Application Note

Aug 2013

Assigning SnapSAN S3000/S5000 Logical Disks to a RHEL Server

Summary

This application note describes how to bind pools and logical disks, and assign them to a RHEL Server using SnapSAN Manager Server software.

Required Information, Tools, and Files

Before beginning this procedure, the following information, tools, and files are required.

Prerequisites

1. Overland Storage SnapSAN S3000/S5000 Disk Array must be installed and configured. You can get additional technical support on the Internet at http://support.overlandstorage.com, or by contacting Overland Storage using the information found on the Contact Us page on our web site.
2. Verify:
   - **Java Runtime Environment** (JRE) is installed prior to running the SnapSAN Manager Server application.
   - **SnapSAN Manager Server** Web Management Interface is installed on the management server.

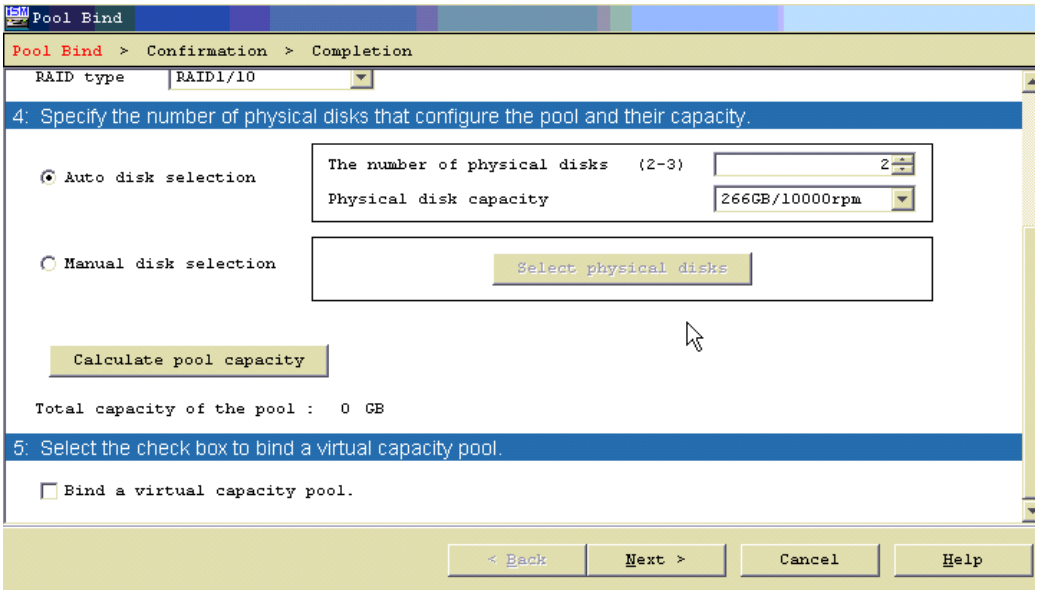
Versions

The test environment used for illustration in this document uses the following versions:

- RHEL 5.4
- Java JRE 7 update 13
- SnapSAN Manager Server 7.4.151
- SnapSAN S3000/S5000 at firmware U14B.007

Binding Pools

1. Open your browser and login to the **Web Manager Interface**.
2. Select product number **S5000**.
3. Navigate to **Configuration > Pool > Pool Bind**.
4. Click **Show Pool List**.



5. Select these **two** options:
   - **Physical Disk Type**
   - **RAID Type**
6. Select **one** of the following:
   - **Auto disk selection**
   - **Manual disk selection**
7. Click **Next**.
8. Verify the **basic settings**.
   To modify the default settings, proceed to **Advanced Settings**.
9. Click **Set**.
10. Click **Yes** to complete the binding.

