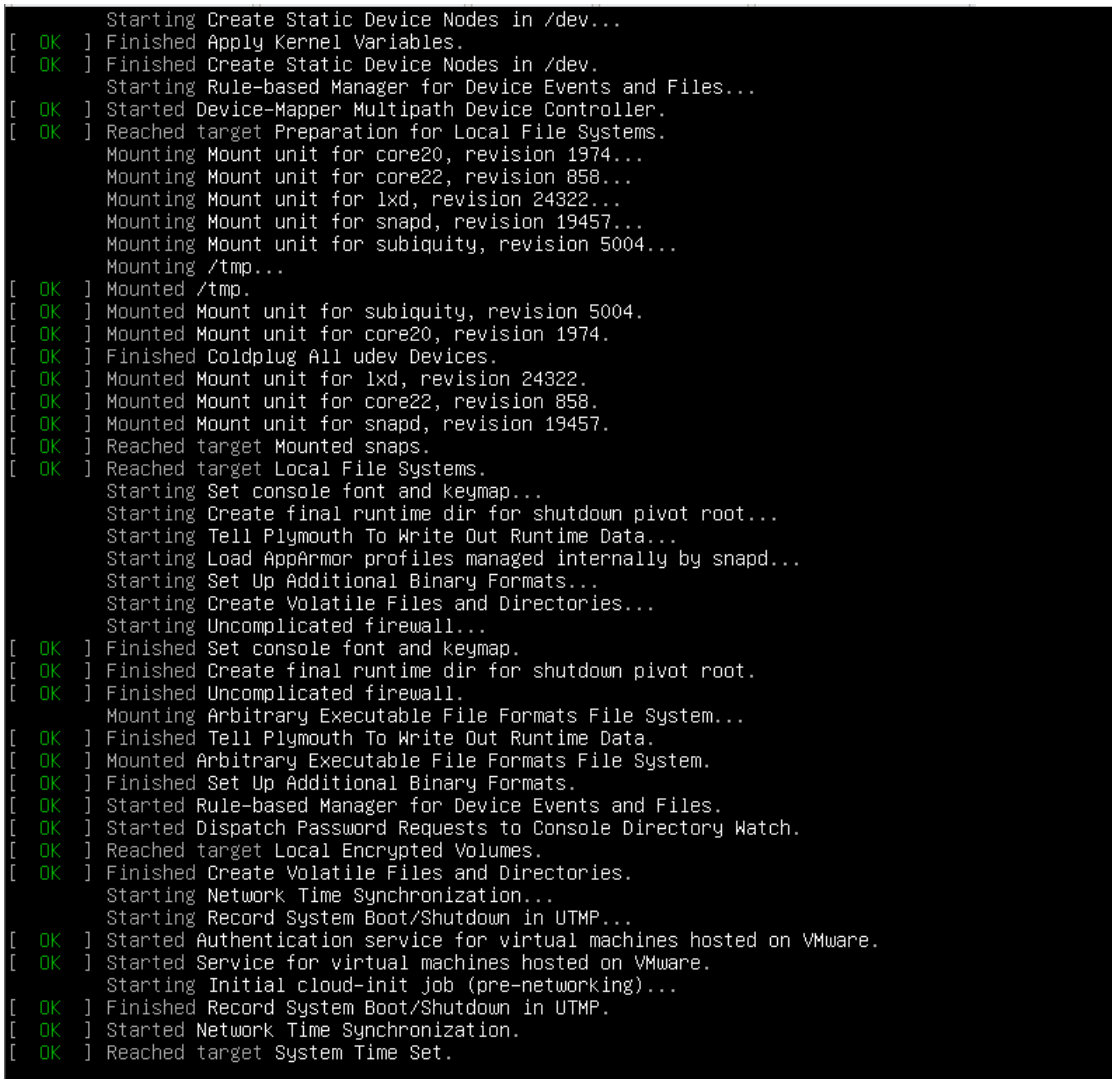
论 ubantu22.04LTS 版本安装以及 postgresql 和 minio 服务部署指南

