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## 操作前需知

---

```
import os
from cxz.userutils import UserAction

ssh_args = {
    'hostname': '192.168.220.128',
    'port': 22,
    'username': 'lzh',
    'password': '083636'
}

user_task = UserAction(ssh_args)
```

- 所有的测试都必须先运行前面那个模块

## 终端快捷方式

---

- 粘贴（上）下一条命令

方向键上下键

- 翻查历史记录

CTRL+R

- 终止当下命令

CTRL+C

- 退出终端

eixt/quit/CTRL+E

- 清理屏幕

clear

- 查看之前打过的命令（可关键词查找）

history

- 将光标移到行首

CTRL+A

- 将光标移到行尾

CTRL+E

- 将光标按单词往前移

```
ALT+B
```

- 将光标按单词往后移

```
ALT+F
```

- 向前删除一个单词

```
ALT+BACESPACE
```

- 向后删除一个单词

```
ALT+D
```

## Linux一些命令操作

---

- 列出所有可更新的软件清单命令

```
sudo apt update
```

- 升级软件包

```
sudo apt upgrade
```

- 查看当前路径下的文件

```
ll
```

- 显示指定工作目录下之内容

```
ls
```

- 改变终端所在路径

```
cd 路径
```

- 打开文件

```
sudo gedit 文件路径 . 文件名 // 按TAB键显示当下文件夹
```

- 查看当前在哪个路径

```
pwd
```

- 如无法将本机复制粘贴到虚拟机解决方法

```
sudo apt install open-vm-tools
```

- 删除包

```
sudo apt remove 文件名
```

- 删除冗余包

```
sudo apt autoremove
```

- 查找某文件路径

```
which 文件名
```

- 查看用户的关键信息

```
cat /etc/passwd
```

- 下载包

```
sudo apt install 文件名
```

- 帮助手册

```
man 命令
```

- 命令用于连接文件并打印到标准输出设备上

```
cat /etc/passwd
```

- 抄代码 //搬砖

```
git clone
```

- 将硬盘列出来

```
lsblk
```

## ssh测试

## 步骤

---

### 1. 更新系统

```
sudo apt update
```

### 2. 下载ssh包

```
sudo apt install openssh-server
```

### 3. 查IP地址

```
ip a
```

## 补充

---

- 服务

```
systemctl
```

- 查看ssh服务

```
systemctl status sshd
```

- 重启ssh服务

```
systemctl restart sshd
```

- 开启ssh服务

```
systemctl start sshd
```

- 关闭ssh服务

```
systemctl stop sshd
```

- 检查是否安装成功ssh服务

```
ssh 用户名@localhost
```

---

## 换源测试

---

# 步骤

---

## 1. 打开换源的文件

```
sudo gedit /etc/apt/sources.list
```

## 2. 替换国内源//这里仅展示中科大源

```
deb https://mirrors.ustc.edu.cn/ubuntu/ jammy main restricted universe  
multiverse deb-src https://mirrors.ustc.edu.cn/ubuntu/ jammy main restricted  
universe multiverse deb https://mirrors.ustc.edu.cn/ubuntu/ jammy-updates  
main restricted universe multiverse deb-src  
https://mirrors.ustc.edu.cn/ubuntu/ jammy-updates main restricted universe  
multiverse deb https://mirrors.ustc.edu.cn/ubuntu/ jammy-backports main  
restricted universe multiverse deb-src https://mirrors.ustc.edu.cn/ubuntu/  
jammy-backports main restricted universe multiverse deb  
https://mirrors.ustc.edu.cn/ubuntu/ jammy-security main restricted universe  
multiverse deb-src https://mirrors.ustc.edu.cn/ubuntu/ jammy-security main  
restricted universe multiverse deb https://mirrors.ustc.edu.cn/ubuntu/  
jammy-proposed main restricted universe multiverse deb-src  
https://mirrors.ustc.edu.cn/ubuntu/ jammy-proposed main restricted universe  
multiverse
```

## 3. 更新系统

```
sudo apt update
```

## 4. 更新软件

```
sudo apt upgrade
```

# 考试如果禁用剪切板的话，补救方式

---

```
1. wget http://web.tecxz.com:7080/ubuntu/sources.list.ustc
```

```
2. sudo mv sources.list.ustc /etc/apt/sources.list
```

## 3. 更新系统

```
sudo apt update
```

#### 4. 更新软件

```
sudo apt upgrade
```

---

## 基础测试

---

#### 1. 下载git和zsh

```
sudo apt install git zsh
```

#### 2. 下载curl

```
sudo apt install curl
```

#### 3. 调用老师的zsh

```
curl -fsSL http://web.tecxz.com:7080/file/zsh/install.sh | sh
```

#### 4. 默认改成zsh

```
chsh -s /usr/bin/zsh
```

#### 5. 改zsh主题（第11行双引号里的改成ys）

```
gedit ~/.zshrc
```

---

## 补充

---

- 改成zsh后必须要登pyclass，不然命令运行不了

---

## 分区创建测试

---

#### 1. 创建新硬盘（15个G）



1.



## 硬件类型

您要安装哪类硬件？

硬件类型(H):

- ☒ 硬盘
- ☐ CD/DVD 驱动器
- ☐ 软盘驱动器
- ☐ 网络适配器
- ☐ USB 控制器
- ☐ 声卡
- ☐ 并行端口
- ☐ 串行端口
- ☐ 打印机
- ☐ 通用 SCSI 设备
- ☐ 可信平台模块

解释  
添加硬盘。

< 上一步(B)    下一步(N) >    取消

2.

## 选择磁盘类型

您要创建何种磁盘？

虚拟磁盘类型

- ☐ IDE(I)
- ☒ SCSI(S) (推荐)
- ☐ SATA(A)
- ☐ NVMe(V)

只有在虚拟机电源处于关闭状态时，才能添加 IDE 磁盘。

只有在虚拟机电源处于关闭状态时，才能添加 NVMe 磁盘。

< 上一步(B)    下一步(N) >    取消

3.

## 选择磁盘

您要使用哪个磁盘？

磁盘

### ☒ 创建新虚拟磁盘(V)

虚拟磁盘由主机文件系统上的一个或多个文件组成，客户机操作系统会将其视为单个硬盘。虚拟磁盘可在一台主机上或多台主机之间轻松复制或移动。

### ☐ 使用现有虚拟磁盘(E)

选择此选项可重新使用以前配置的磁盘。

### ☐ 使用物理磁盘 (适用于高级用户)(P)

选择此选项可为虚拟机提供直接访问本地硬盘的权限。需要具有管理员特权。

< 上一步(B)

下一步(N) >

取消

4.

## 指定磁盘容量

磁盘大小为多少？

最大磁盘大小 (GB)(S):

针对 Ubuntu 64 位 的建议大小: 20 GB

### ☐ 立即分配所有磁盘空间(A)。

分配所有容量可以提高性能，但要求所有物理磁盘空间立即可用。如果不立即分配所有空间，虚拟磁盘的空间最初很小，会随着您向其中添加数据而不断变大。

### ☒ 将虚拟磁盘存储为单个文件(O)

### ☐ 将虚拟磁盘拆分成多个文件(M)

拆分磁盘后，可以更轻松地在计算机之间移动虚拟机，但可能会降低大容量磁盘的性能。

改为15G

< 上一步(B)

下一步(N) >

取消

5.