Advanced Settings

If the default settings need modification:

1. Click **Advanced Settings.**

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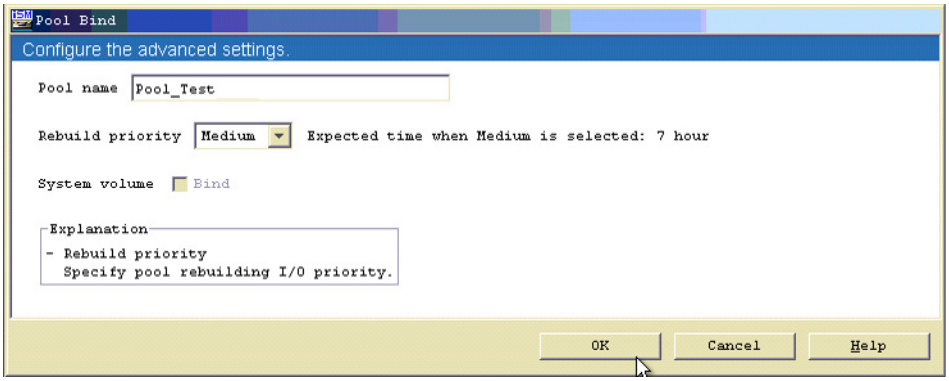
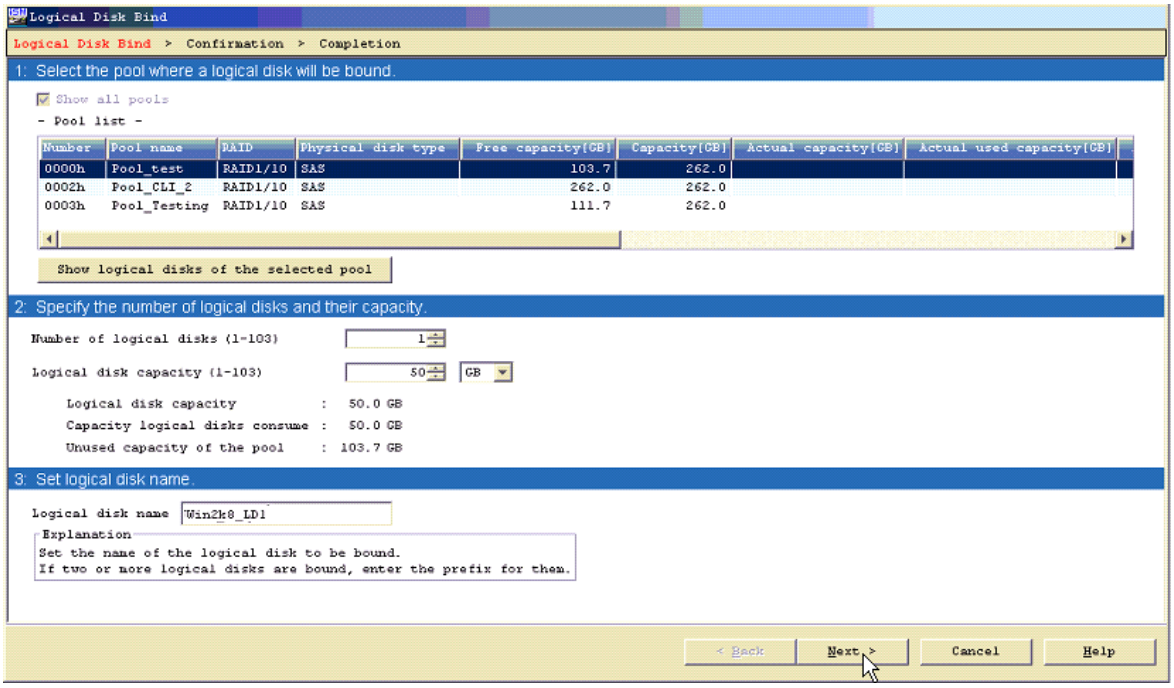


2. Enter both items:
   - **Pool name**
   - **Rebuild Priority**
3. Click **OK**.
4. Click **Yes**.
5. Click **Finish**.

Binding a Logical Disk

1. Use **one** of the options:
   - From the Pool Bind Completion screen, click the **Bind Logical Disk**.
   - From the SnapSAN Manager Monitor screen, navigate to **Configuration > Logical Disk > Logical Disk Bind**.

