

Ubuntu 离线安装 clickhouse

1、安装 clickhouse 前期文件准备

Docker 安装包准备 clickhouse-client_22.3.3.44_all.deb

clickhouse-common-static_22.3.3.44_amd64.deb

clickhouse-server_22.3.3.44_all.deb

 clickhouse-client_22.3.3.44_all.deb	2023/7/21 20:33	DEB 文件	36 KB
 clickhouse-common-static_22.3.3.44_amd64.deb	2023/7/21 20:34	DEB 文件	240,605 KB
 clickhouse-server_22.3.3.44_all.deb	2023/7/21 20:34	DEB 文件	57 KB

2、将 U 盘挂载到 ubuntu 系统

首先查看是否识别 U 盘，执行 lsblk

```
root@thsmart:/home/thsmart# lsblk
NAME                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
fd0                  2:0    1  1.4M  0 disk
loop0                7:0    0  55.4M  1 loop /snap/core18/1944
loop1                7:1    0  69.9M  1 loop /snap/lxd/19188
loop2                7:2    0  31.1M  1 loop /snap/snapped/10707
sda                  8:0    0   40G  0 disk
├─sda1                8:1    0    1M  0 part
├─sda2                8:2    0    1G  0 part /boot
├─sda3                8:3    0   39G  0 part
└─ubuntu--vg-lv--0 253:0    0   39G  0 lvm /
sdb                  8:16   1  29.3G  0 disk
├─sdb1                8:17   1  29.3G  0 part
└─sdb2                8:18   1    32M  0 part
sr0                  11:0    1  93.2M  0 rom
sr1                  11:1    1 1024M  0 rom
root@thsmart:/home/thsmart#
```

将 U 盘进行挂载执行 `mount /dev/sdb1 /mnt/clickhouse1`

取消挂载执行 `umount /mnt/clickhouse1`

把安装包文件夹 clickhouse1 复制到/opt 目录下

执行 `cp -r click house1/opt`

```
root@thsmart:/mnt/clickhouse# cp -r clickhouse1 /opt
```

3、对 deb 文件进行安装

安装 clickhouse-common-static_22.3.3.44_amd64.deb 执行 `dpkg --install`

clickhouse-common-static_22.3.3.44_amd64.deb

```
root@thsmart:/opt/clickhouse1# dpkg --install clickhouse-common-static_22.3.3.44_amd64.deb
Selecting previously unselected package clickhouse-common-static.
(Reading database ... 71222 files and directories currently installed.)
Preparing to unpack clickhouse-common-static_22.3.3.44_amd64.deb ...
Unpacking clickhouse-common-static (22.3.3.44) ...
Setting up clickhouse-common-static (22.3.3.44) ...
root@thsmart:/opt/clickhouse1#
```

安 装 clickhouse-server_22.3.3.44_all.deb 执 行 dpkg --install

clickhouse-server_22.3.3.44_all.deb

```
root@thsmart:/opt/clickhouse1# dpkg --install clickhouse-server_22.3.3.44_all.deb
Selecting previously unselected package clickhouse-server.
(Reading database ... 71236 files and directories currently installed.)
Preparing to unpack clickhouse-server_22.3.3.44_all.deb ...
Unpacking clickhouse-server (22.3.3.44) ...
Setting up clickhouse-server (22.3.3.44) ...
ClickHouse binary is already located at /usr/bin/clickhouse
Symlink /usr/bin/clickhouse-server already exists but it points to /clickhouse. Will replace the old symlink to /usr/bin/clickhouse.
Creating symlink /usr/bin/clickhouse-server to /usr/bin/clickhouse.
Creating symlink /usr/bin/clickhouse-client to /usr/bin/clickhouse.
Creating symlink /usr/bin/clickhouse-local to /usr/bin/clickhouse.
Creating symlink /usr/bin/clickhouse-benchmark to /usr/bin/clickhouse.
Symlink /usr/bin/clickhouse-copier already exists but it points to /clickhouse. Will replace the old symlink to /usr/bin/clickhouse.
Creating symlink /usr/bin/clickhouse-copier to /usr/bin/clickhouse.
Creating symlink /usr/bin/clickhouse-obfuscator to /usr/bin/clickhouse.
```

