
Dell Advanced Infrastructure Manager



Dell AIM Training



Student Lab Guide

Based on AIM release ver.3.4.2



Dell AIM Training Lab: Building an AIM Lab Environment

This is a combined lab consisting of 11 sub-labs written as “How-to Sheets” designed to walk you through the steps of each task. Perform the labs in the order listed below to build your AIM Lab environment that you will use throughout this training.

In this lab, you will perform the following hands-on labs:

- Dell AIM Training Deploying AIM on Red Hat 5.5 (Not used during this training class)
- Dell AIM Training Deploying the AIM OVF
- Dell AIM Training AIM Controller Configuration
- Dell AIM Training Adding Racks, Chassis, and Switches
- Dell AIM Adding Interconnect Switches
- Dell AIM Training Discovering a Physical server in AIM
- Dell AIM Training Adding ESX VMRacks
- Dell AIM Training Discovering a new virtual machine server in AIM
- Dell AIM Training Image migration using SMU
- Dell AIM Training Adding AIM Personas
- Dell AIM Training Working with Server Pools

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 7-8 hours to complete.

Lab Environment

The lab environment consists of:

2 Rack and 2 m1000e chassis environments, the lab will be prepared for students in the following:

- (2) M1000E chassis with 5 blade servers
- (2) R610 racks environments with 5 r610 servers in each
- Each of the 4 work environment has its own network environment including IP scheme.
- Each of the 4 work environments will have preinstalled RHEL 5u5 and VMware ESX 4.1 servers.
- Equallogic iscsi storage

Prepare for the Lab

The following is included in the course materials:

1. Student Lab Guide
 - Lab “How-to” sheets
 - Lab Configuration Sheet
2. Preinstalled VMware ESX 4.1 server
3. Preinstalled Microsoft Windows 2008 R2 server
4. Preinstalled Red Hat 5.5 Server

Part 1: Deploy AIM on Red Hat 5.5

- Begin this lab by opening the **How-to_01_Dell AIM_Deploy AIM on Red Hat 5.5** work sheet.
- Install AIM onto the preinstalled Red Hat 5.5 Server in your kit. Refer to the Lab Configuration sheet associated to your assigned work environment.

Part 2: AIM Controller Configuration

- Configure the AIM Controller that you have just installed by following the steps within the **How-to_03_Dell AIM Training_ AIM Controller Configuration** work sheet.

Part 3: Adding Racks, Chassis, and Switches to the AIM Environment

- Introduce your Rack or Chassis and switches into the AIM environment by following the steps within the **How-to_04_Dell AIM Training_Adding Racks, Chassis, and Switches** work sheet.

Part 4: Adding Interconnect Switches to the AIM Environment

- Add an interconnect switch into the AIM environment by following the steps within the **How-to_05_Dell AIM _Adding Interconnect Switches** work sheet.



Part 5: Discovering a Physical server in AIM

Add physical servers into the AIM environment through Discovery by following the steps within the **How-to_06_Dell AIM Training_Discovering a Physical server in AIM** work sheet.

Part 6: Adding ESX VM Racks to the AIM Environment

Add an ESX vRack into the AIM environment by following the steps within the **How-to_07_Dell AIM Training_Adding ESX VM Racks** work sheet.

Part 7: Discovering a new virtual machine server in AIM

Add virtual servers into the AIM environment through Discovery by following the steps within the **How-to_08_Dell AIM Training_Discovering a new virtual machine server in AIM** work sheet.

Part 8: Image migration using SMU

- Begin this lab by opening the **How-to_09_Dell AIM_Image migration using SMU** work sheet.
- Using SMU and the preinstalled Microsoft Windows 2008 R2 server in your kit, migrate the local disk image to a centralized network boot LUN on the EqualLogic storage device.

Refer to the Lab Configuration sheet associated to your assigned work environment.

Part 9: Adding AIM Personas to the AIM Environment

Add Personas into the AIM environment by following the steps within the **How-to_10_Dell AIM Training_Adding AIM Personas** work sheet.

Part 10: Working with Server Pools

Manage persona and server assignment with Server Pools by following the steps within the **How-to_11_Dell AIM_Working with Server Pools** work sheet.

The end result of these labs is a functional AIM demonstration environment that you will use throughout this training to provide demonstrations during the various presentation exercises.

Dell AIM Training Lab 01: AIM Install In Red Hat 5.5

Lab 01 Objective: Install AIM In Red Hat Server 5.5

In this lab, you will perform the following tasks:

- Pre-installation check
- Running the installation
- Installing the license

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 1 hour to complete

Prepare for the Lab

The following is included in the course materials:

1. Server running RedHat 5.5 on its local hard drive
2. Location of Dell AIM Linux ISO
3. License File
4. Lab Configuration Sheet

Part 1: Pre Installation Check – Red Hat

```

Table: filter
Chain INPUT (policy ACCEPT)
num target prot opt source destination
1 RH-Firewall-1-INPUT all -- 0.0.0.0/0 0.0.0.0/0

Chain FORWARD (policy ACCEPT)
num target prot opt source destination
1 RH-Firewall-1-INPUT all -- 0.0.0.0/0 0.0.0.0/0

Chain OUTPUT (policy ACCEPT)
num target prot opt source destination

Chain RH-Firewall-1-INPUT (2 references)
num target prot opt source destination
1 ACCEPT all -- 0.0.0.0/0 0.0.0.0/0
2 ACCEPT icmp -- 0.0.0.0/0 0.0.0.0/0
3 ACCEPT esp -- 0.0.0.0/0 0.0.0.0/0
4 ACCEPT ah -- 0.0.0.0/0 0.0.0.0/0
5 ACCEPT udp -- 0.0.0.0/0 224.0.0.251 udp dpt:5353
6 ACCEPT udp -- 0.0.0.0/0 0.0.0.0/0 udp dpt:631
7 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 tcp dpt:631
8 ACCEPT all -- 0.0.0.0/0 0.0.0.0/0 state RELATED,ESTABLISHED
9 ACCEPT tcp -- 0.0.0.0/0 0.0.0.0/0 state NEW tcp dpt:22
10 REJECT all -- 0.0.0.0/0 0.0.0.0/0 reject-with icmp-host-prohibited

```

1. Using Putty, ssh to your allocated server running RedHat 5.5; Login with the account **root/Aim4Dell**
2. Check that the correct release is installed:
 - **cat /etc/redhat-release**
 Check that iptables is enabled:
 - **service iptables status**
3. Check IP configuration by running:
 - **ip addr**

Part 1: Pre Installation Check – Red Hat (continued)

```
[root@controller330 ~]# ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        inet6 ::1/128 scope host
            valid_lft forever preferred_lft forever
2: eth2: <BROADCAST,MULTICAST> mtu 1500 qdisc noop qlen 1000
    link/ether 00:15:17:51:8a:a8 brd ff:ff:ff:ff:ff:ff
3: eth3: <BROADCAST,MULTICAST> mtu 1500 qdisc noop qlen 1000
    link/ether 00:15:17:51:8a:a9 brd ff:ff:ff:ff:ff:ff
4: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast qlen 1000
    link/ether 00:1d:09:64:f2:e2 brd ff:ff:ff:ff:ff:ff
    inet 172.16.0.49/24 brd 172.16.0.255 scope global eth0
        inet6 fe80::21d:9ff:fe64:f2e2/64 scope link
            valid_lft forever preferred_lft forever
5: eth1: <BROADCAST,MULTICAST> mtu 1500 qdisc noop qlen 1000
    link/ether 00:1d:09:64:f2:e4 brd ff:ff:ff:ff:ff:ff
6: sit0: <NOARP> mtu 1480 qdisc noop
    link/sit 0.0.0.0 brd 0.0.0.0
```

4. Check the configuration file:
 - `cat /etc/sysconfig/network-scripts/ifcfg-eth0`
5. Make sure SELINUX is disabled:
 - `grep SELINUX=disabled /etc/selinux/config`
6. Check the run level and make sure is set to 3:
 - `grep initdefault /etc/inittab`
7. Check that the controller hostname is in the host file:
 - `cat /etc/hosts`

