

第三次实验报告

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|---|------------|------|-----|
| 实验时间: | 2020.11.29 | 实验人: | 詹泽晔 |
| 实验名称: Linux 命令的使用 | | | |
| <p>1. 实验任务和目标:</p> <ul style="list-style-type: none">● 使用及熟悉第十, 十一, 十二章 PPT 中的命令 | | | |
| 实验环境描述: Linux 环境 | | | |
| <p>实验操作过程及配置说明:</p> <p>第十章</p> <p>1、使用文字设定法对/root/ab 文件设置权限,所有者为读取、写入和执行权限,同组用户为读取和写入权限,而其他用户没有任何权限。</p> <pre># chmod u=rwx,g=rw,o=--- ab</pre> <pre>[root@centos1 ~]# ls -l ab -rw-r--r--. 1 root root 0 Nov 29 22:16 ab [root@centos1 ~]# chmod u=rwx,g=rw,o=--- ab [root@centos1 ~]# ls -l ab -rwxrw----. 1 root root 0 Nov 29 22:16 ab [root@centos1 ~]#</pre> <p>2、使用数字设定法设置/root/ab 文件的权限,所有者只拥有读取和写入权限。</p> <pre># chmod 600 ab</pre> <pre>[root@centos1 ~]# ls -l ab -rwxrw----. 1 root root 0 Nov 29 22:16 ab [root@centos1 ~]# chmod 600 ab [root@centos1 ~]# ls -l ab -rw-----. 1 root root 0 Nov 29 22:16 ab</pre> <p>3、将/root/ab 文件的所有者更改为用户 zhangsan。</p> <pre># chown zhangsan ab</pre> <pre>[root@centos1 ~]# ls -l ab -rw-----. 1 root root 0 Nov 29 22:16 ab [root@centos1 ~]# chown zhangsan ab [root@centos1 ~]# ls -l ab -rw-----. 1 zhangsan root 0 Nov 29 22:16 ab</pre> | | | |

第十一章

1、使用 ps 命令显示 root 用户的进程。

```
# ps -u root
```

```
[root@centos1 ~]# ps -u root
  PID TTY          TIME CMD
    1 ?            00:00:02 systemd
    2 ?            00:00:00 kthreadd
    4 ?            00:00:00 kworker/0:0H
    5 ?            00:00:00 kworker/u2:0
    6 ?            00:00:01 ksoftirqd/0
    7 ?            00:00:00 migration/0
    8 ?            00:00:00 rcu_bh
    9 ?            00:00:02 rcu_sched
   10 ?            00:00:00 lru-add-drain
   11 ?            00:00:02 watchdog/0
   13 ?            00:00:00 kdevtmpfs
   14 ?            00:00:00 netns
   15 ?            00:00:00 khungtaskd
   16 ?            00:00:00 writeback
   17 ?            00:00:00 kintegrityd
   18 ?            00:00:00 bioset
   19 ?            00:00:00 bioset
   20 ?            00:00:00 bioset
   21 ?            00:00:00 kblockd
```

2、强制杀死 crond 进程。

```
# ps -ef | grep crond
```

```
# kill -9 676
```

```
[root@centos1 ~]# ps -ef|grep crond
root      676      1   0 Nov26 ?        00:00:00 /usr/sbin/crond -n
root     5205    5122   0 23:50 pts/0    00:00:00 grep --color=auto crond
[root@centos1 ~]# kill -9 676
[root@centos1 ~]# ps -ef|grep crond
root     5207    5122   0 23:50 pts/0    00:00:00 grep --color=auto crond
[root@centos1 ~]#
```

3、修改/etc/crontab 文件实现自动化，使得每星期一的 11:00 将/boot 目录及其子目录和文件复制到/root/abc 目录下。

```
# crontab -e
```

```
0 11 * * * cp -r /boot /root/abc
```

```
0 11 * * * cp -r /boot /root/abc
~
~
~
```

