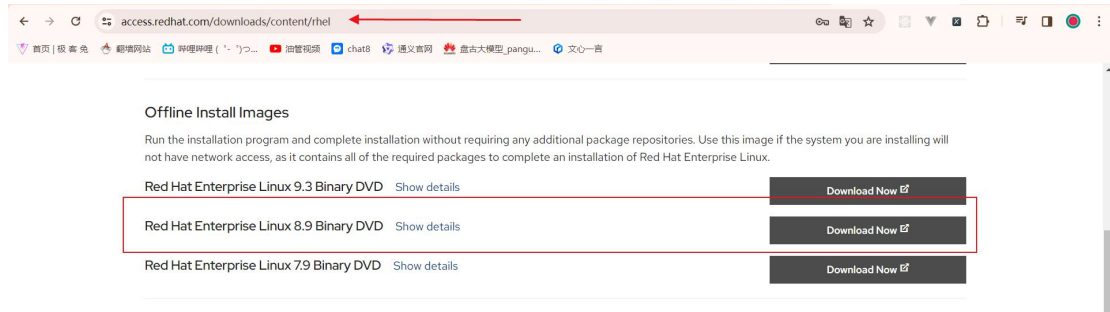


# Docker 安装

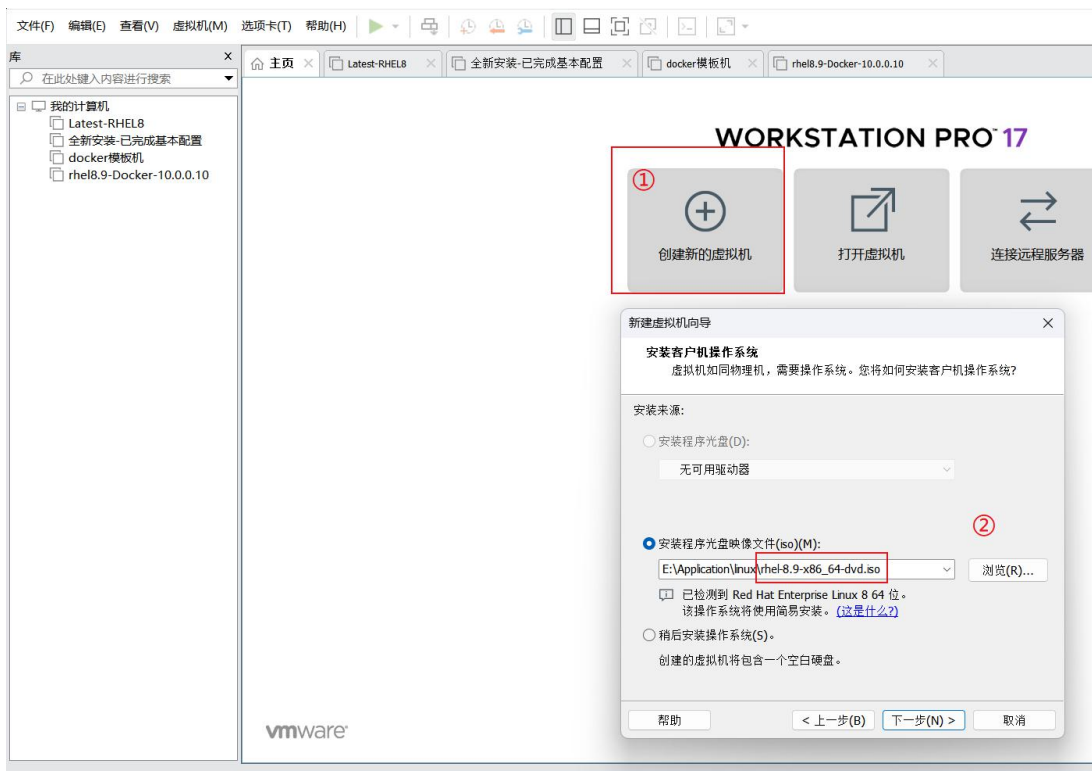
## 1、登陆红帽官网下载 RHEL8.9

登录红帽官网后，复制这段链接 (<https://access.redhat.com/downloads/content/rhel>) 到浏览直接跳转到下载界面

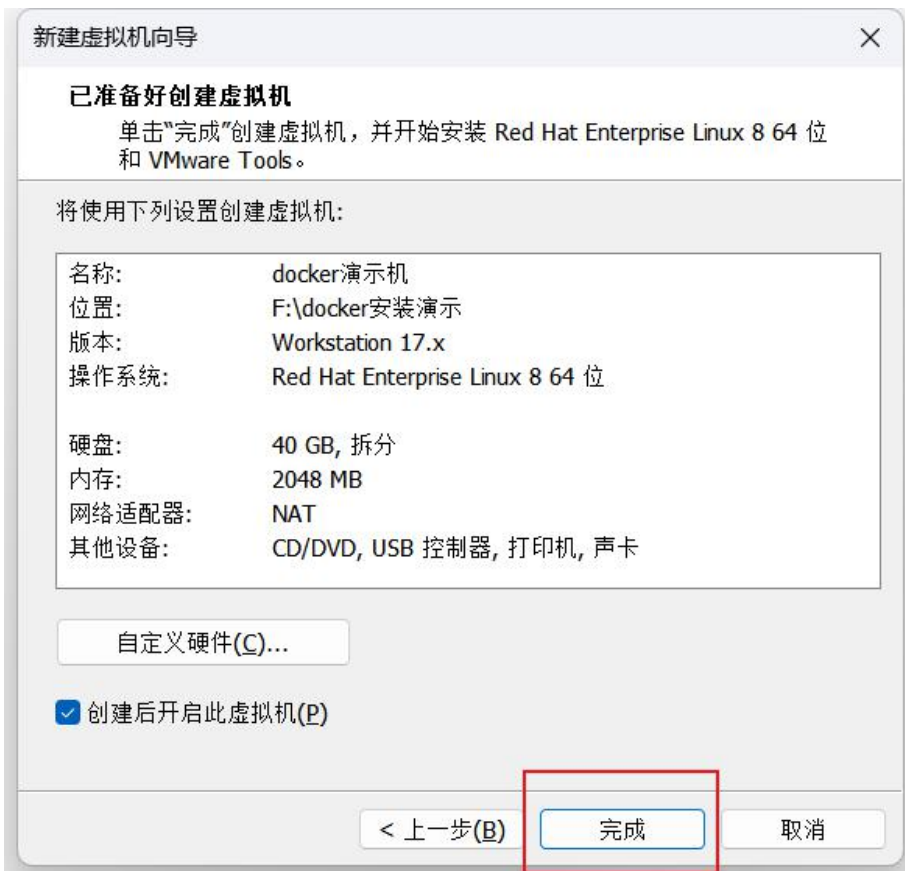
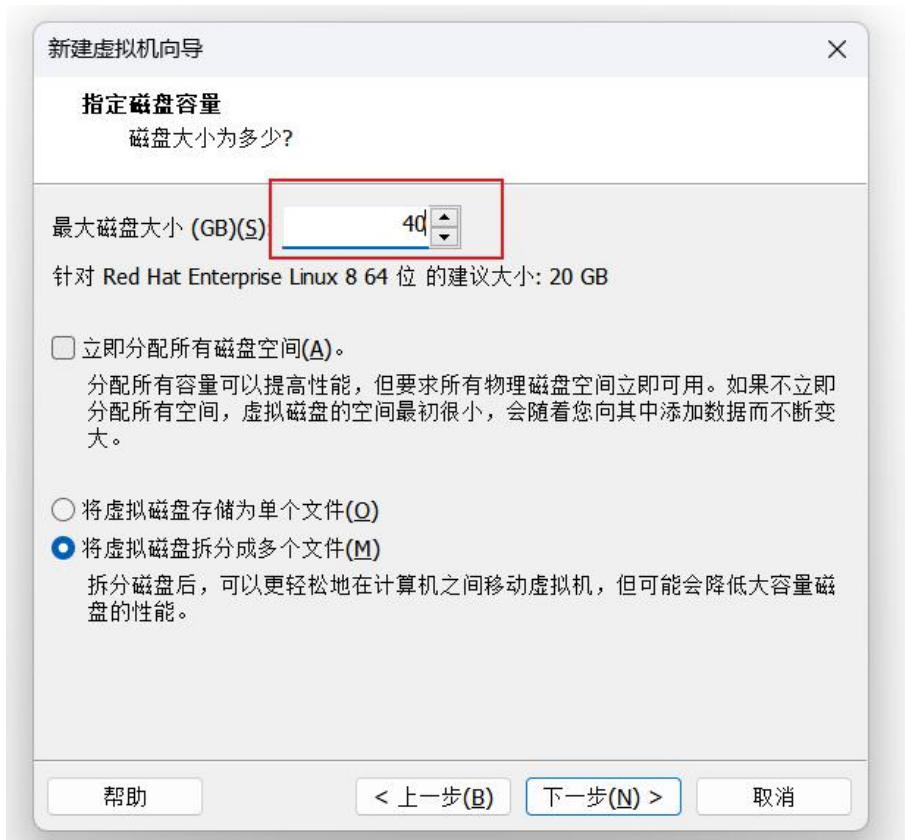