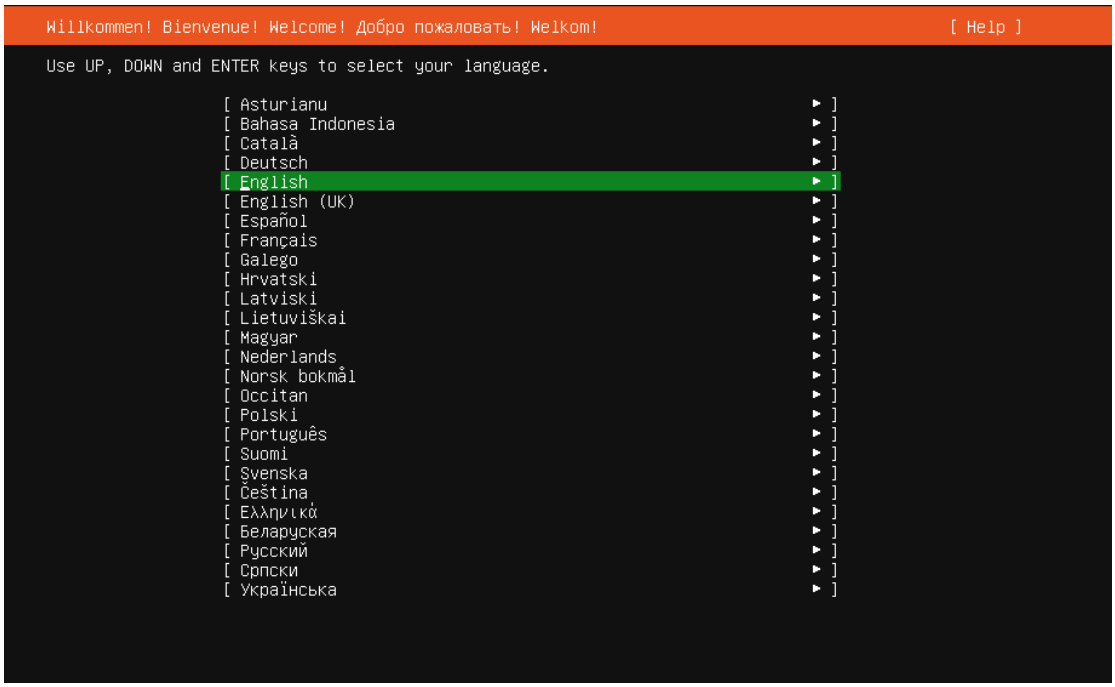
前提：鉴于对该文档的保护，该文档已被加密

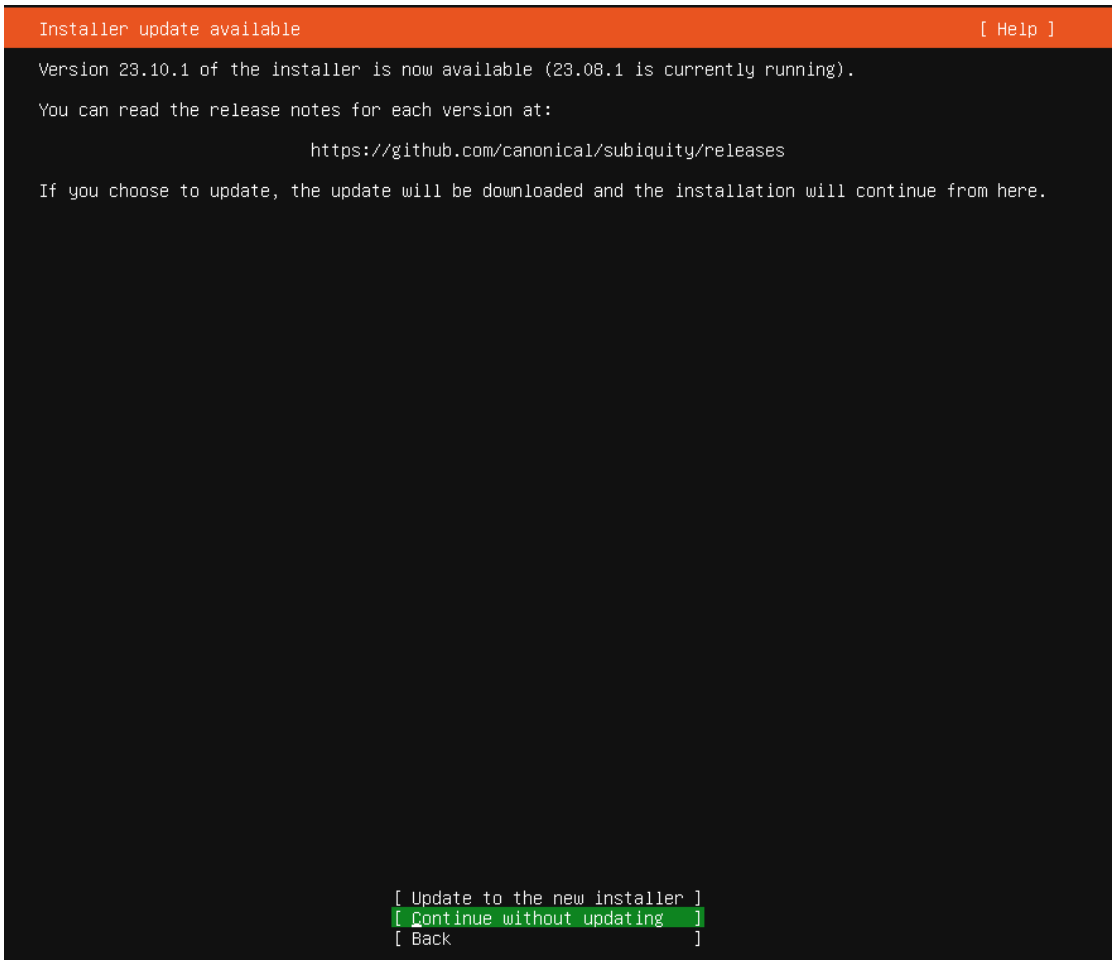
1.开机引导安装部署

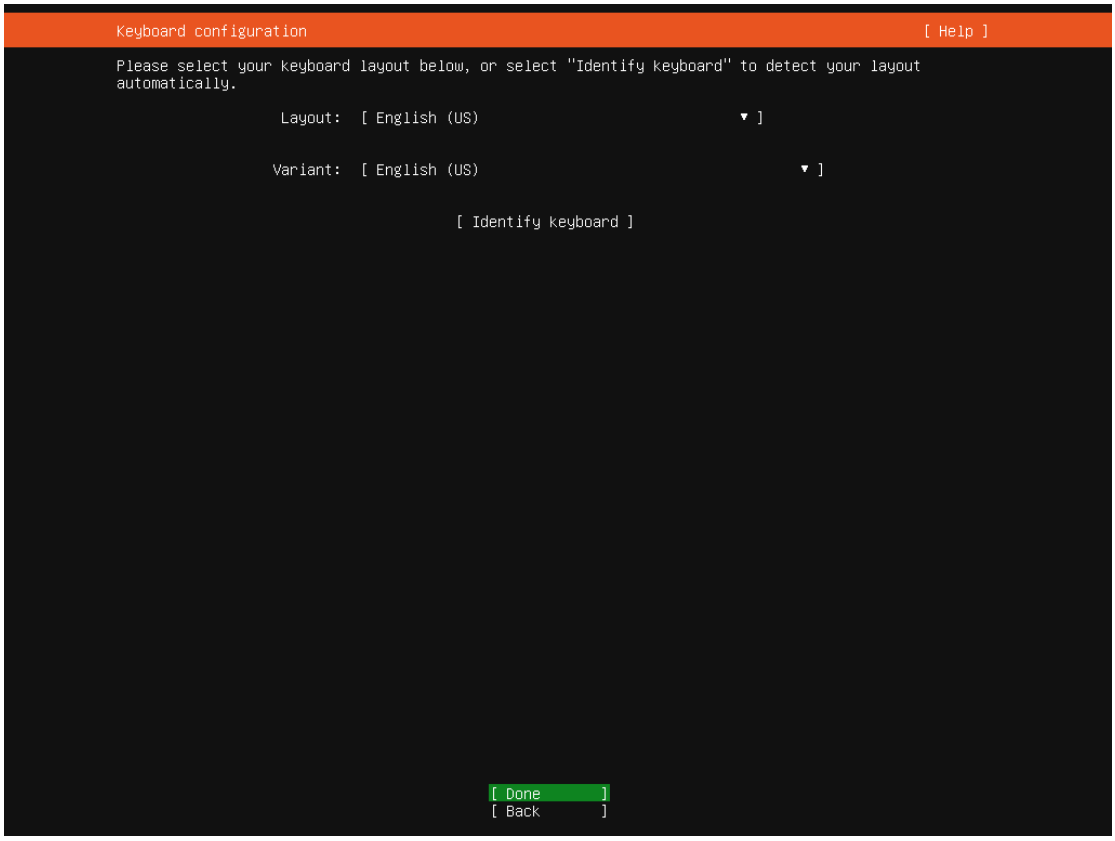
1.1 加载镜像

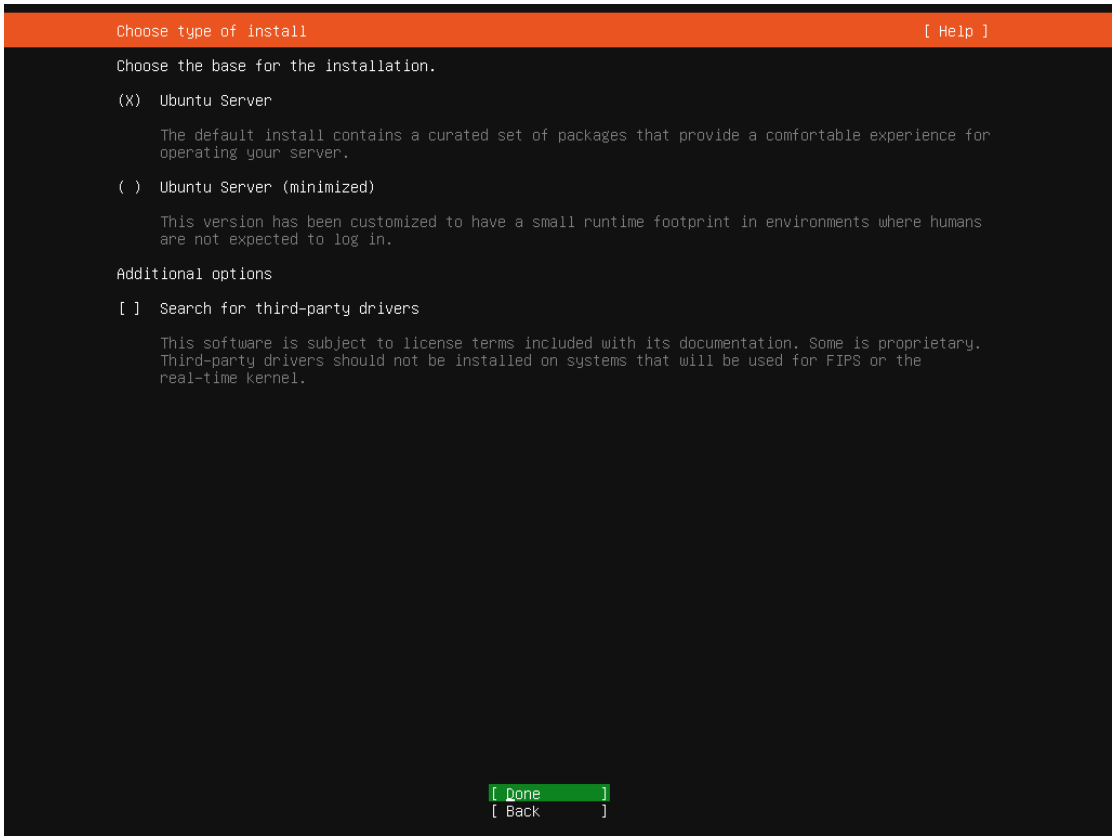


1.2 选择语言

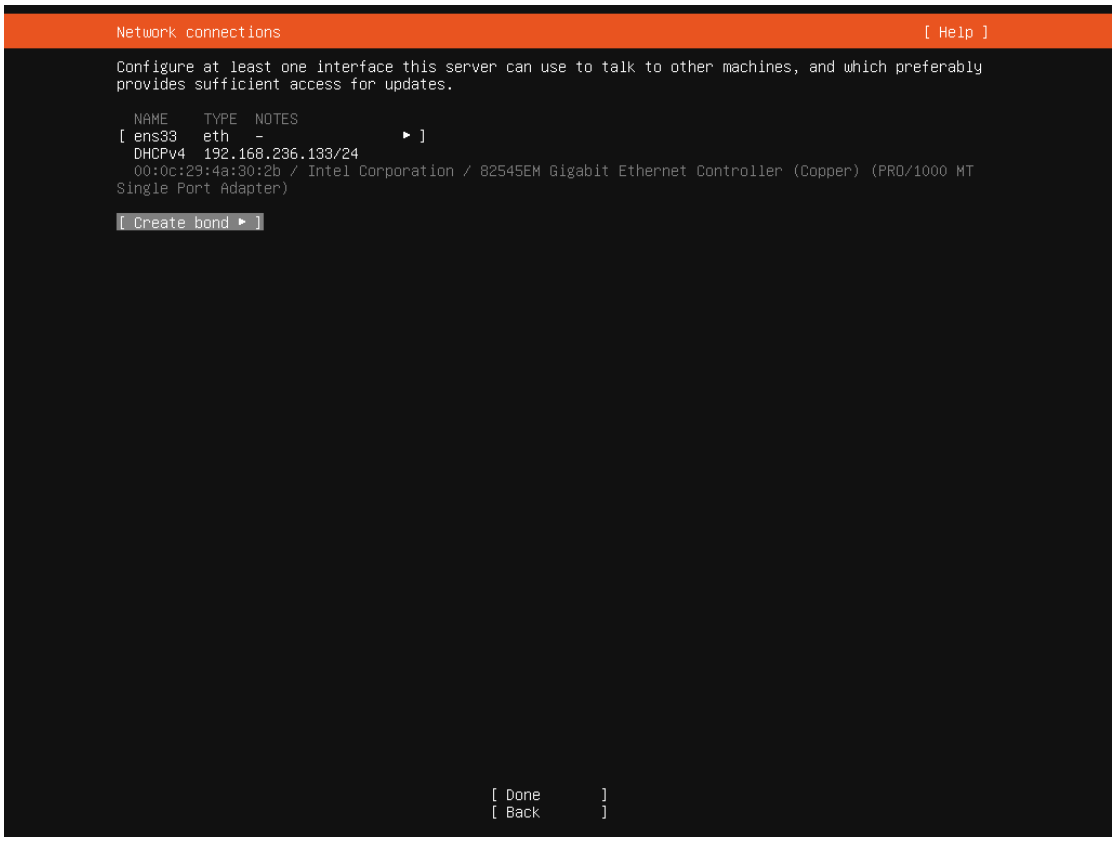

Willkommen! Bienvenue! Welcome! Добро пожаловать! Welkom!
[Help]
Use UP, DOWN and ENTER keys to select your language.
[Asturianu ▸]
[Bahasa Indonesia ▸]
[Català ▸]
[Deutsch ▸]
[English ▸]
[English (UK) ▸]
[Español ▸]
[Français ▸]
[Galego ▸]
[Hrvatski ▸]
[Latviski ▸]
[Lietuviškai ▸]
[Magyar ▸]
[Nederlands ▸]
[Norsk bokmål ▸]
[Occitan ▸]
[Polski ▸]
[Português ▸]
[Suomi ▸]
[Svenska ▸]
[Čeština ▸]
[Ελληνικά ▸]
[Беларуская ▸]
[Русский ▸]
[Српски ▸]
[Українська ▸]

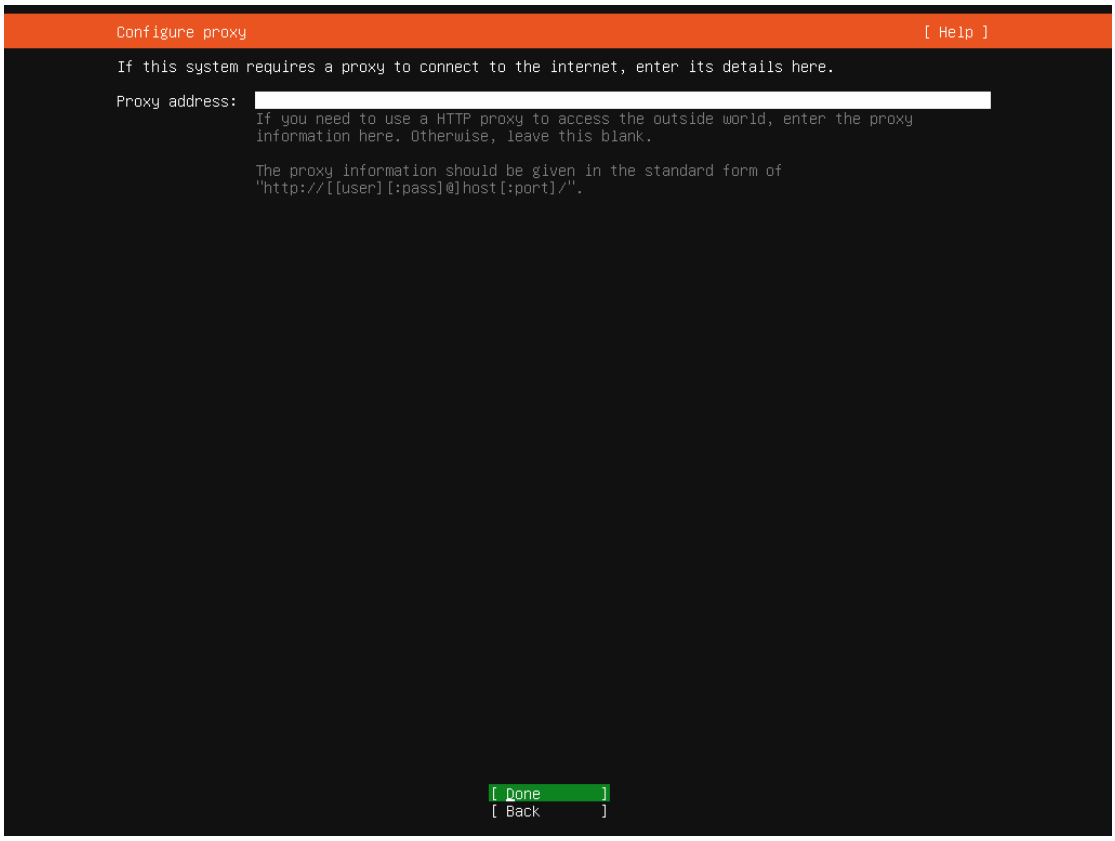

Installer update available
[Help]
Version 23.10.1 of the installer is now available (23.08.1 is currently running).
You can read the release notes for each version at:
https://github.com/canonical/subiquity/releases
If you choose to update, the update will be downloaded and the installation will continue from here.
[Update to the new installer]
[Continue without updating]
[Back]