Part 2: Installing AIM Software

The AIM Controller software (**dell_im_linux_XXXXXX.iso**) has been copied to the /tmp/aim3.4 directory on your Redhat server (server01). This iso can also found in the Training Repository within the AIM 3.4.2 Training ISO's directory.

```
[root@aim-controller ~]# mount /dev/cdrom /mnt/cdrom
mount: block device /dev/cdrom is write-protected, mounting read-only
[root@aim-controller ~]# mount
/dev/sda1 on / type ext3 (rw)
proc on /proc type proc (rw)
devpts on /dev/pts type devpts (rw,mode=0620,gid=5)
none on /proc/sys/fs/binfmt_misc type binfmt_misc (rw)
/dev/hda on /mnt/cdrom type iso9660 (ro)
[root@aim-controller ~]# ls /mnt/cdrom
NOTICE                               installController.sh
README                               install.sh
OWNERS_LICENSE                       installPerson.sh
scripts/aimInstallLicense.sh         installPerson.sh
config/SharedFiles.sh               installXenMode.sh
LICENSE.txt                          license.txt
CONTROLLER_INSTALL_FUNC.sh           README.txt
dell_im_aim3.4-2-100109_1359.rpm     README.txt
dell_im_aim3.4-2-100110_1364.rpm     README.txt
dell_im_aim3.4-2-100110_1354.rpm     README.txt
dell_im_aim3.4-2-100110_1364.rpm     README.txt
dell_im_aim3.4-2-100110_1364.rpm     README.txt
dell_im_aim3.4-2-100110_1359.rpm     README.txt
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dell_im_aim3.4-2-100110_1359.rpm     README.txt
dell_im_aim3.4-2-100110_1364.rpm     README.txt
```

8. Mount the Linux Dell AIM ISO and change into the directory where you mounted it:
 - # `mkdir -p /mnt/dell_im`
 - # `cp /tmp/aim3.4/dell_im_linux_XXXXXX.iso /mnt/dell_im/.`
 - # `mount -o loop dell_im_linux_XXXXXX.iso /mnt/dell_im`
 - # `cd /mnt/dell_im`
9. If you are using a CD-ROM:
 - # `mkdir -p /mnt/dell_im`
 - # `mount /dev/cdrom /mnt/dell_im`
 - # `cd /mnt/dell_im`

TIP: A behavior sometimes seen in Linux is that the cdrom device is not recognized as just "cdrom" it can be listed as some other device; you can find out by using "dmesg"

Part 2: Installing AIM Software (continued)



10. To install Aim launch the following script:

```
> sh installController.sh
```

Warning:

If the installer can't connect to the Redhat repository to resolve all the required dependencies; you may receive the following message:

Yum failed to install the Controller.

Part2: If YUM Fails to Install The Controller (continued)

Often this is because yum is having trouble resolving required dependencies. If this seems to be the case, you can use the repositories on the Red Hat DVD to resolve dependencies by mounting the DVD or iso, and passing that location to the installer.

In this case, rerun the command specifying the path to your RHEL5.5 DVD, for example:

```
# sh installController.sh RedHatRoot=/mnt/cdrom
```

The configuration process for the controller is covered in Lab 3.

This lab ends with Part 3, step 24. Please continue as instructed.

Dell AIM Training Lab 02: Deploying the AIM Controller OVF

Lab 02 Objective: Deploying the AIM Controller OVF

In this lab, you will perform the following tasks:

- Create a volume for your AIM Controller on the EqualLogic Storage Array.
- Deploy the AIM Controller OVF to an ESX housed virtual machine using the VI Client.
- Confirm that your Controller has been added correctly.

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 45 minutes to complete

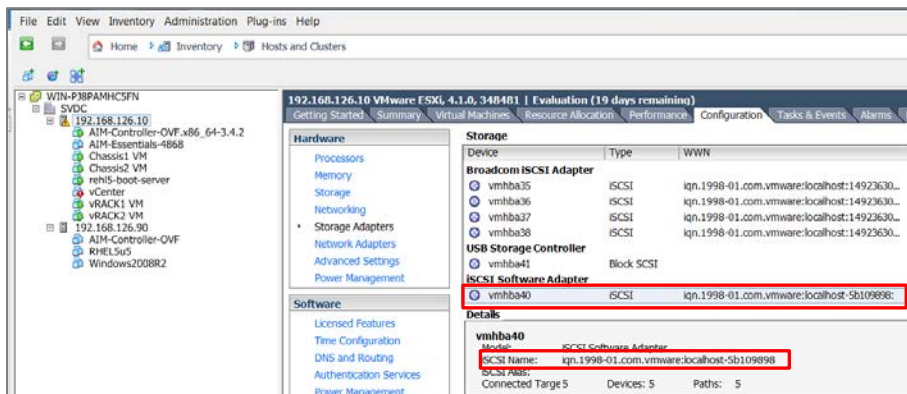
Prepare for the Lab

The following is required for this lab:

1. Your ESX Server iSCSI Software Adapter IQN
2. Volume created for the AIM Controller on the Training EqualLogic Storage Array.
3. AIM-Controller-OVF.x86_64-3.4.2.ovf (located on the Repository datastore – see LAB 1)
4. Lab Configuration Sheet

Part 1: Obtain your ESX iSCSI Software Adapter IQN

1. Access your ESX server through the VI Client on your desktop. (This should have been previously installed in Lab 1).

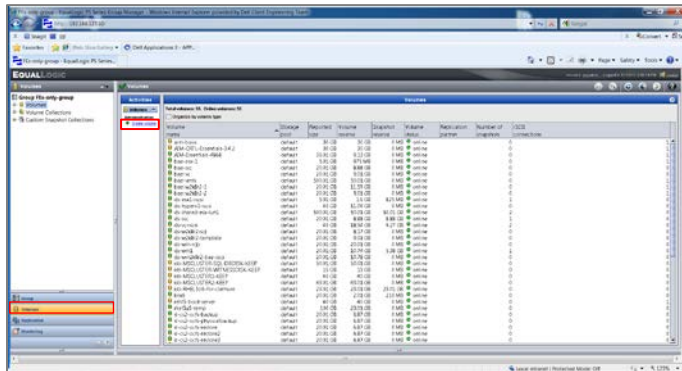


2. Navigate to **Storage Adapters** under the Configuration tab of your ESX host.
3. Click on the iSCSI Software Adapter.
4. From the Details area, copy the **iSCSI Adapter IQN** to a notepad document using a cut and paste method.

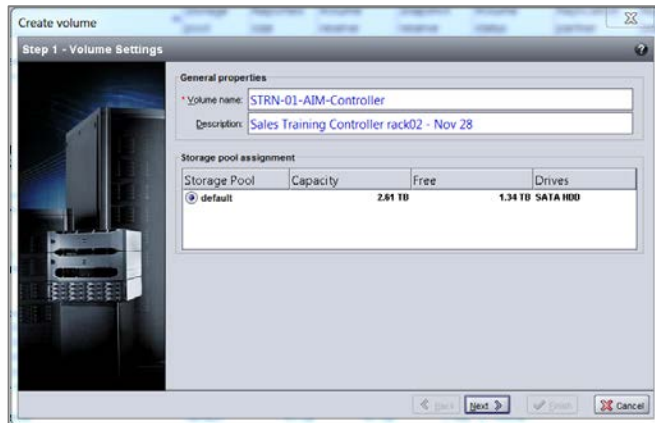
Path: viClient > Hosts and Clusters > Assigned ESX Host > Configuration Tab > Storage Adapters > iSCSI Software Adapter

Part 2: Creating a volume on EqualLogic

Begin this exercise by opening your browser to the training EqualLogic Storage Array and creating a volume for your AIM Controller.



1. Enter <http://192.168.127.10/> into the browser URL field.
2. Access the EqualLogic using the following credentials:
User: **gpadmin**
Code: **scalent**
3. From Navigation bar on the left of the screen click **Volumes**.
4. Under Activities click **Create Volume**.

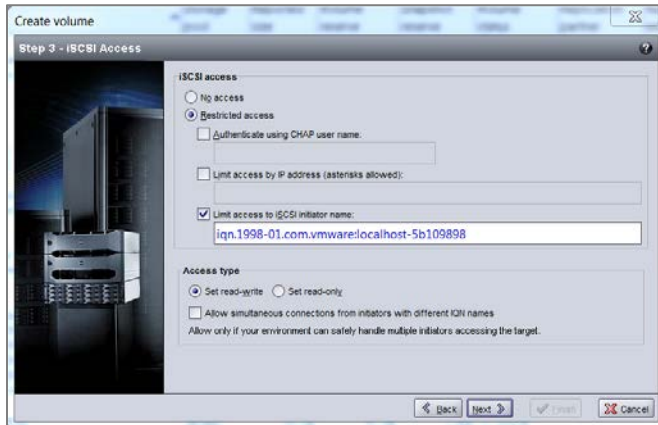


5. Enter the following into the **Create volume** wizard:
6. Enter a volume name: **TRN-0X-AIM-Controller** ('X' signifies your assigned number 1-4).
7. **Enter a description** that has your assigned equipment name and class date.
8. Click **Next**.