## 2、在 VM 虚拟机中安装 RHEL8.9 的系统

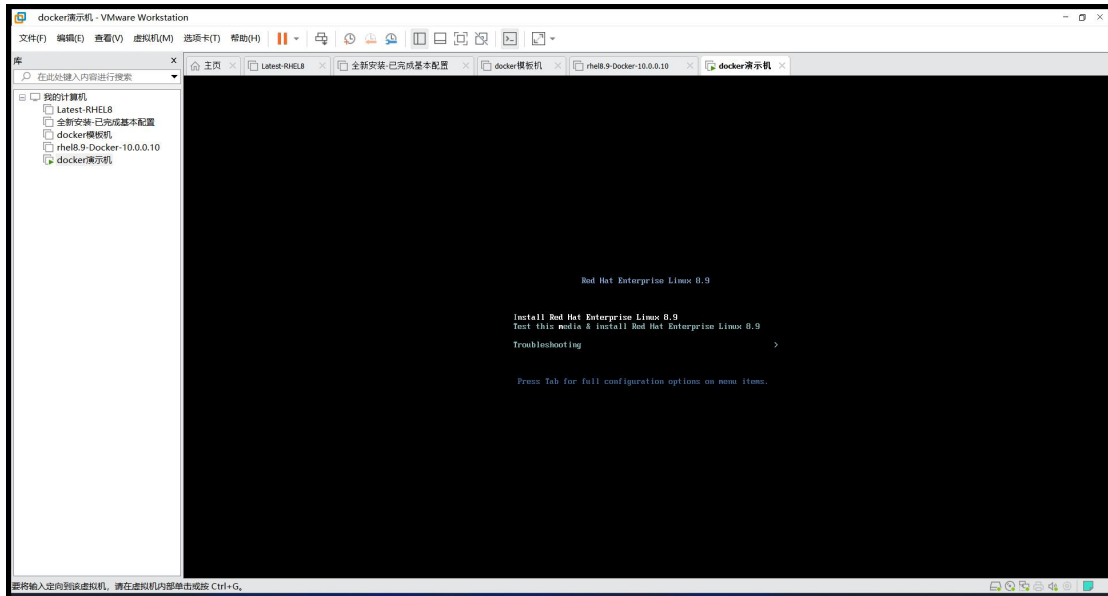
- 加载系统镜像文件



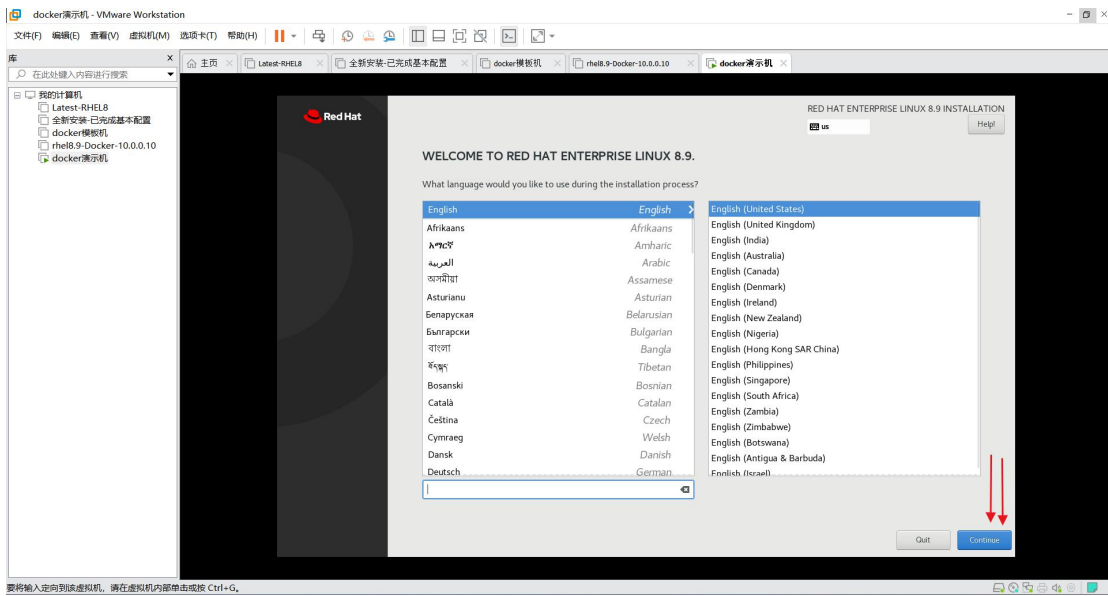
- 配置过程一直点击下一步



## ● 上箭头选择安装系统



## ● 对系统进行基本设置




① 点击 **Time & Date** 设置时区

**TIME & DATE** RED HAT ENTERPRISE LINUX 8.9 INSTALLATION

Done us Help!

Region: Asia City: Shanghai Network Time OFF



04:42  24-hour  AM/PM 03 / 06 / 2024

⚠ You need to set up networking first if you want to use NTP

**Red Hat** RED HAT ENTERPRISE LINUX 8.9 INSTALLATION

INSTALLATION SUMMARY us Help!