6. 一路确定下去

7. 要将输入定向到该虚拟机，请将鼠标指针移入其中或按 Ctrl+G。

任务栏图标

2. 查找是否有新硬盘

```

# lzh @ mechrev in ~/Desktop [19:12:05]
$ ls /dev
autofs      cuse        hpet        loop12      mapper      port        sda2        tty0        tty19      tty29      tty39      tty49      tty59      ttyS1      ttyS2      ttyS3      uinput      vcsa1      vcsu5
block       disk        hugepages   loop13      mcelog      ppp         sg0         tty1        tty2       tty3       tty4       tty5       tty6       ttyS10     ttyS20     ttyS30     urandom     vcsa2      vcsu6
bsg         dma_heap    hwrng       loop2       mem         psaux       sg1         tty10       tty20      tty30      tty40      tty50      tty60      ttyS11     ttyS21     ttyS31     userio      vcsa3      vfio
btrfs-control dmndt       initctl     loop3       nvme0       ram         tty11       tty21      tty31      tty41      tty51      tty61      ttyS12     ttyS22     ttyS32     vcs         vcsa4      vga_arbiter
bus         dri         input       loop4       nvme0n1     rm          tty12       tty22      tty32      tty42      tty52      tty62      ttyS13     ttyS23     ttyS33     vcs1        vcsa5      vhci
cdrom       ecryptfs    knsg        loop5       nvme0n1     rng         tty13       tty23      tty33      tty43      tty53      tty63      ttyS14     ttyS24     ttyS34     vcs2        vcsa6      vhost-net
char        fb0         log         loop6       null        rkill       tty14       tty24      tty34      tty44      tty54      tty64      ttyS15     ttyS25     ttyS35     vcs3        vcsu       vhost-vsock
console     fd          loop0       loop7       rtc         stderr      tty15       tty25      tty35      tty45      tty55      tty65      ttyS16     ttyS26     ttyS36     vcs4        vcsu1      vmci
core        full        loop1       loop8       rtc0        stdin       tty16       tty26      tty36      tty46      tty56      tty66      ttyS17     ttyS27     ttyS37     vcs5        vcsu2      vsock
cpu         fuse        loop10      loop9       nvme0n1     sda         tty17       tty27      tty37      tty47      tty57      tty67      ttyS18     ttyS28     ttyS38     vcs6        vcsu3      zero
cpu_dma_latency hidraw0     loop11      loop-control nvram       sda1        tty18       tty28      tty38      tty48      tty58      tty68      ttyS19     ttyS29     ttyS39     vcsa        vcsu4      zfs

```

查找是否有新硬盘nvme0

### 3. 进入硬盘设置

#### 进入nvme0n1分区

```

$ sudo gdisk /dev/nvme0n1
[sudo] lzh 的密码:
GPT fdisk (gdisk) version 1.0.8

Partition table scan:
  MBR: not present
  BSD: not present
  APM: not present
  GPT: not present

1. Creating new GPT entries in memory.

```

#### 显示当前磁盘的分区表

```

Command (? for help): p
Disk /dev/nvme0n1: 31457280 sectors, 15.0 GiB
Model: VMware Virtual NVMe Disk
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): DF6E6330-8E27-4F44-8DFD-323C30310F71
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 31457246
Partitions will be aligned on 2048-sector boundaries
Total free space is 31457213 sectors (15.0 GiB)

2. Number  Start (sector)    End (sector)  Size      Code  Name

```

#### 增加一个新的分区

3. 输入n后按回车

```
Command (? for help): n
Partition number (1-128, default 1):
First sector (34-31457246, default = 2048) or {+-}size{KMGTP}:
Last sector (2048-31457246, default = 31457246) or {+-}size{KMGTP}: +500M
Current type is 8300 (Linux filesystem)
```

4. 输入L回车 (L to show codes, Enter = 8300): L

```
Hex code or GUID (L to show codes, Enter = 8300): ef00
Changed type of partition to 'EFI system partition'
```

5.

```
Command (? for help): p
Disk /dev/nvme0n1: 31457280 sectors, 15.0 GiB
Model: VMware Virtual NVMe Disk
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): DF6E6330-8E27-4F44-8DFD-323C30310F71
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 31457246
Partitions will be aligned on 2048-sector boundaries
Total free space is 30433213 sectors (14.5 GiB)
```

6.

Number	Start (sector)	End (sector)	Size	Code	Name
1	2048	1026047	500.0 MiB	EF00	EFI system partition

7.

```
Command (? for help): n
Partition number (2-128, default 2):
First sector (34-31457246, default = 1026048) or {+-}size{KMGTP}:
Last sector (1026048-31457246, default = 31457246) or {+-}size{KMGTP}:
Current type is 8300 (Linux filesystem)
Hex code or GUID (L to show codes, Enter = 8300):
Changed type of partition to 'Linux filesystem'
```

```

Command (? for help): p
Disk /dev/nvme0n1: 31457280 sectors, 15.0 GiB
Model: VMware Virtual NVMe Disk
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): DF6E6330-8E27-4F44-8DFD-323C30310F71
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 31457246
Partitions will be aligned on 2048-sector boundaries
Total free space is 2014 sectors (1007.0 KiB)

```

8.

Number	Start (sector)	End (sector)	Size	Code	Name
1	2048	1026047	500.0 MiB	EF00	EFI system partition
2	1026048	31457246	14.5 GiB	8300	Linux filesystem

9. 分区1命名

```

Command (? for help): c
Partition number (1-2): 1
Enter name: classesp

```

10. 分区2命名

```

Command (? for help): c
Partition number (1-2): 2
Enter name: classroot

```

11.

```

Command (? for help): p
Disk /dev/nvme0n1: 31457280 sectors, 15.0 GiB
Model: VMware Virtual NVMe Disk
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): DF6E6330-8E27-4F44-8DFD-323C30310F71
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 31457246
Partitions will be aligned on 2048-sector boundaries
Total free space is 2014 sectors (1007.0 KiB)

```

Number	Start (sector)	End (sector)	Size	Code	Name
1	2048	1026047	500.0 MiB	EF00	classesp
2	1026048	31457246	14.5 GiB	8300	classroot

```
Command (? for help): w
```

```
Final checks complete. About to write GPT data. THIS WILL OVERWRITE EXISTING  
PARTITIONS!!
```

按完w回车后，按y回车

```
Do you want to proceed? (Y/N): y
```

```
OK; writing new GUID partition table (GPT) to /dev/nvme0n1.
```

```
The operation has completed successfully.
```

12.