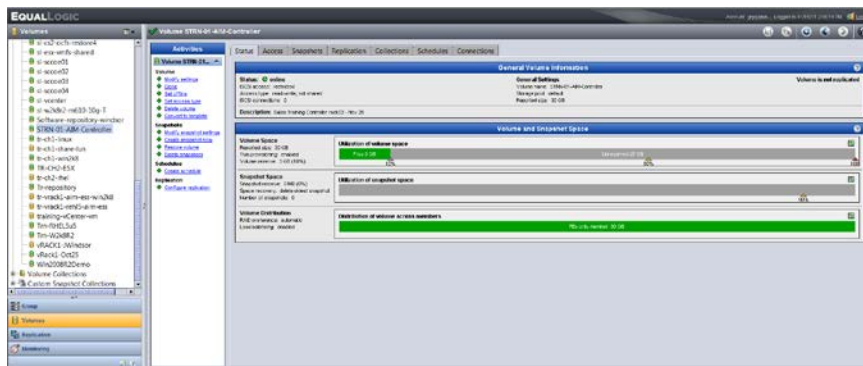
9. The next screen to open is **Step 2- Space**, where you enter the size and provision type for the volume, enter the following:
Volume size: **30 GB**
Select **Thin Provisioned volume** by clicking on the check box
10. Click **Next**.

Part 2: Creating a volume on EqualLogic (continued)

In Step 3 of the Create Volume Wizard you are asked to provide an access method for this volume. This is very important when using AIM as not to allow the image to be accessed by other server hosts in the environment, guaranteeing that there is only one Controller at one time.



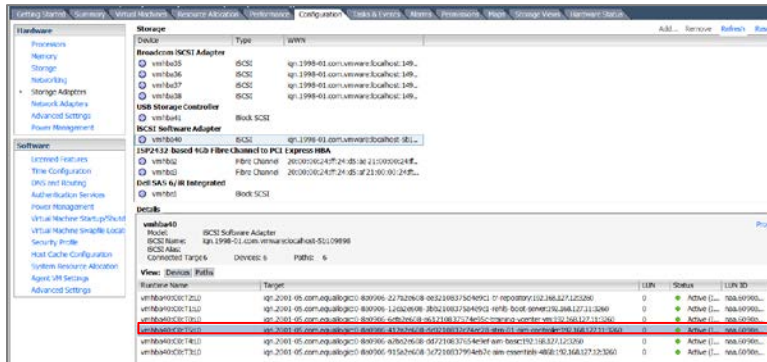
11. Select the **Restricted Access** radio button.
12. Select the **Limit access to iSCSI initiator name** checkbox.
13. Enter the **IQN** for your ESX host iSCSI Software Adaptor (Recorded in Part 1 of this lab).
14. Click **Next**.
15. **Review the Summary** of the Create Volume Wizard and click **Finish** if acceptable.



16. **Verify** that your Volume has been created.
17. **Log out** of the EqualLogic and close your browser.

Part 3: Verify that the volume is visible to ESX

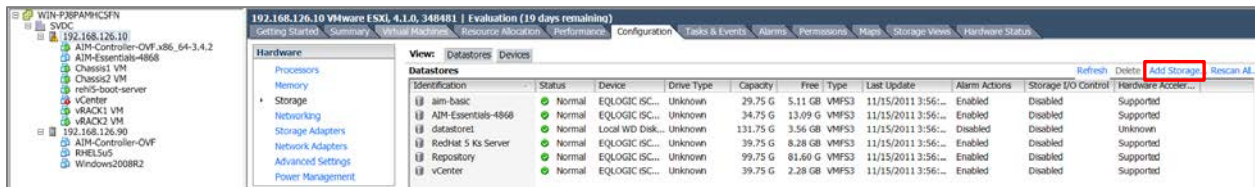
To verify that the Storage you created is visible to the iSCSI Software Adapter use the viClient and return to the Storage Adapters area within the Configuration tab.



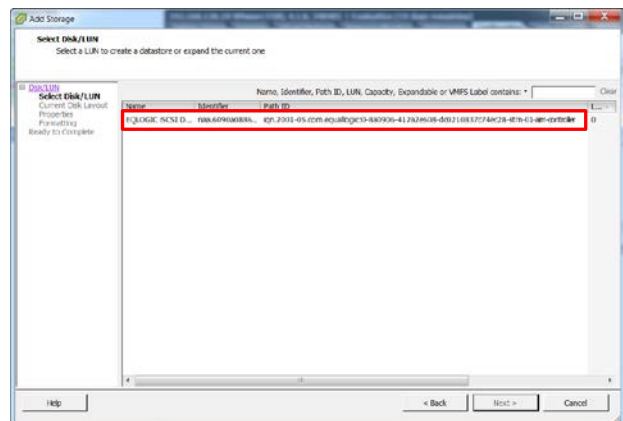
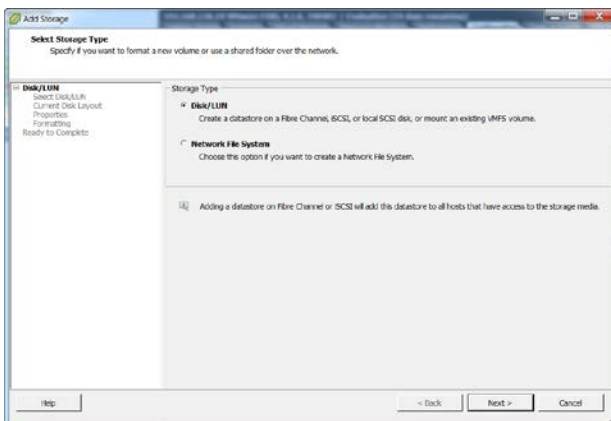
1. Open the viClient.
2. Navigate to **Storage Adapters** under the Configuration tab of your ESX host.
3. Click on the **iSCSI Software Adapter**.
4. From the Details area, **locate and verify** the iSCSI volume that you have created.

Part 4: Add the volume to ESX as available storage

1. Next you need to add the storage that you have created on the EqualLogic. From the Storage screen click **Add Storage**.

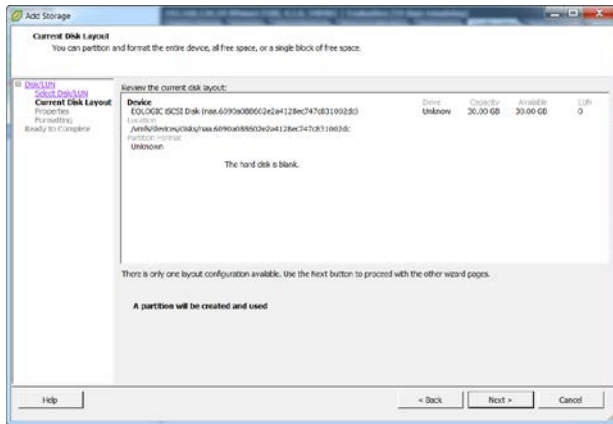


2. Create a **Disk/LUN Storage type** by clicking the appropriate radio button.
3. Select the **LUN** that you want to associate with this storage. The example below shows you the volume created in EqualLogic, this is indicated under the Name column. You can also see, at the end of the Path ID, trn-01-aim-controller is included.
4. Click **Next**.