安 装 clickhouse-client_22.3.3.44_all.deb4 执 行 dpkg --install

clickhouse-client_22.3.3.44_all.deb

```
root@thsmart:/opt/clickhouse1# dpkg --install clickhouse-client_22.3.3.44_all.deb
Selecting previously unselected package clickhouse-client.
(Reading database ... 71250 files and directories currently installed.)
Preparing to unpack clickhouse-client_22.3.3.44_all.deb ...
Unpacking clickhouse-client (22.3.3.44) ...
Setting up clickhouse-client (22.3.3.44) ...
root@thsmart:/opt/clickhouse1#
```

6 执行 systemctl start clickhouse-server, 并查看启动状态执行 systemctl status clickhouse-server

```
root@thsmart:/opt/clickhouse1# systemctl start clickhouse-server
root@thsmart:/opt/clickhouse1# systemctl status clickhouse-server
● clickhouse-server.service - ClickHouse Server (analytic DBMS for big data)
   Loaded: loaded (/lib/systemd/systemd-clickhouse-server.service; disabled; vendor preset: enabled)
   Active: active (running) since Sat 2023-07-22 00:31:11 UTC; 9s ago
     Main PID: 27709 (clickhouse-watch)
       Tasks: 206 (limit: 9417)
      Memory: 80.5M
     CGroup: /system.slice/clickhouse-server.service
             └─27709 clickhouse-watchdog --config=/etc/clickhouse-server/config.xml --pid-file=/run/clickhouse-server/clickhouse-server.pid
               └─27720 /usr/bin/clickhouse-server --config=/etc/clickhouse-server/config.xml --pid-file=/run/clickhouse-server/clickhouse-server.pid

Jul 22 00:31:11 thsmart systemd[1]: Started ClickHouse Server (analytic DBMS for big data).
Jul 22 00:31:11 thsmart clickhouse-server[27709]: Processing configuration file '/etc/clickhouse-server/config.xml'.
Jul 22 00:31:11 thsmart clickhouse-server[27709]: Logging trace to /var/log/clickhouse-server/clickhouse-server.log
Jul 22 00:31:11 thsmart clickhouse-server[27709]: Logging errors to /var/log/clickhouse-server/clickhouse-server.err.log
```

7、进入服务器操作执行 clickhouse-client --password=123456

```
root@thsmart:/opt/clickhouse1# clickhouse-client --password=123456
ClickHouse client version 22.3.3.44 (official build).
Connecting to localhost:9000 as user default.
Connected to ClickHouse server version 22.3.3 revision 54455.

thsmart :)
```

8、替换/etc/clickhouse-server/下面的 conf.xml 和 user.xml

```
root@thsmart:/etc/clickhouse-server# ls
config.d  config.xml  users.d  users.xml
```