13. 检查是否硬盘分区成功

```
$ lsblk
```

NAME	MAJ:MIN	RM	SIZE	RO	TYPE	MOUNTPOINTS
loop0	7:0	0	62M	1	loop	/snap/core20/1587
loop1	7:1	0	4K	1	loop	/snap/bare/5
loop2	7:2	0	346.3M	1	loop	/snap/gnome-3-38-2004/119
loop3	7:3	0	240.6M	1	loop	/snap/firefox/2356
loop4	7:4	0	63.3M	1	loop	/snap/core20/1822
loop5	7:5	0	163.3M	1	loop	/snap/firefox/1635
loop6	7:6	0	400.8M	1	loop	/snap/gnome-3-38-2004/112
loop7	7:7	0	91.7M	1	loop	/snap/gtk-common-themes/1535
loop8	7:8	0	45.9M	1	loop	/snap/snap-store/582
loop9	7:9	0	284K	1	loop	/snap/snapd-desktop-integration/14
loop10	7:10	0	49.8M	1	loop	/snap/snapd/18357
loop11	7:11	0	45.9M	1	loop	/snap/snap-store/638
loop12	7:12	0	304K	1	loop	/snap/snapd-desktop-integration/49
sda	8:0	0	20G	0	disk	
└─sda1	8:1	0	512M	0	part	/boot/efi
└─sda2	8:2	0	19.5G	0	part	/var/snap/firefox/common/host-hunspell /
sr0	11:0	1	1024M	0	rom	
nvme0n1	259:0	0	15G	0	disk	
└─nvme0n1p1	259:3	0	500M	0	part	
└─nvme0n1p2	259:4	0	14.5G	0	part	

## 磁盘挂载测试(挂载必须先挂载p2，再挂载p1)

1. 创建B系统的目录

```
sudo mkdir /mnt/usb
```

```
# lzh @ mechrev in ~/Desktop [20:10:30] C:1
$ sudo mkfs.vfat -F32 /dev/nvme0n1p1
[sudo] lzh 的密码:
mkfs.fat 4.2 (2021-01-31)
```

2. 对p1盘格式化

3. 对p2盘格式化

```
# lzh @ mechrev in ~/Desktop [20:11:54]
$ sudo mkfs.ext4 /dev/nvme0n1p2
mke2fs 1.46.5 (30-Dec-2021)
创建含有 3803899 个块（每块 4k）和 950976 个 inode 的文件系统
文件系统 UUID: ef8e182c-f6bd-442e-b264-3f46e16ff42b
超级块的备份存储于下列块:
    32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208

正在分配组表: 完成
正在写入 inode表: 完成
创建日志(16384 个块): 完成
写入超级块和文件系统账户统计信息: 已完成
```

4. 挂载p2盘

```
sudo mount /dev/nvme0n1p2 /mnt/usb
```

5. 创建/mnt/usb/boot/efi目录

```
sudo mkdir -p /mnt/usb/boot/efi
```

6. 挂载p1盘

```
sudo mount /dev/nvme0n1p1 /mnt/usb/boot/efi
```

7. 查看是否挂载成功

```
lsblk
```

## B系统预创建测试

1. B系统根目录

```
ls /mnt/usb
```

2. 构建一套基本的系统(根文件系统)



- `sudo apt install debootstrap`
- `sudo apt search arch-install`
- `sudo apt install arch-install-scripts`

### 3. 查看源的网站地址

```
cat /etc/apt/sources.list
```

```
$ cat /etc/apt/sources.list
deb https://mirrors.ustc.edu.cn/ubuntu/ jammy main restricted universe multiverse
deb-src https://mirrors.ustc.edu.cn/ubuntu/ jammy main restricted universe multiverse
deb https://mirrors.ustc.edu.cn/ubuntu/ jammy-updates main restricted universe multiverse
deb-src https://mirrors.ustc.edu.cn/ubuntu/ jammy-updates main restricted universe multiverse
deb https://mirrors.ustc.edu.cn/ubuntu/ jammy-backports main restricted universe multiverse
deb-src https://mirrors.ustc.edu.cn/ubuntu/ jammy-backports main restricted universe multiverse
deb https://mirrors.ustc.edu.cn/ubuntu/ jammy-security main restricted universe multiverse
deb-src https://mirrors.ustc.edu.cn/ubuntu/ jammy-security main restricted universe multiverse
deb https://mirrors.ustc.edu.cn/ubuntu/ jammy-proposed main restricted universe multiverse
deb-src https://mirrors.ustc.edu.cn/ubuntu/ jammy-proposed main restricted universe multiverse
```

### 4. 下载根文件系统

```
sudo debootstrap --arch=amd64 jammy /mnt/usb
https://mirrors.ustc.edu.cn/ubuntu/
```

### 5. 创建fstab

```
genfstab /mnt/usb | sudo tee /mnt/usb/etc/fstab
```

### 6. 检查一下

```
cat /mnt/usb/etc/fstab
```

### 7. 复制A系统sources.list文件至B系统nt/usb/etc/apt 目录下

```
sudo cp /etc/apt/sources.list /mnt/usb/etc/apt/sources.list
```

## B系统安装基础测试

### 1. 检查一下

```
cat /mnt/usb/etc/apt/sources.list
```

### 2. 将A系统的dev目录与B系统的dev目录绑定

```
sudo mount -o bind /dev /mnt/usb/dev
```

### 3. 验证是否绑定成功



```
ls /mnt/usb/dev
```

#### 4. 将系统信息绑定

```
sudo mount -o bind /sys /mnt/usb/sys
```

#### 5. 将用户信息绑定

```
sudo mount -o bind /proc /mnt/usb/proc
```

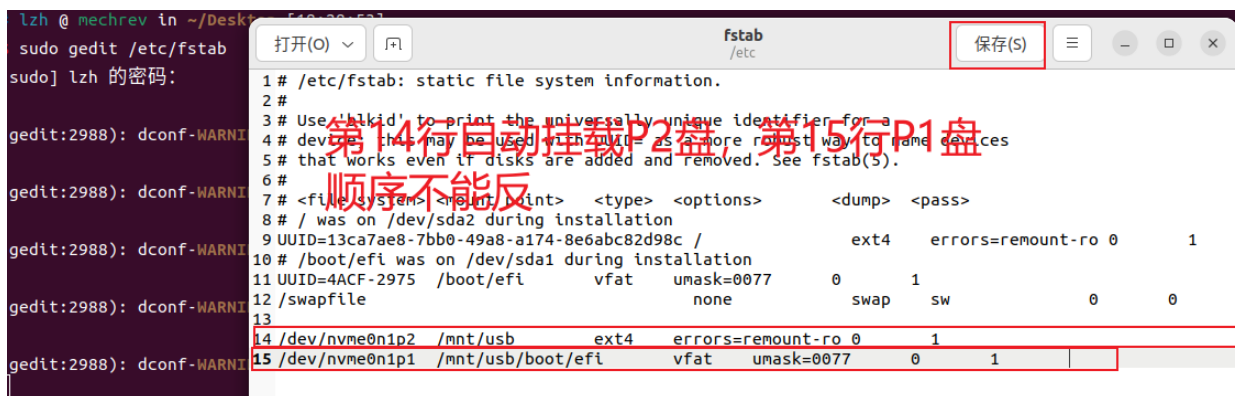
#### 6. 转换到B系统

```
sudo chroot /mnt/usb
```

#### 7. 在A系统修改启动项自动挂载P2盘（不能自动挂载P1盘）

1. `sudo gedit /etc/fstab`

2. `/dev/nvme0n1p2 /mnt/usb ext4 errors=remount-ro 0 1`



## 字符界面使用文本编辑器

- nano编辑器

```
nano //启动编辑器
```

```
CTRL+X //保存 sudo nano 文件的绝对路径
```

- vim编译器 //重要

- 下载vim编译器

```
sudo apt install vim
```

- vi编译器

- 插入(ESC退出)

按I

- 进入命令界面

按冒号

- 保存并退出

wq

- 退出

q

---

## B系统必备软件测试

---

### 1. 在B系统更新软件

```
apt update
```

### 2. 在B系统安装Linux的内核

- 在A系统拷贝 sources.list到B系统上

```
sudo cp /etc/apt/sources.list /mnt/usb/etc/apt/sources.list
```

