maipu-matrix-center-en initjob-nm-core-bfjjg 0/1 Completed 0 11m

maipu-matrix-center-en initjob-plat-core-wczdm 0/1 Completed 0 11m

maipu-matrix-center-en initjob-plat-example-9znzg 0/1 Completed 0 11m

maipu-matrix-center-en initjob-plat-license-b55s6 0/1 Completed 0 11m

maipu-matrix-center-en kafka-0 1/1 Running 0 67s

maipu-matrix-center-en minio-cluster-0 1/1 Running 0 67s

maipu-matrix-center-en nginx-ingress-controller-cbhvg 1/1 Running 0 67s

maipu-matrix-center-en nm-core-55975dc586-s89sd 0/1 Init:1/2 0 67s

maipu-matrix-center-en plat-core-6b5cdbf848-74nss 0/1 Init: 1/2 0 67s

maipu-matrix-center-en plat-license-6f5dcffc5d-5dzfs 0/1 Init:1/2 0 67s

maipu-matrix-center-en redis-cluster-0 1/1 Running 0 67s

maipu-matrix-center-en webapp-d67b5c5f8-zxzzd 1/1 Running 0 67s

maipu-matrix-center-en zk-0 1/1 Running 0 67s

mmc230:/home#
```

#Check the service startup success

(1) In the record line of the service process, the value of the "STATUS" field does not have init ("STATUS" is init, indicating that the process is still being initialized)

(2) In the record line of the service process, the value of the "STATUS" field is "Running", and the value of the "READY" field is "1/1"

If the above 2 points are met, web access can be performed.

The correct one is as follows:

```
mmc230:/home # kubectl get pods -A

NAMESPACE NAME READY STATUS RESTARTS AGE

kube-system calico-kube-controllers-59cdc5cc59-xtslt 1/1 Running 0 4m45s

kube-system calico-node-dcwqm 1/1 Running 0 4m45s

kube-system coredns-7d7668df67-8tktk 1/1 Running 0 4m45s

kube-system coredns-7d7668df67-vrslv 0/1 Pending 0 4m45s

kube-system kube-apiserver-mmc230 1/1 Running 0 3m43s

kube-system kube-controller-manager-mmc230 1/1 Running 0 4m

kube-system kube-proxy-668bv 1/1 Running 0 4m45s

kube-system kube-scheduler-mmc230 1/1 Running 0 3m41s

kube-system kubernetes-dashboard-66ff55bf6b-qpt58 1/1 Running 0 4m45s

maipu-matrix-center-en initjob-nm-core-bfjjg 0/1 Completed 0 15m

maipu-matrix-center-en initjob-plat-core-wczdm 0/1 Completed 0 15m

maipu-matrix-center-en initjob-plat-example-9znzg 0/1 Completed 0 14m

maipu-matrix-center-en initjob-plat-license-b55s6 0/1 Completed 0 14m

maipu-matrix-center-en kafka-0 1/1 Running 0 4m45s

maipu-matrix-center-en minio-cluster-0 1/1 Running 0 4m45s

maipu-matrix-center-en nginx-ingress-controller-cbhvg 1/1 Running 0 4m45s

maipu-matrix-center-en nm-core-55975dc586-s89sd 1/1 Running 0 4m45s

maipu-matrix-center-en plat-core-6b5cdbf848-74nss 1/1 Running 0 4m45s

maipu-matrix-center-en plat-license-6f5dcffc5d-5dzfs 1/1 Running 0 4m45s

maipu-matrix-center-en redis-cluster-0 1/1 Running 0 4m45s

maipu-matrix-center-en webapp-d67b5c5f8-zxzzd 1/1 Running 0 4m45s

maipu-matrix-center-en zk-0 1/1 Running 0 4m45s

mmc230:/home#
```

Step 3: Configure ntp clock synchronization (optional, if there is no ntp clock server, this step is

omitted)

mmc230:~ # upshell config chrony config client 11.6.70.1 #11.6.70.1 is the clock server address of the ntp server

mmc230:~#

Precautions:

- To configure the ntp server, it is necessary to ensure that the time difference between the host where the Maipu Matrix Center is located and the ntp server does not exceed 5 minutes.
- If the two exceed the time span of 5 minutes, the second step must be executed, and then the third step

3.6 After Maipu Matrix Center System Is Successfully Deployed, the Password of the Root Account Is Changed?

Answer: Support. To change the password of the root account of a Linux host, the example is as follows:

```
mmc230:/home#passwd
New password:
BAD PASSWORD: it is WAY too short
BAD PASSWORD: is too simple
Retype new password:
passwd: password updated successfully

mmc230:/home#
```

3.7 Maipu Matrix Center Background linux Cannot Upload Files Remotely?

Answer: It is recommended to use CRT8.5 or above client version. If the CRT client version is too low, temporarily close the sshd service of the linux host, and then open it after the file transfer is completed (it may be used for background log collection), as follows

Close sshd service

```
mmc230:/home # upshell srvmgt stop sshd

* Stop 'sshd' service...

Stop watchdog for 'sshd'...done

mmc230:/home#
```

Start the sshd service

```
mmc230:/home # upshell srvmgt start sshd

* Start 'sshd' service...

Start watchdog for 'sshd'...done

mmc230:/home#
```

Query the current status of sshd (running means it is on, stopped means it is off)

```
mmc230:/home # upshell srvmgt status sshd

service sshd is running

mmc230:/home#
```

3.8 When Maipu Matrix Center Accesses, Is the url Link Illegal/Untrustworthy?

Q: Why does the browser display that the system url access link address is illegal/untrustworthy? The phenomenon is as follows:
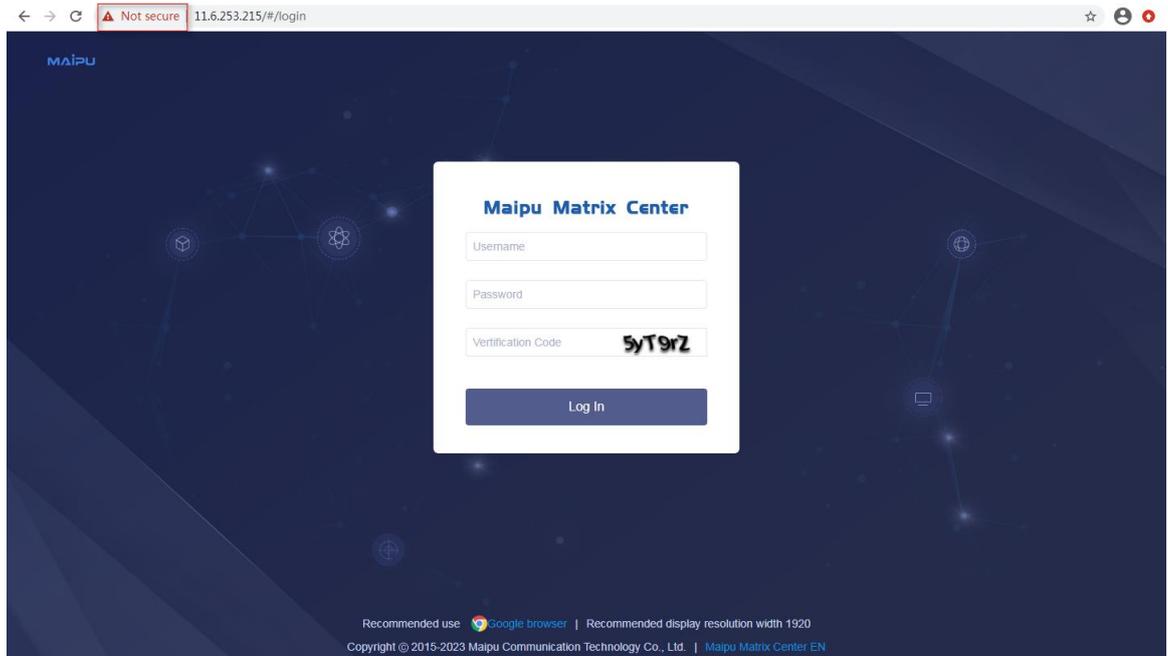
Answer: Since the Maipu Matrix Center system is accessed by https, Maipu Matrix Center system has a built-in self-signed https certificate by default. After purchasing an official and trusted https certificate and importing it into the system, the url access address link will display legal and credible.

3.9 When Maipu Matrix Center Is Installed for the First Time, failed to Unpack?

Q: sh Maipu-Matrix-Center-EN-SUSE-x86-suse-12-V002R003C00B *** .sh install returns " extract failed "