Part 4: Add the volume to ESX available storage (continued)

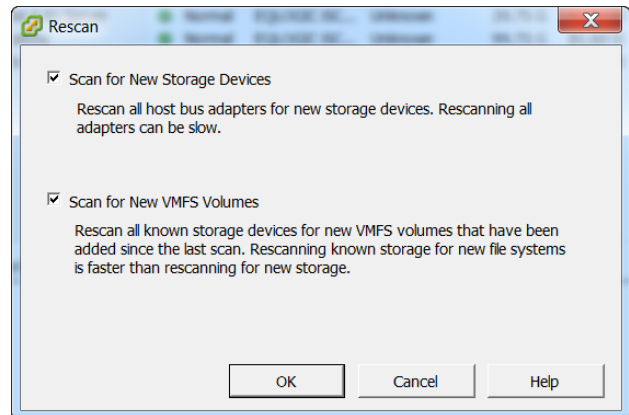
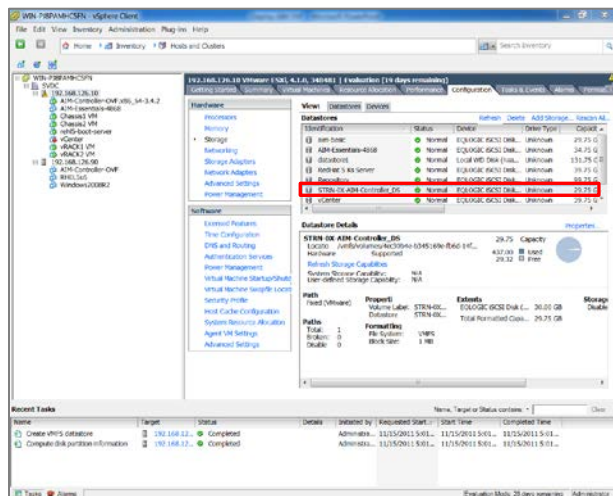
5. To move forward you are asked to review the **Current Disk Layout** and click **Next** if acceptable.



6. Name the Datastore, for training purposes use a convention similar to: **TRN-OX-AIM-Controller_DS**, this will associate your volume with your datastore.
7. **Accept the default** formatting configurations and click **Next**.
8. **Review** the Disk Layout and then click **Finish** to complete adding this storage.

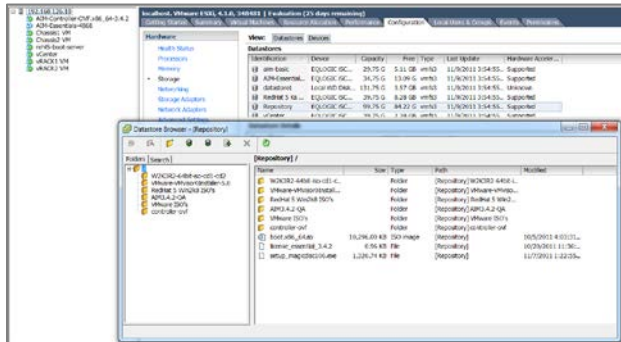
9. Once Finished the newly added storage is displayed in the Datastores field, information about the datastore can be viewed in the Datastore Details area.

TIP: If a datastore is not present in Storage but is visible to the ESX try Scanning for New Devices and New Volumes.



Part 5: Accessing the AIM Controller Software

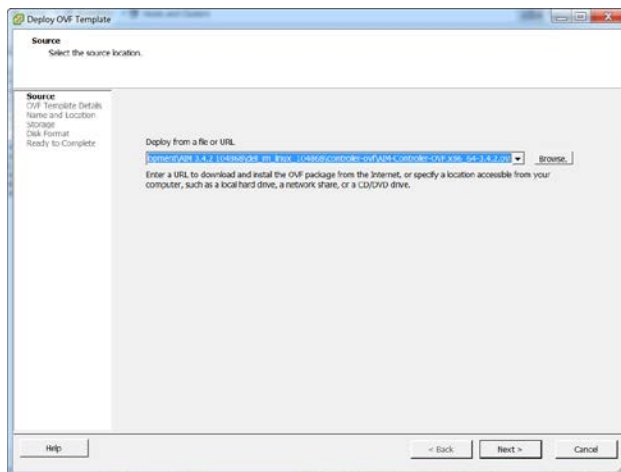
The AIM Controller OVF software is located in the Repository; this is the same software datastore that you used in Lab 1 – Installing ESX. Following the steps as you did in Lab 1, download the AIM-Controller-OVF.x86_64-3.4.2.ovf (name may vary) to your desktop.



1. Using the VI Client access IP **192.168.126.10**
2. From within the VI Client click on the host 192,168,126.10, then open the **Configuration Tab**
3. Under the Hardware list click **Storage**
4. Right click on **Repository** and then click **Browse Datastore**
5. Open the **VMware ISO directory**
6. Right click on **Controller-OVF**, and then select **Download**.
7. Download the ISO to your desktop
8. Close the VI Client.

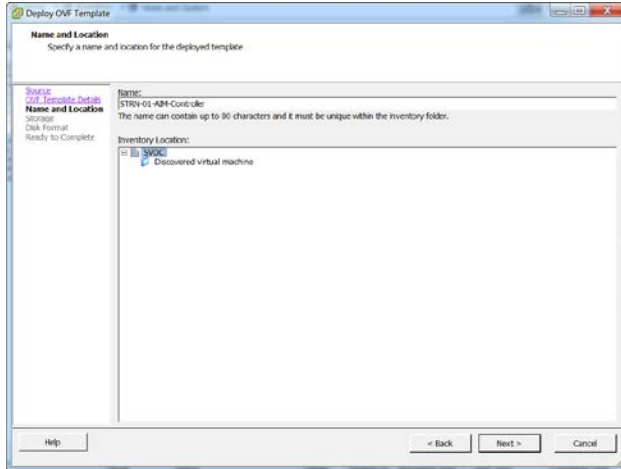
Part 6: Deploying the AIM Controller OVF

1. From the viClient, click on the **File** menu, scroll to and select **Deploy OVF Template**. This will open the Deploy OVF Template wizard.

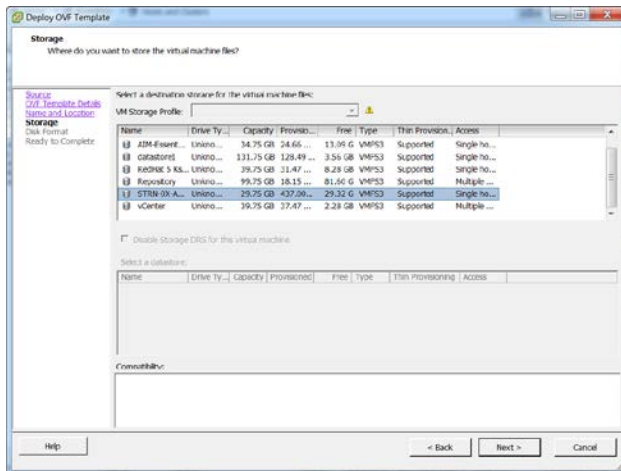


2. From the Source screen of the Deploy OVF Template wizard, **browse** to the AIM-Controller-OVF.x86_64-3.4.2.ovf on your desktop.
3. Once selected click **Next**.
4. You are asked to **verify** the OVF template and click **Next**.

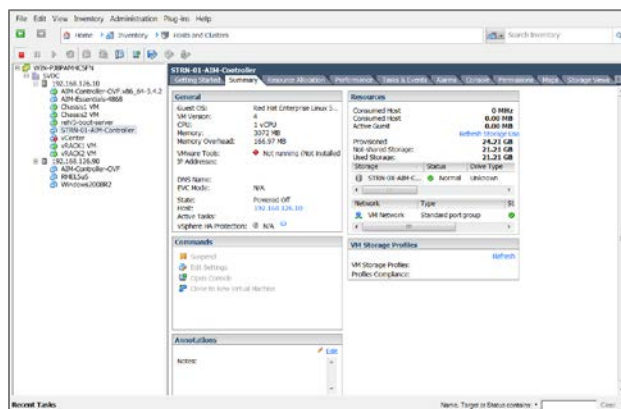
Part 6: Deploying the AIM Controller OVF (continued)



5. Next, name your Controller. Follow the training naming convention by naming your Controller:
TRN-OX-AIM-Controller
6. **Accept the default** Inventory location and click **Next**.



7. Next, you are asked to select a datastore to store the TRN-OX-AIM-Controller vm, select the **TRN-OX-AIM-Controller-DB** and then click **Next**.
8. Format the disk by selecting the **Thick Provision Lazy Zeroed** method.
9. Click **Next**.
10. **Verify** the Deployment settings and click **Finished** if acceptable.



11. When the deployment has completed the TRN-OX-AIM_Controller vm will display in the ESX inventory.
12. Start this vm by right clicking on the vm and selecting Power and then **Power On** from the pop up menu.

This lab ends with Part 6, step 12. Please continue as instructed.