4、将网卡名称 eno16777736 更改为 eth0。（根据自己安装系统的实际情况选做）

```
[root@centos1 abc]# cd /etc/sysconfig/network-scripts/
[root@centos1 network-scripts]# ls
ifcfg-eth0  ifdown-ipp  ifdown-sit  ifup-bnep  ifup-plusb  ifup-TeamPort
ifcfg-eth1  ifdown-ipv6 ifdown-Team  ifup-eth   ifup-post   ifup-tunnel
ifcfg-lo    ifdown-isdn ifdown-TeamPort ifup-ipp   ifup-ppp    ifup-wireless
ifdown      ifdown-post ifdown-tunnel ifup-ipv6  ifup-routes init.ipv6-global
ifdown-bnep ifdown-ppp  ifup        ifup-isdn  ifup-sit    network-functions
ifdown-eth  ifdown-routes ifup-aliases ifup-plip  ifup-Team   network-functions-ipv6
```

5、使用 GRUB2 破解 root 用户的密码。

- 1、开机按光标上下键停止启动，在 GRUB2 菜单处按<e>进入编辑模式
- 2、在 linux16 行，按<End>键定位到这行末尾，添加 rd.breakconsole=tty0
- 3、按<Ctrl-x>继续启动，然后输入下面命令行：

```
# mount -o remount,rw /sysroot/  
# chroot /sysroot/  
# passwd root  
# sync  
# exit # 两次 或者 ctrl + d
```

4、重新启动后，使用指定的密码登录系统，从而验证密码是否正确

6、设置 GRUB2 PBKDF2 加密口令。

```
set timeout=0  
EOF  
    fi  
    cat << EOF  
fi  
EOF  
}  
  
if [ "${GRUB_BUTTON_CMOS_ADDRESS}" != "x" ] ; then  
    cat << EOF  
    if cmostest $GRUB_BUTTON_CMOS_ADDRESS ; then  
        EOF  
        make_timeout "${GRUB_HIDDEN_TIMEOUT_BUTTON}" "${GRUB_TIMEOUT_BUTTON}" "${GRUB_TIMEOUT_STYLE_BUTTON}"  
        echo else  
        make_timeout "${GRUB_HIDDEN_TIMEOUT}" "${GRUB_TIMEOUT}" "${GRUB_TIMEOUT_STYLE}"  
        echo fi  
        else  
        make_timeout "${GRUB_HIDDEN_TIMEOUT}" "${GRUB_TIMEOUT}" "${GRUB_TIMEOUT_STYLE}"  
        fi  
    fi  
  
    if [ "${GRUB_BUTTON_CMOS_ADDRESS}" != "x" ] && [ "${GRUB_BUTTON_CMOS_CLEAN}" = "xyes" ] ; then  
        cat << EOF  
        cmosclean $GRUB_BUTTON_CMOS_ADDRESS  
        EOF  
        fi  
  
    # Play an initial tune  
    if [ "${GRUB_INIT_TUNE}" != "x" ] ; then  
        echo "play ${GRUB_INIT_TUNE}"  
    fi  
  
    if [ "${GRUB_BADRAM}" != "x" ] ; then  
        echo "badram ${GRUB_BADRAM}"  
    fi  
fi  
  
~  
  
:r !grub2-mkpasswd-pbkdf2
```


第十二章（如果没有 eno16777736，可使用本机第一块网卡操作，完成 1-3 题实验后恢复原配置）

1、通过修改/etc/sysconfig/network-scripts/ifcfg-eno16777736 文件，设置计算机 IP 地址为 192.168.0.2，子网掩码为 255.255.255.0，网关 IP 地址为 192.168.0.1。

2、设置计算机解析域名时所指向的主 DNS 服务器 IP 地址为 202.96.209.5。

```
TYPE=Ethernet
PROXY_METHOD=none
BROWSER_ONLY=no
BOOTPROTO=static
DEFROUTE=yes
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
IPV6_ADDR_GEN_MODE=stable-privacy
NAME=ens33
UUID=aa636c97-c63b-4783-8c7a-23771f7ded68
DEVICE=ens33
ONBOOT=yes
IPADDR=192.168.0.2
GATEWAY=192.168.0.1
NETWORKMASK=255.255.255.0
DNS1=202.96.209.5
DNS2=114.114.114.114
DNS3=8.8.8.8
```