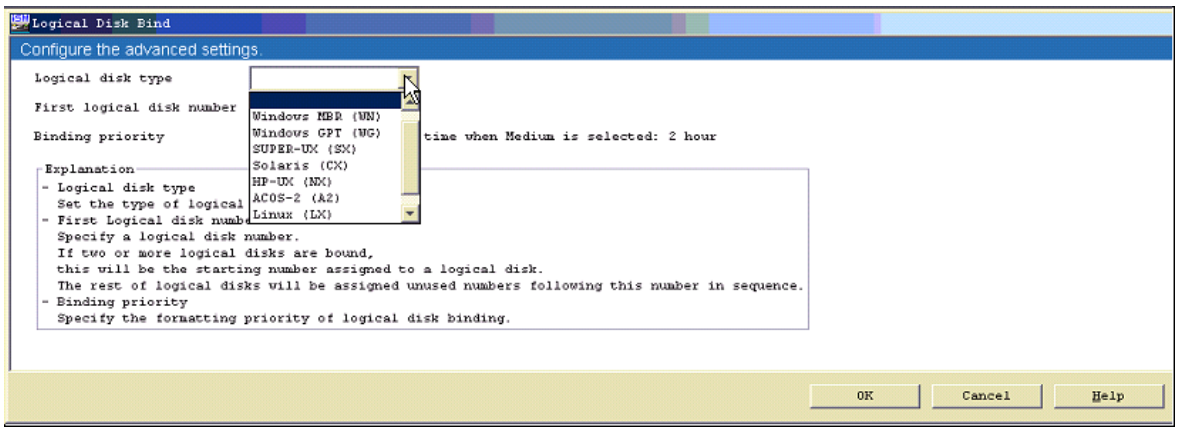


2. Enter:
   - **Number of Logical Disks**
   - **Logical Disk Capacity**
   - **Logical Disk Name**
3. Click **Next**.
4. Verify the basic **settings**.

Advanced Settings

To modify the default settings:

1. Click **Advanced Settings.**



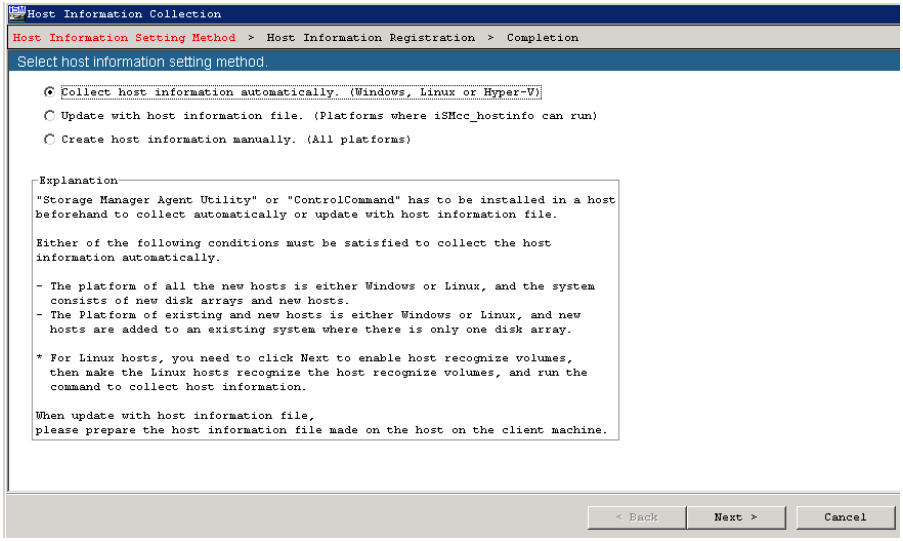
2. Enter:
   - **Logical Disk type**

- **First Logical Disk number**
- **Binding Priority**

3. Click **OK**.
4. Click **Set**.
5. Click **Yes**.
6. Click **Finish**.

Adding Host To The Storage Array

1. From the SnapSAN Manager Monitor screen, navigate to **Configuration > Host > Host Operation > Host Information Collection** to create the information manually.