Dell AIM Training Lab 03: Controller Configuration

Lab 03 Objective: Controller Configuration

In this lab, you will perform the following tasks:

- Configure AIM Controller
- SCP license file
- Start aim service
- Login to aim Controller

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 15 min to complete

Prepare for the Lab

The following is included in the course materials:

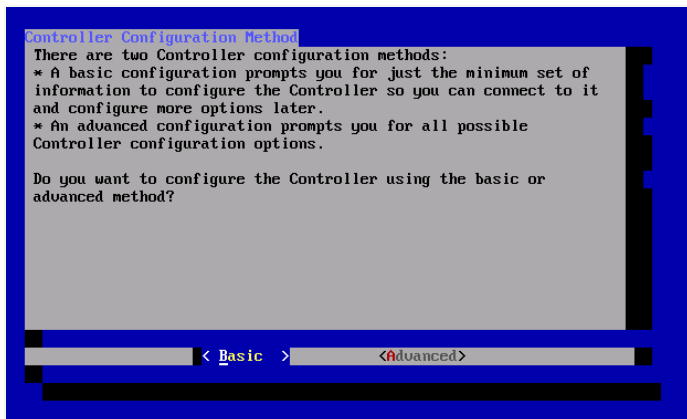
1. Location of the **AIM License**
2. Location of **setupController.sh**
3. Lab Configuration Sheet

Part 1: Configuring the AIM Controller

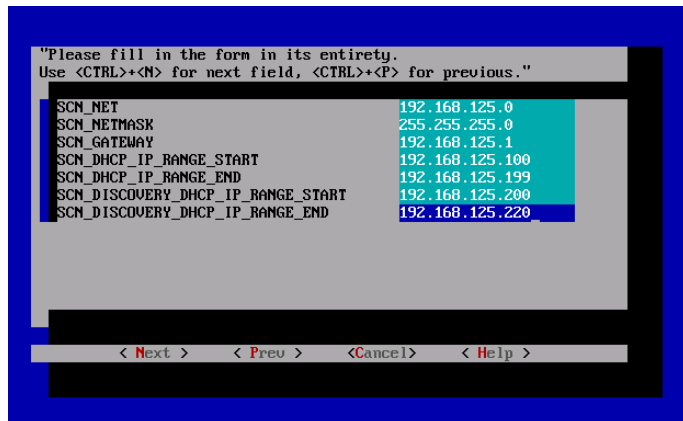


1. After **installing the AIM Controller** software on your physical or virtual machine continue by running **setupController.sh** from **/opt/dell/aim/bin**, this is not necessary when performing an OVF installation.
2. Configuration begins with the screen shown here. Click **Ok** to continue.
3. **Accept** the license agreement.
4. Configure the network device for the virtual machine including the hostname for the controller.
5. Click **Yes** to save the answer file.
6. Click **Ok** to create the filename.
7. Acknowledge that the file has been successfully written.
8. Click **Yes** to proceed.

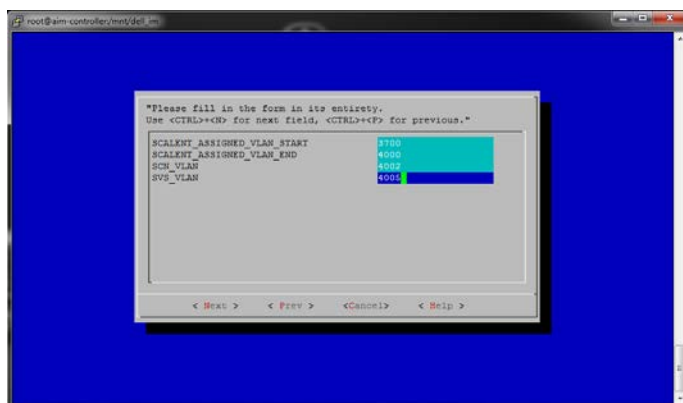
Part 1: Configuring the AIM Controller (continued)



1. There are two configuration methods; **Basic** and **Advanced**, select **advanced**, this will give you all the options available and it is recommended for this lab.
2. Next, select **Full DHCP Server**
3. Choose **Single** for controller service.
4. Select **YES** for **VLANS** customizing
5. In the next screen, provide a **system ID, Controller Services IP, Net mask** and **Controller Device**. (Refer to the Lab Configuration sheet).



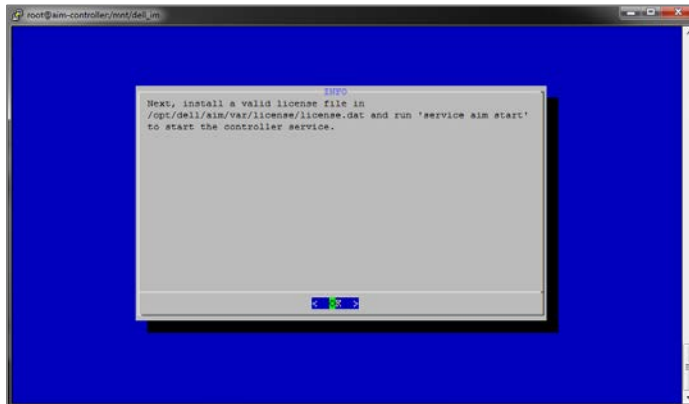
6. In the next screen, provide the SCN Network information as shown in the graphic. (Refer to the Lab Configuration sheet).



7. Next, you are asked to provide the **vlan** used by the Controller.
8. Enter the **vlan range** used by the Controller for switch port vlan manipulation.
9. Next, enter the vlan for the Controller **SCN** and **SVS** vlans (4005). (refer to your lab configuration sheet)

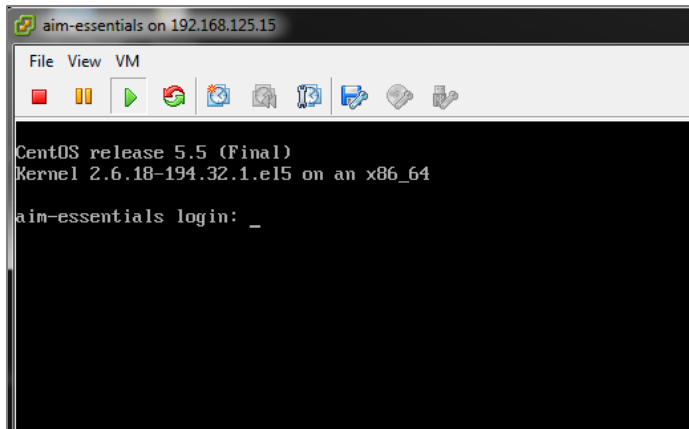
Tip: It is IMPORTANT to assign the correct SCN vlan, an incorrect entry will prevent proper server DISCOVERY and AIM agent operations.

Part 1: Configuring the AIM Controller (continued)



10. Now copy the license file provide to you to this directory:
`/opt/dell/aim/var/license.`
11. Copy the license file to `/var/tmp`
12. Install the license
`cp/var/tmp/license.dat`
`/opt/dell/aim/var/license`
13. Start the Controller service
`# service aim start`

Part 2: Part 1: Configuring the AIM Controller Host for SSH Access (Optional -this step has been done for you)



1. After login as root activate SSH:
`vi /etc/ssh/sshd_config`
2. Clear the `#` sign in front of this line
3. **`# PermitRootLogin yes`**
4. Save the file and restart sshd
5. Service **`sshd`** restart

6. Now you can launch your browser to the **Services** IP Address for AIM and login with **`admin/admin.`**

This lab ends with Part 2, step 5. Please continue as instructed.

Dell AIM Training Lab 04: Adding Racks, Chassis and Switches

Lab 04 Objective: Adding Racks, Chassis and Switches into the AIM Environment

In this lab, you will perform the following tasks:

- Add either a Rack or Chassis into your AIM environment. (This depends on your class assigned equipment.)
- Confirm that your Rack or Chassis has been added correctly.