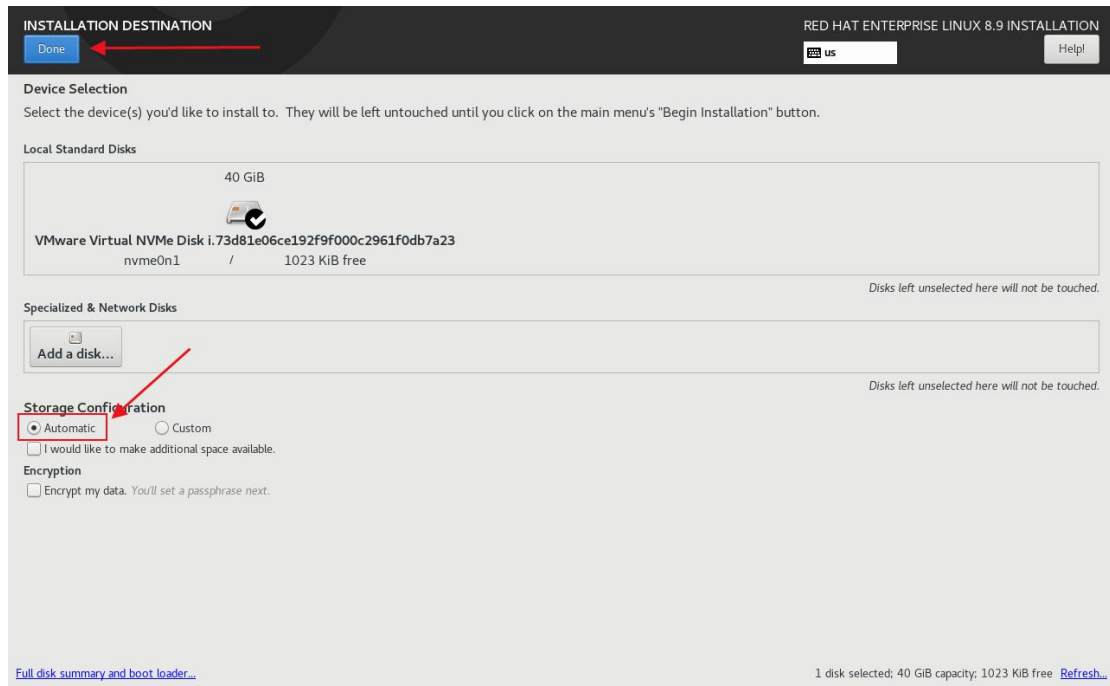
<b>LOCALIZATION</b>	<b>SOFTWARE</b>	<b>SYSTEM</b> ②
Keyboard <small>English (US)</small>	Connect to Red Hat <small>Not registered.</small>	Installation Destination <small>Automatic partitioning selected</small>
Language Support <small>English (United States)</small>	Installation Source <small>Local media</small>	KDUMP <small>Kdump is enabled</small>
①  Time & Date <small>Asia/Shanghai timezone</small>	③  Software Selection <small>Minimal Install</small>	Network & Host Name <small>Not connected</small>
<b>USER SETTINGS</b>		Security Policy <small>No profile selected</small>
Root Password <small>Root account is disabled.</small>		
User Creation <small>No user will be created</small> ④		

Quit Begin Installation

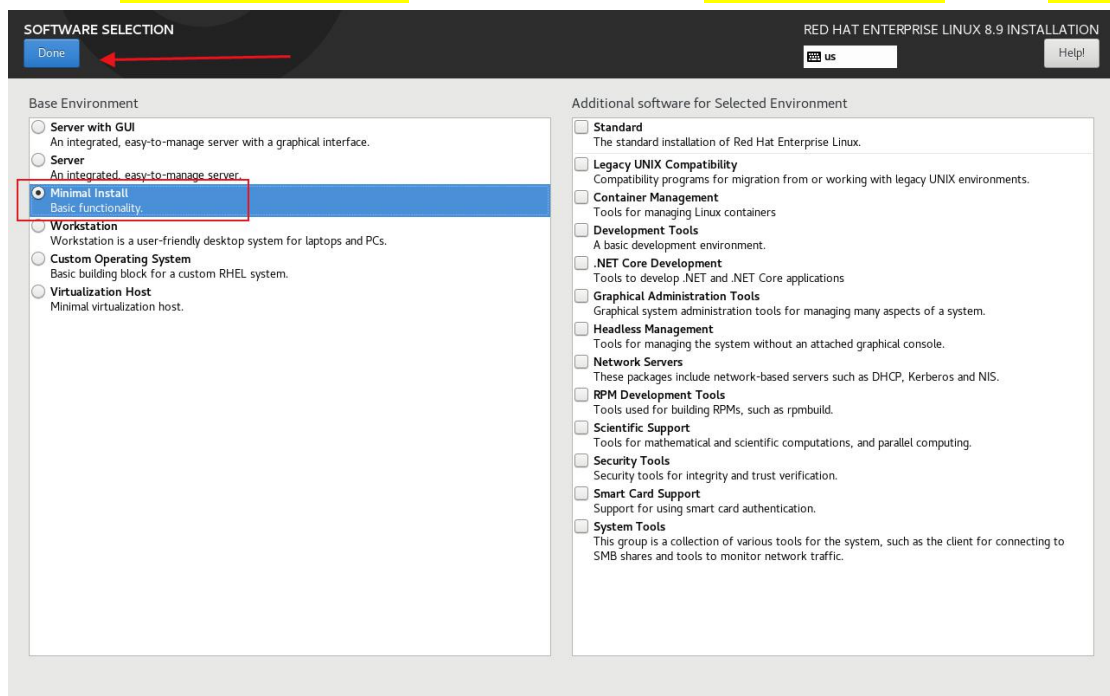
We won't touch your disks until you click 'Begin Installation'.

⚠ Please complete items marked with this icon before continuing to the next step.