2. Select **one** of the Host Information Collection options:
   - **Collect Host Information Automatically** and continue to Steps 3–6

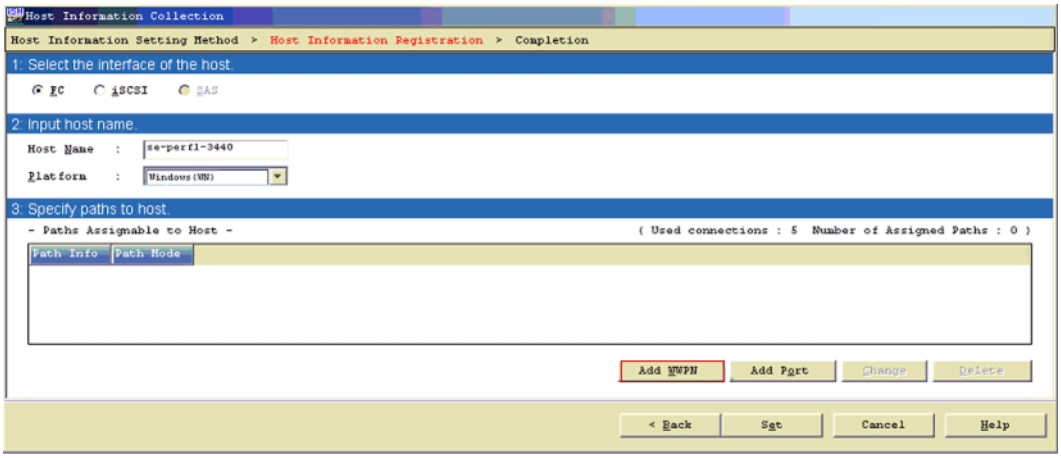
     NOTE: Windows Host Discovery agent must be installed.

   - **Update with Host Information File** and continue to Steps 6–8.
   - Use the **Create Host Information Manually** procedure below to install.
3. Click **Next**.
4. Click **Next** again.
5. Click **Yes**.
6. **Add** file.
7. Click **Set**.
8. Click **Finish**.

Create Host Information Manually

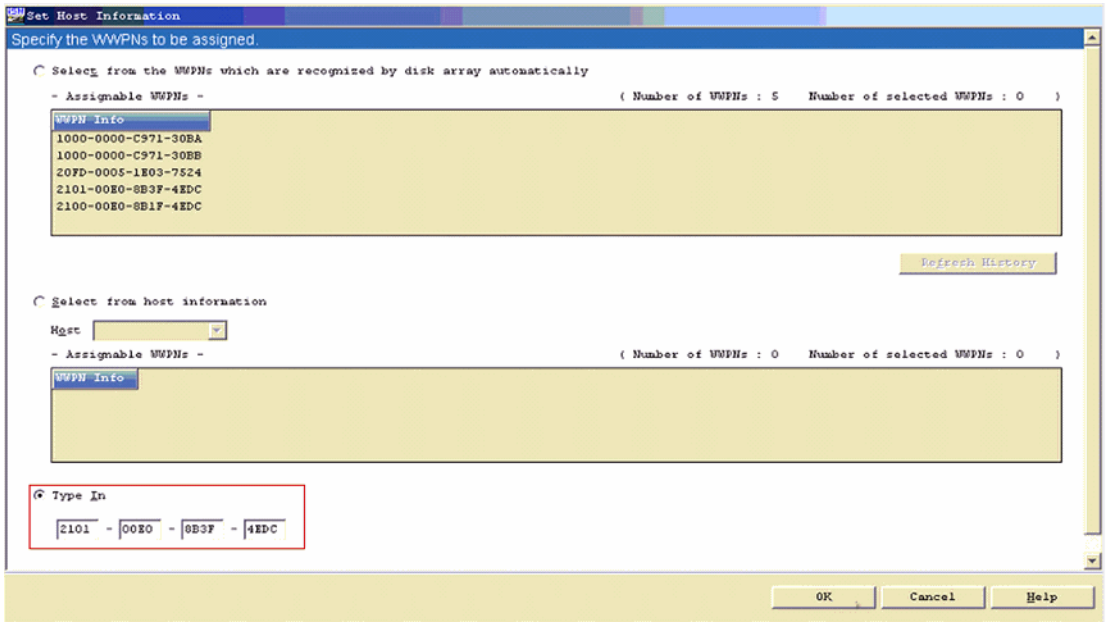
There are two interface options - **FC** and **iSCSI**. Follow the appropriate procedure below.

