

JUNIPER NETWORKS STRM TECHNICAL NOTE

CONFIGURING iSCSI

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This document explains how to connect an STRM appliance to an iSCSI SAN.



Note: In some cases, your existing STRM Administration interface is used to access the storage network, however the information provided in this document uses an additional interface on eth1.



CAUTION: The procedures in this document assumes an advanced knowledge of a Linux operating system. For assistance, please contact Juniper Networks Customer Support.

To configure iSCSI you must follow these steps:

- Step 1 [Preparing STRM to Connect to iSCSI Network](#)
- Step 2 [Assigning and Configuring iSCSI Volumes](#)
- Step 3 [Configuring the System to Auto-mount the iSCSI Volume](#)
- Step 4 [Verifying the iSCSI Mount](#)

Preparing STRM to Connect to iSCSI Network

To prepare STRM to connect to an iSCSI network:

- Step 1 From the STRM Administration Console, configure a secondary network interface with a private IP address to connect to the iSCSI SAN.



Note: A network interface address information, from your SAN network manager, is required.

- Step 2 Log into STRM as root.

- Step 3 Open the following file:

```
/etc/initiatorname.iscsi
```

- Step 4 Add the name of your host to the initiatorname.iscsi file. For example:

```
InitiatorName=csd1
```

Step 5 Save and close the file.

Step 6 Open the following file:

```
/etc/iscsi.conf
```

Step 7 Add the address of your iSCSI server in the `DiscoveryAddress` option. For example:

```
DiscoveryAddress=192.168.1.1
PingTimeout=10
LoginTimeout=10
Continuous=no
```

Step 8 Save and close the file.

Step 9 Enter the following command to start/restart the iSCSI service to open a session to the server:

```
service iscsi restart
```

Step 10 Enter the following command to query the SAN for assigned volumes:

```
iscsi-ls
```

The following is an example of the command output, if no volumes are assigned:

```
*****
SFNet iSCSI Driver Version ...4:0.1.11-4(15-Jan-2007)
*****
```

Assigning and Configuring iSCSI Volumes

To assign and configure iSCSI volumes:

Step 1 Assign volumes to the new host using your iSCSI management software.

Step 2 Enter the following command:

```
iscsi-ls
```

The following is an example of the command output, after volumes are assigned:

```
*****
SFNet iSCSI Driver Version ...4:0.1.11-4(15-Jan-2007)
*****
TARGET NAME       :iqn.2005-08.com.qllabs:intransa:qllabs.csd9
TARGET ALIAS      :
HOST ID           :7
BUS ID            :0
TARGET ID         :0
TARGET ADDRESS    :192.168.1.4:3260,1
SESSION STATUS    :ESTABLISHED AT Thu Nov  8 10:15:08 AST 2007
SESSION ID        :ISID 00023d000001 TSIH 8e4
*****
```

Step 3 Record the `TARGET NAME` that is output by the `iscsi-ls` command.

Step 4 Open the following file:

```
/etc/iscsi.conf
```

Step 5 Verify that the volume is enabled, that is `Enables=yes`.

Step 6 Add the `TARGET_NAME` listed to the `iscsi.conf` file. For example:

```
Enables=yes
TargetName=iqn.2005-08.com.q11labs:intransa:q11labs.csd9
```

Step 7 Save and close the file.

Step 8 Enter the following command to restart the iSCSI service:

```
service iscsi restart
```

Step 9 Enter the following command:

```
dmesg
```

The system displays the following, which includes the iSCSI volume as a new block device. For example:

```
iscsi-sfnet:host3: Session established
scsi3 : SFNet iSCSI driver
Vendor: Intransa Model: IP SAN Rev: 1
Type: Direct-Access ANSI SCSI revision: 04
SCSI device sdc: 964687872 512-byte hdwr sectors (493920 MB)
sdc: cache data unavailable
sdc: assuming drive cache: write through
SCSI device sdc: 964687872 512-byte hdwr sectors (493920 MB)
sdc: cache data unavailable
sdc: assuming drive cache: write through
sdc: unknown partition table
Attached scsi disk sdc at scsi3, channel 0, id 0, lun 0
```

Step 10 Enter the following command to reformat the volume, if it has not previously been used.



CAUTION: If the volume has been used before, do not reformat it if you wish to retain the data already on the volume.



Note: If the new volume is larger than 2TB, format the entire volume. If the new volume is less than 2TB, you may create one or more partitions on the volume using the "fdisk" utility, then mount them separately.

```
mkfs.ext3 /dev/sdc
```

Step 11 Open the following file:

```
/etc/fstab
```

Step 12 Add the volume to the `fstab` file. For example:

```
/dev/sdc1 /san ext3 noauto 0 0
```

Step 13 Save and close the file.

Configuring the System to Auto-mount the iSCSI Volume

To configure the system to auto-mount the iSCSI volume:

Step 1 Open the following file:

```
/etc/rc3.d
```

Step 2 Rename the iSCSI script so that it is part of the startup. For example:

```
mv K89iscsi S12iscsi
```

Step 3 Link the iSCSI script. For example:

```
ln -s /etc/init.d/iscsi-mount S13iscsi-mount
```

Step 4 Save and close the file.

Verifying the iSCSI Mount

To verify that the iSCSI mounts properly:

Step 1 Enter the following command:

```
df -h
```

Step 2 Review the screen output and look for the newly added volume. For example:

```
root@csd6 ~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda2       12G   5.4G  6.5G  46% /
/dev/sda1        99M    50M   44M  54% /boot
/dev/sda3       11G  406M   9.7G   4% /var/log
/dev/md0       136G   6.6G  130G   5% /store
/dev/sda5        10G    33M   10G   1% /store/tmp
/dev/sdg        910G  558M  863G   1% /store/iscsi
root@csd6 ~#
```

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