ISCSI存储C/S实验

一、软件仓库初始化

1. 将ISO文件连接到虚拟机
2. 挂载光盘

```
[root@localhost ~]# mkdir /iso
[root@localhost ~]# mount /dev/sr0 /iso/
[root@localhost iso]# ls
addons  EULA  images    LiveOS      Packages       repodata
RPM-GPG-KEY-redhat-release
EFI     GPL   isolinux  media.repo  release-notes  RPM-GPG-KEY-redhat-beta
TRANS.TBL
```

3.创建本地yum仓库

```
[root@localhost ~]# vim /etc/yum.repos.d/dvd.repo
[dvd]
name=this is dvd
baseurl=file:///iso
gpgcheck=0
enabled=1
验证：
[root@localhost ~]# yum clean all && yum repolist
Loaded plugins: langpacks, product-id, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use
subscription-manager to register.
Cleaning repos: dvd
Cleaning up everything
Loaded plugins: langpacks, product-id, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use
subscription-manager to register.
dvd
    | 4.1 kB  00:00:00
(1/2): dvd/group_gz
    | 134 kB  00:00:00
(2/2): dvd/primary_db
    | 3.4 MB  00:00:00
repo id                                              repo name
                      status
dvd                                                  this is dvd
                      4,305
repolist: 4,305
```

二、磁盘初始化

1.在VMware中给虚拟机添加一个**SATA**接口的硬盘，大小建议为200G

```
验证：
[root@localhost ~]# lsblk
NAME          MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda             8:0    0   50G  0 disk
├─sda1          8:1    0  500M  0 part /boot
└─sda2          8:2    0 49.5G  0 part
  ├─rhel-root 253:0    0 47.5G  0 lvm  /
  └─rhel-swap 253:1    0    2G  0 lvm  [SWAP]
sdb             8:16   0  200G  0 disk              #可以看到刚刚添加的硬盘
sr0            11:0    1  3.5G  0 rom  /iso
```

2.分区

```
[root@localhost iso]# fdisk /dev/sdb
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0x2860b229.

Command (m for help): n                       #添加一个新分区
Partition type:
   p   primary (0 primary, 0 extended, 4 free)
   e   extended
Select (default p): p                         #选择分一个主分区
Partition number (1-4, default 1): 1          #分区号为1
First sector (2048-419430399, default 2048):     #回车选项开始的扇区数
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-419430399, default 419430399): +150G
                                        #+150G 来分一个150G的分区
Partition 1 of type Linux and of size 150 GiB is set

Command (m for help): w                       # 使用w命令来讲分区写入到硬盘
The partition table has been altered!

Calling ioctl() to re-read partition table.
Syncing disks.

验证：
[root@localhost iso]# lsblk
NAME          MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda             8:0    0   50G  0 disk
├─sda1          8:1    0  500M  0 part /boot
└─sda2          8:2    0 49.5G  0 part
  ├─rhel-root 253:0    0 47.5G  0 lvm  /
  └─rhel-swap 253:1    0    2G  0 lvm  [SWAP]
sdb             8:16   0  200G  0 disk
└─sdb1          8:17   0  150G  0 part                  #有一个150G的分区即可
sr0            11:0    1  3.5G  0 rom  /iso
```

三、搭建iscsi服务端

```
[root@localhost ~]# targetcli           # 进入命令行
/> ls                                   #使用ls来查看结构
o- /
.....................................................................................
.................. [...]
  o- backstores
.....................................................................................
........ [...]
  | o- block
.....................................................................
[Storage Objects: 0]
  | o- fileio
.....................................................................
[Storage Objects: 0]
  | o- pscsi
.....................................................................
[Storage Objects: 0]
  | o- ramdisk
.....................................................................
[Storage Objects: 0]
  o- iscsi
.....................................................................................
...... [Targets: 0]
  o- loopback
.....................................................................................
... [Targets: 0]

1.将刚刚创建的分区，添加到iscsi中
/> cd /backstores/block                                 #进入到block中
/backstores/block> create disk1 /dev/sdb1               #将刚刚创建的分区，添加到
block中，重命名为disk1
Created block storage object disk1 using /dev/sdb1.     #显示绿色提示即可
/backstores/block> ls                                   #可以用ls来验证
o- block
.....................................................................
[Storage Objects: 1]
  o- disk1 ..................................................... [/dev/sdb1
(150.0GiB) write-thru deactivated]

2.创建自己的iqn号码
先在命令行查询自己的iqn
[root@localhost ~]# cat /etc/iscsi/initiatorname.iscsi
InitiatorName=iqn.1994-05.com.redhat:30b8ad7a3939

/> cd /iscsi                                           #进入到iscsi目录下，创建自己
的iqn
/iscsi> create iqn.1994-05.com.redhat:30b8ad7a3939      #使用create命令，将自己的iqn
创建
Created target iqn.1994-05.com.redhat:30b8ad7a3939.
Created TPG 1.

3.创建acl，将连接端的iqn添加进来
在连接端的主机命令行查询iqn
[root@localhost ~]# cat /etc/iscsi/initiatorname.iscsi
InitiatorName=iqn.1994-05.com.redhat:b81471723081
添加iqn到服务端
/iscsi> cd /iscsi/iqn.1994-05.com.redhat:30b8ad7a3939/tpg1/acls     #先进入到acls
目录
```

```
/iscsi/iqn.19...939/tpg1/acls> create iqn.1994-05.com.redhat:b81471723081

添加lun到主机
/iscsi/iqn.19...939/tpg1/acls> cd /iscsi/iqn.1994-
05.com.redhat:30b8ad7a3939/tpg1/luns
/iscsi/iqn.19...939/tpg1/luns> create /backstores/block/disk1
Created LUN 0.
Created LUN 0->0 mapping in node ACL iqn.1994-05.com.redhat:b81471723081

设置自己的访问端口
/iscsi/iqn.19...939/tpg1/luns> cd /iscsi/iqn.1994-
05.com.redhat:30b8ad7a3939/tpg1/portals
/iscsi/iqn.19.../tpg1/portals> create 192.168.30.134
Using default IP port 3260
Created network portal 192.168.30.134:3260.
```