FC Option

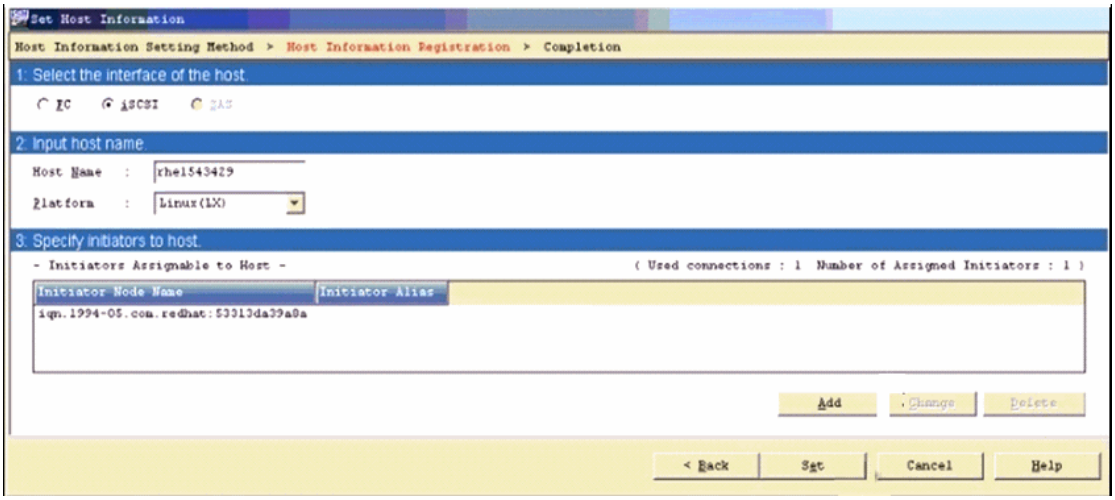


1. Click **FC**.
2. Enter:
   - **Host Name**
   - **Platform**
3. Add the **WWPNs**:
   a. Click **Add WWPN.**
   b. Click **Refresh History**.
   c. Select desired WWPNs and click **OK**.
   d. After history refresh, if the WWPNs are not displayed, select **Type In**, enter the WWPN, and click **OK**.

   NOTE: Repeat this step to manually add all the WWPNs.