```
mmc230:/home # sh Maipu-Matrix-Center-EN-SUSE-x86-suse-12-V002R003C00B *** .sh install
Creating directory /tmp/selfgz1105526796
[basicscene] Verifying archive integrity...
All good.
[basicscene] Uncompressing basicscene V002R003C00B089 installer
- Done
Input setup dest path: [/home/up/up]
[basicscene] DO CBK preinstall

[basicscene] level=[INFO] Extract pkg 0 . /pkgs/Maipu-Matrix-Center-Kuboard-EN-V006R002C *** .sh
/ Failed!
[basicscene] level=[INFO] ERROR: extract failed
removed '/tmp/PKG___GLOBAL__.lock'
mmc230:/home#
```

Answer:

Step 1: Confirm the completeness of the uploaded package and perform the following checks

```
mmc230:/home # sh Maipu-Matrix-Center-EN-SUSE-x86-suse-12-V002R003C00B *** .sh --check
```

```
[basicscene] Verifying archive integrity...
[ basicscene ] MD 5 checksums are OK.
All good. # Return "All good.", indicating that the upload package is complete and there is no problem
mmc230:/home#
```

Step 2: Confirm the available space of the /tmp directory

```
mmc230:/home # df -h /tmp
Filesystem Size Used Avail Use% Mounted on
/dev/sda2 9.4G 512K 9.4G 1% /tmp
mmc230:/home#
```

Step 3: The /tmp directory is smaller than 20GB and needs to be expanded

(1) Solution 1: Manually mount a disk larger than 20GB to the /tmp directory

How to mount a new disk to the /tmp directory, this document will not introduce it, and it is omitted here

(2) Solution 2: Specify the decompression path to another directory with sufficient space

Example

(1) Find a directory with sufficient space

```
mmc230:/home # df -h /home/#View the available space in the /home directory, the available space is sufficient
Filesystem Size Used Avail Use% Mounted on
/dev/mapper/klas- root 239G 33G 206G 14% /
mmc230:/home#
```

(2) In this directory, create a folder, such as /tmp_test

```
mmc230:/home # mkdir tmp_test
mmc230:/home#ll
. . .
drwxr-xr-x 2 root root 6 Feb 20 19:13 tmp_test
. . .
mmc230:/home#
```

(3) When installing, just point the pressurized directory to this folder (the detailed installation process is similar to chapter 1.2.5.2)