- 转换到B系统更新系统

```
sudo apt update
```

- 下载Linux内核到B系统

```
apt install linux-image-generic
```

### 3. 设置root密码

```
passwd
```

```
root@mechrev:/# passwd
第一行是密码，第二行是再次输入密码
New password:
Retype new password:
passwd: password updated successfully
```

### 4. 创建一个用户

```
useradd joker -m
```

#### 5. 验证是否用户有home目录

```
ls /home
```

#### 6. 给刚创建的用户越权权限

```
usermod -aG sudo 用户名
```

#### 7. 安装网络工具软件

```
apt install net-tools network-manager
```

#### 8. 安装nano编译器

```
sudo apt install nano
```

---

## B系统引导测试

---

#### 1. 安装grub

```
apt install efibootmgr grub-efi-amd64
```

#### 2. 更新系统

```
apt update
```

#### 3. 挂载

```
mount -t efivarfs efivarfs /sys/firmware/efi/efivars/
```

#### 4. 下载grub

```
grub-install -v --target=x86_64-efi --recheck /dev/nvme0n1
```

#### 5. 使用nano编辑器编译

```
nano /etc/default/grub
```

```
GNU nano 6.2 /etc/default/grub
# If you change this file, run 'update-grub' afterwards to update
# /boot/grub/grub.cfg.
# For full documentation of the options in this file, see:
# info -f grub -n 'Simple configuration'

GRUB_DEFAULT=0
GRUB_TIMEOUT_STYLE=hidden
GRUB_TIMEOUT=0
GRUB_DISTRIBUTOR='lsb_release -i -s 2> /dev/null || echo Debian'
#GRUB_CMDLINE_LINUX_DEFAULT='quiet splash'
GRUB_CMDLINE_LINUX=""

# Uncomment to enable BadRAM filtering, modify to suit your needs
# This works with Linux (no patch required) and with any kernel that obtains
# the memory map information from GRUB (GNU Mach, kernel of FreeBSD ...)
#GRUB_BADRAM="0x01234567,0xfefefefe,0x89abcdef,0xefefefef"

# Uncomment to disable graphical terminal (grub-pc only)
#GRUB_TERMINAL=console

# The resolution used on graphical terminal
# note that you can use only modes which your graphic card supports via VBE
# you can see them in real GRUB with the command 'vbetinfo'
#GRUB_GFXMODE=640x480

# Uncomment if you don't want GRUB to pass "root=UUID=xxx" parameter to Linux
```

## 6. 更新grub

update-grub

## 7. 下载NetworkManager

apt install network-manager

# B系统ssh测试(关机后进入A系统才能跑100分，在字符界面安装)

### 1. 重启进入B系统

### 2. 输入账户密码

### 3. 使用bash

bash

### 4. 使用指令查看

systemctl status NetworkManager

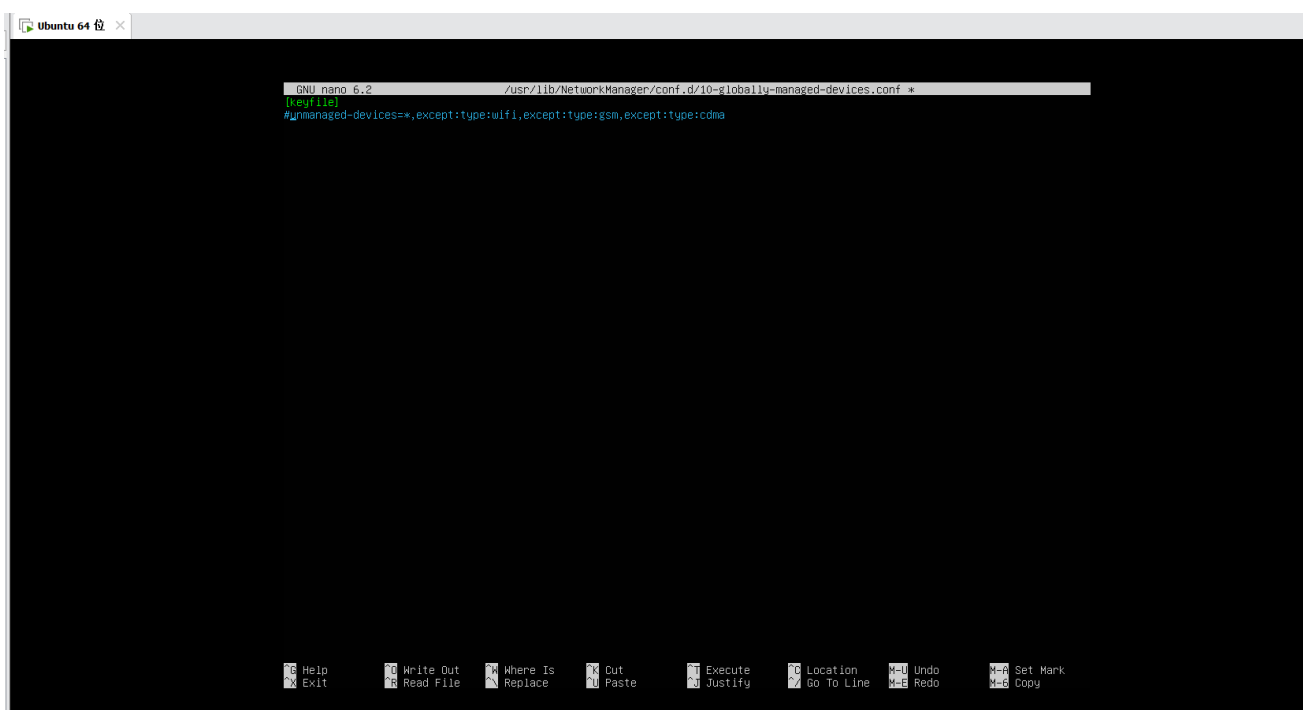
```
joker@joker-virtual-machine:~$ systemctl status NetworkManager
● NetworkManager.service - Network Manager
   Loaded: loaded (/lib/systemd/system/NetworkManager.service; enabled; vendor preset: enabled)
   Active: active (running) since Mon 2023-01-02 10:41:11 UTC; 4min 31s ago
     Docs: man:NetworkManager(8)
    Main PID: 532 (NetworkManager)
      Tasks: 3 (limit: 4584)
     Memory: 10.0M
        CPU: 34ms
    CGroup: /system.slice/NetworkManager.service
           └─532 /usr/sbin/NetworkManager --no-daemon

Warning: some journal files were not opened due to insufficient permissions.
joker@joker-virtual-machine:~$
```