最终效果

```
/iscsi/iqn.19.../tpg1/portals> cd /
/iscsi/iqn.19.../tpg1/portals> ls
o- portals
.....
.... [Portals: 1]
  o- 192.168.30.134:3260
.....
[OK]
/iscsi/iqn.19.../tpg1/portals> cd /
/>
/> ls
o- /
.....
.................. [...]
  o- backstores
.....
...... [...]
  | o- block
.....
[Storage Objects: 1]
  | | o- disk1 ..... [/dev/sdb1
(150.0GiB) write-thru activated]
  | o- fileio
.....
[Storage Objects: 0]
  | o- pscsi
.....
[Storage Objects: 0]
  | o- ramdisk
..... [Storage
Objects: 0]
  o- iscsi
.....
.... [Targets: 1]
  | o- iqn.1994-05.com.redhat:30b8ad7a3939
..... [TPGs: 1]
  |   o- tpg1
..... [no-gen-
acls, no-auth]
```

```
  |     o- acls
.....................................................................
.. [ACLs: 1]
  |     | o- iqn.1994-05.com.redhat:b81471723081
..................................... [Mapped LUNs: 1]
  |     |   o- mapped_lun0
..................................................... [lun0 block/disk1
(rw)]
  |     o- luns
.....................................................................
.. [LUNs: 1]
  |     | o- lun0
..................................................... [block/disk1
(/dev/sdb1)]
  |     o- portals
.....................................................................
[Portals: 1]
  |       o- 192.168.30.134:3260
..................................................................... [OK]
  o- loopback
.....................................................................
[Targets: 0]
使用命令将修改保存
/> saveconfig
Last 10 configs saved in /etc/target/backup.
Configuration saved to /etc/target/saveconfig.json
```

重启服务

```
[root@localhost ~]# systemctl restart target
```

四、在Linux平台上，添加iscsi存储

```
使用man帮助来查询命令
[root@localhost ~]# man iscsiadm
在帮助中查找 EXAMPLE 板块
找到发现和连接命令
发现：iscsiadm --mode discoverydb --type sendtargets --portal 192.168.1.10 --
discover
连接：iscsiadm --mode node --targetname iqn.2001-05.com.doe:test --portal
192.168.1.1:3260 --login
```

```
[root@localhost ~]# iscsiadm --mode discoverydb --type sendtargets --portal
192.168.30.134 --discover
192.168.30.134:3260,1 iqn.1994-05.com.redhat:30b8ad7a3939       #只要能够看到对方的
iqn，说明成功发现了
[root@localhost ~]# iscsiadm --mode node --targetname iqn.1994-
05.com.redhat:30b8ad7a3939 --portal 192.168.30.134:3260 --login
Logging in to [iface: default, target: iqn.1994-05.com.redhat:30b8ad7a3939,
portal: 192.168.30.134,3260] (multiple)
Login to [iface: default, target: iqn.1994-05.com.redhat:30b8ad7a3939, portal:
192.168.30.134,3260] successful.
#显示successful，说明成功连接

[root@localhost ~]# lsblk
```

```
NAME          MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda             8:0    0   50G  0 disk
├─sda1          8:1    0  500M  0 part /boot
└─sda2          8:2    0 49.5G  0 part
  ├─rhel-root 253:0    0 47.5G  0 lvm  /
  └─rhel-swap 253:1    0    2G  0 lvm  [SWAP]
sdb             8:16   0  150G  0 disk
```