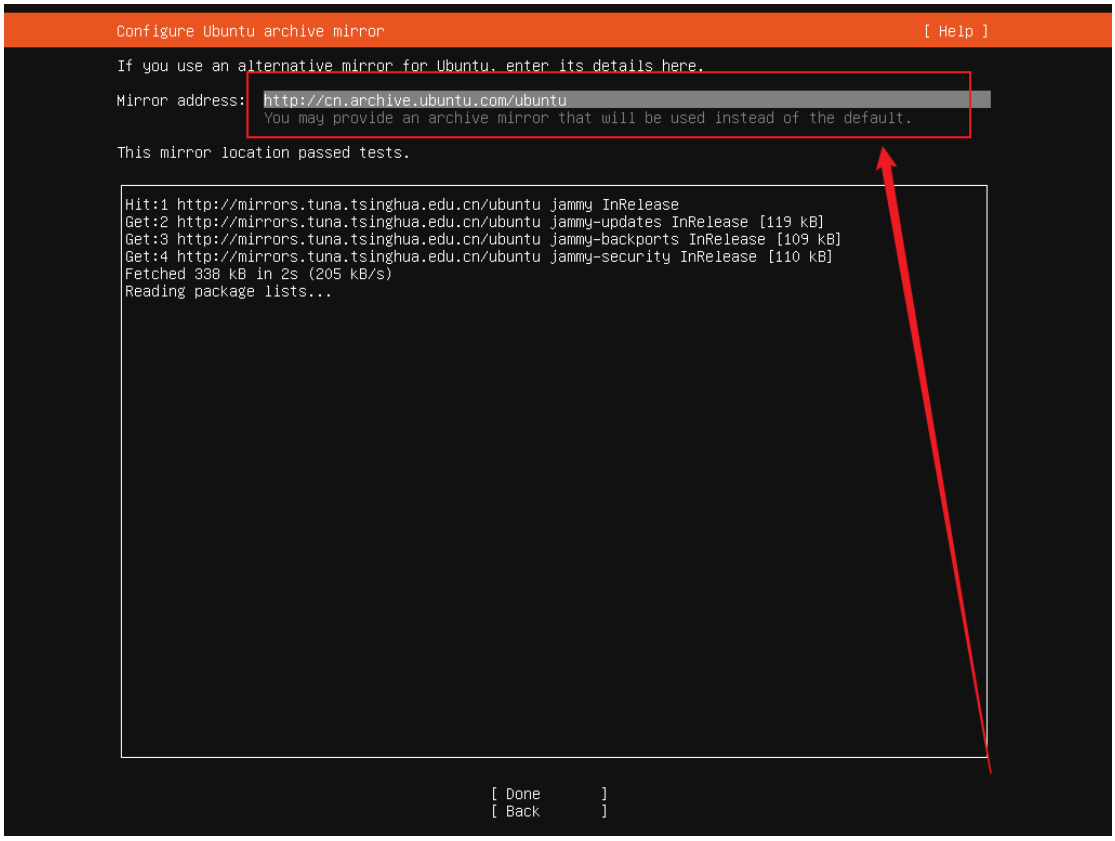

Keyboard configuration
[Help]
Please select your keyboard layout below, or select "Identify keyboard" to detect your layout automatically.
Layout: [English (US) ▾]
Variant: [English (US) ▾]
[Identify keyboard]
[Done]
[Back]


Choose type of install
[Help]
Choose the base for the installation.
(X) Ubuntu Server
The default install contains a curated set of packages that provide a comfortable experience for operating your server.
( ) Ubuntu Server (minimized)
This version has been customized to have a small runtime footprint in environments where humans are not expected to log in.
Additional options
[ ] Search for third-party drivers
This software is subject to license terms included with its documentation. Some is proprietary. Third-party drivers should not be installed on systems that will be used for FIPS or the real-time kernel.
[Done]
[Back]

这一步可以编辑网卡


Network connections
[Help]
Configure at least one interface this server can use to talk to other machines, and which preferably provides sufficient access for updates.
NAME TYPE NOTES
[ens33 eth - ▸]
DHCPv4 192.168.236.133/24
00:0c:29:4a:30:2b / Intel Corporation / 82545EM Gigabit Ethernet Controller (Copper) (PRO/1000 MT Single Port Adapter)
[Create bond ▸]
[Done]
[Back]


Configure proxy
[Help]
If this system requires a proxy to connect to the internet, enter its details here.
Proxy address:
If you need to use a HTTP proxy to access the outside world, enter the proxy information here. Otherwise, leave this blank.
The proxy information should be given in the standard form of "http://[[user][:pass]@]host[:port]/".
[Done]
[Back]



镜像源地址

将 /etc/apt/sources.list 文件中 Ubuntu 默认的源地址 http://archive.ubuntu.com/ 替换为 http://mirrors.ustc.edu.cn/ 即可

中科大

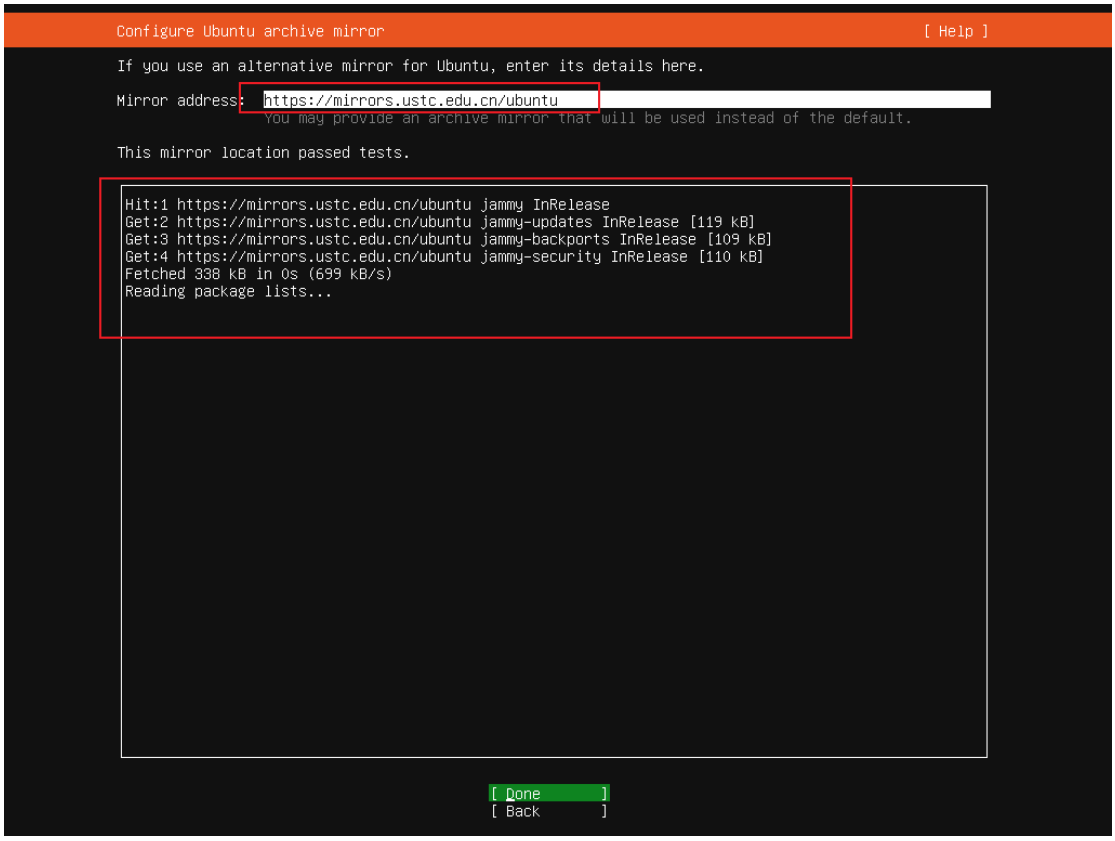
https://mirrors.ustc.edu.cn/

清华

https://mirrors.tuna.tsinghua.edu.cn

网易

http://mirrors.163.com



中科大源

deb https://mirrors.ustc.edu.cn/ubuntu/ focal main restricted universe multiverse

deb-src https://mirrors.ustc.edu.cn/ubuntu/ focal main restricted universe multiverse

deb https://mirrors.ustc.edu.cn/ubuntu/ focal-updates main restricted universe multiverse

deb-src https://mirrors.ustc.edu.cn/ubuntu/ focal-updates main restricted universe multiverse

deb https://mirrors.ustc.edu.cn/ubuntu/ focal-backports main restricted universe multiverse

deb-src https://mirrors.ustc.edu.cn/ubuntu/ focal-backports main restricted

universe multiverse

deb https://mirrors.ustc.edu.cn/ubuntu/ focal-security main restricted universe multiverse

deb-src https://mirrors.ustc.edu.cn/ubuntu/ focal-security main restricted universe multiverse

deb https://mirrors.ustc.edu.cn/ubuntu/ focal-proposed main restricted universe multiverse

deb-src https://mirrors.ustc.edu.cn/ubuntu/ focal-proposed main restricted universe multiverse

网易 163 源

deb http://mirrors.163.com/ubuntu/ focal main restricted universe multiverse

deb http://mirrors.163.com/ubuntu/ focal-security main restricted universe multiverse

deb http://mirrors.163.com/ubuntu/ focal-updates main restricted universe multiverse

deb http://mirrors.163.com/ubuntu/ focal-proposed main restricted universe multiverse

deb http://mirrors.163.com/ubuntu/ focal-backports main restricted universe multiverse

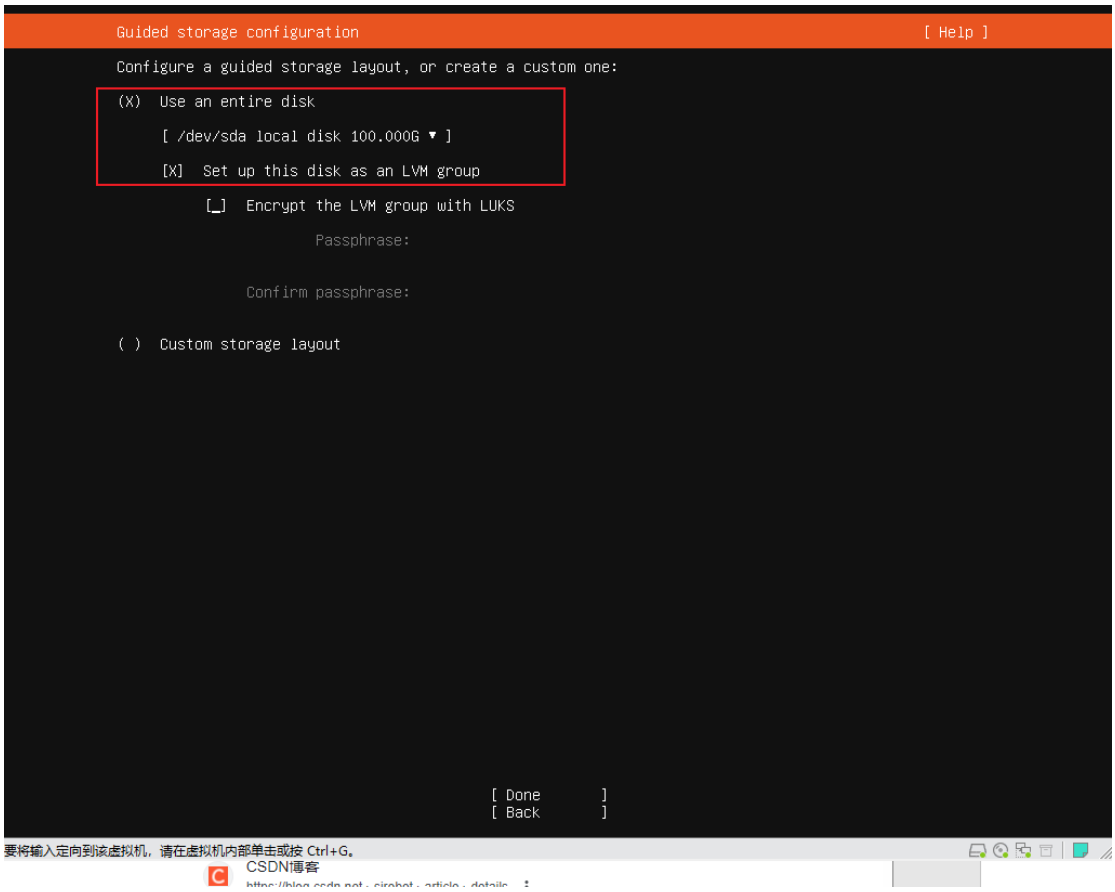
deb-src http://mirrors.163.com/ubuntu/ focal main restricted universe multiverse

deb-src http://mirrors.163.com/ubuntu/ focal-security main restricted universe multiverse

