

iscsi op Linux



context

dit document beschrijft hoe je iscsi targets beheert op Linux ahv **targetcli** (vanop Debian10)

installatie

1. apt get install targetcli-fb
2. pas de firewall aan zodat tcp/3260 wordt doorgelaten.
3. voeg (op Debian10, althans) een basic opstartscript toe:

```
cd /etc/systemd/system
sudo curl
https://raw.githubusercontent.com/open-iscsi/rtplib-fb/master/systemd/t
arget.service -o target.service
sudo systemctl enable target.service
sudo service target start
```

werking

- start targetcli
- navigeren doe je ahv standaard linux commando's: cd, ls
- directory:
 - **backstores**: disken die je beschikbaar maakt ivv:
 - block: device file (hard disk, logisch volume)
 - fileio: bestand
 - **iscsi**: bovenstaande disk ahv iscsi protocol exporteren
- gebruik TAB-toets om beschikbare commando's te zien
- gebruik cd om grafisch te navigeren

```
o- / ..... [..]
  o- backstore ..... [Storage Objects: 0]
    o- block ..... [Storage Objects: 0]
    o- fileio ..... [Storage Objects: 0]
    o- pscsi ..... [Storage Objects: 0]
    o- rawdisk ..... [Storage Objects: 1]
    o- ramdisk ..... [1.001] deactivated
    o- alua ..... [ALUA Groups: 1]
      o- default_tq_pt_gp ..... [ALUA state: Active/optimized]
    o- local ..... [Targets: 0]
    o- loopback ..... [Targets: 0]
    o- whost ..... [Targets: 0]
    o- xen-pscsi ..... [Targets: 0]
```

- gebruiker info om de eigenschappen te zien van het object

backstore aanmaken

disk

- `cd /backstores/fileio`
- `create file_or_dev=/home/test/bigster name=bigster size=1024m`
= maakt 1Gb bestand bigster aan in /home/test

```
/backstores/fileio> ls
o- fileio ..... [Storage Objects: 1]
o- bigster ..... [/home/test/bigster (1.00GB) write-thru deactivated]
o- alua ..... [ALUA Groups: 1]
o- default_tpg ..... [ALUA state: Active/optimized]
/backstores/fileio> ls
```

block

- `cd /backstores/block`
- `create dev=/dev/vg00/lvvmware name=vmware size=750g`
= maakt logisch volume vmware beschikbaar als block device.

iSCSI target aanmaken

- `cd iscsi`
- `create`
maakt default iSCSI componenten aan: portal, IQN, lun, ACL

```
/iscsi> ls
o- iscsi ..... [Targets: 1]
o- tpg1 ..... [TPGs: 1]
o- acls ..... [no-gen-acls, no-auth]
o- luns ..... [ACLs: 0]
o- portals ..... [LUNs: 0]
o- 0.0.0.0:3200 ..... [Portals: 1]
/iscsi>
```

LUN aanmaken

- `cd iscsi`
- `cd <IQN>`
- `cd <tpg#>`
- `cd lun`
- `create storage_object=<device file>`
vb: `create storage_object=/backstores/fileio/groot`

ACL aanmaken

- `cd iscsi`
- `cd <IQN>`
- `cd <tpg#>`
- `cd acl`
- `* create wwn=<IQN van iSCSI initiator>`

CHAP authenticatie

- `cd iscsi`
- `cd <IQN>`
- `cd <tpg#>`
- `set attribute authentication=1`
- `cd acls`
- `cd <IQN_Initiator>`
- `set auth userid=<IQN_Initiator>`
- `set auth password=<ArbitraryPassword0f16characters>`

Note: Nu zou de iSCSI target beschikbaar moeten zijn vanuit je client (iSCSI initiator).