## 5. 输入（可用TAB补全）

```
sudo nano /usr/lib/NetworkManager/conf.d/10-globally-managed-
devices.conf
```

## 6. 注释掉内容



## 7. 输入

```
sudo systemctl restart NetworkManager
```

## 8. 查看ip

```
ip a
```

## 9. 更新

```
sudo apt update
```

## 10. 安装ssh

```
sudo apt install openssh-server
```

## 11. 查看ip

```
ip a
```

# B系统基础测试（关机后进入A系统才能得100分，在字符界面安装）

---

## 1. 安装zsh和git

```
sudo apt install zsh git
```

## 2. 安装zsh环境

```
wget http://web.tecxz.com:7080/file/zsh/install.sh
```

## 3. 运行zsh

```
sh install.sh
```


```

2023-01-02 11:09:08 (374 KB/s) - 'install.sh' saved [17141/17141]

joker@joker-virtual-machine:~$ sh install.sh
Cloning Oh My Zsh...
remote: Enumerating objects: 2957, done.
remote: Counting objects: 100% (2957/2957), done.
remote: Compressing objects: 100% (2326/2326), done.
remote: Total 2957 (delta 924), reused 2123 (delta 508), pack-reused 0
Receiving objects: 100% (2957/2957), 1.47 MiB | 462.00 KiB/s, done.
Resolving deltas: 100% (924/924), done.
From https://gitee.com/mirrors/oh-my-zsh
* [new branch]      af-magic-resizable-separator -> origin/af-magic-resizable-separator
* [new branch]      code-of-conduct -> origin/code-of-conduct
* [new branch]      colorize/fix-installed-check -> origin/colorize/fix-installed-check
* [new branch]      master -> origin/master
* [new branch]      ohmyzsh/pull-9005 -> origin/ohmyzsh/pull-9005
* [new branch]      remove-bwana-plugin -> origin/remove-bwana-plugin
* [new branch]      rename-kubect1-alias -> origin/rename-kubect1-alias
* [new branch]      revert-6309-ssh -> origin/revert-6309-ssh
* [new branch]      robbyrussell-omz-shop-links -> origin/robbyrussell-omz-shop-links
Branch 'master' set up to track remote branch 'master' from 'origin'.
Already on 'master'
/home/joker

Looking for an existing zsh config...
Using the Oh My Zsh template file and adding it to ~/.zshrc.

Time to change your default shell to zsh:
Do you want to change your default shell to zsh? [Y/n] y
Changing your shell to /usr/bin/zsh...
[sudo] password for joker:
Shell successfully changed to '/usr/bin/zsh'.

 ....is now installed!

Before you scream Oh My Zsh! look over the `~/.zshrc` file to select plugins, themes, and options.

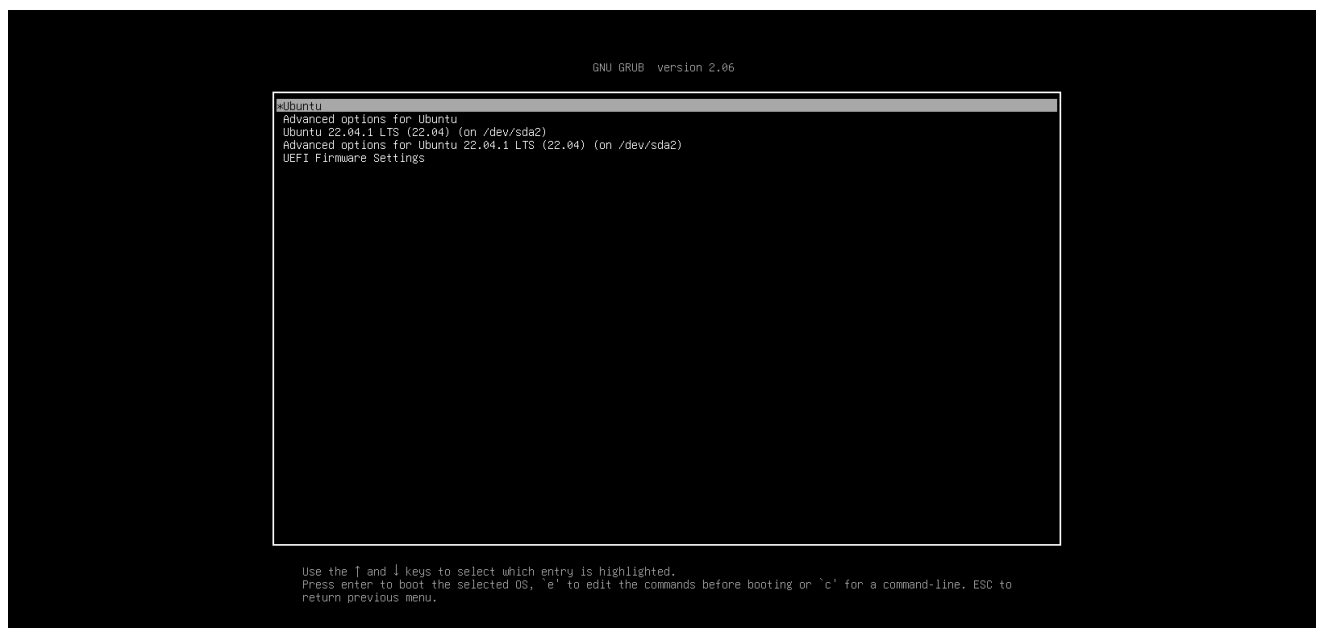
• Follow us on Twitter: https://twitter.com/ohmyzsh
• Join our Discord community: https://discord.gg/ohmyzsh
• Get stickers, t-shirts, coffee mugs and more: https://shop.planetargon.com/collections/oh-my-zsh

♦ ~ _

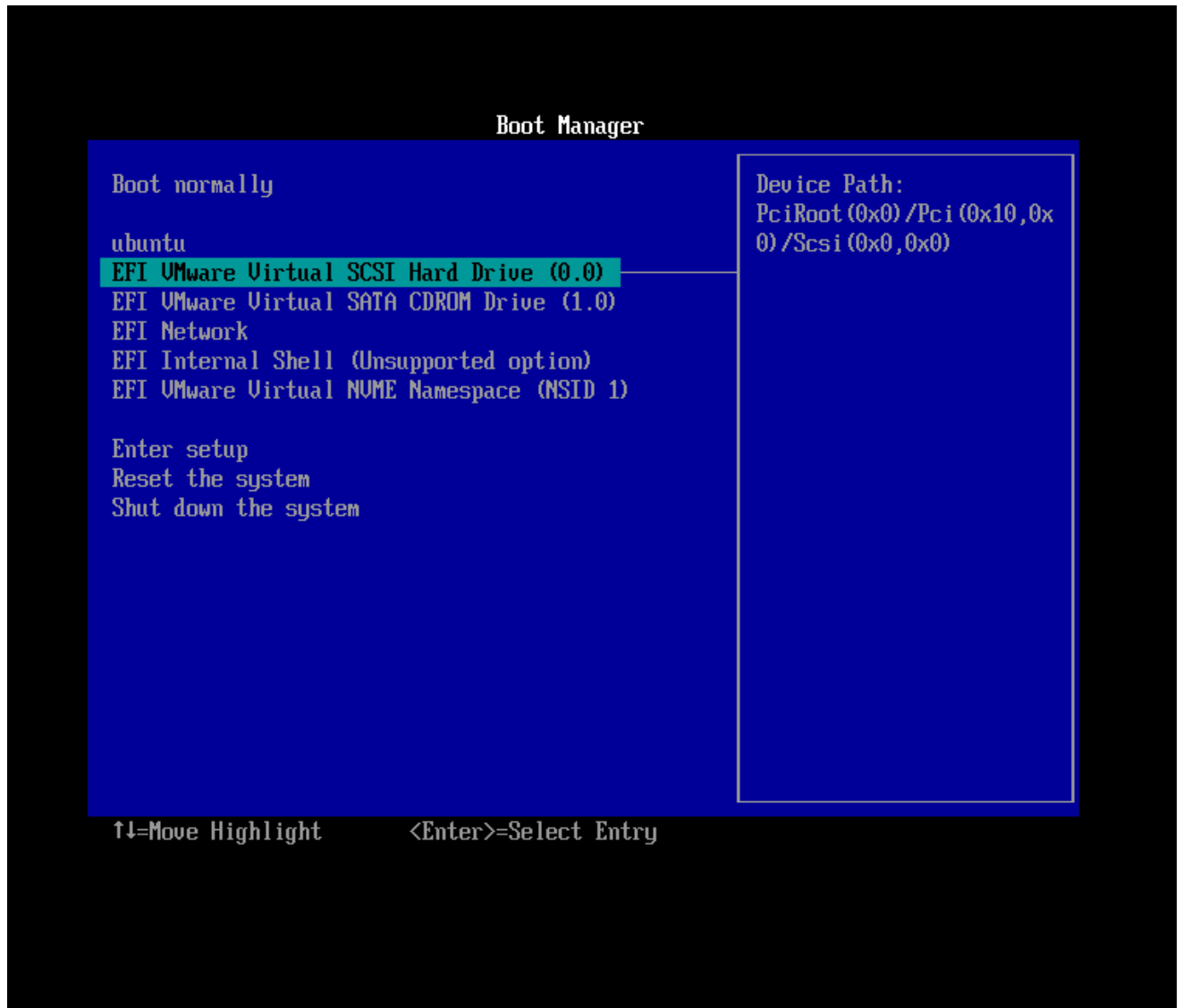
```