```
mmc230:/home # sh Maipu-Matrix-Center-EN-SUSE-x86-suse-12-V002R003C00B *** .sh -t
/home/tmp_test/ install
. . .
Creating directory /home/tmp_test//selfgz1206226255
[basicscene] Verifying archive integrity...
All good.
[basicscene] Uncompressing basicscene V002R003C00B089 installer
- Done
Input setup dest path: [/home/up/up] # Software installation location, if no modification is required, press Enter by
```
default

[basicscene] DO CBK preinstall

[basicscene] level=[INFO] Extract pkg 0 . /pkgs/Maipu-Matrix-Center-Kuboard-EN-V006R002C *** .sh
/ Done
[basicscene] level=[INFO] Call scene ./_callbackscript/cbkscene.sh ()
--- ------------------------------
Setup for Maipu-Matrix-Center
--- ------------------------------
The setup program will install files, strongly recommend that you backup data!!!
Confirm install [y/n]? : [y] # Confirm the installation operation, press the enter key to return
[basicscene] DO CBK install
. . .
[basicscene] INFO all packages has been installed successfully! # Return "installed successfully!" means the installation is
successful
removed '/tmp/PKG___GLOBAL__.lock'
mmc230:/home#

4 Description of Common Commands

4.1 upshell Command Set

Shell Command	Usage
upshell srvmgt init [srvname]	init or re-config config
upshell srvmgt start [srvname]	start all services or one
upshell srvmgt stop [srvname]	stop all services or one
upshell srvmgt restart [srvname]	restart all services or one
upshell srvmgt status [srvname]	show status of all services or one
upshell srvmgt kill [srvname]	force termination of all services or one
upshell srvmgt list	show all available services
upshell srvmgt health	show health of all services
upshell cluster start	start cluster services
upshell cluster stop	stop cluster services
upshell cluster health	show health of cluster services
upshell srvmgt deploy	kuboard add node and install cluster
upshell srvmgt uninstall	uninstall cluster,node,kuboard
upshell srvmgt updbpass	modify password for db
upshell config syslogd	config syslog port
upshell config trapd	config trap port
upshell config cluster time	Modify cluster time
upshell config cluster network backup	Modify cluster network backup config
upshell config cluster network restore	Modify cluster network restore config
upshell config cluster network service	Modify cluster network service
