系统安装

- 安装系统时请将配置设为CPU:2核 内存2G以上,否则可能导致系统安装不成功
- 系统盘40G
- 全部分配给/；不需要/boot swap分区
- 修改时区tzselect
- root密码：123456

创建系统磁盘40G

```
qemu-img create -f qcow2 Debian_10.2.0_64.qcow2 40G
```

```
[root@localhost Debian_10.2.0_64]# qemu-img create -f qcow2 Debian_10.2.0_64.qcow2 40G
Formatting 'Debian_10.2.0_64.qcow2', fmt=qcow2 size=42949672960 encryption=off cluster_size=65536 lazy_refcounts=off
[root@localhost Debian_10.2.0_64]#
```

生成xml模板文件

```
<domain type = 'kvm'>
<name>Debian_10.2.0_64</name>                                    #虚拟机名称
<memory unit='MiB'>4096</memory>                                   #内存
<currentMemory unit='MiB'>4096</currentMemory>
<vcpu current='4'>64</vcpu>                                          #cpu
<os>
    <type arch = 'x86_64' machine = 'pc'>hvm</type>                  #x86_64位操作系
统
<boot dev = 'cdrom' />                                             #第一引导CDROM
<boot dev = 'hd' />                                                 #第二引导磁盘
    </os>
<features>
    <acpi/>
    <apic/>
    <pae/>
</features>
<cpu mode='host-passthrough' check='none'/>
<clock offset = 'localtime'/>
<on_poweroff>destroy</on_poweroff>
<on_reboot>restart</on_reboot>
<on_crash>destroy</on_crash>
<devices>
    <emulator>/usr/libexec/qemu-kvm</emulator>
    <disk type = 'file' device = 'disk'>
    <driver name = 'qemu' type = 'qcow2'/>
    <source file =
'/home/kvm/template/Debian_10.2.0_64/Debian_10.2.0_64.qcow2'/>#系统磁盘路径
    <target dev = 'vda' bus = 'virtio'/>                                  #虚拟机磁
盘vda总线类型virtio
    </disk>

    <disk type = 'file' device = 'cdrom'>
    <driver name = 'qemu' type = 'raw'/>
<source file = '/home/kvm/iso/debian-10.2.0-amd64-DVD-3.iso'/>    #系统镜像
    <target dev = 'vdb' bus = 'ide'/>
```

```
    <readonly/>
    </disk>

    <interface type = 'bridge'>
    <source bridge = 'br0'/>
    <model type='virtio'/>
    <filterref filter='template_firewall_out'>                    #网络过滤器
    </filterref>
    </interface>

    <interface type = 'bridge'>
    <source bridge = 'br1'/>
    <model type='virtio'/>
    <filterref filter='template_firewall_in'>                        #网络过滤器
    </filterref>
    </interface>
    <channel type='unix'>
        <target type='virtio' name='org.qemu.guest_agent.0'/>
    </channel>
    <input type ='tablet' bus='usb'/>
    <input type = 'mouse' bus = 'ps2'/>
    <graphics type = 'vnc' port = '-1' autoport='yes' listen='0.0.0.0'
passwd='123456' keymap='en-us'/>
</devices>
</domain>
```

根据实际情况修改以上配置后定义虚拟机, 即可进入开始安装界面，系统安装完成后关机，将cdrom boot引导关闭，否则会又进入系统安装。

```
[root@localhost Debian_10.2.0_64]# virsh define sys.xml
Domain Debian_10.2.0_64 defined from sys.xml

[root@localhost Debian_10.2.0_64]# virsh start Debian_10.2.0_64
Domain Debian_10.2.0_64 started
```

系统配置

更换apt软件源

系统升级apt-get update;apt-get upgrade

安装软件

```
# apt-get install sysstat vim gcc wget iftop nload curl lrzsz dmidecode
screen ntp ntpdate parted lsb-core libcurses-perl libcurses-ui-perl libterm-
readkey-perl sysv-rc-conf eject
```

配置ssh添加两行参数

```
# vim /etc/ssh/sshd_config
UseDNS no
AddressFamily inet
```

添加内核优化参数

```
# vim /etc/sysctl.conf
vm.swappiness = 0
net.ipv4.neigh.default.gc_stale_time=120
net.ipv4.conf.all.rp_filter=0
net.ipv4.conf.default.rp_filter=0
net.ipv4.conf.default.arp_announce = 2
net.ipv4.conf.lo.arp_announce=2
net.ipv4.conf.all.arp_announce=2
net.ipv4.tcp_max_tw_buckets = 5000
net.ipv4.tcp_syncookies = 1
net.ipv4.tcp_max_syn_backlog = 1024
net.ipv4.tcp_synack_retries = 2
net.ipv6.conf.all.disable_ipv6 = 1
net.ipv6.conf.default.disable_ipv6 = 1
net.ipv6.conf.lo.disable_ipv6 = 1
```