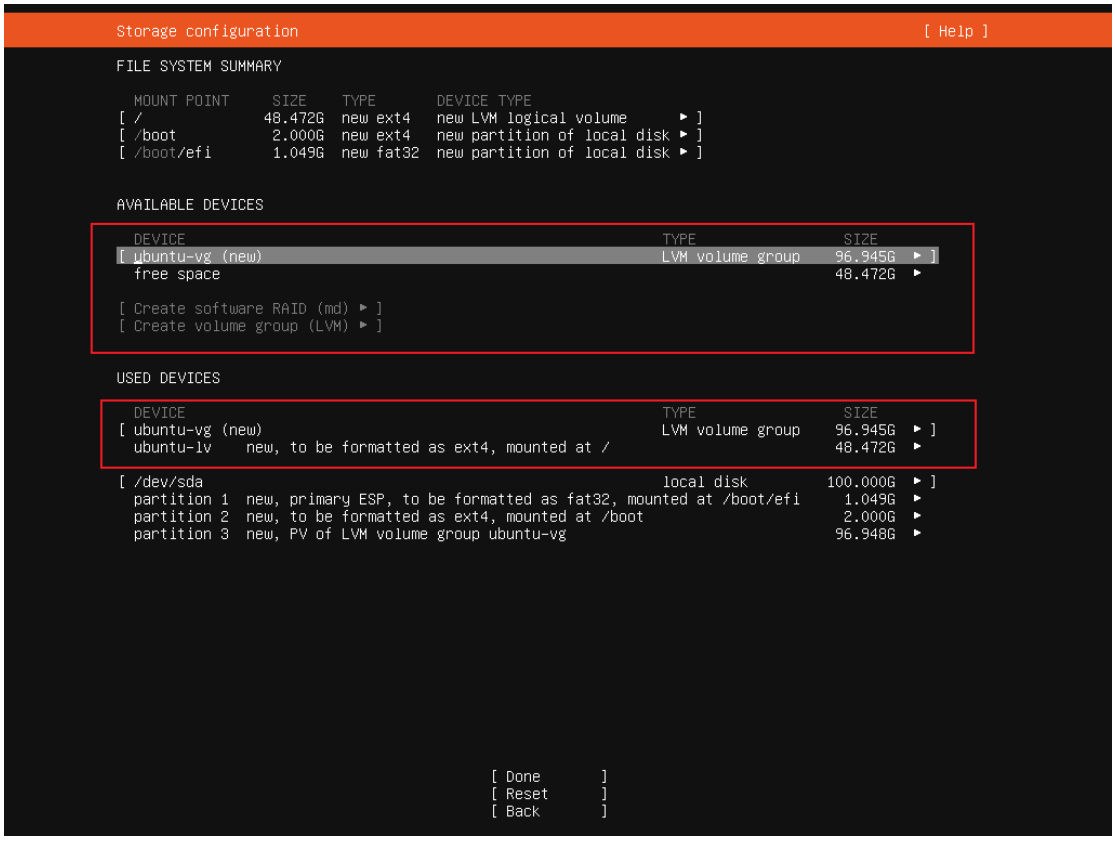
deb-src http://mirrors.163.com/ubuntu/ focal-updates main restricted universe multiverse

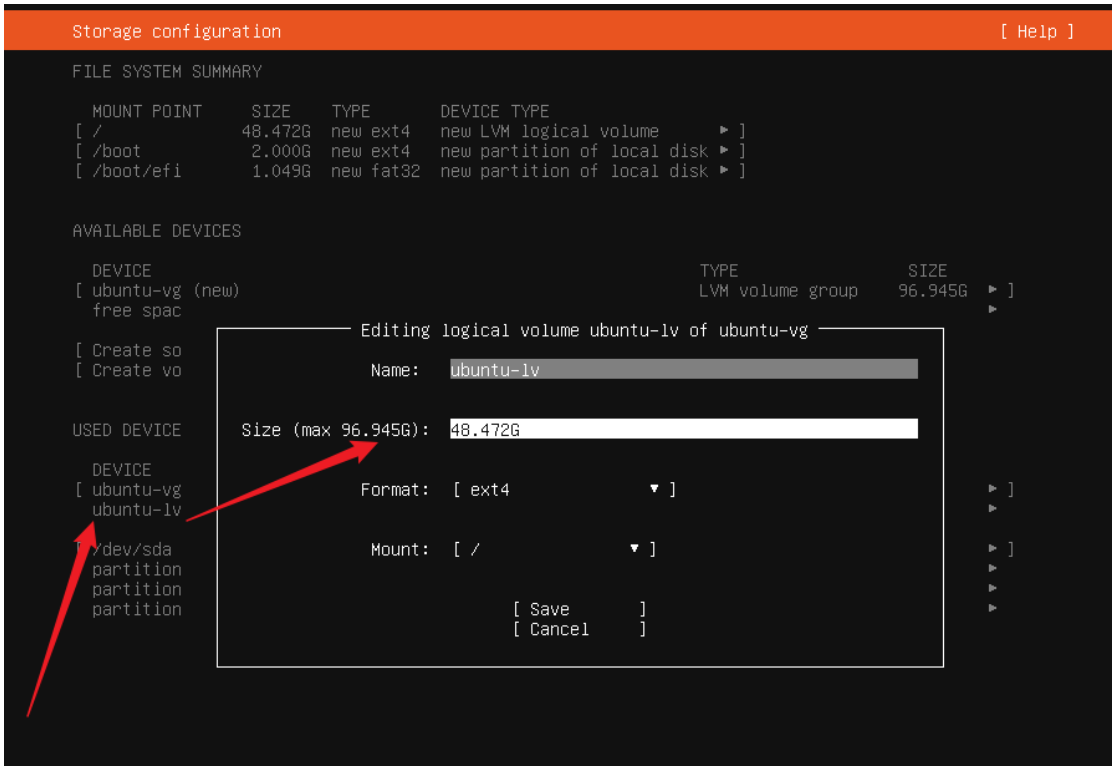
deb-src http://mirrors.163.com/ubuntu/ focal-proposed main restricted universe multiverse

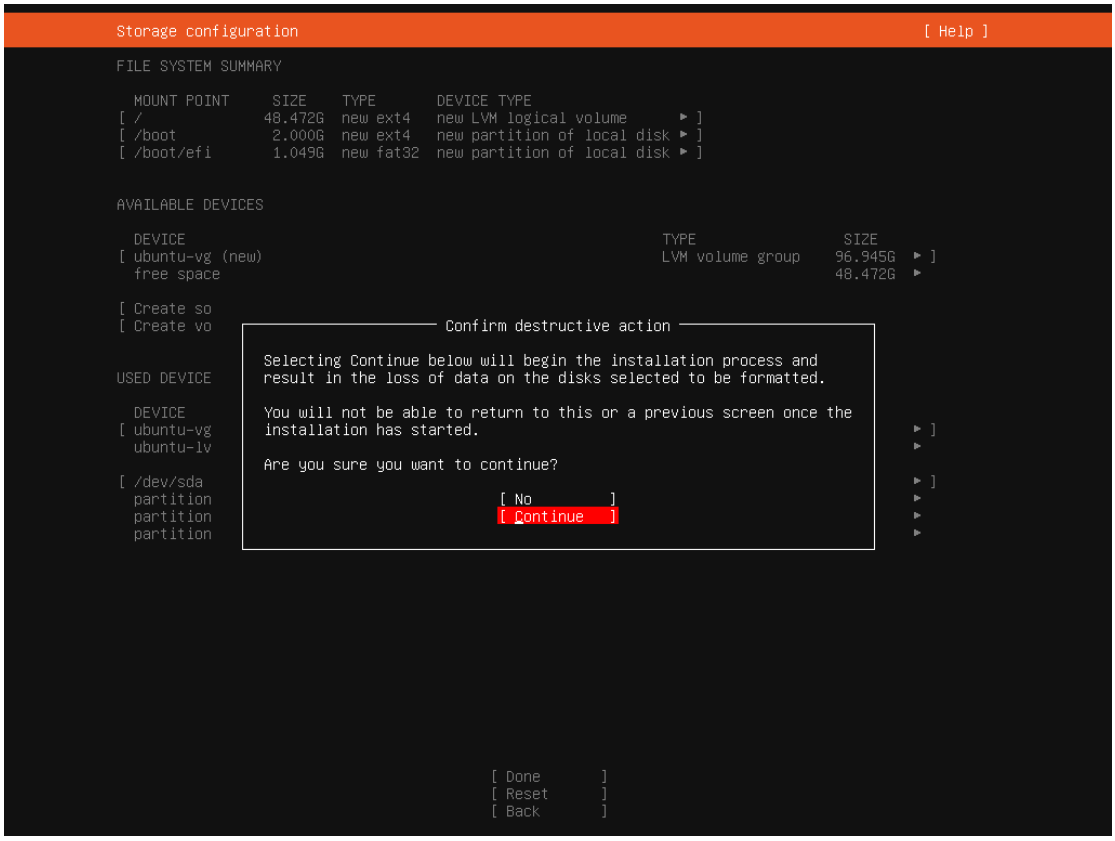
deb-src http://mirrors.163.com/ubuntu/ focal-backports main restricted universe multiverse



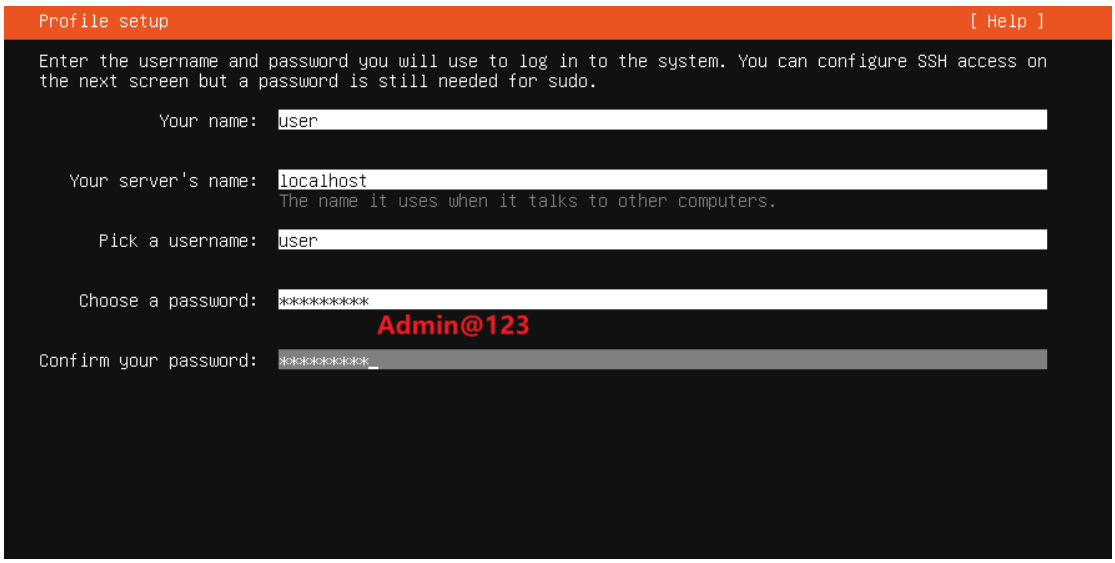
这里可以修改系统分区


Storage configuration
[Help]
FILE SYSTEM SUMMARY
MOUNT POINT SIZE TYPE DEVICE TYPE
[/ 48.472G new ext4 new LVM logical volume ▸]
[/boot 2.000G new ext4 new partition of local disk ▸]
[/boot/efi 1.049G new fat32 new partition of local disk ▸]
AVAILABLE DEVICES
DEVICE TYPE SIZE
[ubuntu-vg (new) LVM volume group 96.945G ▸]
free space 48.472G ▸
[Create software RAID (md) ▸]
[Create volume group (LVM) ▸]
USED DEVICES
DEVICE TYPE SIZE
[ubuntu-vg (new) LVM volume group 96.945G ▸]
ubuntu-lv new, to be formatted as ext4, mounted at / 48.472G ▸
[/dev/sda local disk 100.000G ▸]
partition 1 new, primary ESP, to be formatted as fat32, mounted at /boot/efi 1.049G ▸
partition 2 new, to be formatted as ext4, mounted at /boot 2.000G ▸
partition 3 new, PV of LVM volume group ubuntu-vg 96.948G ▸
[Done]
[Reset]
[Back]