upshell config cluster network node	Modify cluster network node
upshell config chrony	Config chrony server
upshell config scrict-mode	Open or close the scrict mode
upshell show syslogd	Query the syslog port

upshell show trap	Query the trap port
upshell mpha takeover	takeover all services
upshell upha standby	standby all services
upshell db sync init	sync init ha
upshell db sync frompeer	sync data from peer
upshell show cluster version	view then cluster version information
upshell help	show this messages
upsetup show	show version(Maipu Matrix Center) #Note to query the currently installed version [you need to bring the version number when reporting problems]

4.2 kubectl Command Set

Shell Command	Usage
kubectl get pods -A	Query the current running status of the service
kubectl delete pod -n maipu-matrix-center -en plat-core- ***	Delete a pod and let it restart once
kubectl edit -n maipu-matrix-center -en cm plat-core	Modify the debug log printing level of plat-core
kubectl edit -n maipu-matrix-center -en cm nm -core	Modify the debug log printing level of nm-core
kubectl edit -n maipu-matrix-center -en cm plat- license	Modify the debug log printing level of plat-license

Appendix 1 SUSE12 SP5 System Installation Guide

The currently recommended operating system for Maipu Matrix Center 2.3.0 is SUSE Linux Enterprise Server 12 SP5 (x86_64)

Operating System	Version No.	Kernel
SUSE	SUSE Linux Enterprise Server 12 SP5	Linux nettime 4.12.14-120-default

Step 1: Select "Installation"
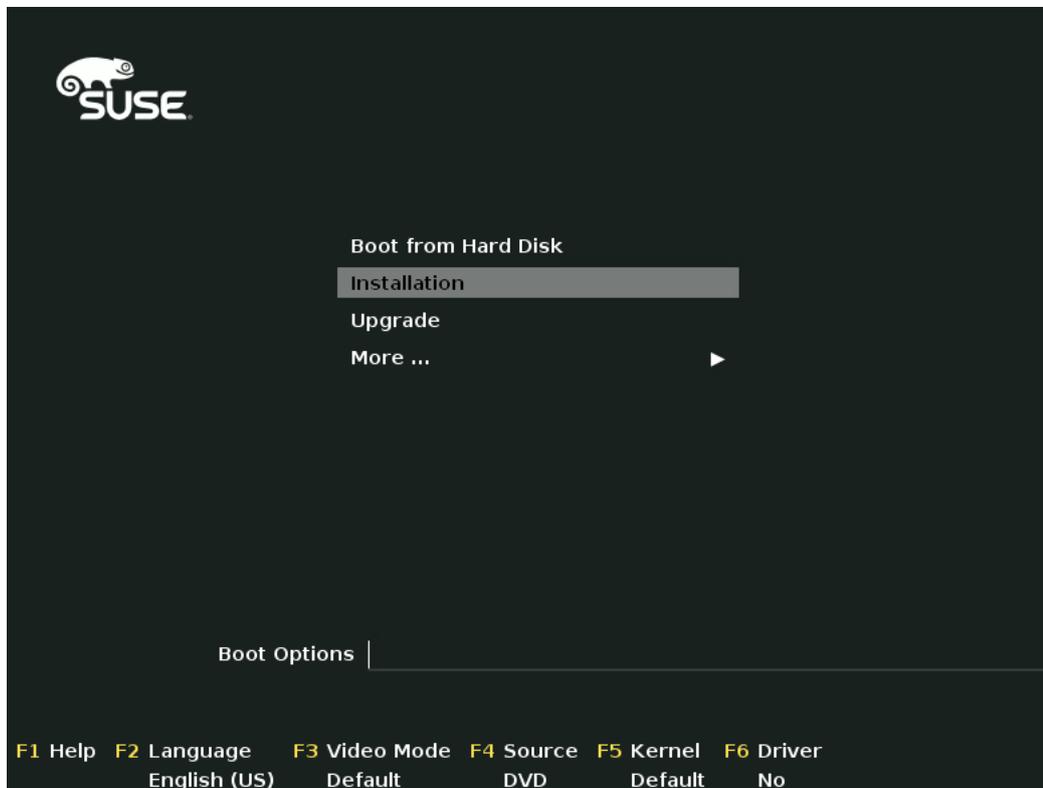
Step 2: Language configuration, the recommended language is English
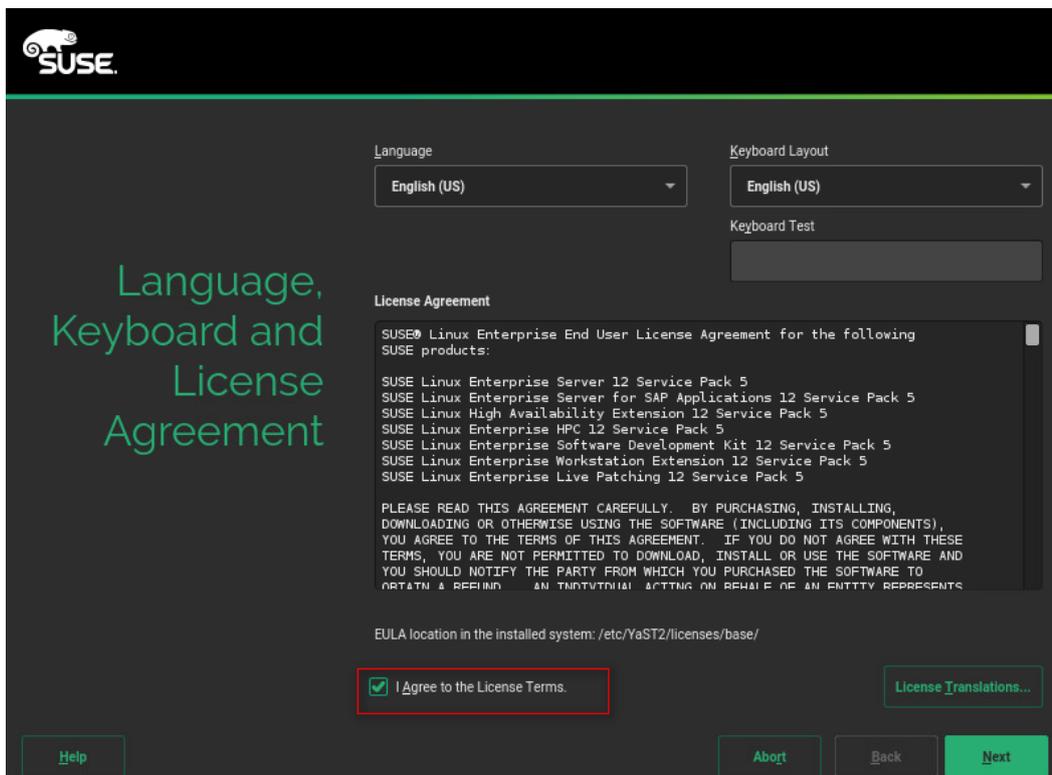
Step 3: "Network Settings" network parameter configuration

Note: Select the actual network interface, configure a static IP address, DNS, and default route for the interface
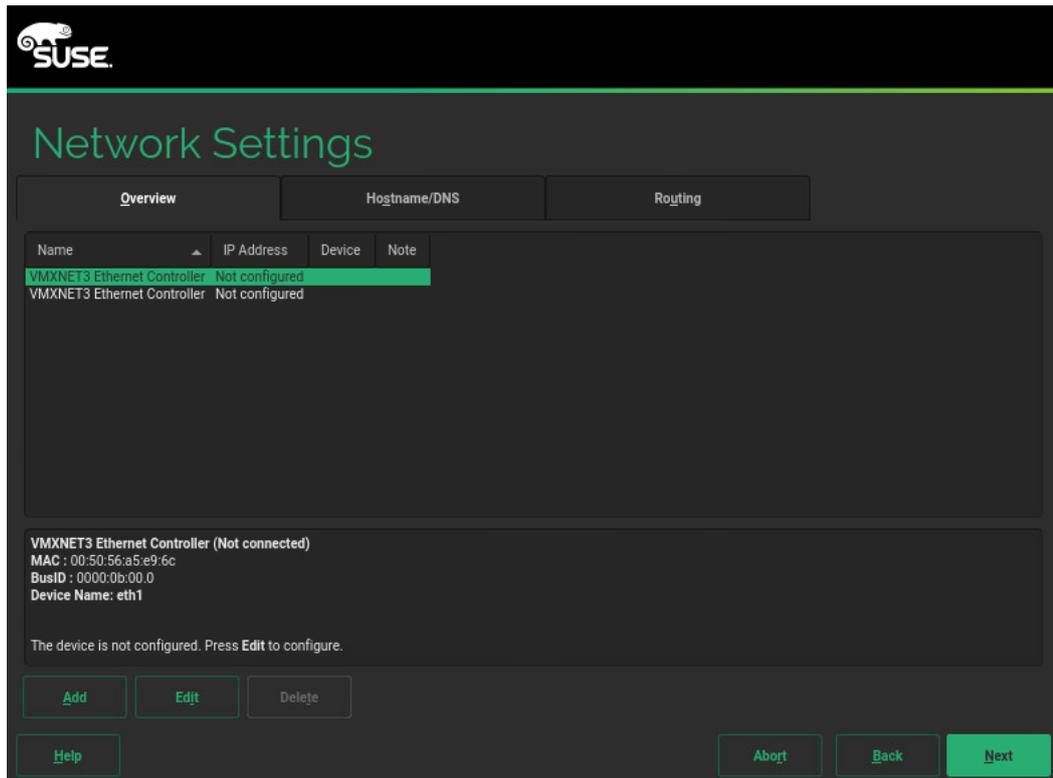
Select the network interface:
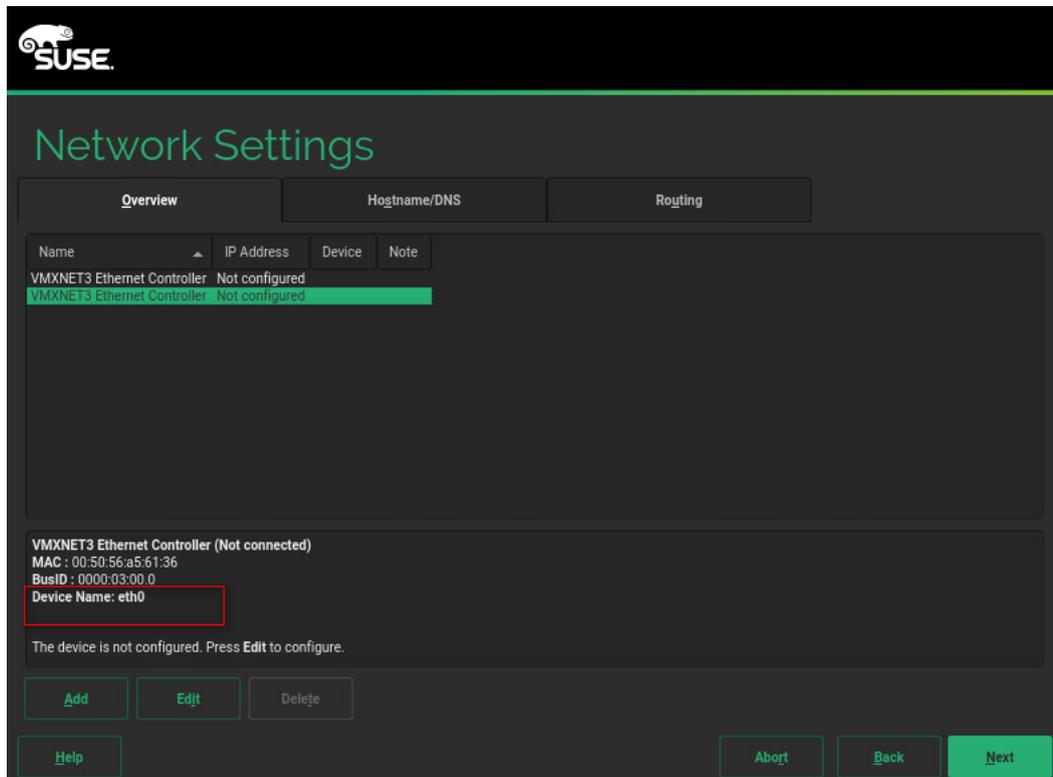
IP address configuration
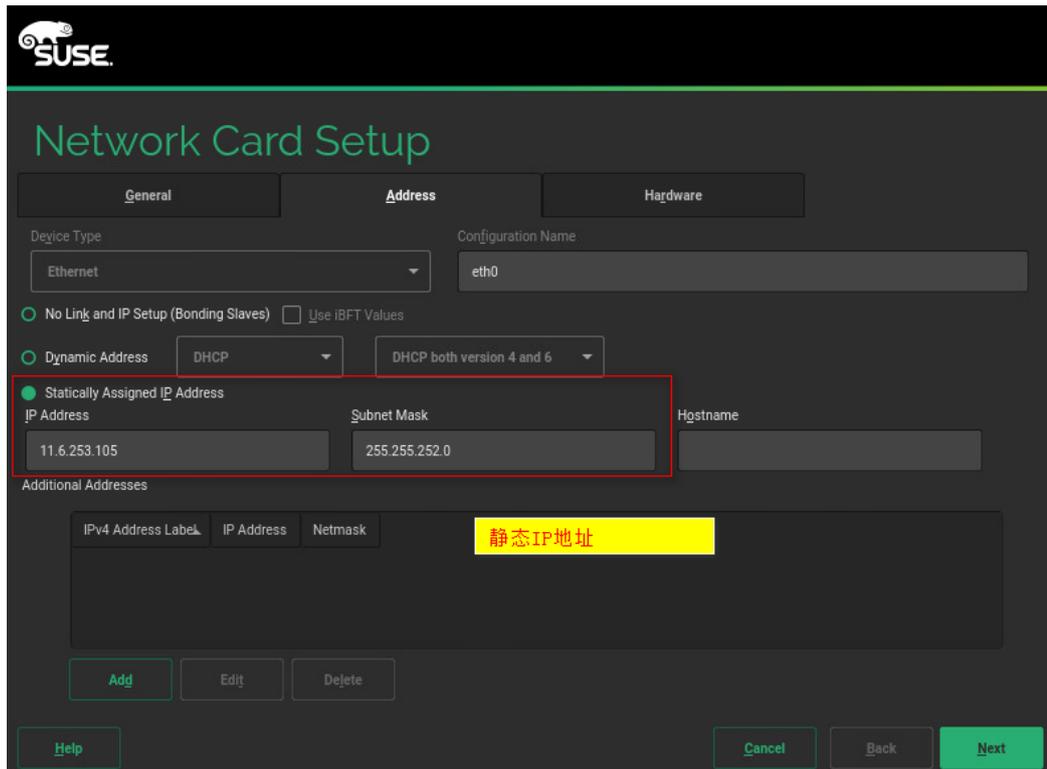
DNS configuration
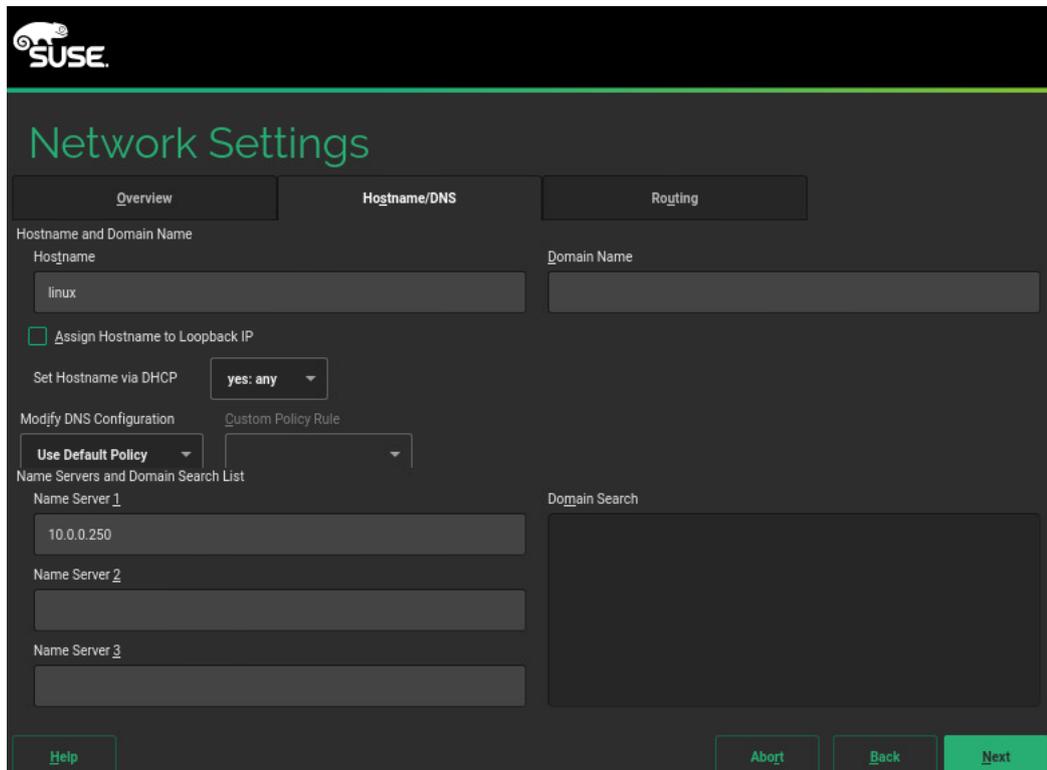
Default gateway
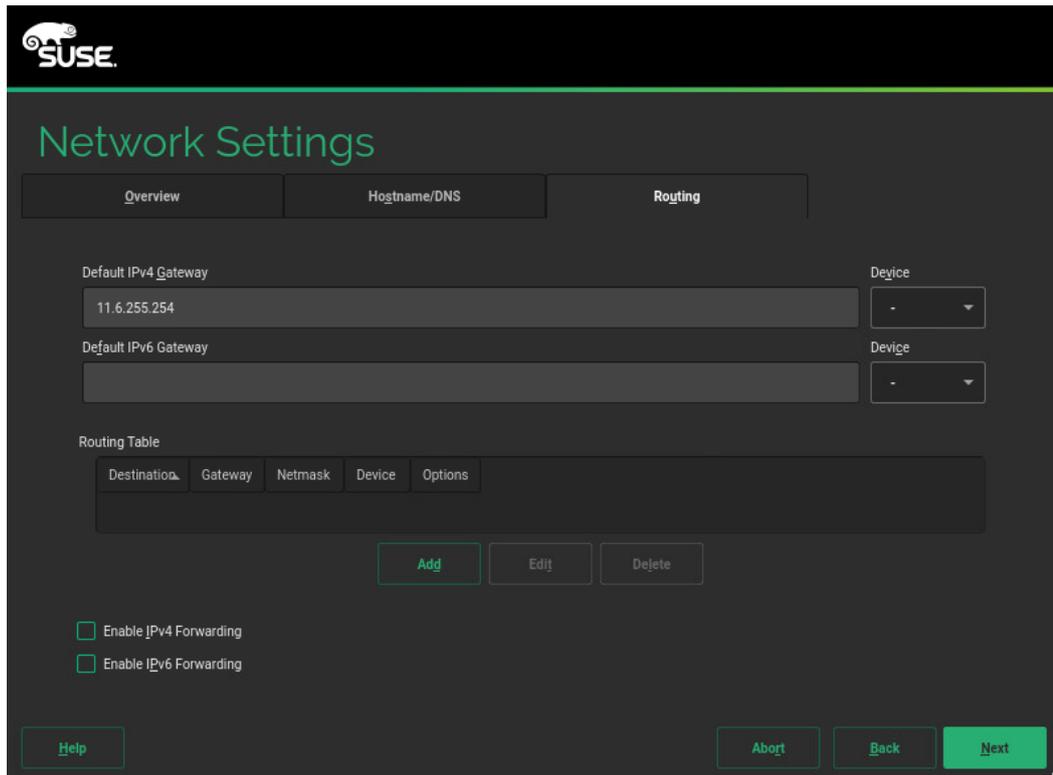
Step 4: "Registration" system registration (configure according to the actual situation, you can skip it)