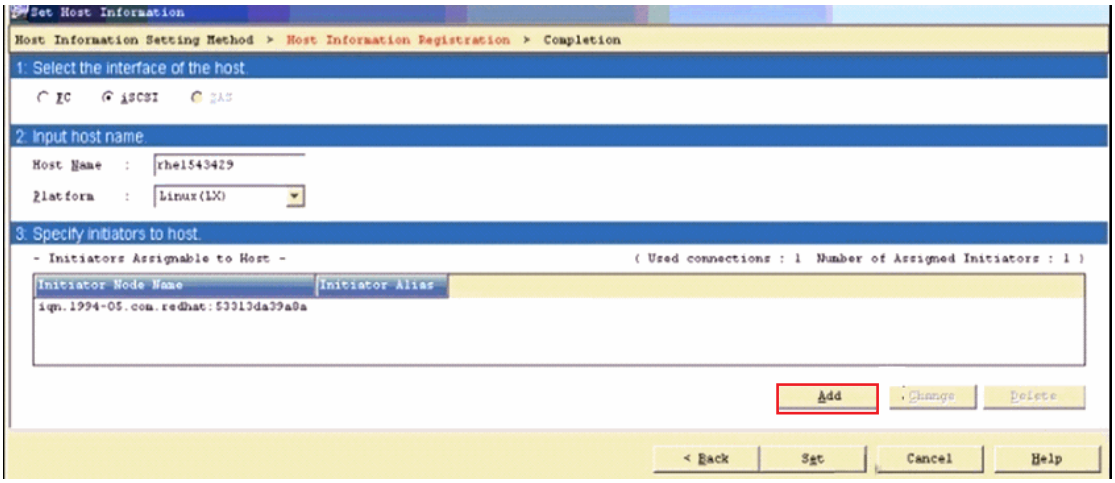
4. Click **Set.**



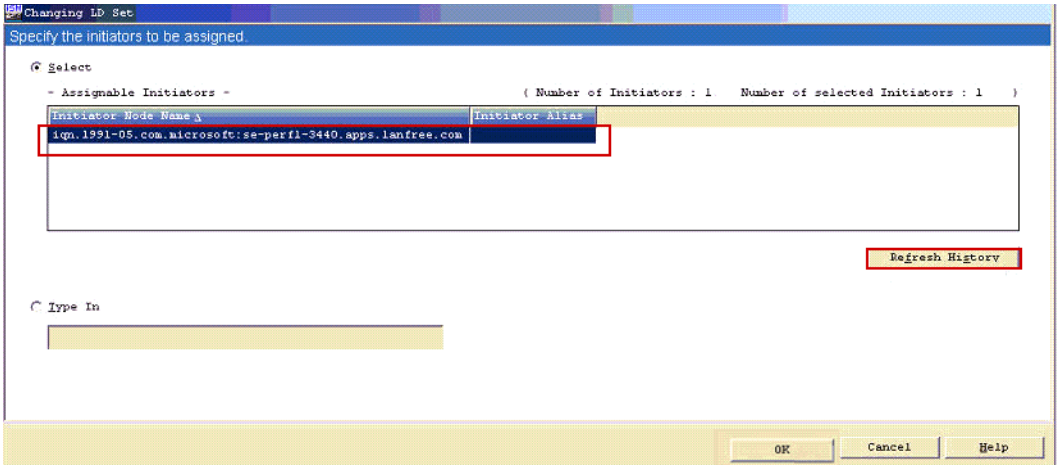
5. Click **Finish**.

iSCSI Option

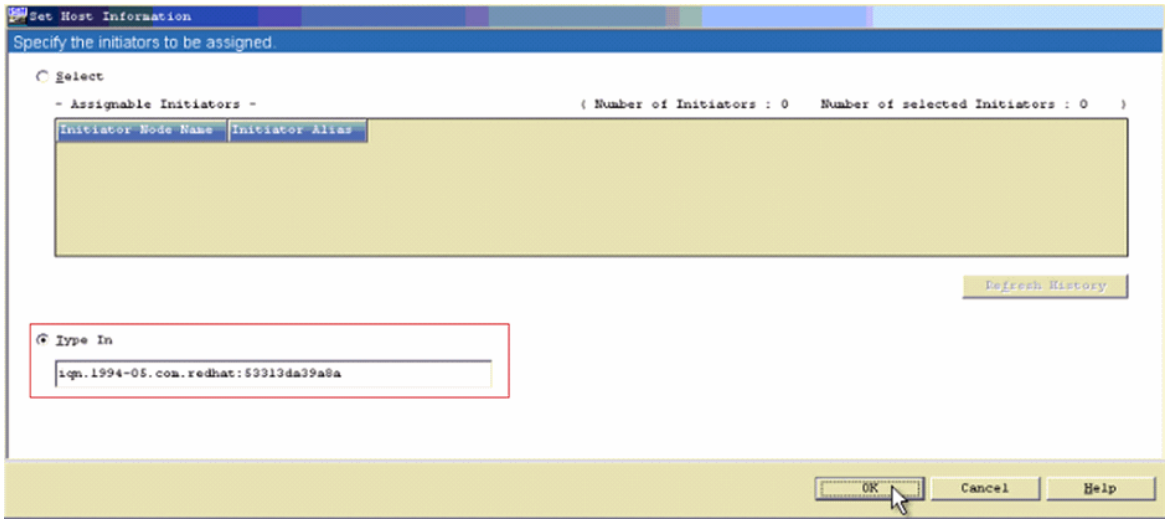
1. Click **iSCSI.**
2. Enter **Host Name.**
3. Select **Platform.**
4. Click **Add**.



