# Installing and Configuring External Storage

This section describes how to manually prepare your external iSCSI storage information to work with NAM. It contains the following topics:

- Configuring the iSCSI Array
- Locating the NAM IQN
- Connecting the Storage Array

## Configuring the iSCSI Array

Use your vendor's user guide to ensure you have properly configured the iSCSI array. The NAM is independent of most array settings, but some are important for accessibility and performance.

**Step 1** To configure the Logical Unit Numbers (LUNs) on the array, there is often a Segment Size setting. Larger segment sizes can improve write speeds. Configure the Segment Size setting to use the largest possible segment size (up to 512KB).

Multiple LUNs can be configured on a single array.

**Step 2** Map the LUNs to iSCSI Qualified Names (IQNs) on the array. Each IQN represents a different list of LUNs for hosts (such as the NAM) to access.

**Step 3** The NAM supports up to 32 LUNs between all protocols. Multiple LUNs can be mapped to one IQN.

**Step 4** The NAM also has an IQN, which represents the host side of an iSCSI session. Be sure you map each NAM's IQN to the LUNs for host read-write access. Most storage arrays require this for security reasons, to ensure that only certain hosts can access the LUNs. Each NAM has a unique IQN, so perform this step for each NAM that requires access and for each target LUN that is to be accessed. For more details about which CLI command to use, see Locating the NAM IQN, page 4-1.

**Step 5** Set the IP path to the NAM management port. For details, see Connecting the Storage Array, page 4-2.

## Locating the NAM IQN

To find the NAM IQN, use the **remote-storage iscsi local-iqn** CLI command:

```
root@nam.domain# remote-storage iscsi local-iqn
```

```
Local iSCSI Qualified Name: iqn.1967-04.com.cisco:NAM2420-K9.00:19:55:07:15:9A
```

# Connecting the Storage Array

After you configure the iSCSI storage arrays, be sure that it has an IP path to the NAM management port (see NAM Management Port (LAN 1), page 1-4). The array can be connected while the NAM is running.

Some arrays come with multiple storage controller modules. As a security feature, module ownership must often be mapped to each LUN.

The NAM logs into the storage to start an iSCSI session using the IP address and IQN(s) of the storage array. To connect the storage array using the user interface, follow these steps:

**Step 1** Log into the NAM web interface. To access the Data Storage page, select **Capture > Packet Capture/Decode > Data Storage**.

**Step 2** Click the **iSCSI Login** button and enter the target IP and IQN.

The storage table refreshes with the newly discovered LUNs.

If the LUNs do not appear:

a. Check **remote-storage iscsi list** to verify the iSCSI session was properly started.

The follow example shows how to verify the iSCSI session.

```
root@nam.domain# remote-storage iscsi list
Storage ID: 16
Label:
Status: Ready
 Protocol: ISCSI
 Target IP: 172.20.10.82
Target IQN: iqn.2015-04:celermas.target18
Type: LUN
Model: IET VIRTUAL-DISK
LUN: 4
 Capacity: 24.98GB
 Available: 24.98GB
Active iSCSI Sessions:
tcp: [8] 172.20.10.82:3260,1 iqn.2015-04:celermas.target18
```

The LUN number (in the above example, LUN 4) can help you identify one LUN from others of the same IQN. This number is unique to each IQN, meaning two LUNs from different IQNs can have the same number.

b. If the iSCSI session was properly started, check the storage array configuration to verify that:

• The LUNs are mapped to the target IQN, and

• The NAM IQN has been given Read/Write access to the LUNs.

c. If you make any configuration changes, logout of the iSCSI session and login again. To logout, use the CLI **remote-storage iscsi logout**. If the LUNs appear on the user interface, you can select one of them and click **iSCSI Logout**. All LUNs mapped to that target IQN will be disconnected.

You can now use the iSCSI external storage from within the NAM. For more information, see the *Cisco Prime Network Analysis Module Software User Guide*.