Note: If you choose to skip, there will be a message prompting "Warning: If you do not register your system, we will not be able to grant access to the update repository.", and click OK.
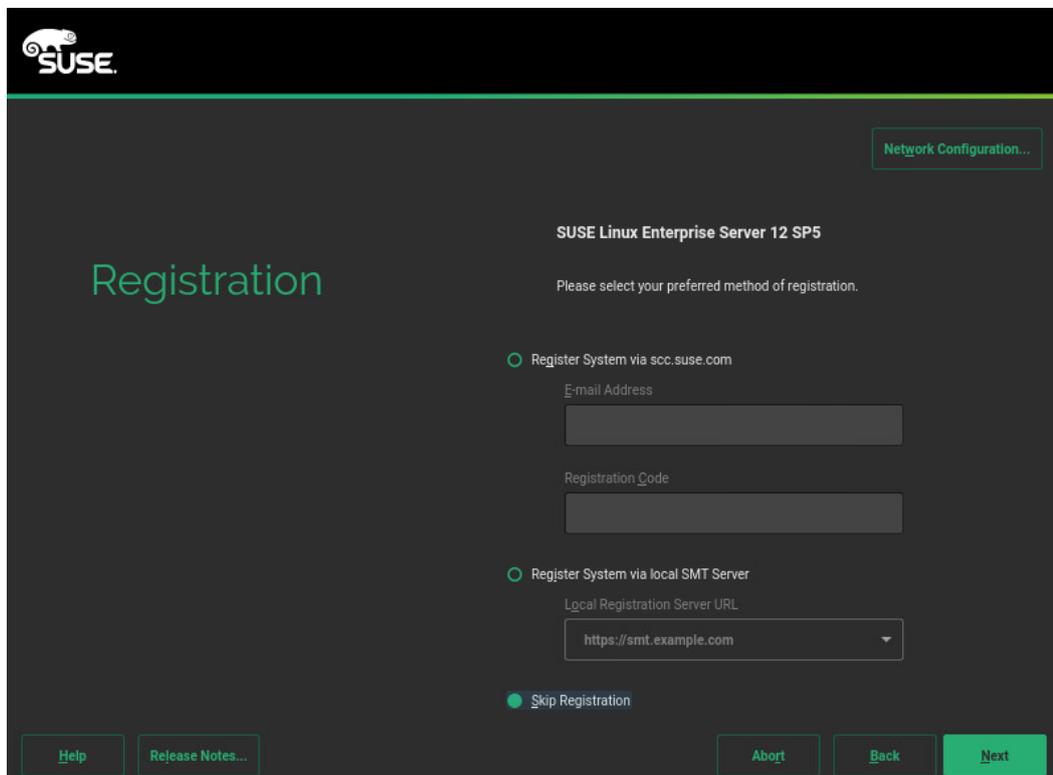
Step 5: "Add On Product" configuration (optional, just execute the next step)
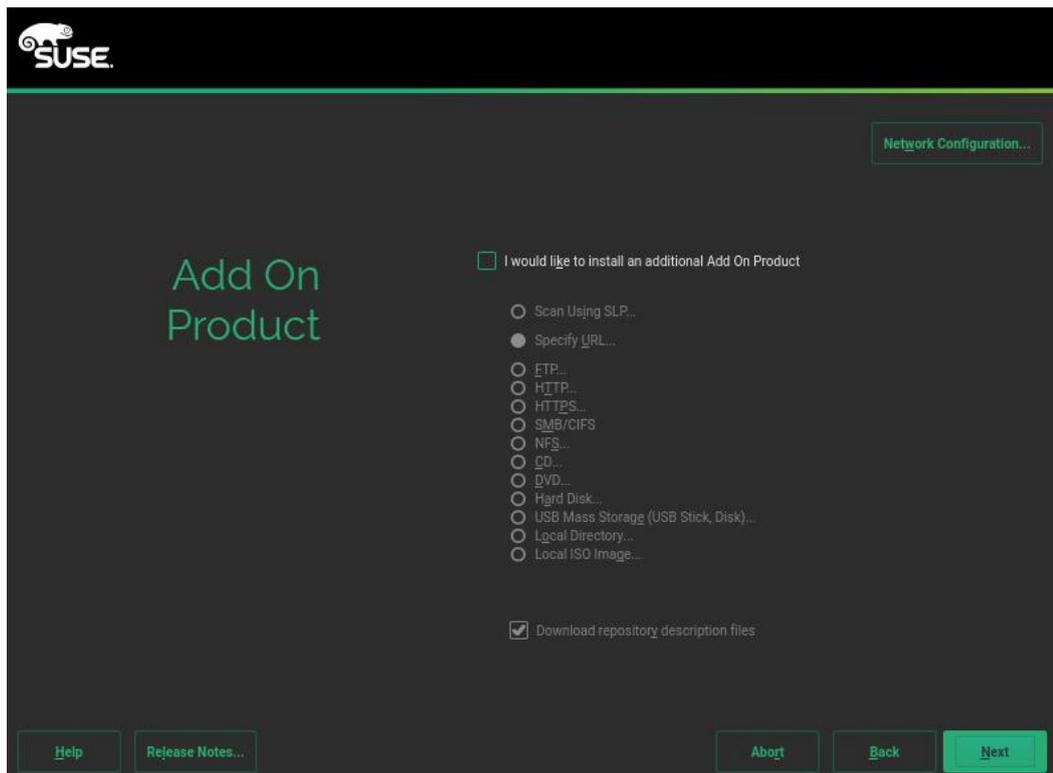
Step 6: Select "System Role", default (Default System)

- default system
  - ✓ GNOME environment, including a btrfs root partition (/)
  - ✓ Separate/home partition (XFS) for disks larger than 20GB
- KVM virtualization host
  - ✓ Kernel-based hypervisors and tools
  - ✓ no separate /home partition
- Xen virtualization host
  - ✓ Bare Metal Hypervisors and Tools
  - ✓ no separate /home partition
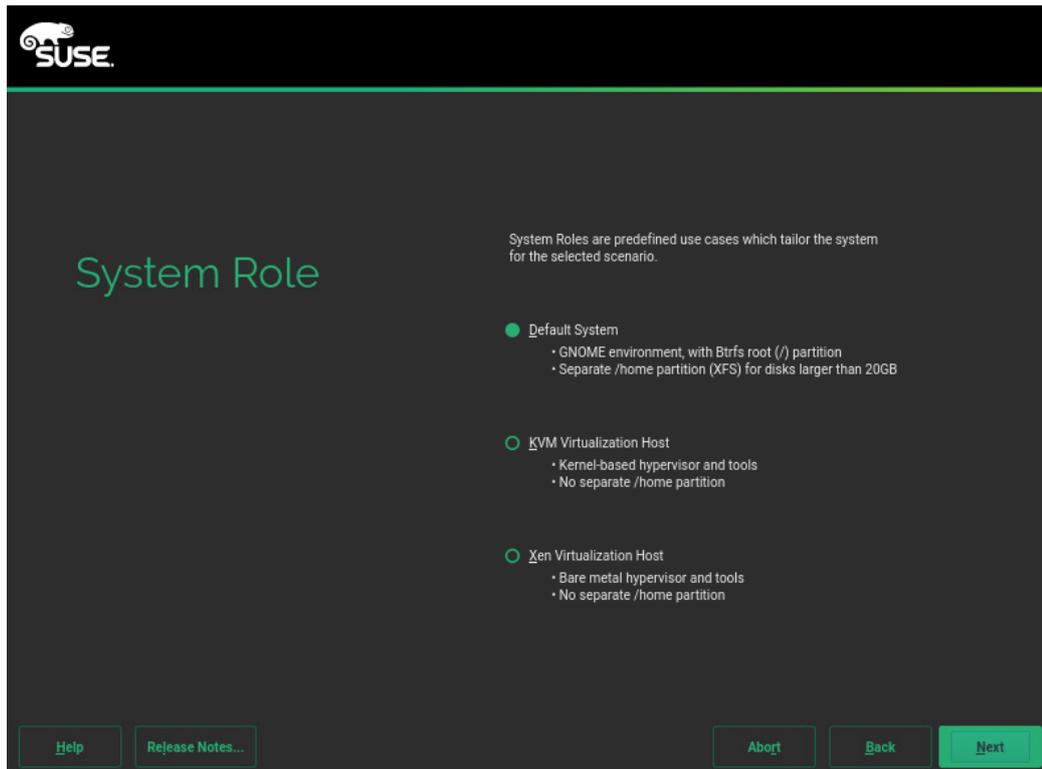
Step 7: "Suggested Partitioning" configuration
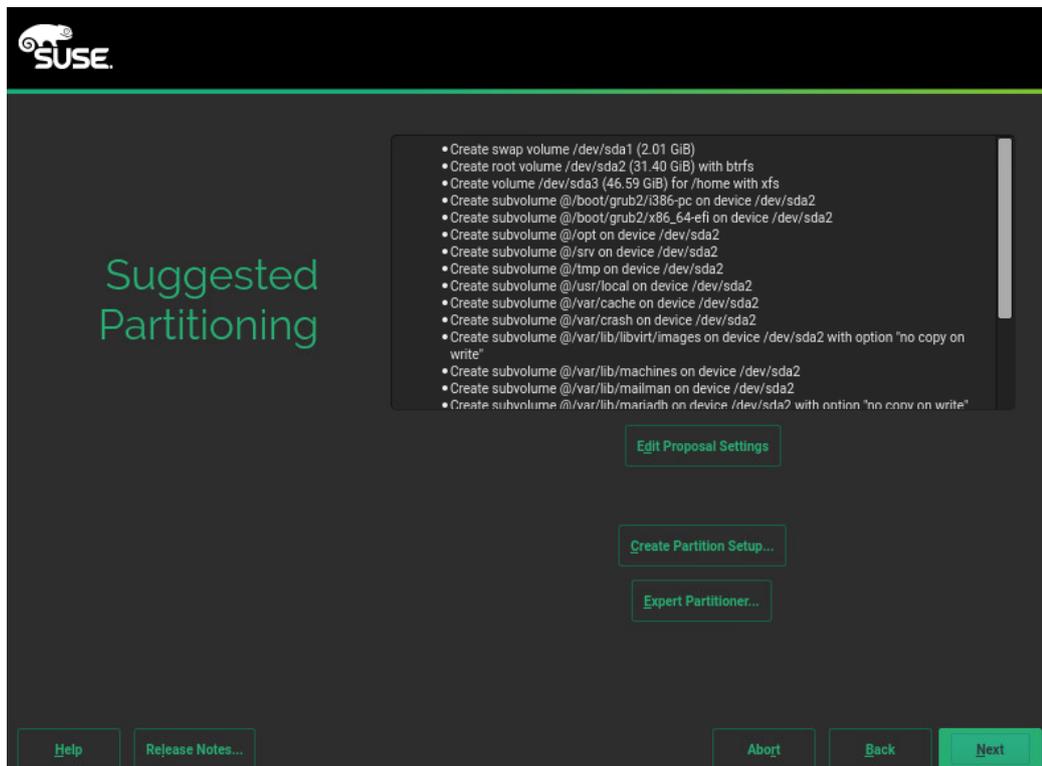
Step 8: "Clock and Time Zone" configuration

Note: The steps of configuring the time and time zone are very important. After the MMC (Maipu Matrix Center) is successfully deployed, it is recommended not to modify the time and time zone. After the system is deployed, modifying the time and time zone may invalidate the license authorization information imported into MMC.