## 系统的进入方法（开机时狂点ESC键）

- 第一个B系统， 第二个A系统



- SCSI的为A系统， NOME的为B系统



## B系统安装图形化界面（考试不考）

1. 下载安装图形化界面的app

```
sudo apt install tasksel
```

2. 进入tasksel

```
tasksel
```

3. 选择第二个

4. 下载失败

```
sudo apt update sudo apt upgrade
```



# 搜狗输入法安装

---

1. 去搜狗官网下载linux版x86版本的输入法
2. 切换至downloads目录下

```
切换至downloads目录下
```

3. 安装输入法

```
sudo dpkg -i sogoupinyin_4.0.1.2800_x86_64.deb
```

4. 提示缺失一些安装包,给它补上

```
sudo apt install -f
```

5. 再次执行安装命令

```
sudo dpkg -i sogoupinyin_4.0.1.2800_x86_64.deb
```

6. 卸载原有输入法

```
sudo apt remove --purge ibus
```

7. 安装两个依赖包

```
sudo apt install libqt5qml5 libqt5quick5 libqt5quickwidgets5 qml-module-qtquick2  
sudo apt install libgsettings-qt1
```

8. 重启虚拟机

```
登入界面右下角改一下
```

---

## Samba测试

1. 下载Samba

```
sudo apt install Samba
```

2. 检测是否下载成功

```
systemctl status smbd.service
```

```

$ systemctl status smbd.service
● smbd.service - Samba SMB Daemon
   Loaded: loaded (/lib/systemd/system/smbd.service; enabled; vendor preset: enabled)
   Active: active (running) since Mon 2023-03-20 20:27:04 CST; 38s ago
     Docs: man:smbd(8)
           man:samba(7)
           man:smb.conf(5)
  Process: 12460 ExecStartPre=/usr/share/samba/update-apparmor-samba-profile (code=exited, status=0/SUCCESS)
 Main PID: 12469 (smbd)
    Status: "smbd: ready to serve connections..."
      Tasks: 4 (limit: 9403)
   Memory: 16.0M
      CPU: 91ms
   CGroup: /system.slice/smbd.service
           └─12469 /usr/sbin/smbd --foreground --no-process-group
             └─12471 /usr/sbin/smbd --foreground --no-process-group
               └─12472 /usr/sbin/smbd --foreground --no-process-group
                 └─12473 /usr/lib/x86_64-linux-gnu/samba/samba-bgqd --ready-signal-fd=45 --parent-watch-fd=11 --debuglevel=0

3月 20 20:27:04 mechrev systemd[1]: Starting Samba SMB Daemon...
3月 20 20:27:04 mechrev update-apparmor-samba-profile[12463]: grep: /etc/apparmor.d/samba/smbd-shares: 没有那个文件或目录
3月 20 20:27:04 mechrev update-apparmor-samba-profile[12466]: diff: /etc/apparmor.d/samba/smbd-shares: 没有那个文件或目录
3月 20 20:27:04 mechrev systemd[1]: Started Samba SMB Daemon.