5. Click **Refresh History.**
6. Click **OK** to see the IQN.



7. If the IQN was not discovered, click **Type In** and provide the IQN in the text field.



To find the **IQN** to enter in the field:

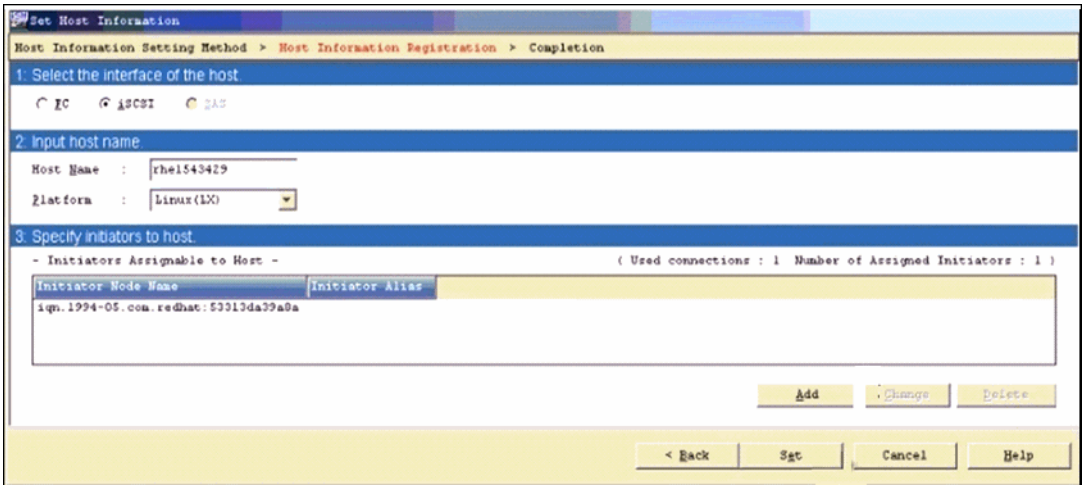
a. Connect to the **Linux host**.

b. Run the following **command**:

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

c. Copy and paste name into the **Type In** field.

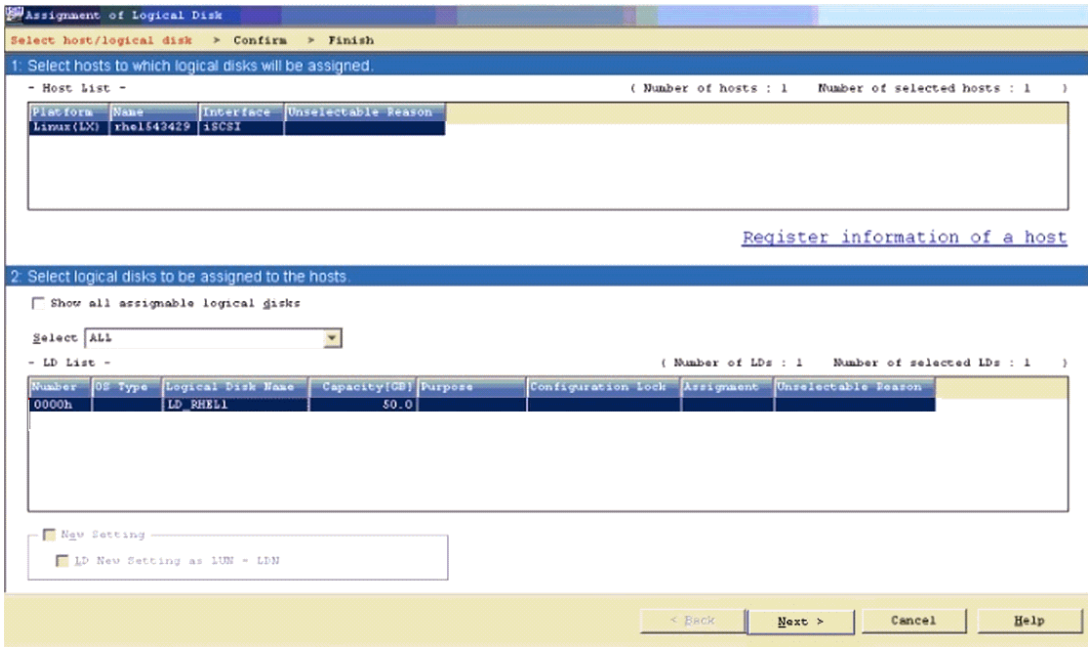
d. Click **OK**.
The **Host Information Registration** screen appears.