服务优化

关闭开机自启ufw lvm2

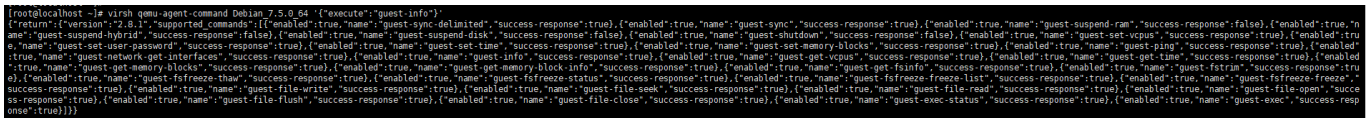
添加开机自启ntp

编辑/etc/fstab修改/目录挂载点为/dev/vda1

```
# vim /etc/fstab
/dev/vda1 / ext4 defaults 1 1
```

安装qemu-guest-agent

Ubuntu/Debian: apt-get install qemu-guest-agent



安装自动化脚本

脚本下载地址：https://download.apayun.com/zkeys/server/linux_auto.zip

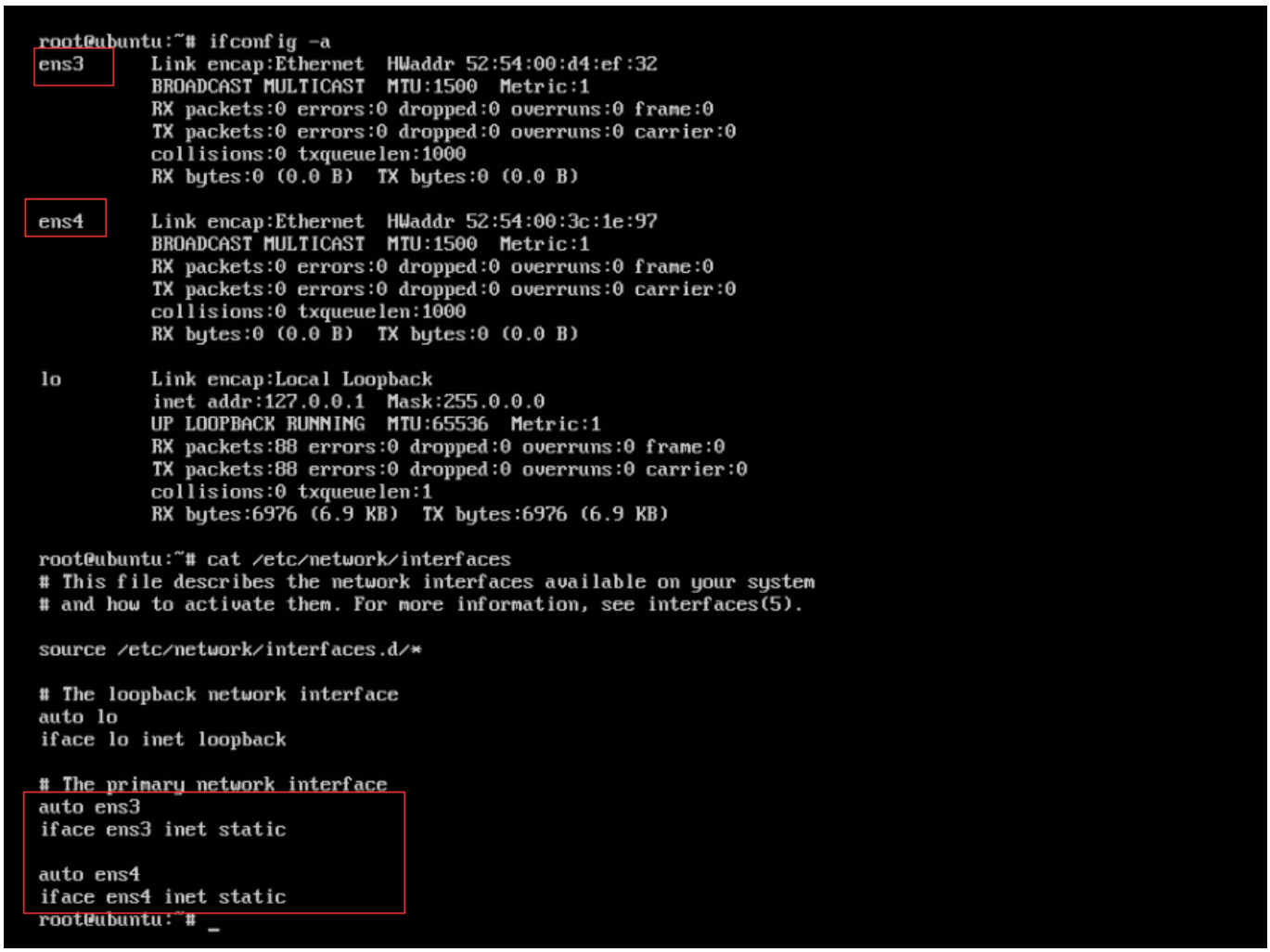
```
# 将脚本解压, 例如压缩包存放位置为root目录下, 解压到root目录
unzip /root/linux_auto.zip -d /root/
# 添加执行权限
chmod +x /root/*.sh
# 执行脚本
sh /root/install.sh
# 删除文件
rm -rf /root/vminit.sh
```