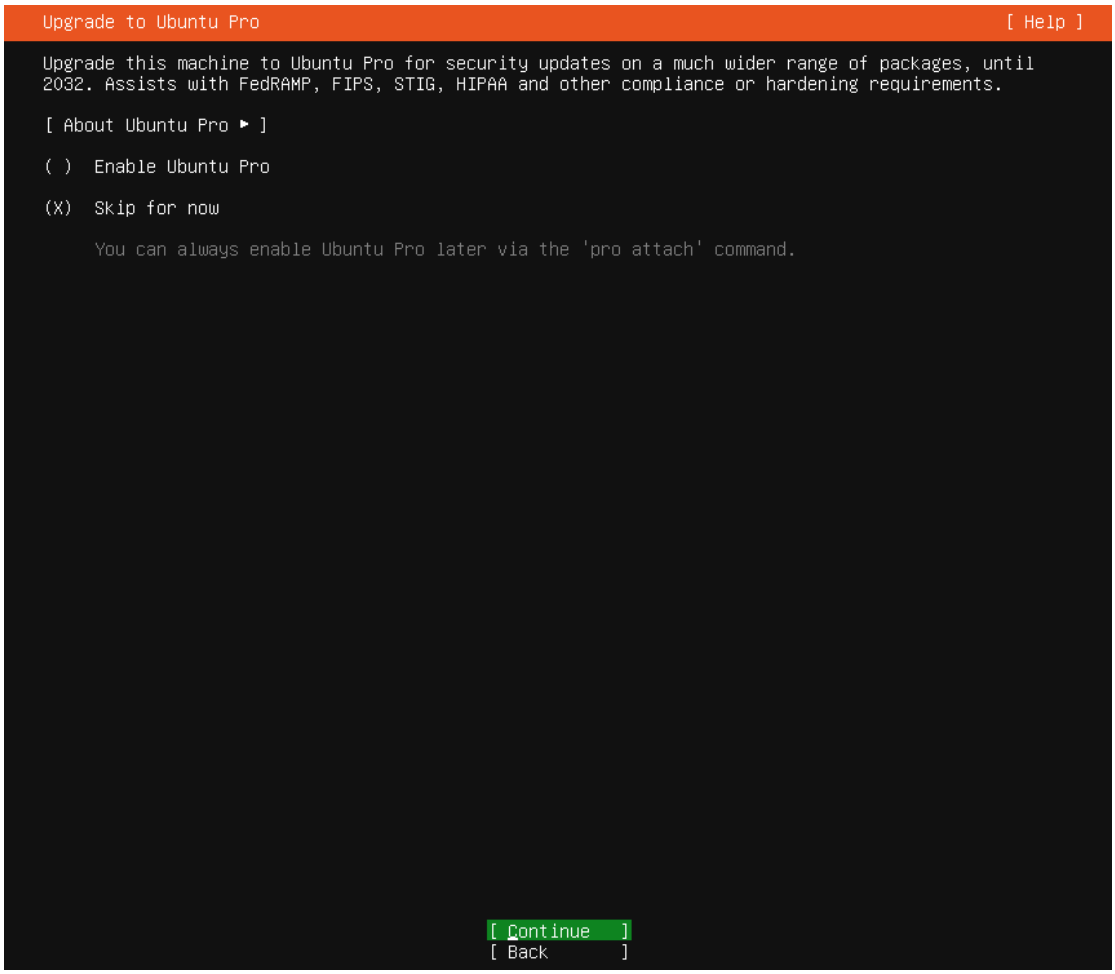

Storage configuration
[Help]
FILE SYSTEM SUMMARY
MOUNT POINT SIZE TYPE DEVICE TYPE
[/ 48.472G new ext4 new LVM logical volume ▸]
[/boot 2.000G new ext4 new partition of local disk ▸]
[/boot/efi 1.049G new fat32 new partition of local disk ▸]
AVAILABLE DEVICES
DEVICE TYPE SIZE
[ubuntu-vg (new) LVM volume group 96.945G ▸]
free spac ▸
[Create so
[Create vo
USED DEVICE
DEVICE
[ubuntu-vg ▸]
ubuntu-lv ▸
[/dev/sda ▸]
partition ▸
partition ▸
partition ▸
Editing logical volume ubuntu-lv of ubuntu-vg
Name: ubuntu-lv
Size (max 96.945G): 48.472G
Format: [ext4 ▾]
Mount: [/ ▾]
[Save]
[Cancel]



设置用户密码

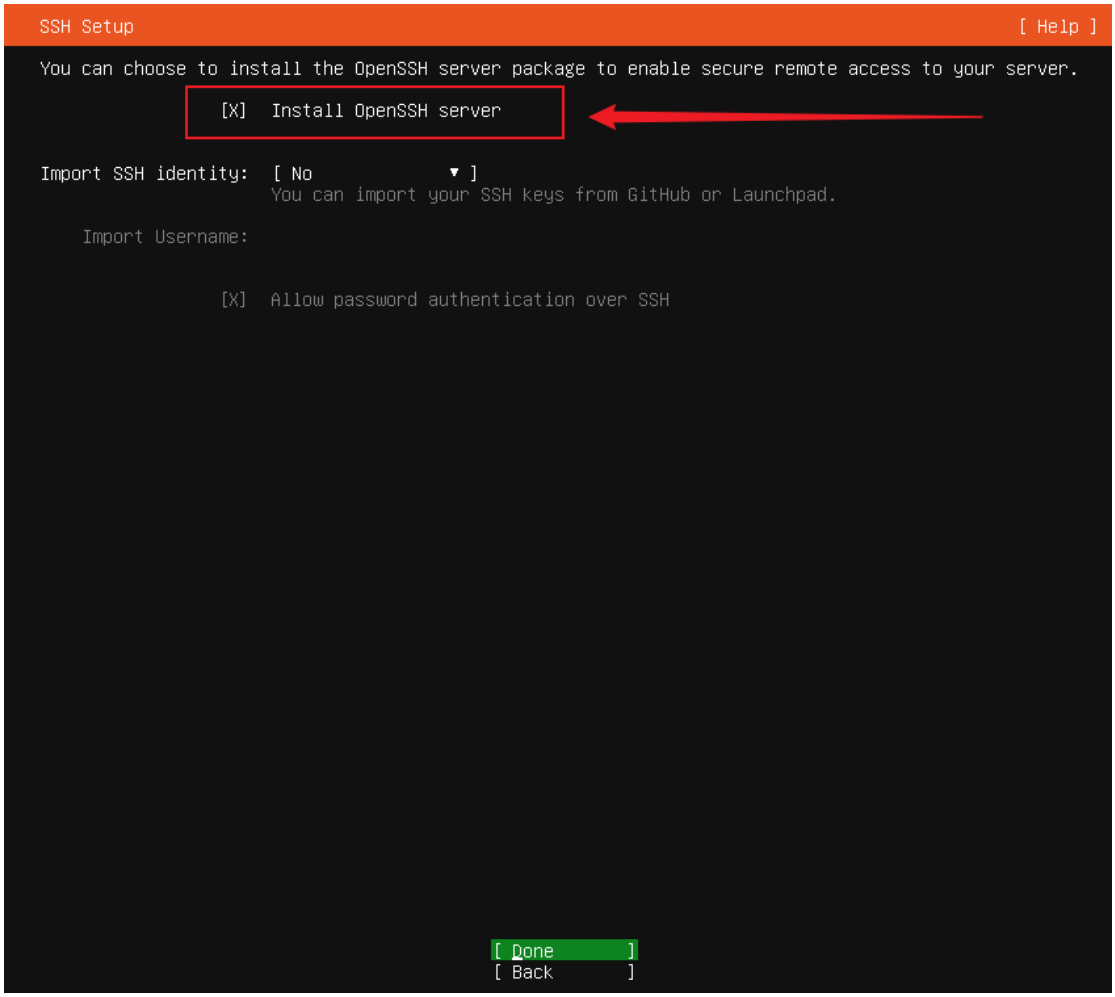


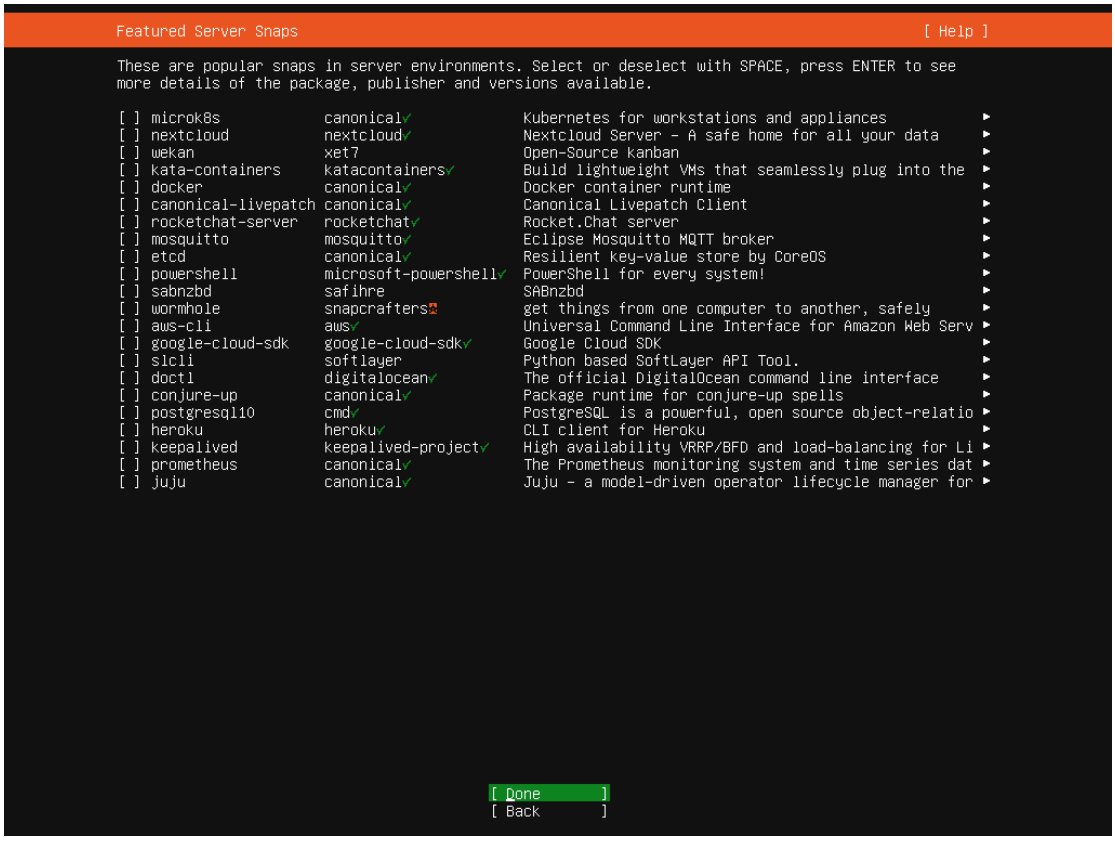
跳过 ubantu pro


Upgrade to Ubuntu Pro
[Help]
Upgrade this machine to Ubuntu Pro for security updates on a much wider range of packages, until 2032. Assists with FedRAMP, FIPS, STIG, HIPAA and other compliance or hardening requirements.
[About Ubuntu Pro ▸]
( ) Enable Ubuntu Pro
(X) Skip for now
You can always enable Ubuntu Pro later via the 'pro attach' command.
[Continue]
[Back]