3、配置网卡 eno16777736 别名设备 eno16777736:1 的 IP 地址为 192.168.0.3，并且激活网卡 eno16777736:1 设备。

```
[root@localhost network-scripts]# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.73.8 netmask 255.255.255.0 broadcast 192.168.73.255
    inet6 fe80::83d:a202:b77a:4510 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:6a:23:67 txqueuelen 1000 (Ethernet)
    RX packets 33407 bytes 42844942 (40.8 MiB)
    RX errors 0 dropped 17 overruns 0 frame 0
    TX packets 5615 bytes 362279 (353.7 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 613 bytes 53476 (52.2 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 613 bytes 53476 (52.2 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[root@localhost network-scripts]# _
```

```
[root@localhost network-scripts]# ifconfig ens33:1 192.168.0.3
[root@localhost network-scripts]# ifconfig ens33:1 up
[root@localhost network-scripts]# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.73.8 netmask 255.255.255.0 broadcast 192.168.73.255
    inet6 fe80::83d:a202:b77a:4510 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:6a:23:67 txqueuelen 1000 (Ethernet)
    RX packets 33425 bytes 42846081 (40.8 MiB)
    RX errors 0 dropped 17 overruns 0 frame 0
    TX packets 5618 bytes 362507 (354.0 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ens33:1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.3 netmask 255.255.255.0 broadcast 192.168.0.255
    ether 00:0c:29:6a:23:67 txqueuelen 1000 (Ethernet)

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 613 bytes 53476 (52.2 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 613 bytes 53476 (52.2 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[root@localhost network-scripts]# _
```

4、使用命令显示当前计算机系统的内核路由表信息。

```
[root@localhost network-scripts]# netstat -r
Kernel IP routing table
Destination        Gateway            Genmask           Flags     MSS Window  irtt Iface
default            gateway           0.0.0.0           UG        0 0       0 ens33
192.168.0.0        0.0.0.0           255.255.255.0     U         0 0       0 ens33
192.168.73.0       0.0.0.0           255.255.255.0     U         0 0       0 ens33
[root@localhost network-scripts]#
```

5、显示端口号为 22 的连接情况。

```
[root@localhost network-scripts]# netstat -antl | grep 22
tcp        0      0 0.0.0.0:22          0.0.0.0:*           LISTEN
tcp6       0      0 :::22              :::*                 LISTEN
[root@localhost network-scripts]# _
```

6、捕获经过网络接口 eno16777736 的数据包。

```
[root@localhost network-scripts]# tcpdump -i ens33
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on ens33, link-type EN10MB (Ethernet), capture size 262144 bytes
22:08:25.766828 IP 192.168.72.1.58493 > 239.255.255.250.ssdp: UDP, length 174
22:08:25.768824 IP localhost.localdomain.35683 > 103.86.96.100.domain: 3716+ PTR? 250.255.255.239.in-addr.arpa. (46)
22:08:25.992503 IP 103.86.96.100.domain > localhost.localdomain.35683: 3716 NXDomain 0/1/0 (103)
22:08:25.998294 IP localhost.localdomain.50295 > 103.86.96.100.domain: 9612+ PTR? 1.72.168.192.in-addr.arpa. (43)
22:08:26.767390 IP 192.168.72.1.58493 > 239.255.255.250.ssdp: UDP, length 174
22:08:27.768206 IP 192.168.72.1.58493 > 239.255.255.250.ssdp: UDP, length 174
22:08:28.769105 IP 192.168.72.1.58493 > 239.255.255.250.ssdp: UDP, length 174
22:08:31.004181 IP localhost.localdomain.40557 > public1.114dns.com.domain: 9612+ PTR? 1.72.168.192.in-addr.arpa. (43)
22:08:31.012343 IP public1.114dns.com.domain > localhost.localdomain.40557: 9612 NXDomain* 0/1/0 (78)
22:08:31.013943 IP localhost.localdomain.41988 > 103.86.96.100.domain: 9559+ PTR? 100.96.86.103.in-addr.arpa. (44)
```

7、使用命令启动 named 服务，并且设置该服务在计算机启动时一起启动。

```
[root@localhost network-scripts]# systemctl start named.service
Failed to start named.service: Unit not found.
[root@localhost network-scripts]# _
```

没有这个命令，没法做

```
Failed to start named.service: Unit not found.  
[root@localhost network-scripts]# systemctl enable named.service_
```

实验结果（可以是截屏图片）：

总结和分析：