9、停止 clickhouse-server 执行 systemctl stop clickhouse-server

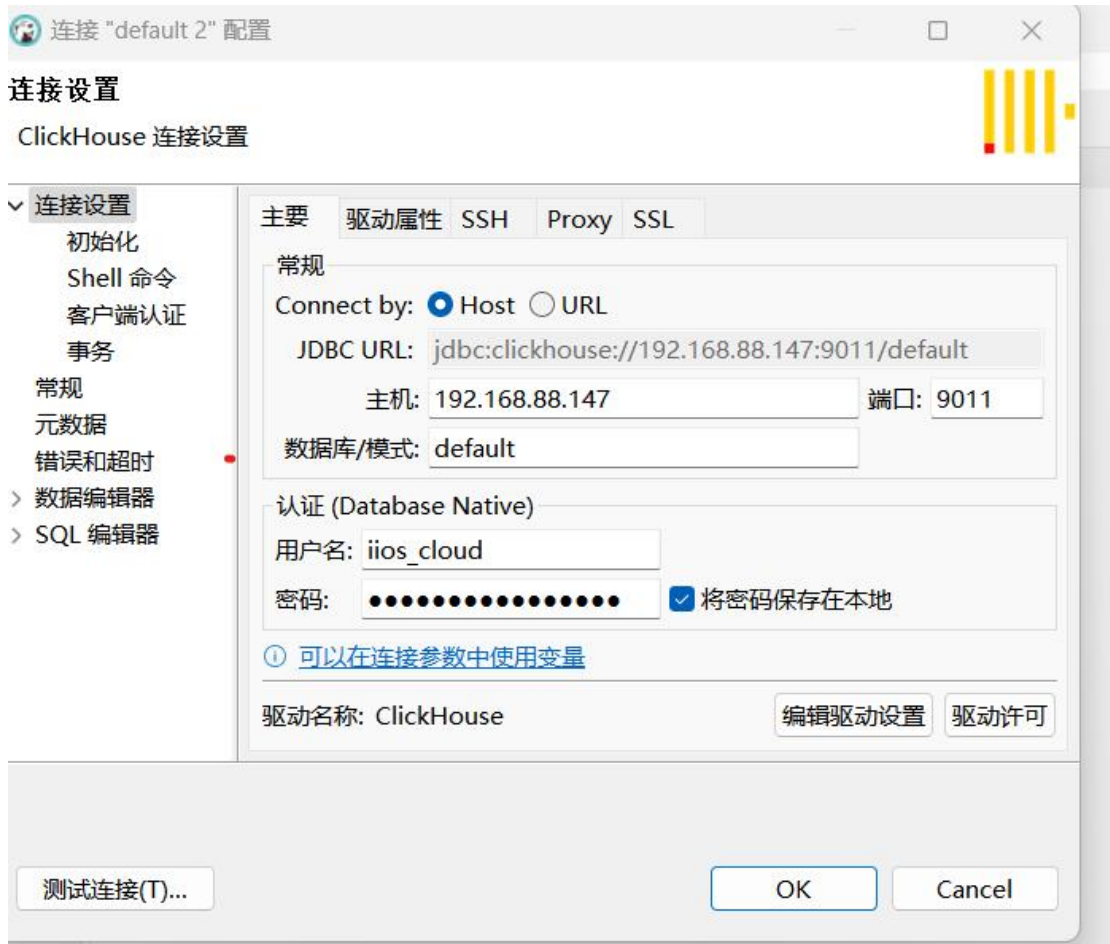
10、启动 clickhouse-server 执行 `systemctl start clickhouse-server`

