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# How do I setup an iSCSI target using targetcli in RHEL7?

🌟 **SOLUTION IN PROGRESS** - Updated November 27 2015 at 3:02 AM - English ▾  
(<http://example.com>)

## Environment

Red Hat Enterprise Linux 7

## Issue

How do I setup an iSCSI Target using `targetcli` ?

## Resolution

- There are two method to make iSCSI target configuration.
  1. Using iSCSI helper (<https://access.redhat.com/labs/iscsihelper/>) in Customer Portal.
  2. Manual configuration
- If you want to use iSCSI helper (<https://access.redhat.com/labs/iscsihelper/>) , please visit iSCSI helper (<https://access.redhat.com/labs/iscsihelper/>) site. NOTE: The site requires to login Customer Portal.
- Manual configuration is described below.
  1. Start by installing the LIO target packages using yum

```
# yum install targetcli
```

2. load the target modules



```
# systemctl start target
```

3. Configure target to start at boot time

```
# systemctl enable target
```

4. If you do not have a device to share out over iSCSI already, create one now. We'll be using `/dev/data/lun0` in our examples

5. Enter the `targetcli` shell

```
# targetcli
targetcli shell version 2.1.fb34
Copyright 2011-2013 by Datera, Inc and others.
For help on commands, type 'help'.

/>
```

6. Start by adding your device under `/backstores/block`. I'm using the name 'lun0' for my already existing blockdevice:

```
/> cd /backstores/block/
/backstores/block> create lun0 /dev/data/lun0
Created block storage object lun0 using /dev/data/lun0.
```

7. Switch to the `/iscsi` and create a new iqn. The iqn will be created randomly if you do not specify one.

```
/backstores/block> cd /iscsi
/iscsi> create
Created target iqn.2003-01.org.linux-iscsi.io.x8664:sn.adb007db317a.
Created TPG 1.
```

8. Change to your iqn directory and then to the `tpg1` directory

```
/iscsi> cd iqn.2003-01.org.linux-iscsi.io.x8664:sn.adb007db317a/tpg1/
/iscsi/iqn.20...07db317a/tpg1>
```

9. Obtain your initiator name from your client (iscsi-initiator)

```
[root@client ~]# cat /etc/iscsi/initiatorname.iscsi
InitiatorName=iqn.1994-05.com.redhat:7d366003913
```



10. Setup acls for the hosts that can login to this portal under /acls .

```
/iscsi/iqn.20...07db317a/tpg1> cd acls
/iscsi/iqn.20...17a/tpg1/acls> create iqn.1994-05.com.redhat:7d366003913
Created Node ACL for iqn.1994-05.com.redhat:7d366003913
```

11. Create a portal. This will be the IP address that we will listen on

```
/iscsi/iqn.20...17a/tpg1/acls> cd ../portals
/iscsi/iqn.20.../tpg1/portals> create
Using default IP port 3260
Binding to INADDR_ANY (0.0.0.0)
Created network portal 0.0.0.0:3260.
```

12. Add the lun we created in step 6 to to this target

```
/iscsi/iqn.20.../tpg1/portals> cd ../luns
/iscsi/iqn.20...17a/tpg1/luns> create /backstores/block/lun0
Created LUN 0.
Created LUN 0->0 mapping in node ACL iqn.1994-05.com.redhat:7d366003913
```

13. Check your configuration

```
/iscsi/iqn.20...17a/tpg1/luns> cd ../..
/iscsi/iqn.20...adb007db317a> ls
o- iqn.2003-01.org.linux-iscsi.io.x8664:sn.adb007db317a
..... [TPGs: 1]
  o- tpg1 .....
[no-gen-acls, no-auth]
  o- acls
.....
  [ACLs: 1]
    | o- iqn.1994-05.com.redhat:7d366003913
..... [Mapped LUNs: 1]
    | o- mapped_lun0 .....
[lun0 block/lun0 (rw)]
  o- luns
.....
  [LUNs: 1]
    | o- lun0 .....
[block/lun0 (/dev/data/lun0)]
  o- portals
.....
  [Portals: 1]
    o- 0.0.0.0:3260
..... [OK]
```

14. Finally, save your configurations and exit



```
/iscsi/iqn.20...adb007db317a> cd /
/> saveconfig
Last 10 configs saved in /etc/target/backup.
Configuration saved to /etc/target/saveconfig.json
/> exit
Global pref auto_save_on_exit=true
Last 10 configs saved in /etc/target/backup.
Configuration saved to /etc/target/saveconfig.json
```

15. On your iscsi-initiator run a discovery against the target to verify your iqn is available

```
# iscsiadm --mode discoverydb --type sendtargets --portal <ip-of-
target> --discover
<ip-of-target>:3260,1 iqn.2003-01.org.linux-
iscsi.io.x8664:sn.adb007db317a
```

16. Login to this target

```
# iscsiadm --mode node --targetname iqn.2003-01.org.linux-
iscsi.io.x8664:sn.adb007db317a --portal <ip-of-target> --login
Logging in to [iface: default, target: iqn.2003-01.org.linux-
iscsi.io.x8664:sn.adb007db317a, portal: <ip-of-target>,3260] (multiple)
Login to [iface: default, target: iqn.2003-01.org.linux-
iscsi.io.x8664:sn.adb007db317a, portal: <ip-of-target>,3260] successful.
```

17. Verify your new device is available

```
[root@client ~]# cat /proc/scsi/scsi
Attached devices:
Host: scsi11 Channel: 00 Id: 00 Lun: 00
  Vendor: LIO-ORG  Model: lun0          Rev: 4.0
  Type:   Direct-Access                ANSI SCSI revision: 05
[root@client ~]# fdisk -l
Disk /dev/sdc: 1 GiB, 1073741824 bytes, 2097152 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 65536 bytes
```

**Product(s)** [Red Hat Enterprise Linux \(/taxonomy/products/red-hat-enterprise-linux\)](/taxonomy/products/red-hat-enterprise-linux)

**Component** [iscsi-initiator-utils \(/components/iscsi-initiator-utils\)](/components/iscsi-initiator-utils) [kernel \(/components/kernel\)](/components/kernel)

**Category** [Configure \(/category/configure\)](/category/configure)

**Tags** [iscsi \(/tags/iscsi\)](/tags/iscsi) [rhel\\_7 \(/taxonomy/tags/rhel7\)](/taxonomy/tags/rhel7) [storage \(/tags/storage\)](/tags/storage)



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