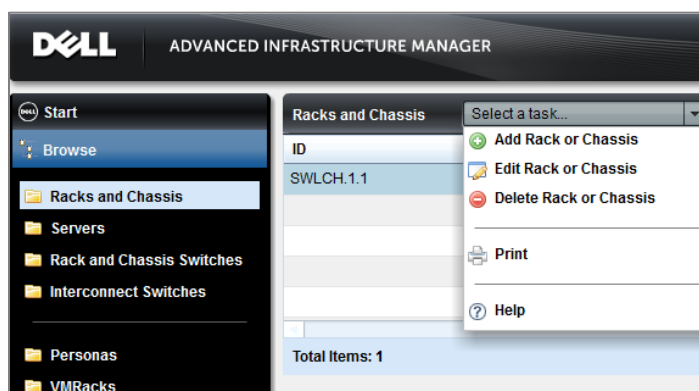
Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 45 minutes to complete

Prepare for the Lab

The following is requires for this lab:

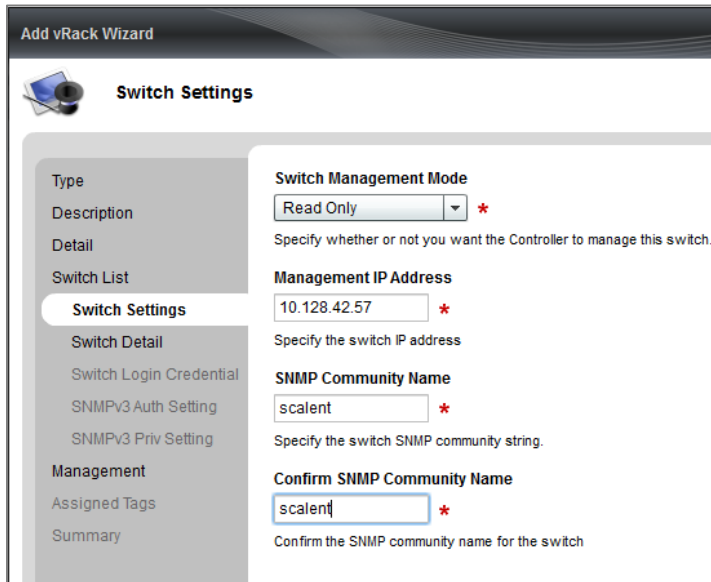
1. Make sure you have all the information for your Rack or Chassis management IP as well as the switches IP, username, password and SNMP community.
2. Lab Configuration Sheet

Part 1: Add Rack or Chassis into AIM environment



1. From the navigation pane select Racks and Chassis; then from the drop down menu click **Add Rack or Chassis**.
2. The Add, vRack or Chassis Wizard opens then select the **Type** you want to add.
3. Enter an **ID for the vRack or Chassis, if you do not AIM will add this for you**.
4. Next enter a **Name** and **Description** for your vRack or Chassis.
5. Provide **Contact information** and a **Location**; leave certificate unchecked.

Part1: Add Rack or Chassis into AIM environment (continued)



6. Click the **Add** button to add a new switch.

Tip: you must add at least one switch in order to add a Rack or Chassis from the AIM console UI.

7. Select the Switch Management mode from the dropdown menu.

8. Set the switch mode to **Read-Only**, this will be changed later to Read-Write if implementing vlan control to the AIM environment.

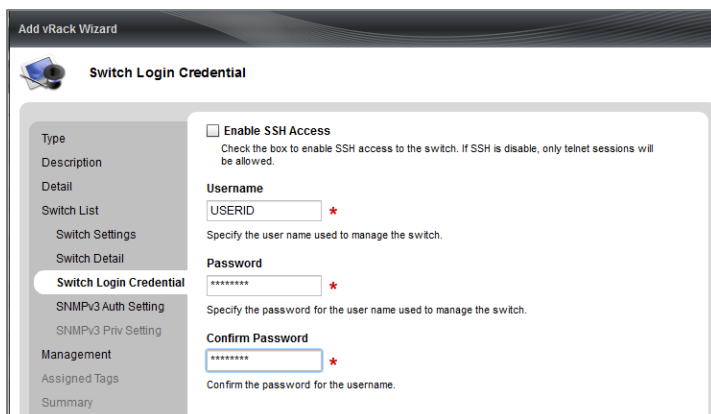
9. Provide the **Management IP address** for your switch and the **SNMP community Name**.

10.

11. You can set a custom ID or let AIM select one for you.

12. Next enter a **name** and **channel (1)** for your switch.

Important: After you add your first switch make sure you give a different Channel number to the following switches; otherwise the wizard will not let you add the switch. (1-2-3-4- and so on).



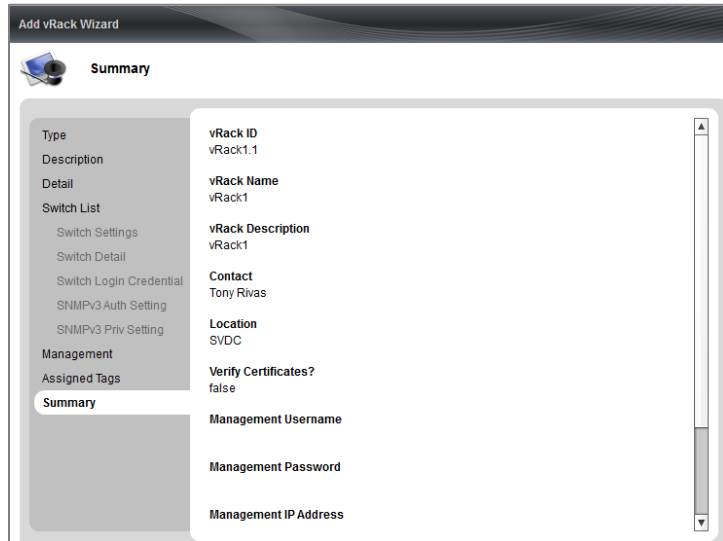
13. Do not enable SSH Access

14. Provide **username** and **password** for your switch.

15. Do **not** enable SNMPv3

16. The Management screen opens next, if adding a Rack leave these fields blank, if adding a Chassis enter the information for Power management (DRAC).

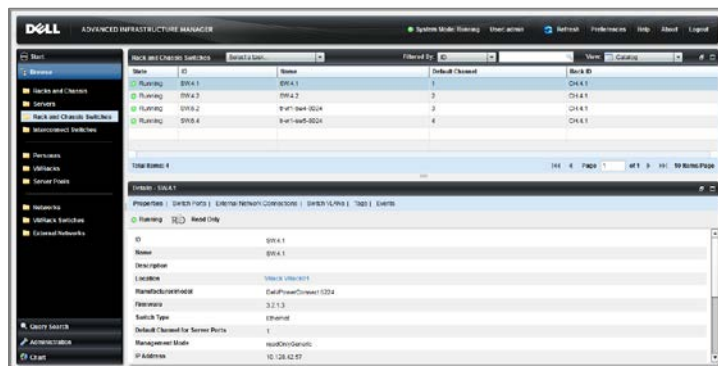
Part1: Add Rack or Chassis into AIM environment (continued)



17. Tags are generally added for environment identification, for this lab leave this field blank and continue.
18. **Review your summary** and make sure you have provided accurate information before you click **Finish**.
19. Now you will be able to see your Rack with the switches you just added in your AIM environment.

Part 2: Configuring Port Roles

These steps walk you through the configuration of the switch port roles. Refer to the Port Roles configuration sheet included within the Lab Configuration Sheets. (Ports 2, 3, 4, 5)



1. From the Navigation bar access the **Rack and Chassis Switches** element.
2. Select the switch that you want to configure port roles and then from the Select a Task dropdown menu select **Edit Switch Ports**.
3. Now you can see the newly added switch, repeat steps 5 to 12 to add the remaining switches to this vRack. Do **not** add the interconnect switch at this time. (See the Lab Configuration Sheet for clarification).

Part 2: Configuring Port Roles (Continued)

When configuring ports for use with AIM switch port manipulation the following roles can be assigned to the port.