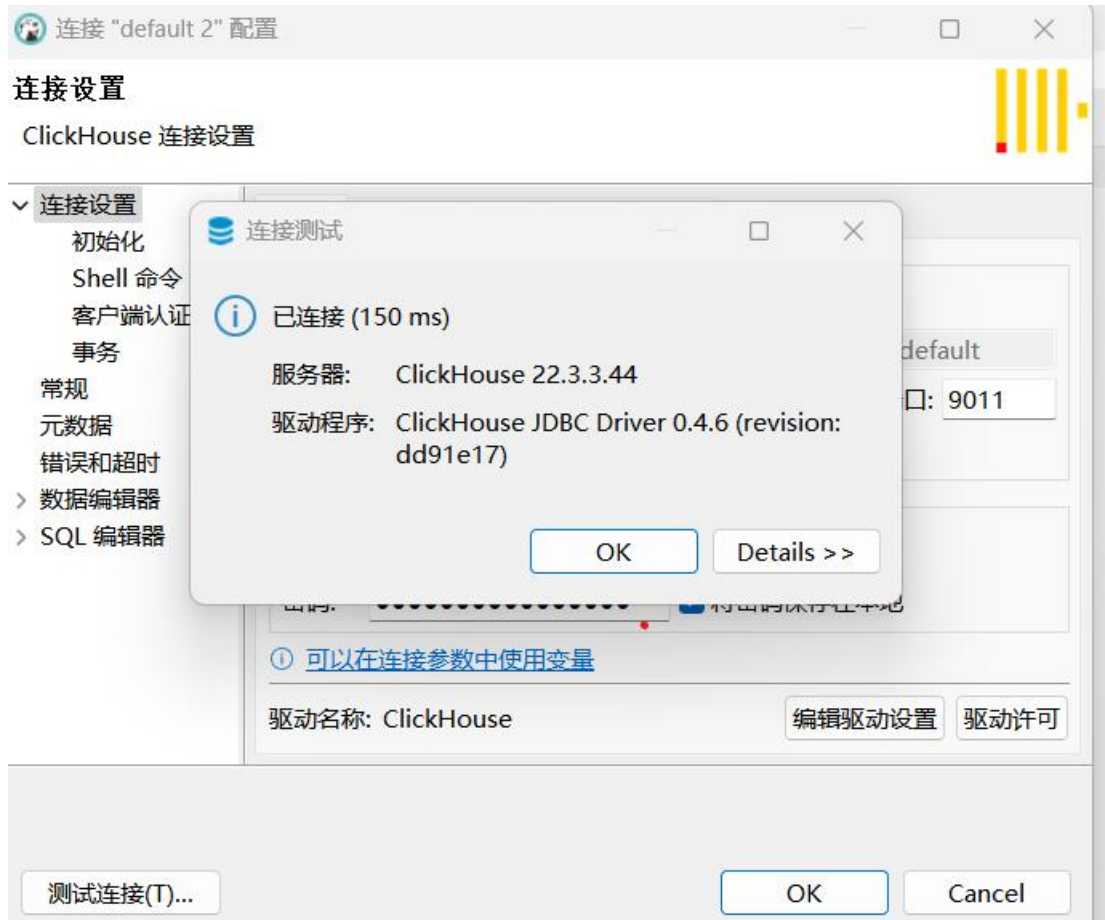
11、查看 clickhouse-server 状态执行 `systemctl status clickhouse-server`

```
root@ths mart:~# systemctl start clickhouse-server
root@ths mart:~# systemctl status clickhouse-server
● clickhouse-server.service - ClickHouse Server (analytic DBMS for big data)
   Loaded: loaded (/usr/lib/systemd/system/clickhouse-server.service; disabled; vendor preset: enabled)
   Active: active (running) since Sun 2023-07-23 00:36:17 UTC; 18s ago
     Main PID: 17611 (clickhouse-watch)
       Tasks: 200 (limit: 9417)
      Memory: 75.7M
     CGroup: /system.slice/clickhouse-server.service
            └─17611 clickhouse-watchdog --config=/etc/clickhouse-server/config.xml --pid-file=/run/clickhouse-server/clickhouse-server.pid
              └─17622 /usr/bin/clickhouse-server --config=/etc/clickhouse-server/config.xml --pid-file=/run/clickhouse-server/clickhouse-server.pid

Jul 23 00:36:17 thsmart systemd[1]: Started ClickHouse Server (analytic DBMS for big data).
Jul 23 00:36:18 thsmart clickhouse-server[17611]: Processing configuration file '/etc/clickhouse-server/config.xml'.
Jul 23 00:36:18 thsmart clickhouse-server[17611]: Logging trace to /var/log/clickhouse-server/clickhouse-server.log
Jul 23 00:36:18 thsmart clickhouse-server[17611]: Logging errors to /var/log/clickhouse-server/clickhouse-server.err.log
Jul 23 00:36:18 thsmart clickhouse-server[17622]: Processing configuration file '/etc/clickhouse-server/config.xml'.
Jul 23 00:36:18 thsmart clickhouse-server[17622]: Saved preprocessed configuration to '/var/lib/clickhouse/preprocessed_configs/config.xml'.
Jul 23 00:36:18 thsmart clickhouse-server[17622]: Processing configuration file '/etc/clickhouse-server/users.xml'.
```

12、使用 DBeaver 软件测试连接





数据库: 默认库名: default 用户名: iios_cloud 密码: 52M!y&fokdamh9vk

13、设置 clickhouse-server 自启执行

```
root@thsmart:~# systemctl enable clickhouse-server
Synchronizing state of clickhouse-server.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable clickhouse-server
Created symlink /etc/systemd/system/multi-user.target.wants/clickhouse-server.service → /lib/systemd/system/clickhouse-server.service.
root@thsmart:~#
```