8. Click **Set**.
9. Click **Yes**.
10. Click **Finish**.

Assigning Logical Disks To The Host

1. Use **one** of these options:
   - From the 'Host Information Setting Method Completion' screen, click the **Assign Logical Disks To The Host** link.
   - From the SnapSAN Manager Monitor screen, navigate to the **Configuration > Host > Assignment of Logical Disk** page.



2. Select both the **Host** and the **Logical Disk**.
3. Click **Next**.
4. Click **Set**.
5. At the confirmation page, click **Yes**.
6. Click **Finish.**
7. Click **Yes**.
8. Click the **Make the Assignment of Logical Disks to the Host Enable** link.
9. Click **Start**.

10. Click **Yes.**

Additional Steps for iSCSI Connection

1. Locate the **iscsi.conf** file located in /etc/.
2. Edit the iscsi.conf file and modify the **Discovery Address** setting.
3. Insert the **IPAddress** of the SnapSAN iSCSI Port into the **DiscoveryAddress=** field.
   Example: DiscoveryAddress=<ip_address>
4. Enter the following command to discover the **new SnapSAN disks**:
   `iscsiadm -m discovery -t sendtargets -p <ip_address>`

```
[root@se-rhel33231 scsi_host]#
[root@se-rhel33231 scsi_host]# iscsiadm -m discovery -t sendtargets -p 172.168.10.11
172.168.10.11:3260,0 iqn.2001-03.jp.overland:storage01:ist-m000-sn-0000000942990012.lx-se-rhel33231.target0004
172.168.10.12:3260,1 iqn.2001-03.jp.overland:storage01:ist-m000-sn-0000000942990012.lx-se-rhel33231.target0004
172.168.20.11:3260,4 iqn.2001-03.jp.overland:storage01:ist-m000-sn-0000000942990012.lx-se-rhel33231.target0004
172.168.20.12:3260,5 iqn.2001-03.jp.overland:storage01:ist-m000-sn-0000000942990012.lx-se-rhel33231.target0004
[root@se-rhel33231 scsi_host]#
```

Verifying Logical Disks in RHEL

1. Enter the following **command** to list the new devices in RHEL:
   `cat /proc/scsi/scsi`

```
[root@se-rhel33231 ~]#
[root@se-rhel33231 ~]# cat /proc/scsi/scsi
Attached devices:
Host: scsi0 Channel: 00 Id: 00 Lun: 00
  Vendor: COMPAQ   Model: CD-ROM SN-124     Rev: N104
  Type:   CD-ROM                           ANSI  SCSI revision: 05
Host: scsi4 Channel: 00 Id: 00 Lun: 00
  Vendor: OVERLAND Model: SNAPSAN           Rev: 1000
  Type:   Direct-Access                    ANSI  SCSI revision: 05
Host: scsi7 Channel: 00 Id: 00 Lun: 00
  Vendor: OVERLAND Model: SNAPSAN           Rev: 1000
  Type:   Direct-Access                    ANSI  SCSI revision: 05
Host: scsi5 Channel: 00 Id: 00 Lun: 00
  Vendor: OVERLAND Model: SNAPSAN           Rev: 1000
  Type:   Direct-Access                    ANSI  SCSI revision: 05
Host: scsi6 Channel: 00 Id: 00 Lun: 00
  Vendor: OVERLAND Model: SNAPSAN           Rev: 1000
  Type:   Direct-Access                    ANSI  SCSI revision: 05
[root@se-rhel33231 ~]#
```

2. Issue the **lsscsi command** to list the iSCSI SnapSAN targets.

```
[root@se-rhel33231 ~]#
[root@se-rhel33231 ~]# lsscsi
[0:0:0:0]    cd/dvd  COMPAQ   CD-ROM SN-124    N104  /dev/sr0
[4:0:0:0]    disk    OVERLAND SNAPSAN          1000  /dev/sda
[5:0:0:0]    disk    OVERLAND SNAPSAN          1000  /dev/sdb
[6:0:0:0]    disk    OVERLAND SNAPSAN          1000  /dev/sdd
[7:0:0:0]    disk    OVERLAND SNAPSAN          1000  /dev/sdc
[root@se-rhel33231 ~]#
```

3. Partition and format the **disk**.