Default time/time zone
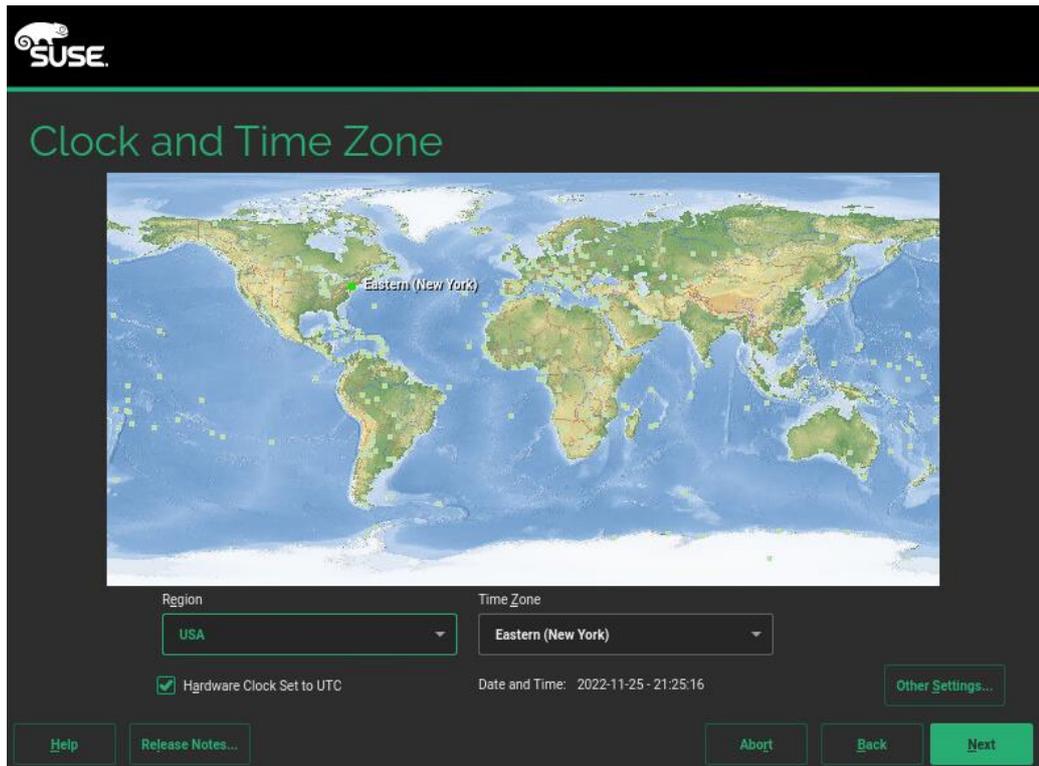
Change to Beijing time

Step 9: Add "Local User" account, it is not necessary to configure, execute next
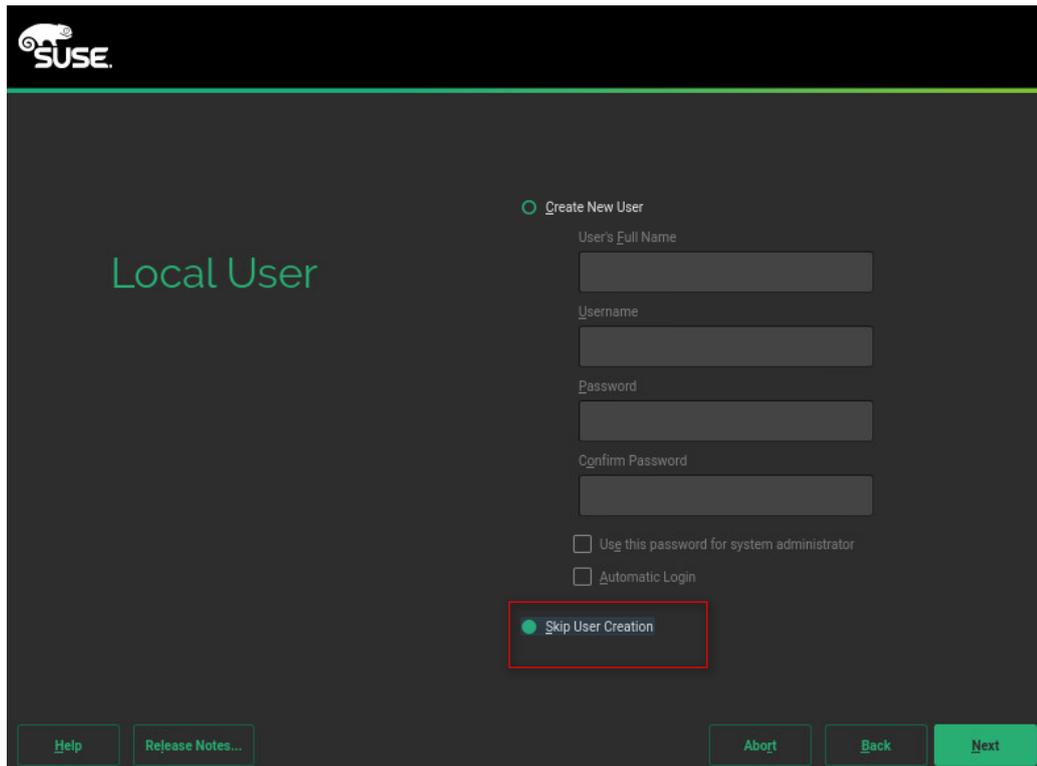
Step 10: "Password for the System Administrator "root" ", configuration of root password
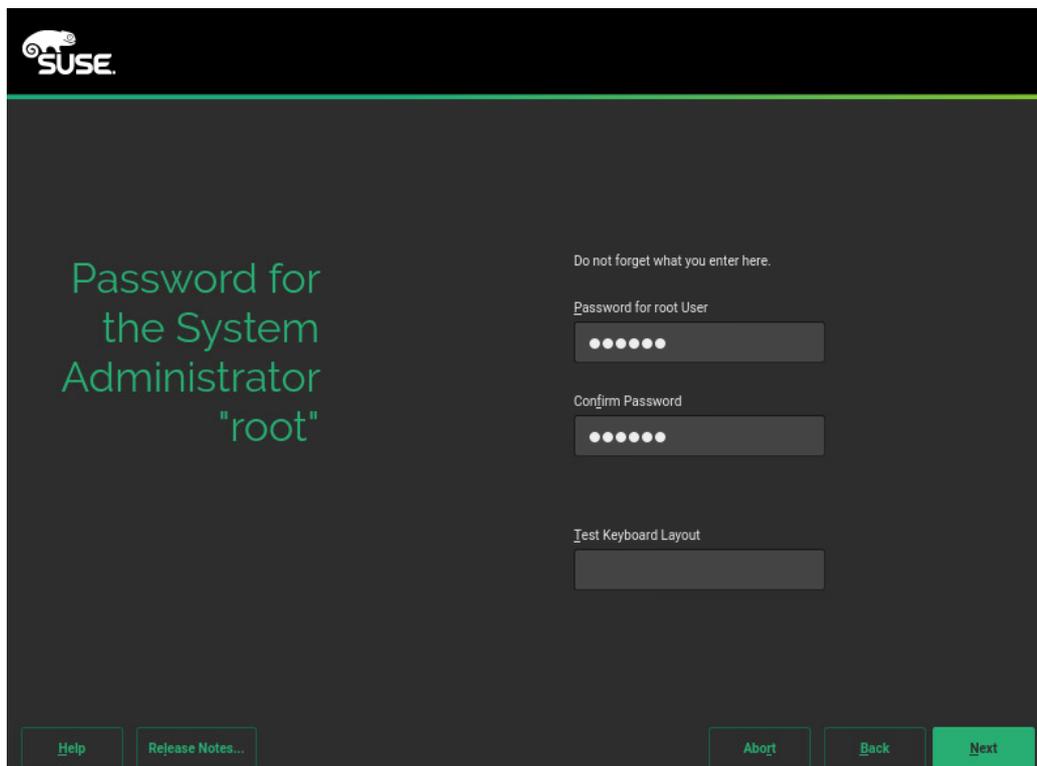
Step 11: Execute the installation "Installation Settings"
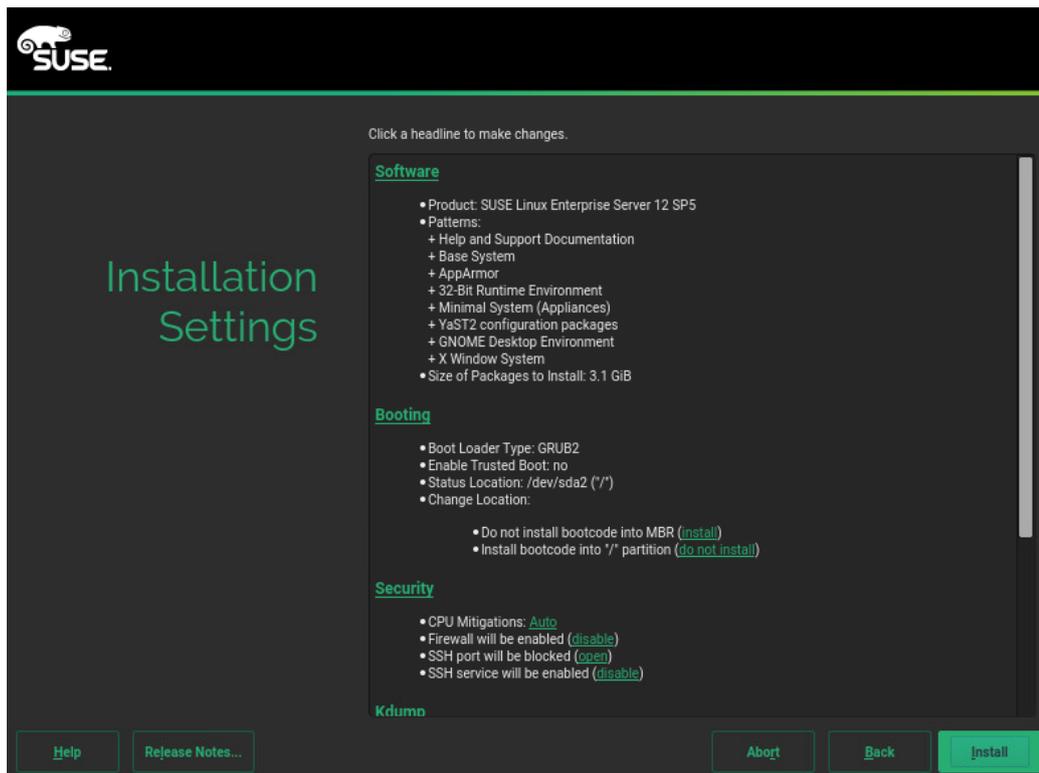
Step 12: Click "Install" to confirm the installation operation and enter the installation process
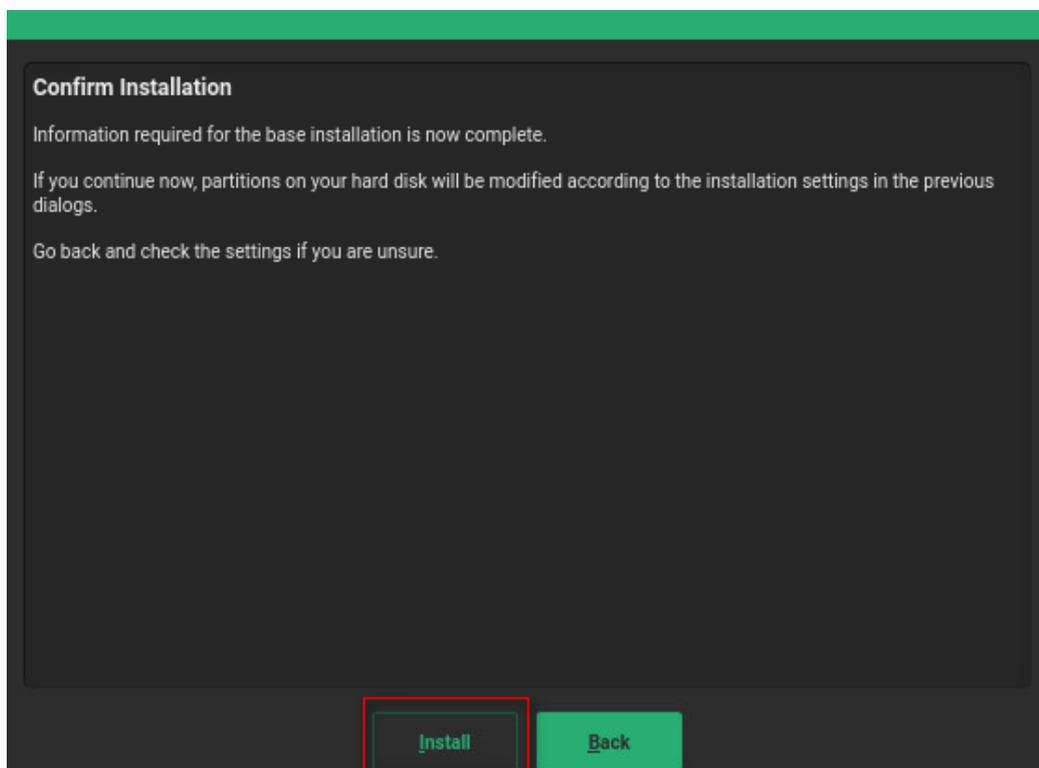
Step 13: Wait for the installation to complete
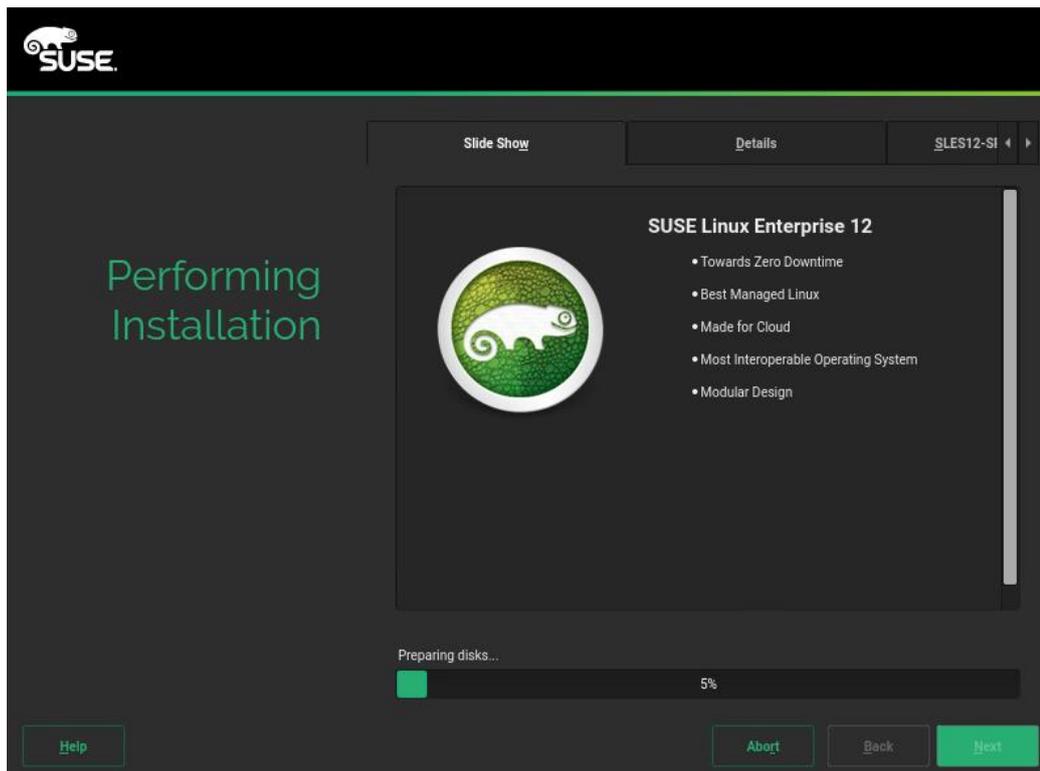
Step 14: After the installation is complete, it will restart automatically, and the interface after restart is as follows
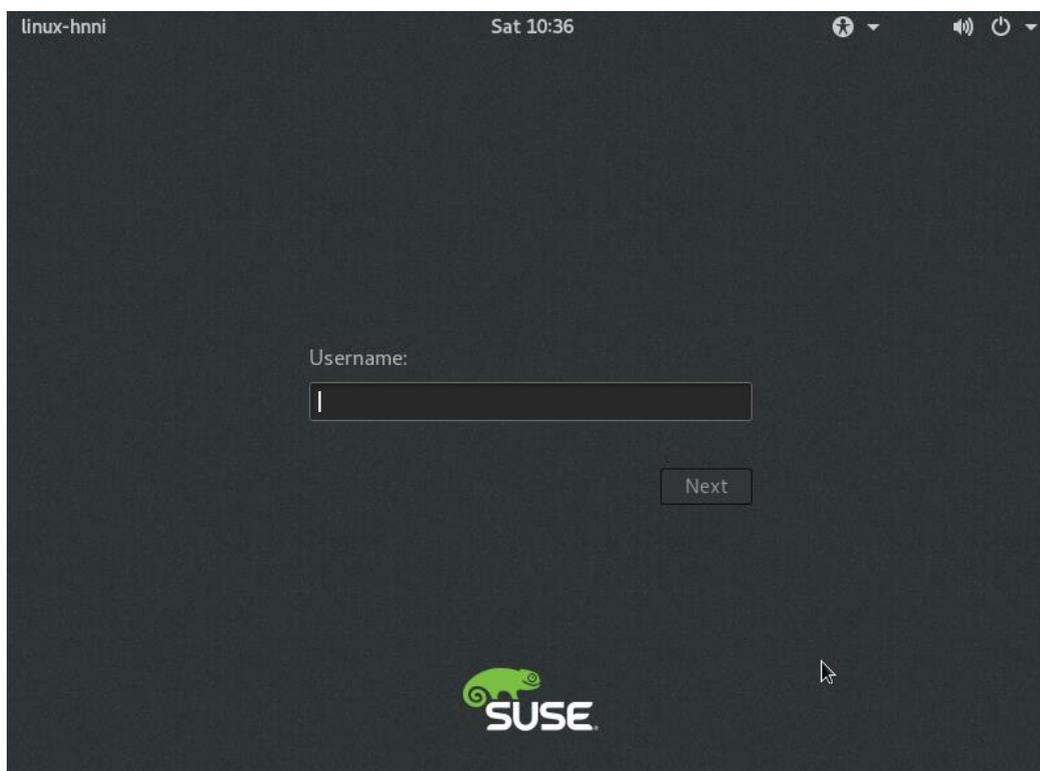
Step 15: Enter the root account and password, log in to the system successfully, and the operation ends.
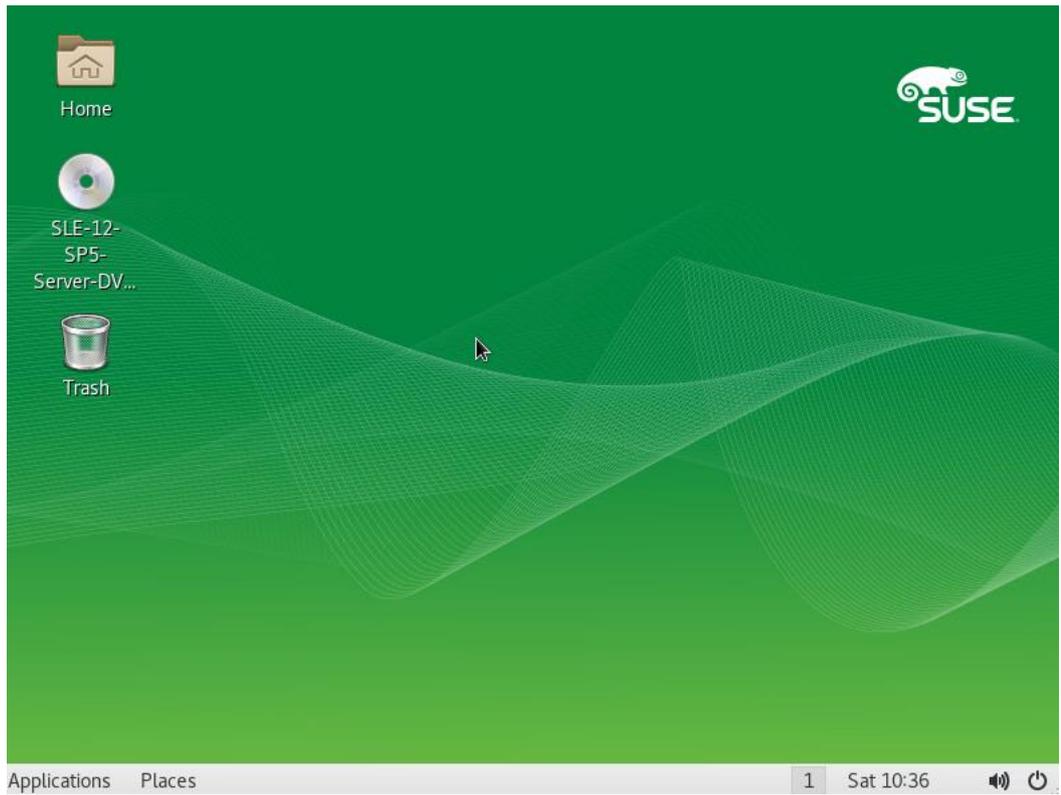
Appendix 2 SUSE12 SP5 Mirror Package Download

The official website download link is as follows

SLE-12-SP5-Server-DVD-x86_64-GM-DVD1.iso (package size: 4,098,883,584 bytes)