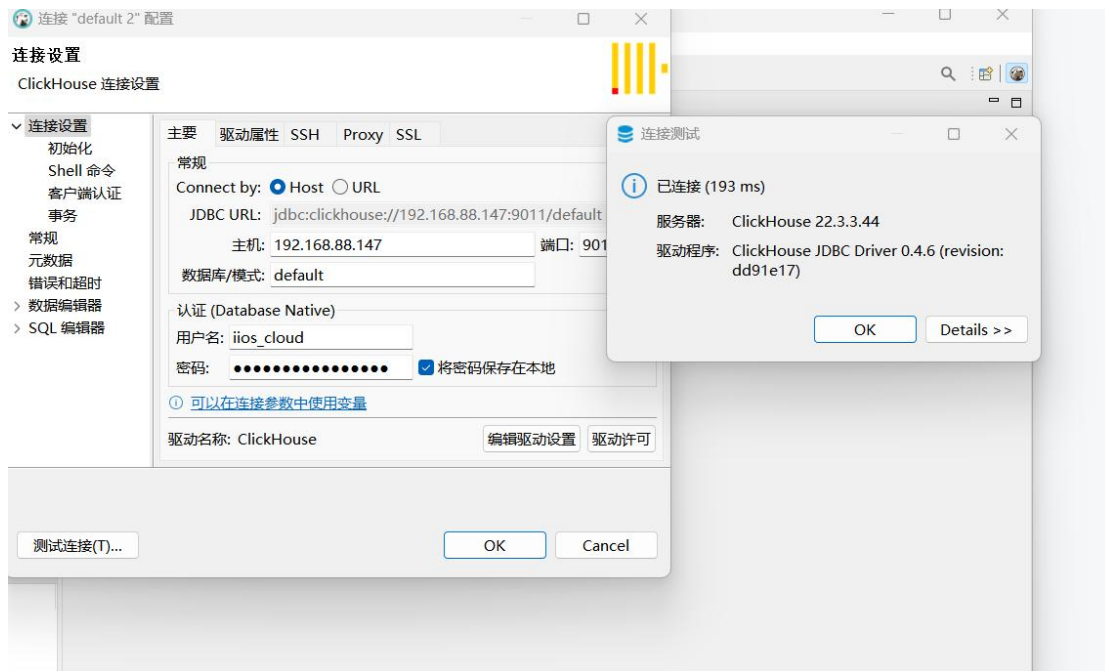
14、ubuntu 系统重启执行 reboot

15、再次查看 clickhouse-server 状态执行 systemctl status clickhouse-server

```
● clickhouse-server.service - ClickHouse Server (analytic DBMS for big data)
   Loaded: loaded (/lib/systemd/system/clickhouse-server.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2023-07-23 00:46:35 UTC; 1min 52s ago
     Main PID: 853 (clickhouse-watch)
        Tasks: 200 (limit: 9417)
       Memory: 476.1M
      (Group): /system.slice/clickhouse-server.service
             └─853 clickhouse-watchdog --config=/etc/clickhouse-server/config.xml --pid-file=/run/clickhouse-server/clickhouse-server.pid
                └─951 /usr/bin/clickhouse-server --config=/etc/clickhouse-server/config.xml --pid-file=/run/clickhouse-server/clickhouse-server.pid

Jul 23 00:46:35 thsmart systemd[1]: Started ClickHouse Server (analytic DBMS for big data).
Jul 23 00:46:36 thsmart clickhouse-server[853]: Processing configuration file '/etc/clickhouse-server/config.xml'.
Jul 23 00:46:36 thsmart clickhouse-server[853]: Logging trace to /var/log/clickhouse-server/clickhouse-server.log
Jul 23 00:46:36 thsmart clickhouse-server[853]: Logging errors to /var/log/clickhouse-server/clickhouse-server.err.log
Jul 23 00:46:38 thsmart clickhouse-server[951]: Processing configuration file '/etc/clickhouse-server/config.xml'.
Jul 23 00:46:38 thsmart clickhouse-server[951]: Saved preprocessed configuration to '/var/lib/clickhouse/preprocessed_configs/config.xml'.
Jul 23 00:46:38 thsmart clickhouse-server[951]: Processing configuration file '/etc/clickhouse-server/users.xml'.
Jul 23 00:46:38 thsmart clickhouse-server[951]: Merging configuration file '/etc/clickhouse-server/users.d/default-password.xml'.
Jul 23 00:46:38 thsmart clickhouse-server[951]: Saved preprocessed configuration to '/var/lib/clickhouse/preprocessed_configs/users.xml'.
lines 1-19
```