```

### 3. 创建Samba账号，用户名为share

```
sudo useradd
```

### 4. 将系统普通账号添加到samba 用户中

```
sudo smbpasswd -a share
```

### 5. 在根目录下创建data

```
sudo mkdir /data
```

### 6. 更改权限

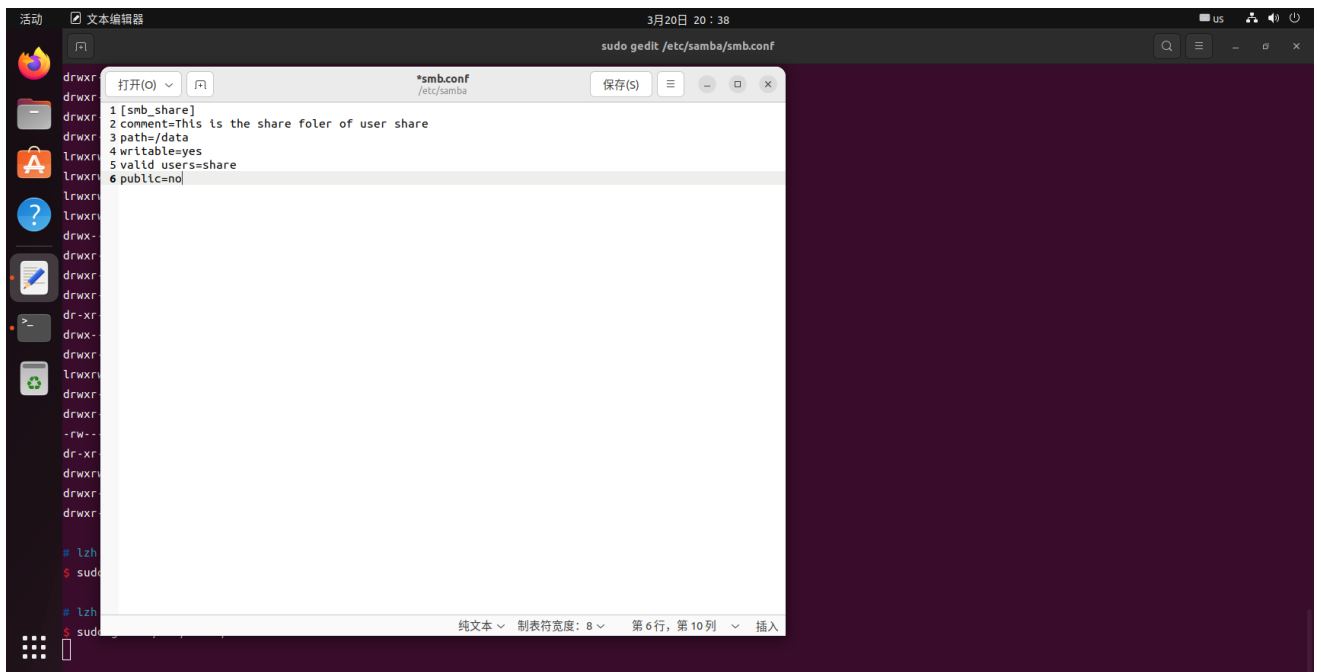
```
sudo chown share:share /data
```

### 7. 打开编辑器

```
sudo gedit /etc/samba/smb.conf
```

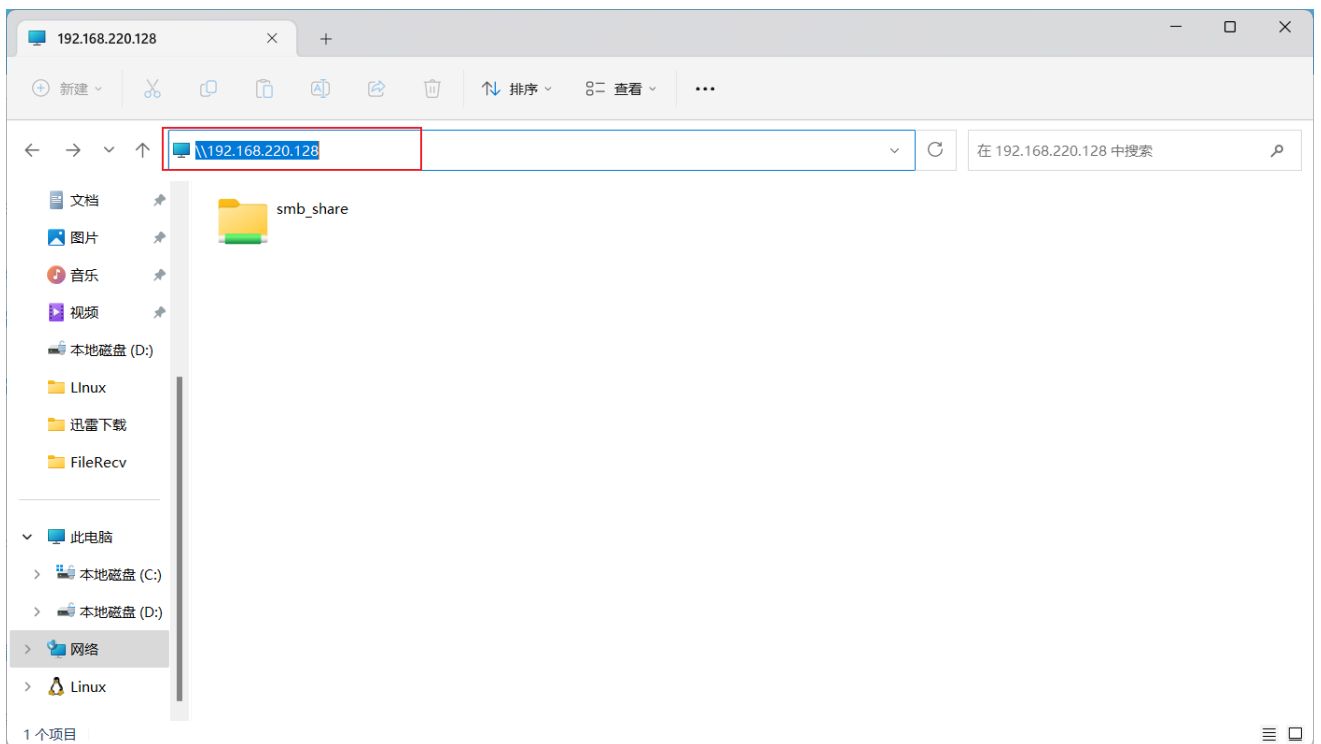
### 8. 将里面所有内容更改为http://web.tecxz.com:7080/file/smb.conf

```
[smb_share] comment=This is the share folder of user share path=/data
writable=yes valid users=share public=no
```



## 9. 重启文件

```
sudo systemctl restart smbd.service
```



10.

11. 输入Samba用户名密码， 随便放入一个文件

12. linux终端中输入ll /data， 检测是否放入成功

# WPS下载

1. 先去官网下载WPS安装包，安装WPS

```
sudo dpkg -i WPS安装包名
```

2. 安装完后右下角有WPS软件图标，鼠标右键允许运行
3. 虚拟机浏览器中搜索<http://web.tecxz.com:7080/ubuntu/>，下载wps-fonts.zip文件
4. 解压wps-fonts.zip文件

```
unzip wps-fonts.zip
```