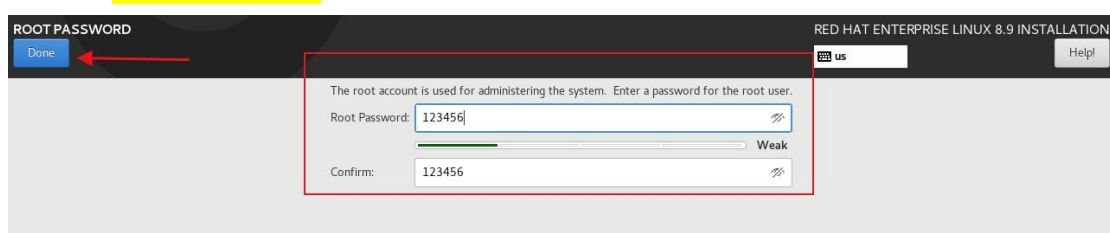
② 点击 **Installation Destination**, 选择 **Automatic** 然后 **Done** 完成



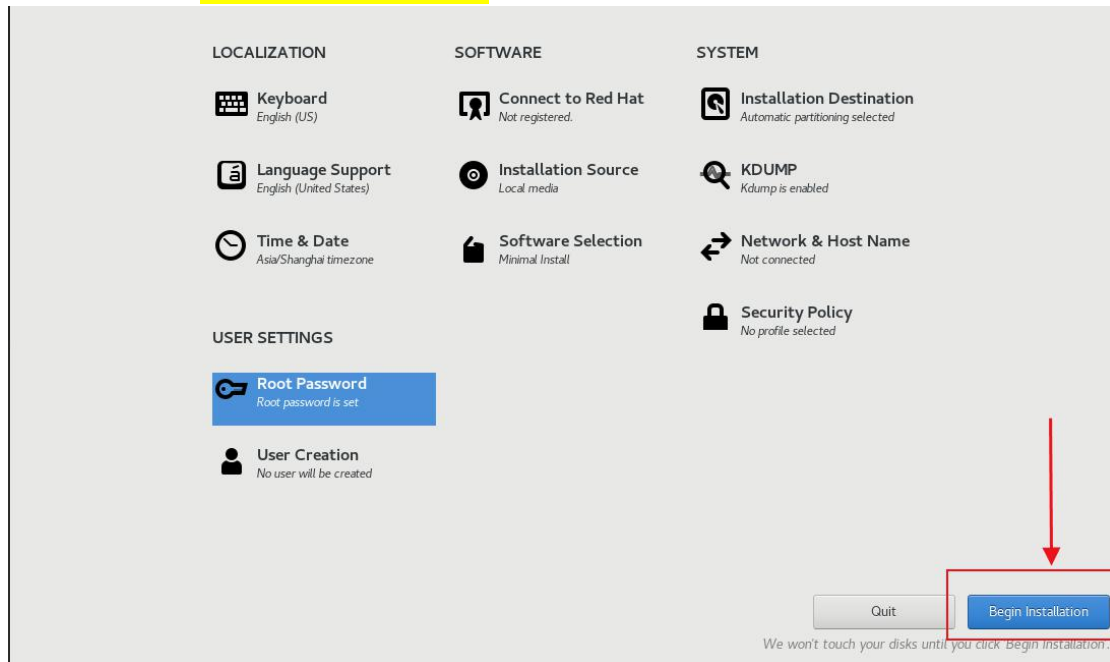
③ 点击 **Software Selection**, 进入该界面, 选择 **Minimal Install**, 然后 **Done**