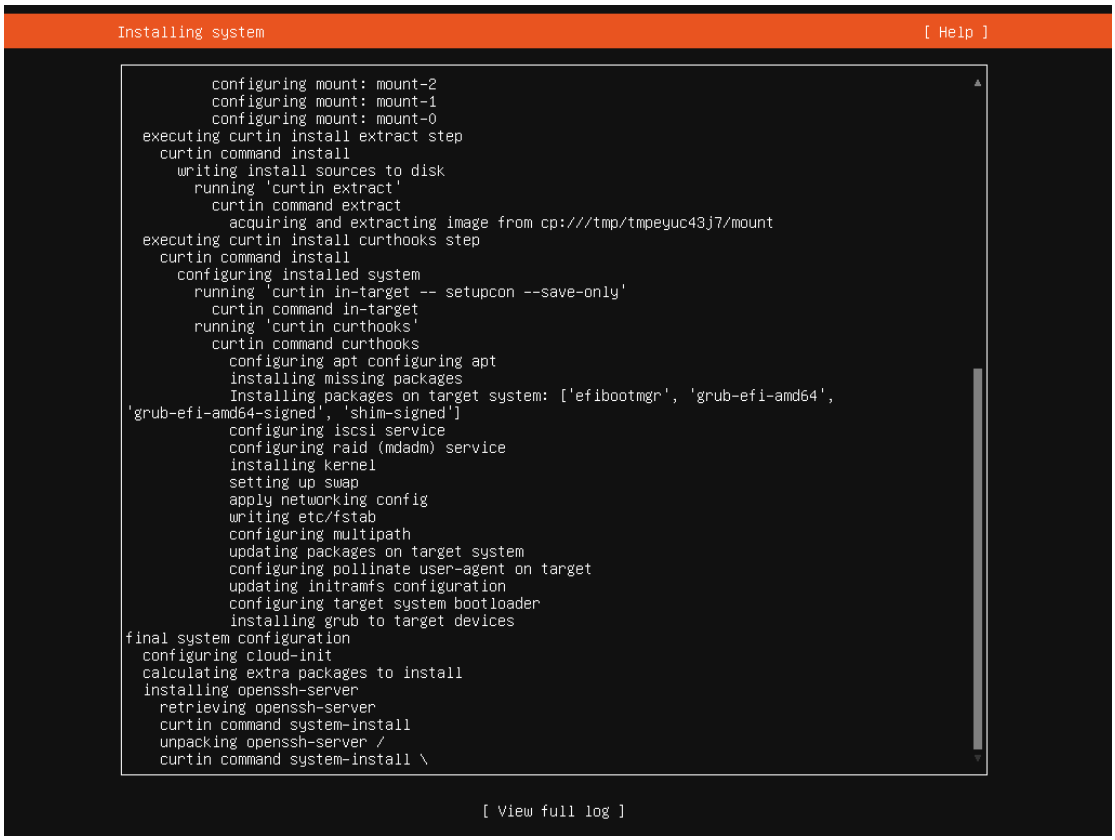
安装 ssh

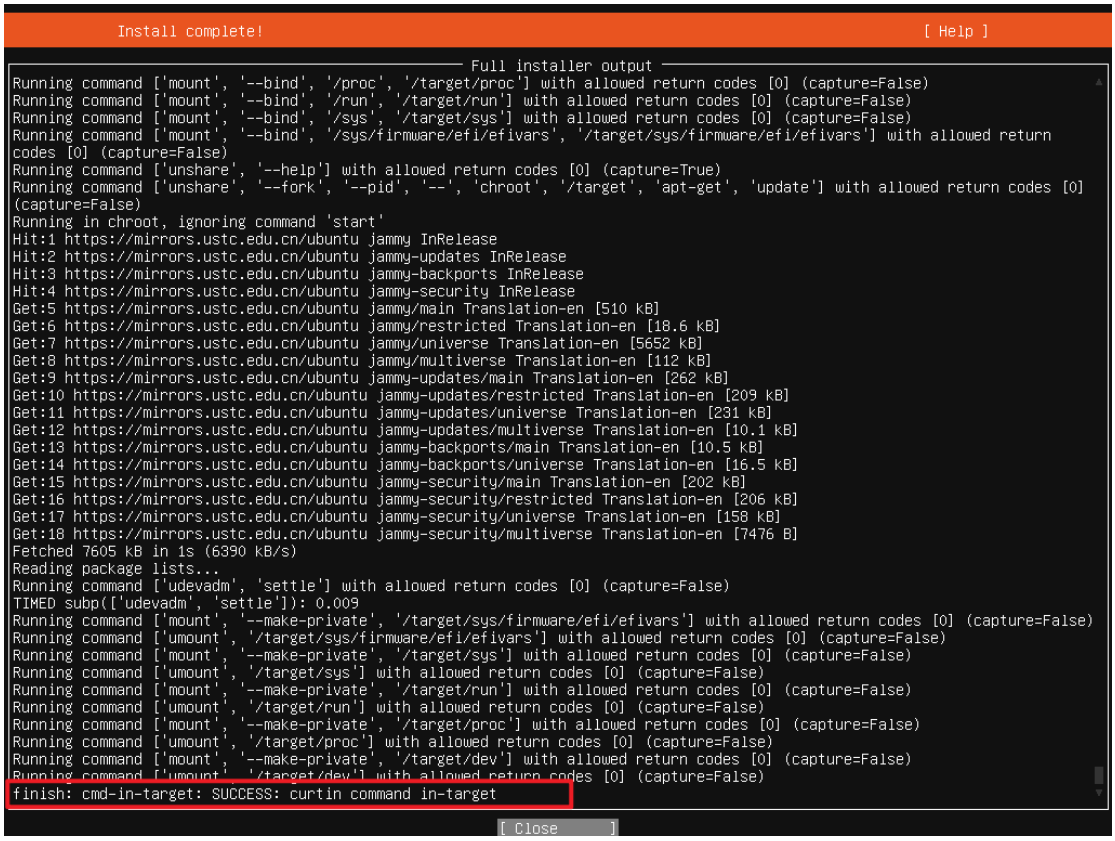
空格选中

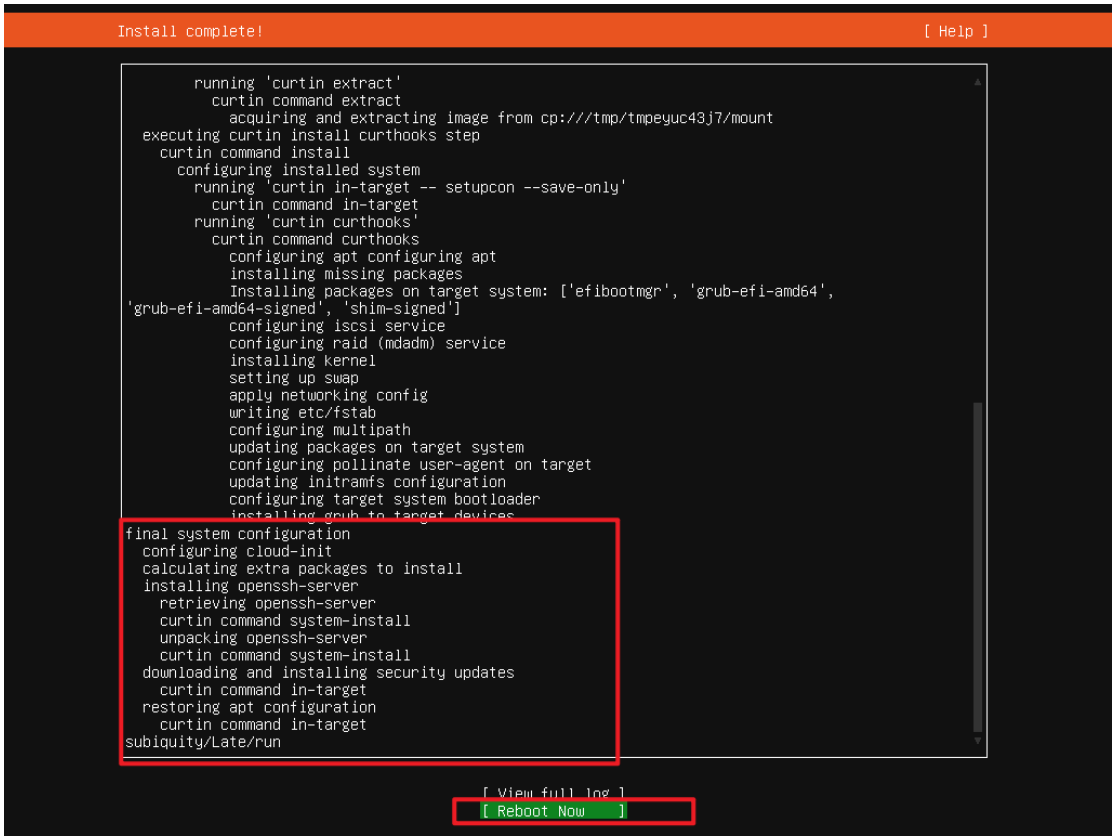

SSH Setup
[Help]
You can choose to install the OpenSSH server package to enable secure remote access to your server.
[X] Install OpenSSH server
Import SSH identity: [No ▾]
You can import your SSH keys from GitHub or Launchpad.
Import Username:
[X] Allow password authentication over SSH
[Done]
[Back]



最后就是等他安装完成了




Install complete!
[Help]
Full installer output
Running command ['mount', '--bind', '/proc', '/target/proc'] with allowed return codes [0] (capture=False)
Running command ['mount', '--bind', '/run', '/target/run'] with allowed return codes [0] (capture=False)
Running command ['mount', '--bind', '/sys', '/target/sys'] with allowed return codes [0] (capture=False)
Running command ['mount', '--bind', '/sys/firmware/efi/efivars', '/target/sys/firmware/efi/efivars'] with allowed return codes [0] (capture=False)
Running command ['unshare', '--help'] with allowed return codes [0] (capture=True)
Running command ['unshare', '--fork', '--pid', '--', 'chroot', '/target', 'apt-get', 'update'] with allowed return codes [0] (capture=False)
Running in chroot, ignoring command 'start'
Hit:1 https://mirrors.ustc.edu.cn/ubuntu jammy InRelease
Hit:2 https://mirrors.ustc.edu.cn/ubuntu jammy-updates InRelease
Hit:3 https://mirrors.ustc.edu.cn/ubuntu jammy-backports InRelease
Hit:4 https://mirrors.ustc.edu.cn/ubuntu jammy-security InRelease
Get:5 https://mirrors.ustc.edu.cn/ubuntu jammy/main Translation-en [510 kB]
Get:6 https://mirrors.ustc.edu.cn/ubuntu jammy/restricted Translation-en [18.6 kB]
Get:7 https://mirrors.ustc.edu.cn/ubuntu jammy/universe Translation-en [5652 kB]
Get:8 https://mirrors.ustc.edu.cn/ubuntu jammy/multiverse Translation-en [112 kB]
Get:9 https://mirrors.ustc.edu.cn/ubuntu jammy-updates/main Translation-en [262 kB]
Get:10 https://mirrors.ustc.edu.cn/ubuntu jammy-updates/restricted Translation-en [209 kB]
Get:11 https://mirrors.ustc.edu.cn/ubuntu jammy-updates/universe Translation-en [231 kB]
Get:12 https://mirrors.ustc.edu.cn/ubuntu jammy-updates/multiverse Translation-en [10.1 kB]
Get:13 https://mirrors.ustc.edu.cn/ubuntu jammy-backports/main Translation-en [10.5 kB]
Get:14 https://mirrors.ustc.edu.cn/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:15 https://mirrors.ustc.edu.cn/ubuntu jammy-security/main Translation-en [202 kB]
Get:16 https://mirrors.ustc.edu.cn/ubuntu jammy-security/restricted Translation-en [206 kB]
Get:17 https://mirrors.ustc.edu.cn/ubuntu jammy-security/universe Translation-en [158 kB]
Get:18 https://mirrors.ustc.edu.cn/ubuntu jammy-security/multiverse Translation-en [7476 B]
Fetched 7605 kB in 1s (6390 kB/s)
Reading package lists...
Running command ['udevadm', 'settle'] with allowed return codes [0] (capture=False)
TIMED subp(['udevadm', 'settle']): 0.009
Running command ['mount', '--make-private', '/target/sys/firmware/efi/efivars'] with allowed return codes [0] (capture=False)
Running command ['umount', '/target/sys/firmware/efi/efivars'] with allowed return codes [0] (capture=False)
Running command ['mount', '--make-private', '/target/sys'] with allowed return codes [0] (capture=False)
Running command ['umount', '/target/sys'] with allowed return codes [0] (capture=False)
Running command ['mount', '--make-private', '/target/run'] with allowed return codes [0] (capture=False)
Running command ['umount', '/target/run'] with allowed return codes [0] (capture=False)
Running command ['mount', '--make-private', '/target/proc'] with allowed return codes [0] (capture=False)
Running command ['umount', '/target/proc'] with allowed return codes [0] (capture=False)
Running command ['mount', '--make-private', '/target/dev'] with allowed return codes [0] (capture=False)
Running command ['umount', '/target/dev'] with allowed return codes [0] (capture=False)
finish: cmd-in-target: SUCCESS: curtin command in-target
[Close]