16、再次测试连接



17、问题备注

当替换或更改 conf.xml 和 user.xml 后执行 clickhouse-server restart 出现一下问题

```
root@thsmart:/etc/clickhouse-server# clickhouse restart
/var/run/clickhouse-server/clickhouse-server.pid file exists and contains pid = 7065.
The process with pid = 7065 is running.
Sent terminate signal to process with pid 7065.
Waiting for server to stop
/var/run/clickhouse-server/clickhouse-server.pid file exists and contains pid = 7065.
The process with pid = 7065 is running.
Waiting for server to stop
/var/run/clickhouse-server/clickhouse-server.pid file exists and contains pid = 7065.
The process with pid = 7065 is running.
Waiting for server to stop
/var/run/clickhouse-server/clickhouse-server.pid file exists and contains pid = 7065.
The process with pid = 7065 is running.
Waiting for server to stop
/var/run/clickhouse-server/clickhouse-server.pid file exists and contains pid = 7065.
The process with pid = 7065 is running.
Waiting for server to stop
/var/run/clickhouse-server/clickhouse-server.pid file exists and contains pid = 7065.
The process with pid = 7065 is running.
Waiting for server to stop
/var/run/clickhouse-server/clickhouse-server.pid file exists and contains pid = 7065.
```

说明没有重启成功、可以执行以下操作 /usr/bin/clickhouse-server --config-file=/etc/clickhouse-server/config.xml

```
root@thsmart:/opt/clickhouse# /usr/bin/clickhouse-server --config-file=/etc/clickhouse-server/config.xml
Processing configuration file '/etc/clickhouse-server/config.xml'.
Logging trace to /var/log/clickhouse-server/clickhouse-server.log
Logging errors to /var/log/clickhouse-server/clickhouse-server.err.log
Logging trace to console
2023.07.21 17:37:31.072937 [ 21865 ] {} <Information> Sentry: Sending crash reports is disabled
2023.07.21 17:37:31.079581 [ 21865 ] {} <Trace> Pipes: Pipe capacity is 1.00 MiB
2023.07.21 17:37:31.232057 [ 21865 ] {} <Information> : Starting ClickHouse 22.3.3.44 with revision 54460, build id: F903C2B86668EF5D, PID 21865
2023.07.21 17:37:31.232265 [ 21865 ] {} <Information> Application: starting up
2023.07.21 17:37:31.232314 [ 21865 ] {} <Information> Application: OS name: Linux, version: 5.4.0-65-generic, architecture: x86_64
2023.07.21 17:37:31.248400 [ 21865 ] {} <Trace> AsynchronousMetrics: Scanning /sys/class/thermal
2023.07.21 17:37:31.248513 [ 21865 ] {} <Trace> AsynchronousMetrics: Scanning /sys/block
2023.07.21 17:37:31.248652 [ 21865 ] {} <Trace> AsynchronousMetrics: Scanning /sys/devices/system/edac
2023.07.21 17:37:31.248727 [ 21865 ] {} <Trace> AsynchronousMetrics: Scanning /sys/class/hwmon
2023.07.21 17:37:31.530408 [ 21865 ] {} <Warning> Application: Calculated checksum of the binary: FD20C2FC24F88896C15B97FA841803. There is no information about the reference checksum.
2023.07.21 17:37:31.530707 [ 21865 ] {} <Trace> Application: Will do mlock to prevent executable memory from being paged out. It may take a few seconds.
2023.07.21 17:37:31.535516 [ 21865 ] {} <Trace> Application: The memory map of clickhouse executable has been mlock'ed, total 275.48 MiB
2023.07.21 17:37:31.536671 [ 21865 ] {} <Error> Application: DB:Exception: Effective user of the process (root) does not match the owner of the data (clickhouse). Run under 'sudo -u clickhouse'.
2023.07.21 17:37:31.536710 [ 21865 ] {} <Information> Application: shutting down
2023.07.21 17:37:31.536716 [ 21865 ] {} <Debug> Application: Uninitializing subsystem: Logging Subsystem
2023.07.21 17:37:31.536861 [ 21866 ] {} <Trace> BaseDaemon: Received signal -2
2023.07.21 17:37:31.536903 [ 21866 ] {} <Information> BaseDaemon: Stop SignalListener thread
```

```
2023-07-21 18:22:58.24496 [ 56084 ] {} <Information> Subiquity: Sending crash reports is disabled
2023-07-21 18:22:58.250827 [ 56084 ] {} <Trace> Pipe: Pipe capacity is 1.00 MiB
2023-07-21 18:22:58.368117 [ 56084 ] {} <Information> : Starting ClickHouse 22.3.3.44 with revision 54460, build id: F903C2B8666BEF5D, PID 56084
2023-07-21 18:22:58.368323 [ 56084 ] {} <Information> Application: starting up
2023-07-21 18:22:58.368367 [ 56084 ] {} <Information> Application: OS name: Linux, version: 5.4.0-65-generic, architecture: x86_64
2023-07-21 18:22:58.376584 [ 56084 ] {} <Trace> AsynchronousMetrics: Scanning /sys/class/thermal
2023-07-21 18:22:58.376649 [ 56084 ] {} <Trace> AsynchronousMetrics: Scanning /sys/block
2023-07-21 18:22:58.376733 [ 56084 ] {} <Trace> AsynchronousMetrics: Scanning /sys/devices/system/edac
2023-07-21 18:22:58.376759 [ 56084 ] {} <Trace> AsynchronousMetrics: Scanning /sys/class/hwmon
2023-07-21 18:22:58.583765 [ 56084 ] {} <Warning> Application: Calculated checksum of the binary: FD20C2FC24F8B8996C15BF97FA841803. There is no information about the reference checksum.
2023-07-21 18:22:58.584178 [ 56084 ] {} <Trace> Application: Will do mlock to prevent executable memory from being paged out. It may take a few seconds.
2023-07-21 18:22:58.590526 [ 56084 ] {} <Trace> Application: The memory map of clickhouse executable has been mlock'ed, total 275.48 MiB
2023-07-21 18:22:58.590728 [ 56084 ] {} <Information> StatusFile: Status file /var/lib/clickhouse/status already exists - unclean restart. Contents:
PID: 16080
Started at: 2023-07-21 17:30:04
Revision: 54460

2023-07-21 18:22:58.592224 [ 56084 ] {} <Error> Application: DB::Exception: Cannot lock file /var/lib/clickhouse/status. Another server instance in same directory is already running.
2023-07-21 18:22:58.592328 [ 56084 ] {} <Information> Application: shutting down
2023-07-21 18:22:58.592386 [ 56084 ] {} <Debug> Application: Uninitializing subsystem: Logging Subsystem
2023-07-21 18:22:58.592561 [ 56089 ] {} <Trace> BaseDaemon: Received signal -2
2023-07-21 18:22:58.592603 [ 56089 ] {} <Information> BaseDaemon: Stop Signallistener thread
```