④ 点击 **Root Password**, 设置超级用户密码



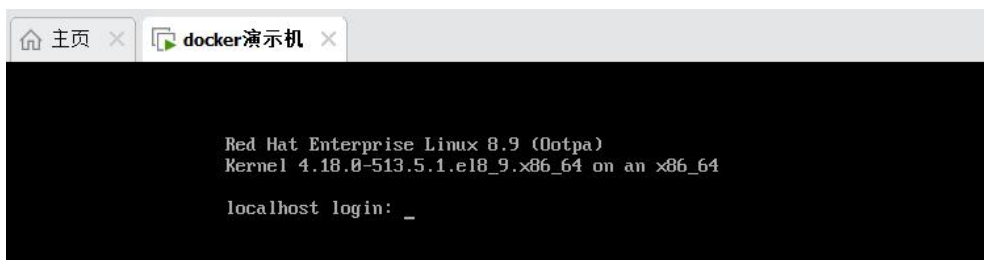
- 点击 **Begin Installation**, 开始安装



- 等待进度条走完, 点击 **Reboot System** 重启系统



- 重启成功后, 进入到这个界面



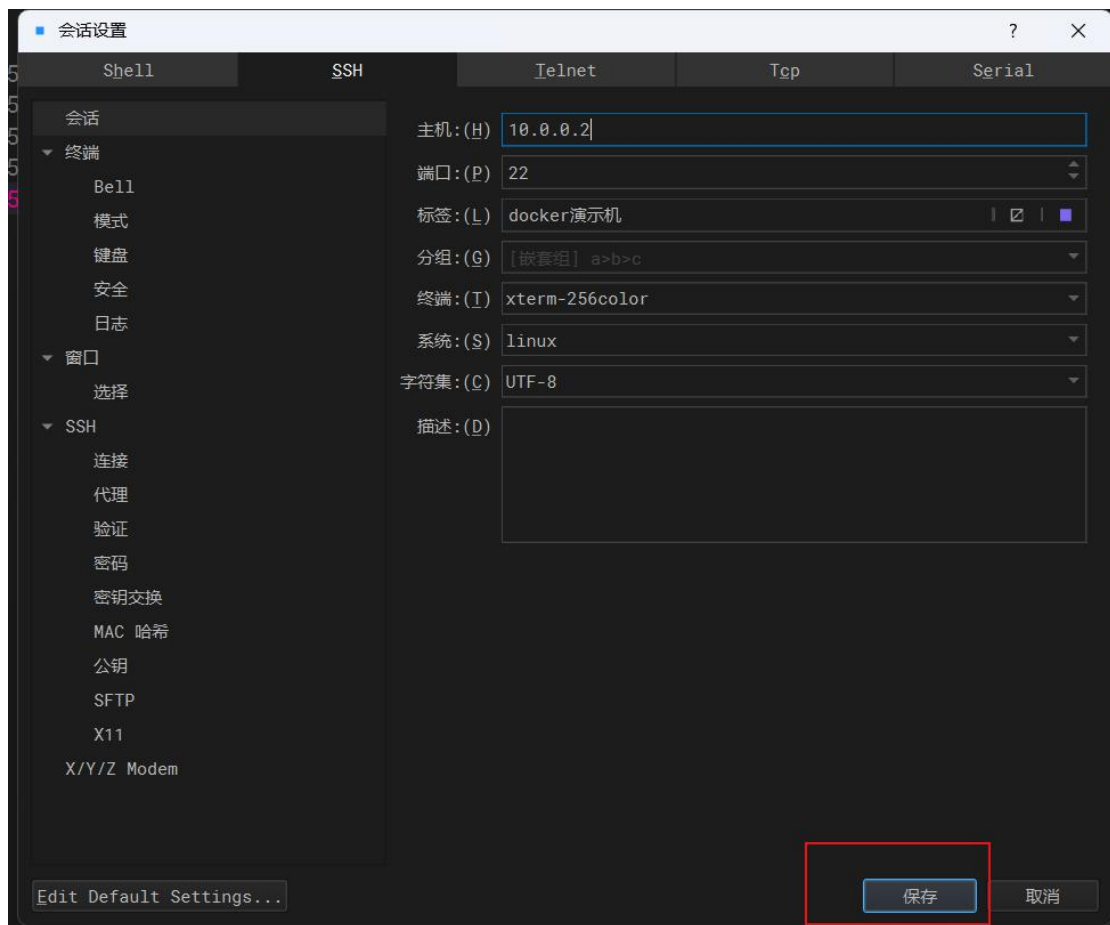
### 3、系统网络配置

- 登录系统并配置静态 IP，通过【ping】命令来测试网络通路

```
[root@localhost ~]# nmcli c add type ethernet con-name "static" ifname ens160 ipv4.addresses 10.0.0.2/24 gw4 10.0.0.254 ipv4.dns "0.0.0.0 114.114.114.114" ipv4.method manual autoconnect yes && nmcli c up static
Connection "static" (4c4d60e-5462-493f-6d35-ee833625b1ae) successfully added.
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/7)
[root@localhost ~]# ping www.baidu.com
PING www.a.shifen.com (153.3.238.110): 56(84) bytes of data:
64 bytes from 153.3.238.110 (153.3.238.110): icmp_seq=1 ttl=128 time=76.2 ms
64 bytes from 153.3.238.110 (153.3.238.110): icmp_seq=2 ttl=128 time=50.6 ms

--- www.a.shifen.com ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1002ms
rtt min/avg/max/mdev = 50.568/63.383/76.199/12.017 ms
[root@localhost ~]# C
[root@localhost ~]#
```

- 用远程工具连接虚拟机，方便操作



- 设置系统语言

```
[root@localhost /]# localectl set-locale LANG="en_US.UTF-8"
[root@localhost /]# echo 'export LANG=en_US.UTF-8' >> /etc/profile
[root@localhost /]# echo $LANG
en_US.UTF-8
[root@localhost /]#
```



- 关闭防火墙

```
20 [root@localhost /]# systemctl disable firewalld --now
21 Removed /etc/systemd/system/multi-user.target.wants/firewalld.service.
22 Removed /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service.
23 [root@localhost /]# systemctl status firewalld
24 ● firewalld.service - firewalld - dynamic firewall daemon
25   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; disabled; vendor pr
26   Active: inactive (dead)
27     Docs: man:firewalld(1)
```

- 关闭 SELinux 安全策略

```
35 [root@localhost /]# setenforce 0
36 [root@localhost /]# getenforce
37 Permissive
38 [root@localhost /]# sed -i.bak 's/SELINUX=enforcing/SELINUX=disabled/' /etc/selinu
39 [root@localhost /]# grep SELINUX=disabled /etc/selinux/config
40 SELINUX=disabled
41 [root@localhost /]#
```

