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## Debian / Ubuntu Linux Connect to an iSCSI Volume

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Q. How do I format and connect to an iSCSI Volume under Debian / Ubuntu Linux?

A. You need to install open-iscsi package for high performance, transport independent iSCSI implementation under Debian / Ubuntu Linux. This package is also known as the Linux Open-iSCSI Initiator. You need Linux operating system with kernel version 2.6.16, or later. See REHL 5 / CentOS 5 / Fedora Linux specific instructions here [2].

## Install Open-iSCSI Initiator

Type the following command at a shell prompt:

```
$ sudo apt-get install open-iscsi
```

## Open-iSCSI default configuration

You need to soft-link (path fix) few two files to autologin work i.e. fix file paths for iscsiadm, enter:

```
ln -s /etc/{iscsid.conf,initiatorname.iscsi} /etc/iscsi/
```

Default configuration file could be located at /etc/iscsi/iscsid.conf or ~/.iscsid.conf. Open /etc/iscsi/iscsid.conf file:

```
# vi /etc/iscsi/iscsid.conf
```

Set node.session.auth.username, node.session.auth.password and other parameter as follows:

```
node.startup = automatic
node.session.auth.username = MY-ISCSI-USER
node.session.auth.password = MY-ISCSI-PASSWORD
discovery.sendtargets.auth.username = MY-ISCSI-USER
discovery.sendtargets.auth.password = MY-ISCSI-PASSWORD
node.session.timeo.replacement_timeout = 120
node.conn[0].timeo.login_timeout = 15
node.conn[0].timeo.logout_timeout = 15
node.conn[0].timeo.noop_out_interval = 10
node.conn[0].timeo.noop_out_timeout = 15
node.session.iscsi.InitialR2T = No
node.session.iscsi.ImmediateData = Yes
node.session.iscsi.FirstBurstLength = 262144
node.session.iscsi.MaxBurstLength = 16776192
node.conn[0].iscsi.MaxRecvDataSegmentLength = 65536
```

Save and close the file. Restart open-iscsi service:

```
# /etc/init.d/open-iscsi restart
```

Now you need to run a discovery against the iscsi target host:

```
# iscsiadm -m discovery -t sendtargets -p ISCSI-SERVER-IP-ADDRESS
```

If 192.168.1.60 is iSCSI server IP address, enter:

```
# iscsiadm -m discovery -t sendtargets -p 192.168.1.60
```

OR

```
# iscsiadm --mode discovery --type sendtargets --portal 192.168.1.60
```

Note down the record id (such as iqn.2001-05.com.doe:test) found by the discovery. You need the same for login. Login, must use a node record id found by the discovery:

```
# iscsiadm --mode node --targetname iqn.2001-05.com.doe:test --portal 192.168.1.60:3260
--login
```

Finally restart the service again:

```
# /etc/init.d/open-iscsi restart
```

## Format iSCSI Volume

Now you should see an additional drive on the system such as /dev/sdc. Use /var/log/messages file to find out device name:

```
# tail -f /var/log/messages
```

If your device name is /dev/sdc, enter the following command to create a partition:

```
# fdisk /dev/sdc
```

Next format partition:

```
# mkfs.ext3 /dev/sdc1
```

Mount file system:

```
# mkdir /iscsi
# mount /dev/sdc1 /iscsi
```