请确保/etc/rc.local文件有执行权限，没有需要加上

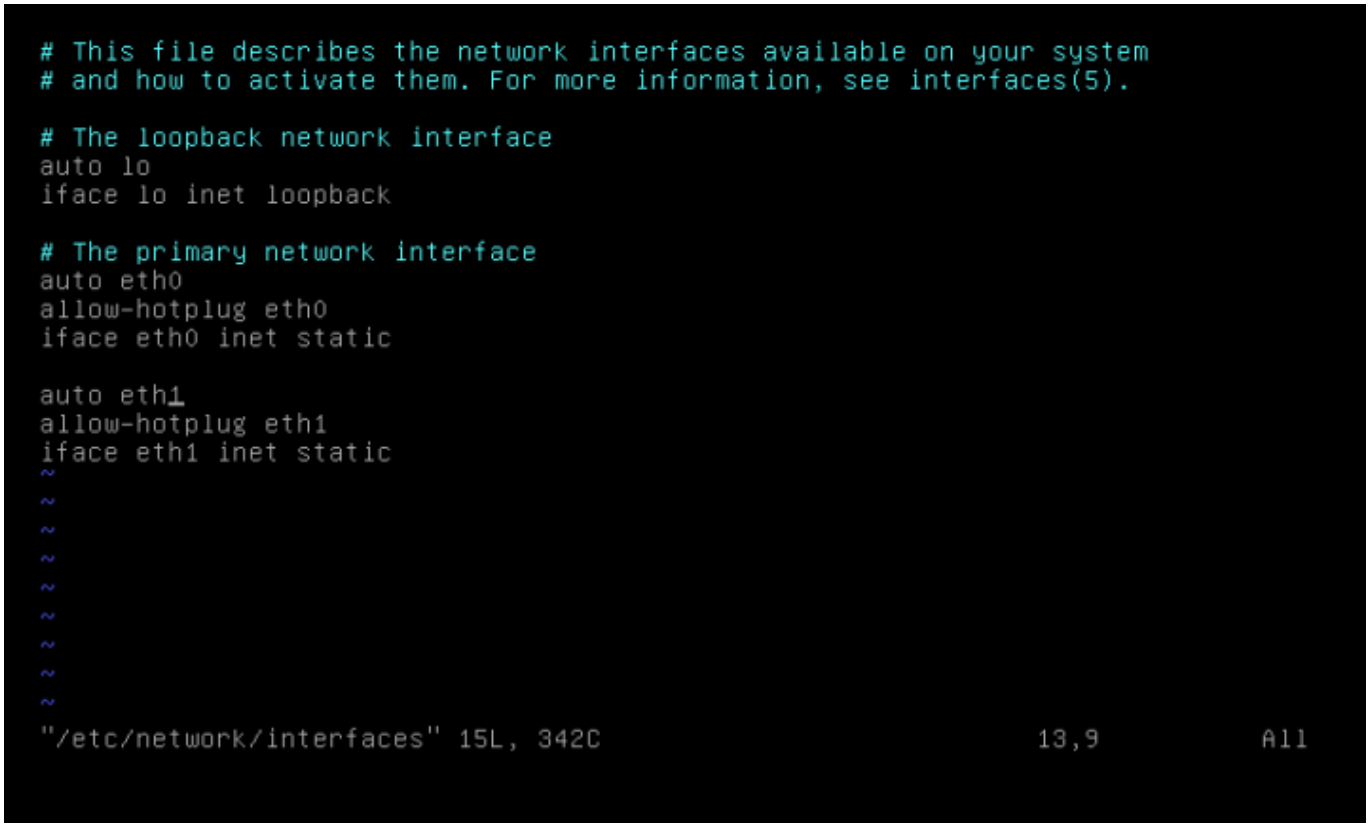
系统网卡配置

系统网卡配置文件请删除UUID和HWADDR参数

Ubuntu:



Debian:



清除日志

```
# cd /var/log
# >btmp ;>dmesg;>messages ;>wtmp
# history -c && history -w && poweroff
```

磁盘文件压缩

```
qemu-img convert -c -O qcow2 /dev/shm/src.qcow2 /home/soft/kvm/dst.qcow2
```