5. 移动文件

```
sudo mv wps-fonts-master/wps/* /usr/share/fonts/wps-office/
```

6. 更新

```
fc-cache -fv
```

7. 再次打开WPS文档，成功则不会显示字体缺失

---

## xrdp测试

---

1. 下载xrdp(远程桌面协议)

```
sudo apt install xrdp
```

2. 启动xrdp

```
sudo systemctl restart xrdp
```

3. 查看启动状态

```
sudo systemctl status xrdp
```

4. 启动开机自启

```
sudo systemctl enable xrdp
```

5. 添加xrdp的用户组，赋予用户权限

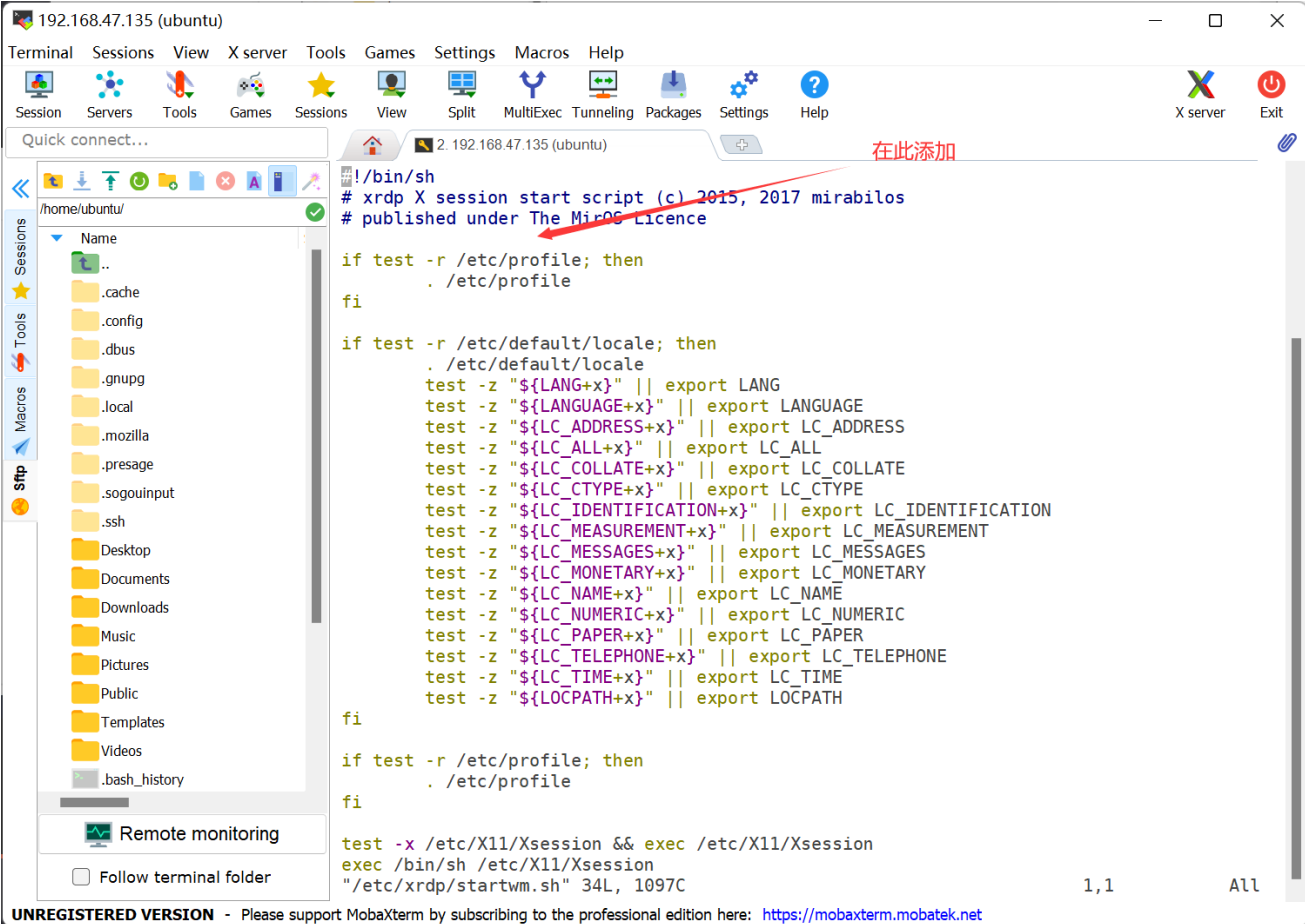
```
sudo usermod -aG ssl-cert xrdp
```

6. 编辑startwm.sh文件

```
sudo gedit /etc/xrdp/startwm.sh
```

## Unset DBUS\_SESSION\_ADDRESS

## Unset XDG\_RUNTIME\_DIR



```
192.168.47.135 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect... 2. 192.168.47.135 (ubuntu) 在此添加

! /bin/sh
# xrdp X session start script (c) 2015, 2017 mirabilos
# published under The MIT Licence

if test -r /etc/profile; then
    . /etc/profile
fi

if test -r /etc/default/locale; then
    . /etc/default/locale
    test -z "${LANG+x}" || export LANG
    test -z "${LANGUAGE+x}" || export LANGUAGE
    test -z "${LC_ADDRESS+x}" || export LC_ADDRESS
    test -z "${LC_ALL+x}" || export LC_ALL
    test -z "${LC_COLLATE+x}" || export LC_COLLATE
    test -z "${LC_CTYPE+x}" || export LC_CTYPE
    test -z "${LC_IDENTIFICATION+x}" || export LC_IDENTIFICATION
    test -z "${LC_MEASUREMENT+x}" || export LC_MEASUREMENT
    test -z "${LC_MESSAGES+x}" || export LC_MESSAGES
    test -z "${LC_MONETARY+x}" || export LC_MONETARY
    test -z "${LC_NAME+x}" || export LC_NAME
    test -z "${LC_NUMERIC+x}" || export LC_NUMERIC
    test -z "${LC_PAPER+x}" || export LC_PAPER
    test -z "${LC_TELEPHONE+x}" || export LC_TELEPHONE
    test -z "${LC_TIME+x}" || export LC_TIME
    test -z "${LOCPATH+x}" || export LOCPATH
fi

if test -r /etc/profile; then
    . /etc/profile
fi

test -x /etc/X11/Xsession && exec /etc/X11/Xsession
exec /bin/sh /etc/X11/Xsession
"/etc/xrdp/startwm.sh" 34L, 1097C

1,1 All

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net
```

### 7. 将共享文件权限改为所有人

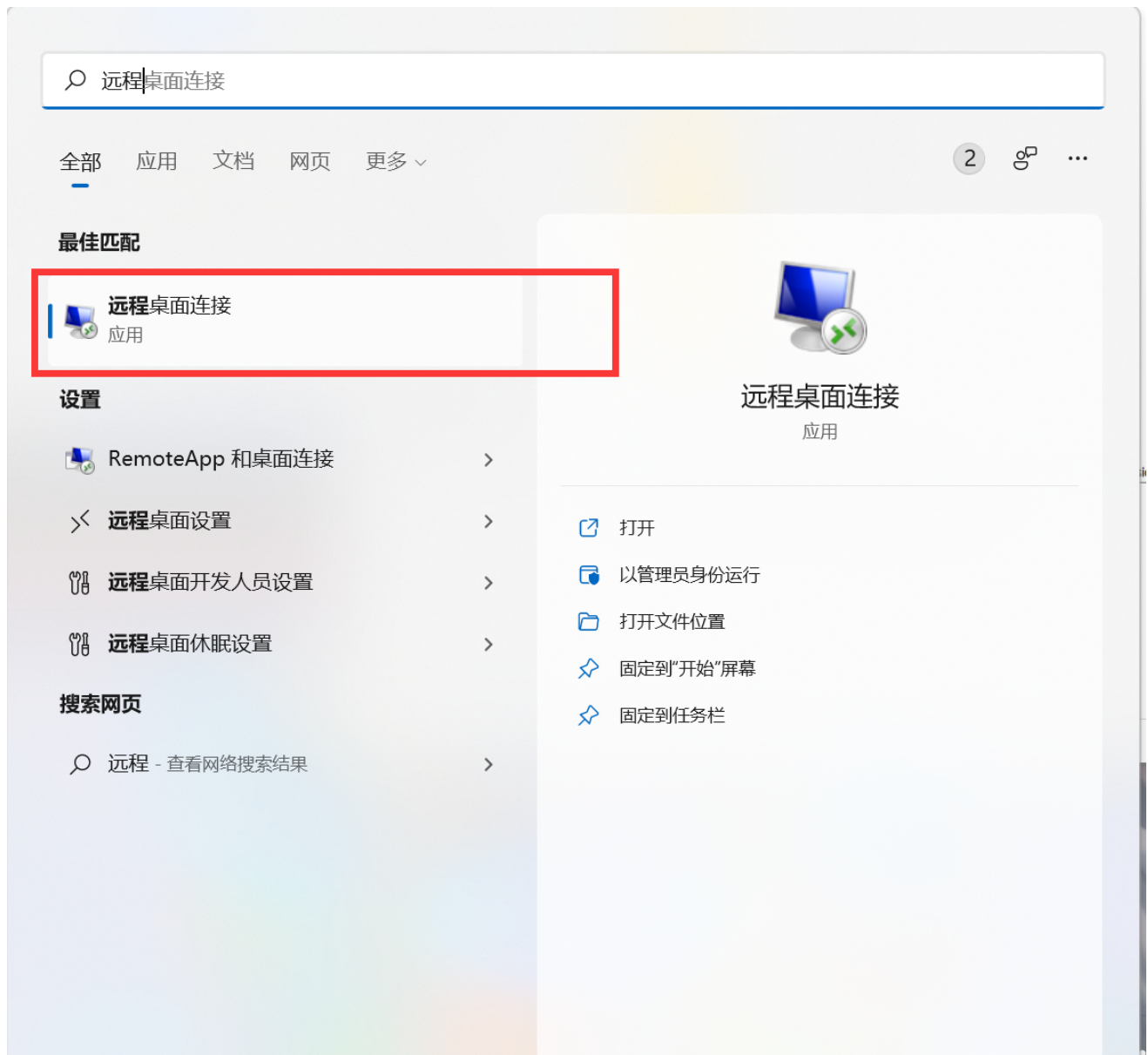
```
sudo gedit /etc/X11/Xwrapper.config
```

将 `allowed_users=anybody` 改为 `allowed_users=everybody`

### 8. 重新启动虚拟机

```
sudo reboot
```

## 9. 完成后用windows的远程桌面去连接



## 10. 输入虚拟机ip