beheer

actieve sessies

- `cd /`
- `session action=detail`

```
/> sessions action=detail
alias: sid: 2 type: Normal session-state: LOGGED_IN
name: ign.1991-05.com.microsoft:uvmkve-cloudist.dmr.lab.local (NOT AUTHENTICATED)
mapped-lun: 1 backstore: fileio/brl mode: rw
mapped-lun: 0 backstore: fileio/groot mode: rw
address: 10.37.0.117 (TCP) cid: 1 connection-state: LOGGED_IN
alias: sid: 3 type: Normal session-state: LOGGED_IN
name: ign.1991-05.com.microsoft:uvmkve-ls103.dmr.lab.local (NOT AUTHENTICATED)
mapped-lun: 1 backstore: fileio/brl mode: rw
mapped-lun: 0 backstore: fileio/groot mode: rw
address: 10.37.0.220 (TCP) cid: 1 connection-state: LOGGED_IN
```

target uitschakelen

- `cd iscsi`
- `cd <IQN>\tpg<#>`
- `disable`

```
/usr/local/iscsi/tpg2> ls
- target ..... [disabled]
- acls ..... [acl: 0]
- luns ..... [lun: 0]
- portals ..... [Portals: 0]
/usr/local/iscsi/tpg2>
```

inschakelen: `enable`

backup/restore

backup

- `cd /`
- `saveconfig`

restore

- cd /
- restoreconfig

Elke backup wordt bewaard onder /etc/rtslib-fb-target/backup Je kan ook vanop de commandline: `targetcli restoreconfig /etc/rtslib-fb-target/backup/backup-x-x.json`

problemen, problemen

netwerk monitor ahv tshark

`tshark -f "dst port 3260" && "src ip <IPvanInitiator>"` (zie: [tshark](#))

```
1 0.000000000 10.11.12.16 → 10.11.110.10 TCP 74 40399 → 3260 [SYN] Seq=0
Win=65535 Len=0 MSS=1460 WS=512 SACK_PERM=1 TSval=74754 TSecr=0
2 0.000054598 10.11.110.10 → 10.11.12.16 TCP 74 3260 → 40399 [SYN, ACK]
Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM=1 TSval=2937156815
TSecr=74754 WS=128
3 0.000413976 10.11.12.16 → 10.11.110.10 TCP 66 40399 → 3260 [ACK]
Seq=1 Ack=1 Win=263168 Len=0 TSval=74754 TSecr=2937156815
4 0.252186069 10.11.12.16 → 10.11.110.10 iSCSI 274 Login Command
5 0.252224095 10.11.110.10 → 10.11.12.16 TCP 66 3260 → 40399 [ACK]
Seq=1 Ack=209 Win=65024 Len=0 TSval=2937157067 TSecr=74779
6 0.252325001 10.11.110.10 → 10.11.12.16 iSCSI 114 Login Response
(Service unavailable)
7 0.252370167 10.11.110.10 → 10.11.12.16 TCP 66 3260 → 40399 [FIN, ACK]
Seq=49 Ack=209 Win=65024 Len=0 TSval=2937157068 TSecr=74779
8 0.252688938 10.11.12.16 → 10.11.110.10 TCP 66 40399 → 3260 [ACK]
Seq=209 Ack=50 Win=263168 Len=0 TSval=74780 TSecr=2937157067
9 0.503529224 10.11.12.16 → 10.11.110.10 TCP 66 40399 → 3260 [FIN, ACK]
Seq=209 Ack=50 Win=263168 Len=0 TSval=74805 TSecr=2937157067
10 0.503573310 10.11.110.10 → 10.11.12.16 TCP 66 3260 → 40399 [ACK]
Seq=50 Ack=210 Win=65024 Len=0 TSval=2937157319 TSecr=74805
^C 11 3.021542392 10.11.12.16 → 10.11.110.10 TCP 74 13353 → 3260 [SYN]
Seq=0 Win=65535 Len=0 MSS=1460 WS=512 SACK_PERM=1 TSval=75056 TSecr=0
```

/var/log/syslog

```
Feb  7 13:28:41 UVMkve-ubuntu kernel: [296881.919424] iSCSI Login
negotiation failed.
Feb  7 13:28:46 UVMkve-ubuntu kernel: [296886.935254] Unable to locate
Target IQN: iqn.2003-01.org.linux-iscsi.uvmkve-ubuntu.x8664:sn.50a18bfcc36b
in Storage Node

Feb  7 14:05:18 UVMkve-ubuntu kernel: [299078.761397] iSCSI Initiator Node:
```

```
iqn.1991-05.com.microsoft:uvmkve-ls103.dmz.lab.local is not authorized to
access iSCSI target portal group: 1.
Feb  7 14:05:18 UVMkve-ubuntu kernel: [299078.761421] iSCSI Login
negotiation failed.
```

meer info

- [targetcli MAN page](#)
- [iSCSI target mounten vanop Linux client](#)

[iscsi](#), [linux](#), [storage](#)

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