查看报错内容，怀疑是 clickhouse-server 起重复了，可以查看 clickhouse-server 的进程并 kill 掉，执行 `ps -ef | grep clickhouse-server`

```
root@thsmart:~# ps -ef | grep clickhouse-server
clickho 16075 1 13:56 ? 00:00:00 clickhouse-watchdog --config-file /etc/clickhouse-server/config.xml --pid-file /var/run/clickhouse-server/clickho
use-server.pid
clickho 16080 1 13:56 ? 00:02:22 /usr/bin/clickhouse-server --config-file /etc/clickhouse-server/config.xml --pid-file /var/run/clickhouse-server/clickho
use-server.pid --daemon
root 68360 63428 0 15:06 pts/0 00:00:00 grep --color=auto clickhouse-server
```

kill 掉执行 `kill pid 号`

再次执行 `service clickhouse-server start`

`service clickhouse-server status`

ubuntu 固定 ip 地址修改

首先进入，执行 `cd /etc/netplan#`

```
root@thsmart:~# cd /etc/netplan
root@thsmart:~# cd /etc/netplan# ls
00-installer-config.yaml
root@thsmart:~# cd /etc/netplan#
```

修改 ip 地址格式如下

```
# This is the network config written by "subiquity"
network:
  ethernets:
    ens33:
      addresses: [192.168.88.230/24]
      gateway4: 192.168.88.1
      dhcp4: false
  version: 2
```

最后执行 `netplan apply`