- 本地仓库源配置

```
49 [root@localhost /]# vi /etc/yum.repos.d/local.repo
50 [root@localhost /]# repolist
51 -bash: repolist: command not found
52 [root@localhost /]# yum repolist
53 Updating Subscription Management repositories.
54 Unable to read consumer identity
55
56 This system is not registered with an entitlement server. You can use subscription
57 -manager to register.
58
59 repo id                repo name
60 BaseOS                  AppStream
61                          BaseOS
```

- 挂载本地仓库、配置开机自动挂载

```
61 [root@localhost /]# mount /dev/cdrom /mnt
62 mount: /mnt: WARNING: device write-protected, mounted read-only.
63 [root@localhost /]# yum clean all && yum makecache
64 Updating Subscription Management repositories.
65 Unable to read consumer identity
66
67 Metadata cache created.
68 [root@localhost /]# echo '/dev/cdrom /mnt iso9660 loop 0 0' >> /etc/fstab
69
70 [root@localhost /]#
```

- 安装常用软件

```
80 [root@localhost /]# yum install vim lrzsz tree nc telnet wget lsof chronty bash-com
81 Updating Subscription Management repositories.
82 Unable to read consumer identity
```

- 配置与阿里时钟服务器同步

```
202 [root@localhost /]# vi /etc/chrony.conf
203 [root@localhost /]# systemctl enable chronyd --now
204 [root@localhost /]# chronyc sources
205 MS Name/IP address          Stratum Poll Reach LastRx Last sample
```



- 添加一块 10G 数据硬盘



- 添加完成之后，重启虚拟机

```
211 ^? 203.107.6.88 2 6 3 2 +27824s[+27824s] +/- 39ms
212 [root@localhost ~]# reboot
213
```

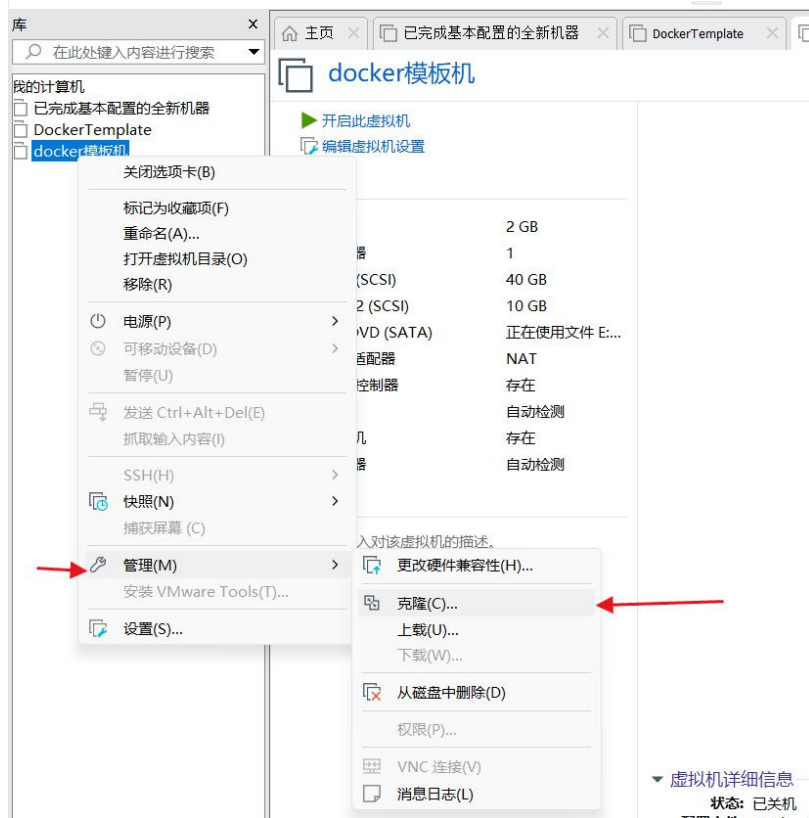
- 查看硬盘设备

```
218 [root@localhost ~]# lsblk
219 NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
220 loop0 7:0 0 12.6G 1 loop /mnt
221 sda 8:0 0 40G 0 disk
222 └─sda1 8:1 0 1G 0 part /boot
223 └─sda2 8:2 0 39G 0 part
224 ┌─rhel-root 253:0 0 37G 0 lvm /
225 └─rhel-swap 253:1 0 2G 0 lvm [SWAP]
226 sdb 8:16 0 10G 0 disk
227 sr0 11:0 1 12.6G 0 rom
228 [root@localhost ~]#
```