Install complete!
[Help]
running 'curtin extract'
curtin command extract
acquiring and extracting image from cp:///tmp/tmpeyuc43j7/mount
executing curtin install curthooks step
curtin command install
configuring installed system
running 'curtin in-target -- setupcon --save-only'
curtin command in-target
running 'curtin curthooks'
curtin command curthooks
configuring apt configuring apt
installing missing packages
Installing packages on target system: ['efibootmgr', 'grub-efi-amd64', 'grub-efi-amd64-signed', 'shim-signed']
configuring iscsi service
configuring raid (mdadm) service
installing kernel
setting up swap
apply networking config
writing etc/fstab
configuring multipath
updating packages on target system
configuring pollinate user-agent on target
updating initramfs configuration
configuring target system bootloader
installing grub to target devices
final system configuration
configuring cloud-init
calculating extra packages to install
installing openssh-server
retrieving openssh-server
curtin command system-install
unpacking openssh-server
curtin command system-install
downloading and installing security updates
curtin command in-target
restoring apt configuration
curtin command in-target
subiquity/Late/run
[View full log]
[Reboot Now]

重启系统

登入输入密码
User
Admin@123

开机检查配置项

```
user@localhost:~$
user@localhost:~$ free -h
               total        used        free      shared  buff/cache   available
Mem:           3.8Gi       312Mi       3.1Gi       1.0Mi       405Mi       3.3Gi
Swap:          3.8Gi          0B       3.8Gi
user@localhost:~$ df -h
Filesystem                         Size  Used Avail Use% Mounted on
tmpfs                              388M  1.5M  387M   1% /run
/dev/mapper/ubuntu--vg-ubuntu--lv   48G  6.7G   39G  15% /
tmpfs                              1.9G     0  1.9G   0% /dev/shm
tmpfs                              5.0M     0  5.0M   0% /run/lock
/dev/sda2                          2.0G  130M  1.7G   8% /boot
/dev/sda1                          1.1G  6.1M  1.1G   1% /boot/efi
tmpfs                              388M  4.0K  388M   1% /run/user/1000
user@localhost:~$
```

sudo vim /etc/ssh/sshd_config 输入当前用户密码后，修改如下，并 esc+： wq 保存退出
systemctl restart ssh

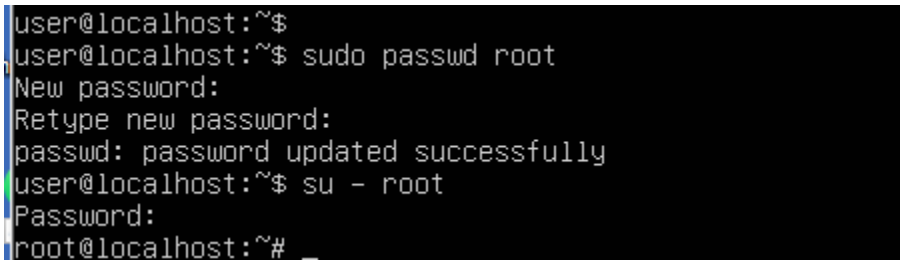
```
11
12 Include /etc/ssh/sshd_config.d/*.conf
13
14 #Port 22
15 #AddressFamily any
16 #ListenAddress 0.0.0.0
17 #ListenAddress ::
18
19 #HostKey /etc/ssh/ssh_host_rsa_key
20 #HostKey /etc/ssh/ssh_host_ecdsa_key
21 #HostKey /etc/ssh/ssh_host_ed25519_key
22
23 # Ciphers and keying
24 #RekeyLimit default none
25
26 # Logging
27 #SyslogFacility AUTH
28 #LogLevel INFO
29
30 # Authentication:
31
32 #LoginGraceTime 2m
33 PermitRootLogin yes
34 #StrictModes yes
35 #MaxAuthTries 6
36 #MaxSessions 10
37
38 #PubkeyAuthentication yes
39
40 # Expect .ssh/authorized_keys2 to be disregarded by default in future.
41 #AuthorizedKeysFile     .ssh/authorized_keys .ssh/authorized_keys2
42
```

33行修改为 yes ， 取消注释

修改后直接设置 root 密码，切换 root 用户

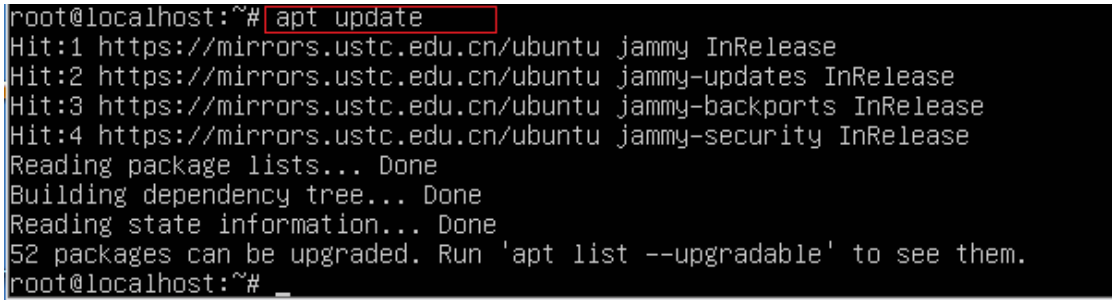
sudo passwd root

su – root



安装数据库 postgresql

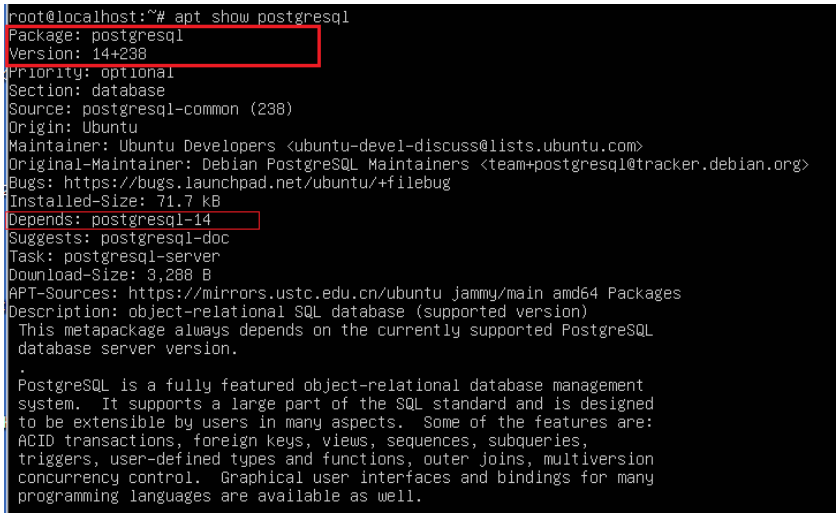
1. apt update 更新软件包仓库



2. 搜索可用软件包

apt show postgresql

搜索一下可用 postgresql 软件包



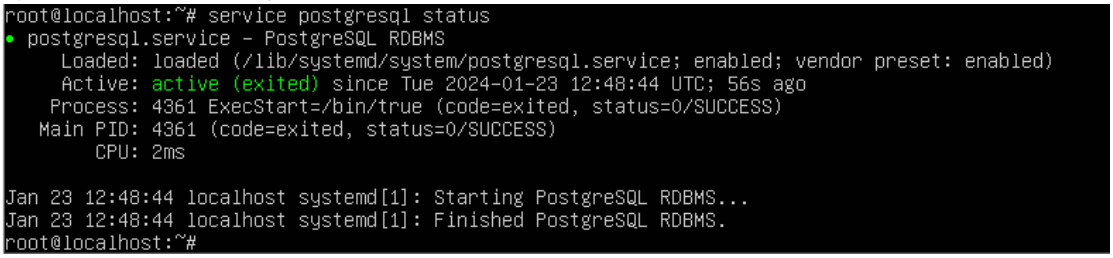
3. 安装 postgresql 最新版

apt install postgresql postgresql-contrib

postgresql-contrib 或者说 contrib 包，包含一些不属于 PostgreSQL 核心包的实用工具和功能。在大多数情况下，最好将 contrib 包与 PostgreSQL 核心一起安装。

4. 查看数据库启动状态

systemctl status postgresql



默认情况下，PostgreSQL 会创建一个拥有所权限的特殊用户 postgres。要实际使用 PostgreSQL，你必须先登录该账户：

su postgres

你的提示符会更改为类似于以下的内容：

postgres@ubuntu-VirtualBox:/home/ubuntu$

现在，使用 psql 来启动 PostgreSQL Shell：

psql

你应该会看到如下提示符：

postgress=#

你可以输入 \q 以退出，输入 \? 获取帮助。

要查看现有的所有表，输入如下命令：

\l
\du

```
root@localhost:~#  su postgres
postgres@localhost:/root$ free -g
               total        used        free      shared  buff/cache   available
Mem:               3           0           2           0           0           3
Swap:              3           0           3
postgres@localhost:/root$ free -h
               total        used        free      shared  buff/cache   available
Mem:           3.8Gi       341Mi       2.6Gi        12Mi       894Mi       3.2Gi
Swap:          3.8Gi          0B       3.8Gi
postgres@localhost:/root$ psql
could not change directory to "/root": Permission denied
psql (14.10 (Ubuntu 14.10-0ubuntu0.22.04.1))
Type "help" for help.
```

```
postgres@localhost:/root$ psql
could not change directory to "/root": Permission denied
psql (14.10 (Ubuntu 14.10-0ubuntu0.22.04.1))
Type "help" for help.

postgres=# \q
postgres@localhost:/root$ psql
could not change directory to "/root": Permission denied
psql (14.10 (Ubuntu 14.10-0ubuntu0.22.04.1))
Type "help" for help.

postgres=# \du
                                   List of roles
 Role name |                         Attributes                         | Member of
-----------+------------------------------------------------------------+-----------
 postgres  | Superuser, Create role, Create DB, Replication, Bypass RLS | {}

postgres=# \l
                                 List of databases
   Name    |  Owner   | Encoding |   Collate   |    Ctype    |   Access privileges
-----------+----------+----------+-------------+-------------+-----------------------
 postgres  | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 |
 template0 | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/postgres          +
           |          |          |             |             | postgres=CTc/postgres
 template1 | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/postgres          +
           |          |          |             |             | postgres=CTc/postgres
(3 rows)
```

对应 sql 语句

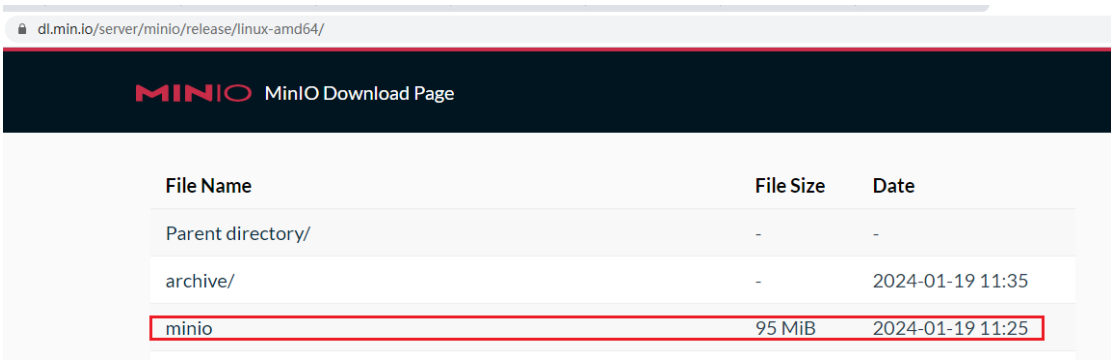
你可以使用以下命令更改任何用户（包括 postgres）的密码：

ALTER USER postgres WITH PASSWORD 'my_password';
注意：将 postgres 替换为你要更改的用户名，my_password 替换为所需要的密码。另外，不要忘记每条命令后面的 ；（分号）。
建议你另外创建一个用户（不建议使用默认的 postgres 用户）。为此，请使用以下命令：
CREATE USER my_user WITH PASSWORD 'my_password';
运行 \du，你将看到该用户，但是，my_user 用户没有任何的属性。来让我们给它添加超级用户权限：
ALTER USER my_user WITH SUPERUSER;
你可以使用以下命令删除用户：
DROP USER my_user;
要使用其他用户登录，使用 \q 命令退出，然后使用以下命令登录：
psql -U my_user
你可以使用 -d 参数直接连接数据库：
psql -U my_user -d my_db
你可以使用其他已存在的用户调用 PostgreSQL。例如，我使用 ubuntu。要登录，从终端执行以下命名：
psql -U ubuntu -d postgres
注意：你必须指定一个数据库（默认情况下，它将尝试将你连接到与登录的用户名相同的数据库）。
如果遇到如下错误：
psql: FATAL: Peer authentication failed for user "my_user"
确保以正确的用户身份登录，并使用管理员权限编辑 /etc/postgresql/11/main/pg_hba.conf：
sudo vim /etc/postgresql/11/main/pg_hba.conf
注意：用你的版本替换 11（例如 10）。
对如下所示的一行进行替换：
local all postgres peer
替换为：
local all postgres md5
然后重启 PostgreSQL：
sudo service postgresql restart