## ● 格式化硬盘设备并挂载

```
228 [root@localhost ~]# mkfs.xfs /dev/sdb
229 meta-data=/dev/sdb          isize=512    agcount=4, agsize=655360 blks
230      =                       sectsz=512   attr=2, projid32bit=1
231      =                       crc=1         finobt=1, sparse=1, rmapbt=0
232      =                       reflink=1    bigtime=0 inobtcount=0
233 data      =                   bsize=4096   blocks=2621440, imaxpct=25
234      =                       sunit=0       swidth=0 blks
235 naming   =version 2         bsize=4096   ascii-ci=0, ftype=1
236 log      =internal log     bsize=4096   blocks=2560, version=2
237      =                       sectsz=512   sunit=0 blks, lazy-count=1
238 realtime =none            extsz=4096   blocks=0, rtextents=0
239 [root@localhost ~]# mkdir /app
240 [root@localhost ~]# echo '/dev/sdb /app xfs defaults 0 0' >> /etc/fstab
241 [root@localhost ~]# mount -a
242 mount: (hint) your fstab has been modified, but systemd still uses
243 the old version; use 'systemctl daemon-reload' to reload.
244 [root@localhost ~]# systemctl daemon-reload
245 [root@localhost ~]# df -h
246 Filesystem      Size  Used Avail Use% Mounted on
247 devtmpfs        848M  0    848M  0% /dev
248 tmpfs           868M  0    868M  0% /dev/shm
249 tmpfs           868M  8.8M 859M  2% /run
250 tmpfs           868M  0    868M  0% /sys/fs/cgroup
251 /dev/mapper/rhel-root 37G  2.1G  35G   6% /
252 /dev/sda1       1014M 229M  786M  23% /boot
253 /dev/loop0      13G   13G   0 100% /mnt
254 tmpfs           174M  0    174M  0% /run/user/0
255 /dev/sdb        10G  104M  9.9G  2% /app
256 [root@localhost ~]#
```

● 此时已完成虚拟机的基本配置，关机进行完整克隆，方便后续操作失误进行恢复



## 4、docker 安装

- 关闭 swap

```
10 [root@localhost ~]# swapoff -a
11 [root@localhost ~]# vim /etc/fstab
12 [root@localhost ~]#
```

- 卸载原来的 Docker 组件

```
12 [root@localhost ~]# yum remove docker docker-client docker-client-latest docker-co
- mmon docker-latest docker-latest-logrotate docker-logrotate docker-engine
13 Updating Subscription Management repositories.
14 Unable to read consumer identity
15
16 This system is not registered with an entitlement server. You can use subscription
- manager to register.
17
18 No match for argument: docker
19 No match for argument: docker-client
20 No match for argument: docker-client-latest
21 No match for argument: docker-common
22 No match for argument: docker-latest
23 No match for argument: docker-latest-logrotate
24 No match for argument: docker-logrotate
25 No match for argument: docker-engine
26 No packages marked for removal.
27 Dependencies resolved.
28 Nothing to do.
29 Complete!
30 [root@localhost ~]#
```

- 安装必要的一些系统工具

```
29 Complete!
30 [root@localhost ~]# yum install -y yum-utils device-mapper-persistent-data lvm2
31 Updating Subscription Management repositories.
32 Unable to read consumer identity
33
```

- 添加阿里软件仓库源

```
68 [root@localhost ~]# yum-config-manager --add-repo https://mirrors.aliyun.com/docke
- r-ce/linux/centos/docker-ce.repo
69 Updating Subscription Management repositories.
70 Unable to read consumer identity
71
72 This system is not registered with an entitlement server. You can use subscription
- manager to register.
73
74 Adding repo from: https://mirrors.aliyun.com/docker-ce/linux/centos/docker-ce.repo
75 [root@localhost ~]# sudo sed -i 's+download.docker.com+mirrors.aliyun.com/docker-c
- e+' /etc/yum.repos.d/docker-ce.repo
76 [root@localhost ~]# yum makecache
77 Updating Subscription Management repositories.
```

- 安装 Docker-CE 并设置开机自启

```
86 [root@localhost ~]# yum -y install docker-ce
87 Updating Subscription Management repositories.
207 [root@localhost ~]# systemctl enable docker --now
208 Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/
- lib/systemd/system/docker.service.
```



- 查看 docker 版本

```
59] 503 [root@localhost ~]# docker version
59] 504 Client: Docker Engine - Community
59] 505 Version: 25.0.3
```

- 运行 Hello world 测试 docker

```
530 GitCommit: de40ada0
531 [root@localhost ~]# docker run hello-world
532 Unable to find image 'hello-world:latest' locally
533 latest: Pulling from library/hello-world
534 c1ec31eb5944: Pull complete
535 Digest: sha256:d000bc569937abbe195e20322a0bde6b2922d805332fd6d8a68b19f524b7d21d
536 Status: Downloaded newer image for hello-world:latest
537
538 Hello from Docker!
539 This message shows that your installation appears to be working correctly.
```

- 测试 docker 容器运行 ubuntu

```
558
559 [root@localhost ~]# docker run -it ubuntu bash
560 Unable to find image 'ubuntu:latest' locally
561 latest: Pulling from library/ubuntu
562 01007420e9b0: Pull complete
563 Digest: sha256:f9d633ff6640178c2d0525017174a688e2c1aef28f0a0130b26bd5554491f0da
564 Status: Downloaded newer image for ubuntu:latest
565 root@b25b0458b1f4:/# date
566 Tue Mar 5 14:18:12 UTC 2024
567 root@b25b0458b1f4:/#
```