部署 minio 对象存储服务

1. 下载程序文件

wget https://dl.min.io/server/minio/release/linux-amd64/minio



2. 为 MinIO 二进制文件添加执行权限

```
chmod +x minio
sudo mv minio /usr/local/bin/
```

3. 创建启动服务文件

vim /etc/systemd/system/minio.service

[Unit]
Description=MinIO
Documentation=https://docs.min.io
Wants=network-online.target
After=network-online.target
AssertFileIsExecutable=/usr/local/bin/minio

[Service]
WorkingDirectory=/usr/local/

User=root
Group=root
ProtectProc=invisible

```
EnvironmentFile=/etc/default/minio
ExecStartPre=/bin/bash -c "if [ -z \"${MINIO_VOLUMES}\" ]; then echo \"Variable
MINIO_VOLUMES not set in /etc/default/minio\"; exit 1; fi"
ExecStart=/usr/local/bin/minio server $MINIO_OPTS $MINIO_VOLUMES

# Let systemd restart this service always
Restart=always

# Specifies the maximum file descriptor number that can be opened by this process
LimitNOFILE=1048576

# Specifies the maximum number of threads this process can create
TasksMax=infinity

# Disable timeout logic and wait until process is stopped
TimeoutStopSec=infinity
SendSIGKILL=no

[Install]
WantedBy=multi-user.target

# Built for ${project.name}-${project.version} (${project.name})
```

配置数据目录（/data/minio）、用户名（admin）、密码（12345678），并启动服务

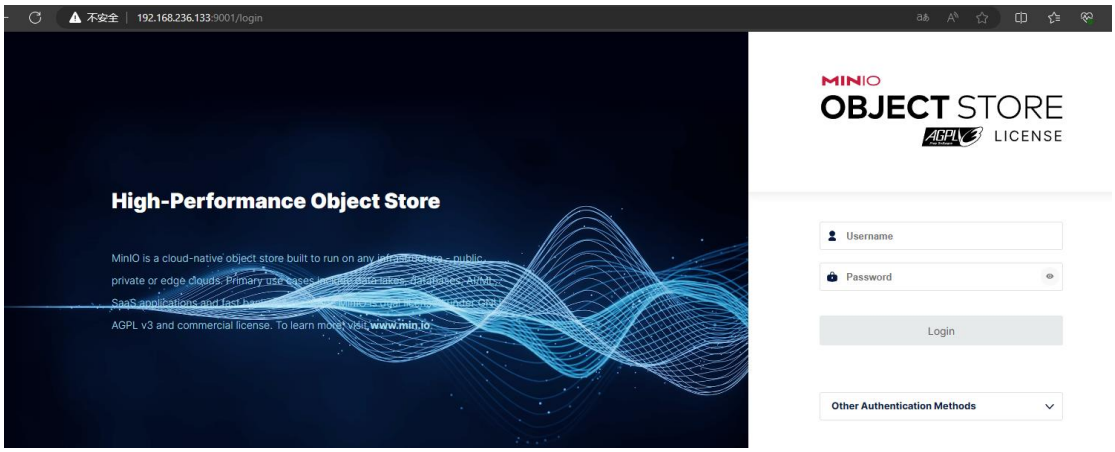
```
sudo cat <<EOT >> /etc/default/minio
# Volume to be used for MinIO server.
MINIO_VOLUMES="/data/minio"
# Use if you want to run MinIO on a custom port.
MINIO_OPTS="--address :9000    --console-address :9001"
# Root user for the server.
MINIO_ROOT_USER=admin
# Root secret for the server.
MINIO_ROOT_PASSWORD=12345678
EOT
```

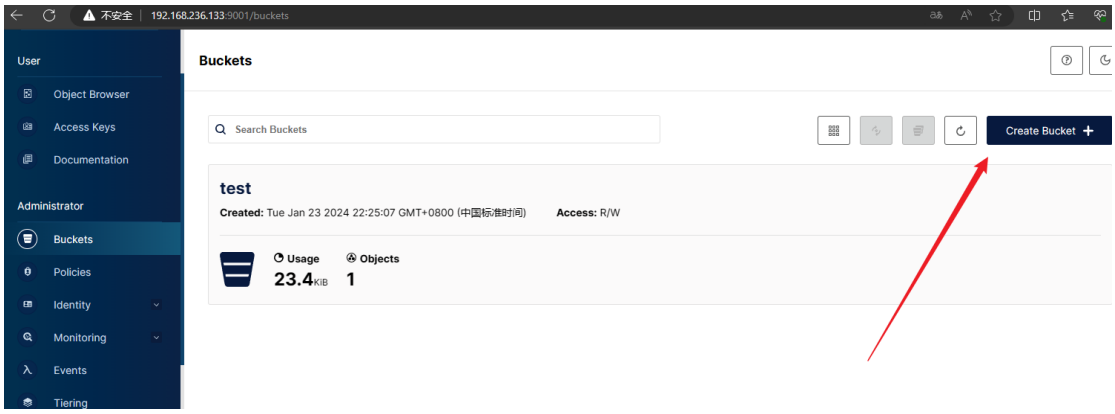
4. 创建数据存储位置

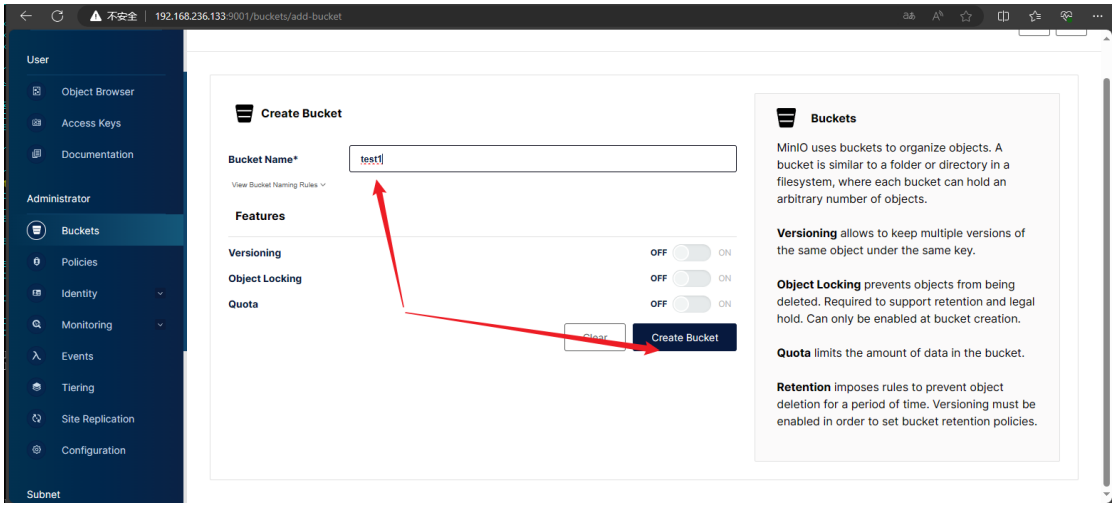
sudo mkdir -p /data/minio

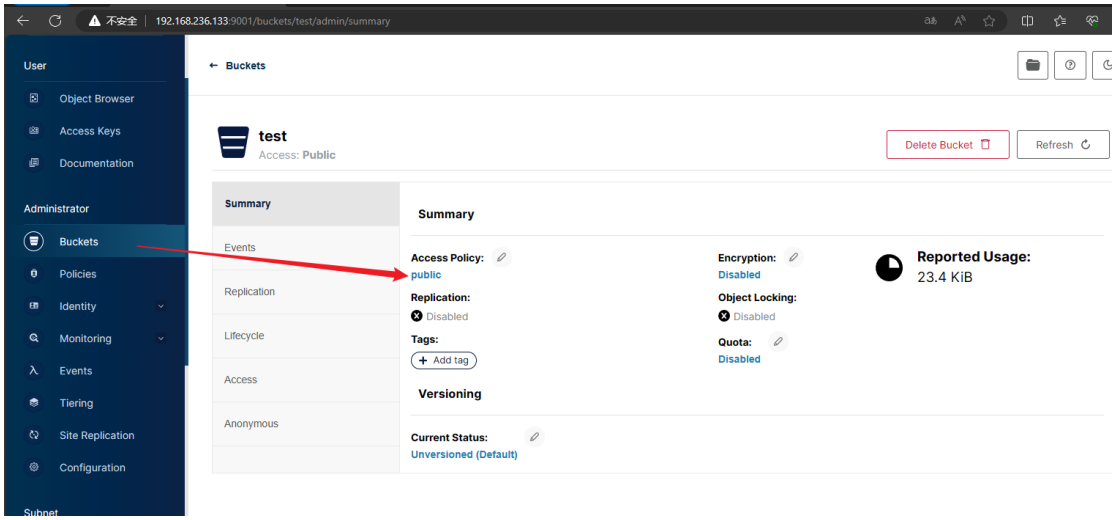
sudo systemctl daemon-reload
sudo systemctl enable minio.service
sudo systemctl start minio.service

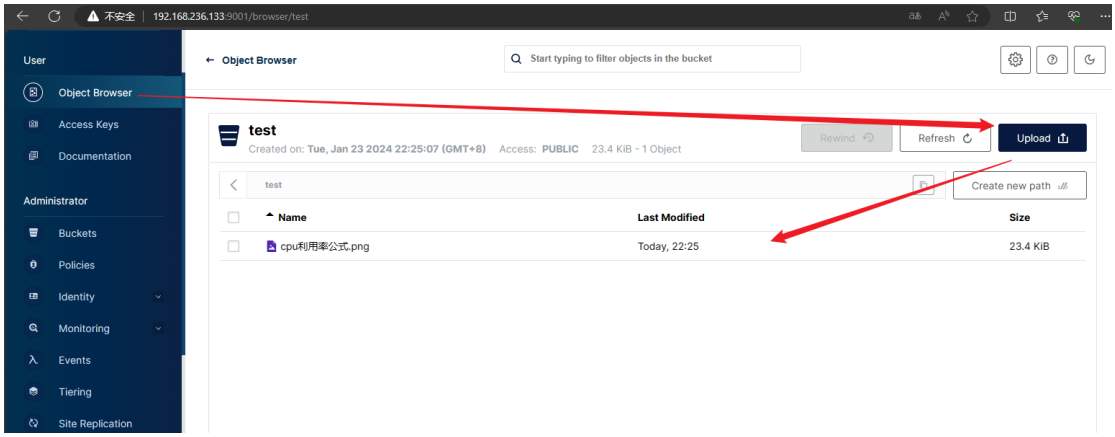
web 访问 192.168.236.133:9000
登入 minio，创建存储桶，设置为公共桶，并上传测试文件，并验证











5. 测试

测试方法需要 ip:9000/桶名称/对象名称

http://192.168.236.133:9000/test/cpu 利用率公式.png