Host

Used for managed NICs on managed servers
Normally in trunk mode but can also be in access mode
Native VLAN is the SCN

External

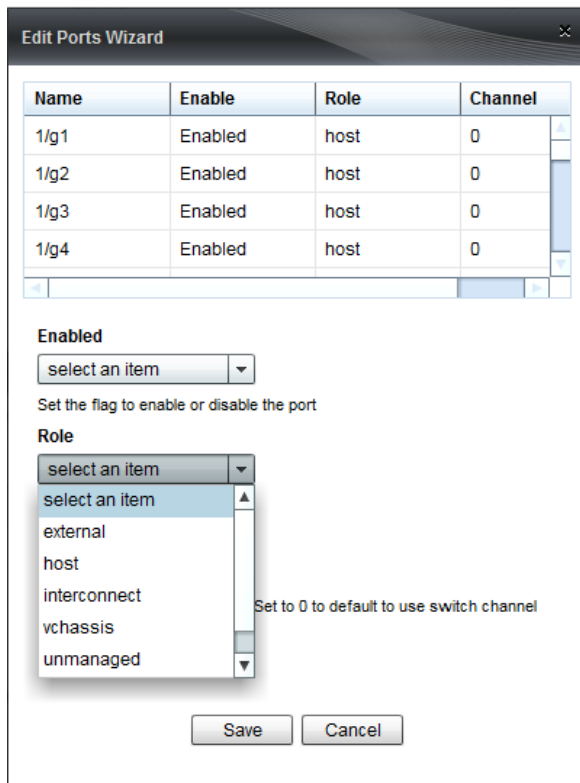
Used to connect to other switches or external networks
Access or trunk mode depending on the number of VLANs configured

Interconnect

Used when an external port is connected to another managed switch external port, it automatically becomes an interconnect port
Carries all managed VLANs

Unmanaged

Used for ports not to be managed by the Controller



Name	Enable	Role	Channel
1/g1	Enabled	host	0
1/g2	Enabled	host	0
1/g3	Enabled	host	0
1/g4	Enabled	host	0

Enabled
select an item

Set the flag to enable or disable the port

Role
select an item

- external
- host
- interconnect
- vchassis
- unmanaged

Set to 0 to default to use switch channel

Save Cancel

1. Select the **switch port** that you want to manipulate the Role or Channel from the table at the top of the screen.
2. From the Role dropdown menu select the **Role** that is required for this port, refer to the Switch port roll spreadsheet within the Lab Configuration sheet.
3. Select the specified **role**.
4. Save the configuration changes by clicking **Save**.
4. Repeat this task as needed as per port role specified by network architectural needs. (Refer to the Lab Configuration Sheet Port Roles).

This lab ends with Part 2, step 4. Please continue as instructed.

Dell AIM Training Lab 05: Adding an Interconnect Switch to AIM

Lab 05 Objective: Adding an Interconnect Switch to AIM

In this lab, you will perform the following tasks:

- Add Interconnect switch to the AIM environment

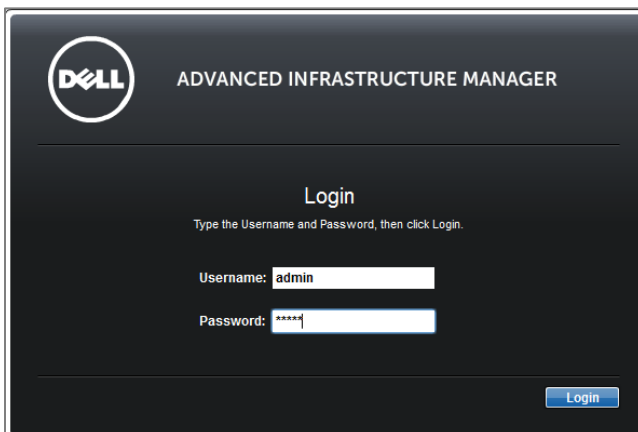
Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 15 minutes to complete.

Prepare for the Lab

The following is included in the course materials:

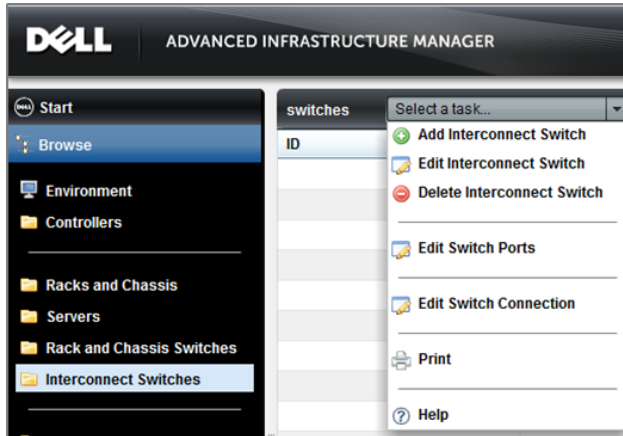
1. IP information for the AIM controller
2. Login credentials
3. Lab Configuration Sheet

Part 1: Add Interconnect Switch

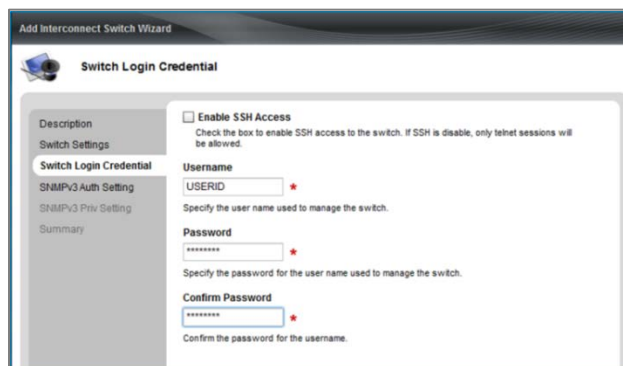


1. **Login** to AIM console by pointing your browser to the AIM service IP address
2. Provide **username** and **password** and click **Enter**.

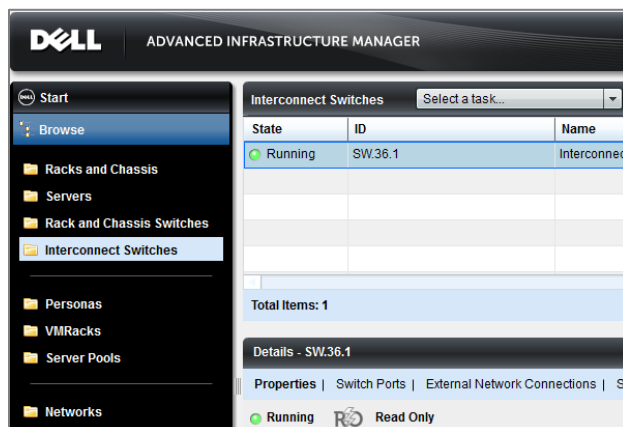
Part 1: Add Interconnect Switch (continued)



1. Select Interconnect Switch from the left Browse pane.
2. Then click Add Interconnect Switch from the **Select task submenu**.
3. Enter your description for the **ID**, **name** and **Description** of the Switch
4. For the Switch Settings; select **Read only** for Management Mode.
5. Enter switch **IP Address**, **SNMP community name** and continue.



6. **Do not** enable SSH
7. Provide the **username**
8. And then enter the **password** twice
9. **Do not** enable SNMPv3
10. **Review** the summary if acceptable click **Finish**.



11. You should see this after the operation has finished.

This lab ends with Part 1, step 11. Please continue as instructed.

Dell AIM Training Lab 06: Discovering Physical Servers in AIM

Lab 06 Objective: Discovering New Servers in AIM

In this lab, you will perform the following tasks:

- Discover new physical server hardware into the AIM Environment.
- Verification of new servers

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 1/2 hour to complete

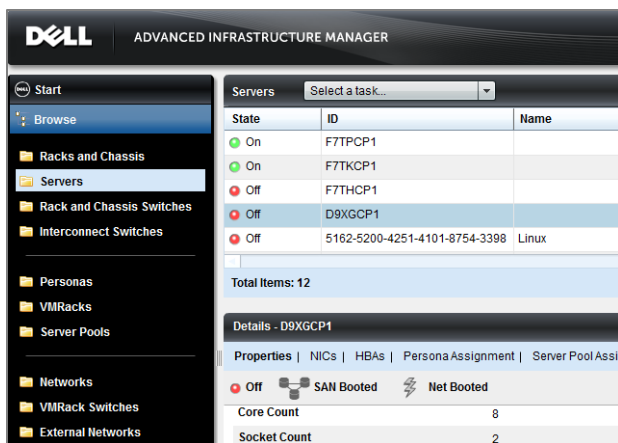
Prepare for the Lab

The following is included in the course materials:

1. Select a Physical server from your kit (use servers 4 or 5 only)
2. Running AIM controller
3. Lab Configuration Sheet

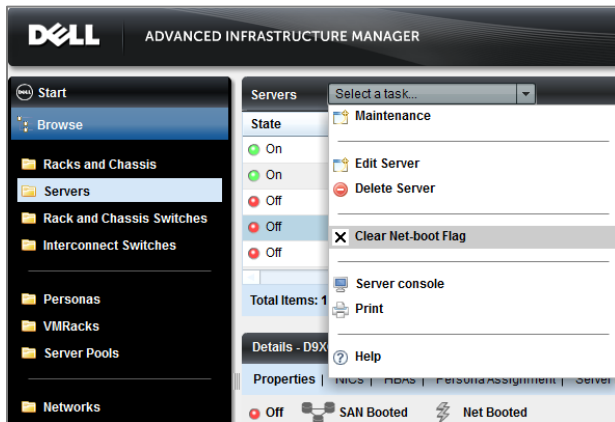
Your lab environment you may not have an undiscovered Physical Server, if this is the case you need to reset the net-boot flag from within the AIM Controller, The steps to do this are listed below:

Part 1: Resetting the Net-boot Flag (Skip this step if your servers 4 and 5 have not been previously discovered)



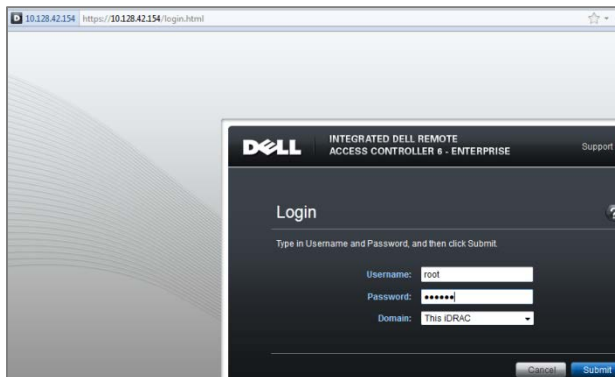
1. Launch your browser and login to your AIM Controller using the default credentials **admin/admin**.
2. Click **Browse** and then click **Server** from the navigation bar on the left of the screen.
3. From the **Catalog** view select either server trn-04 or trn-05 to reset the net-boot flag as it was most likely set in a previous exercise.

Part 1: Resetting the Netboot Flag (continued)

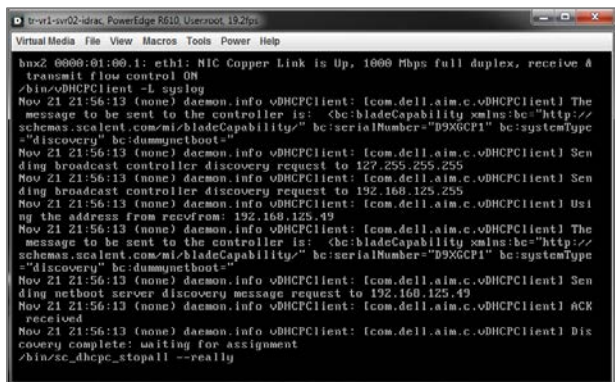


4. After selecting the Physical Server that you want to reset the netboot flag on open the **Select a task** dropdown menu.
5. Scroll to and select the **Clear Net-boot Flag** menu item.
6. This removes the Net-boot flag from this server, effectively removing it from the available server list within AIM allowing you to rediscover the server as new hardware.

Part2: Power On The New Server (Begin lab here if Part One is unneeded)



7. Obtain the IP address of the server from the Lab sheet; Use this IP address to launch your browser and login with **root/calvin**.
8. Once login launch the virtual console.
9. Select **Power** and power on the system.
10. When the system is coming up press **F12** to PXE boot the server.
11. The server will get discover by AIM.



12. From the AIM console select and **right click** on the newly discover server and then select **Edit Server**; make sure the management type is IPMI, double check that the correct IP address is set for management and the username "root" and password "calvin" are set on the Management Settings.
13. When all these are correct AIM should **power off** the server.

This lab ends with Part 1, step 16. Please continue as instructed.

Dell AIM Training Lab 07: Adding an ESX VM Rack to the AIM Environment

Lab 07 Objective: Adding ESX VM Rack

In this lab, you will perform the following tasks:

- Discover the ESX disk booted server into AIM
- Clear Netboot Flag
- Add ESX VM Rack to AIM
- Assign a Server to ESX VM Rack

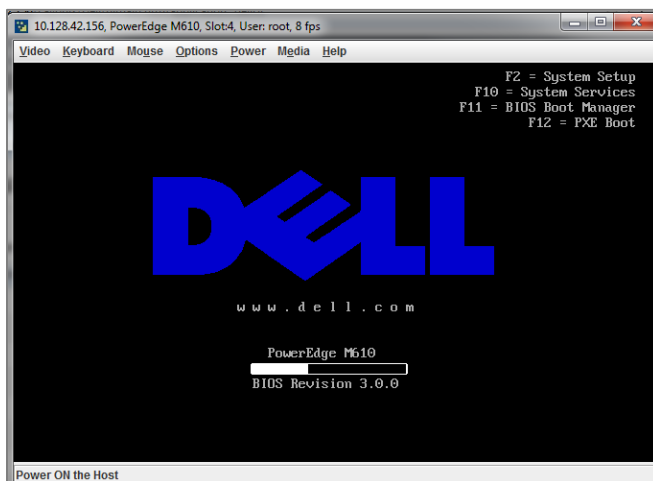
Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 30 minutes to complete

Prepare for the Lab

The following is included in the course materials:

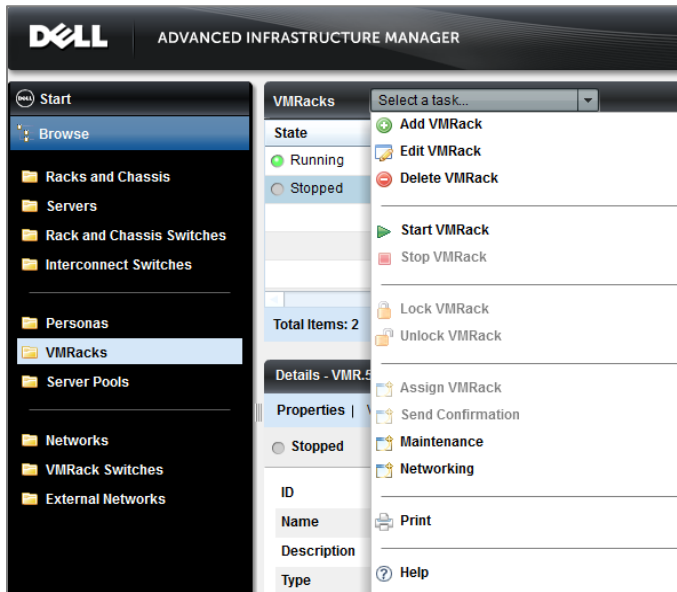
1. Location of ESX server
2. Location of AIM controller
3. Lab Configuration Sheet

Part 1: Discover the ESX server as a network-booted server

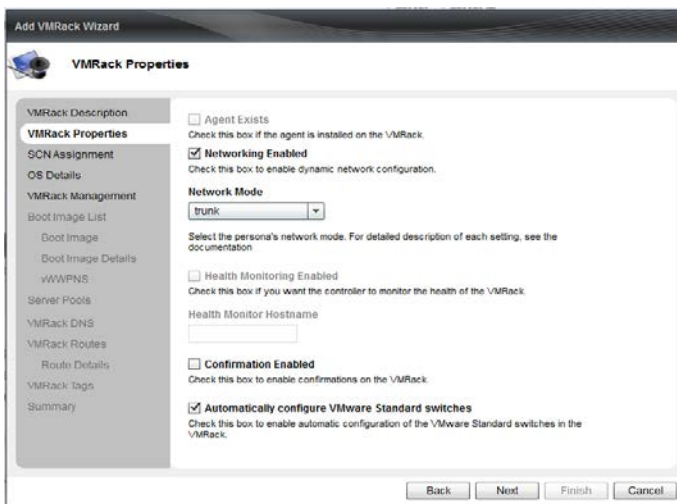


1. You must first configure the server to **PXE boot**; you can do by pressing **F12** when the server is booting.
2. Allow the server to continue booting so the controller can discover the server as a network-booted server.
3. Confirm the server will boot from the **Hard Disk** before moving forward.
4. From the AIM console select the server you just discovered and from the Select Task submenu click on **Clear net-boot Flag**.

Part 2: Add the ESX VM Rack (continued)



1. From the Browse pane select VM Racks and from the Select Task menu, and then click on **Add VM Rack**.
The Add VM Rack Wizard opens to the VM Rack Description screen.
2. Select the VM Rack type from the dropdown menu. For this lab select **VMware ESX**.
3. Next enter an **ID**, **Name**, and **description** for the VM Rack.



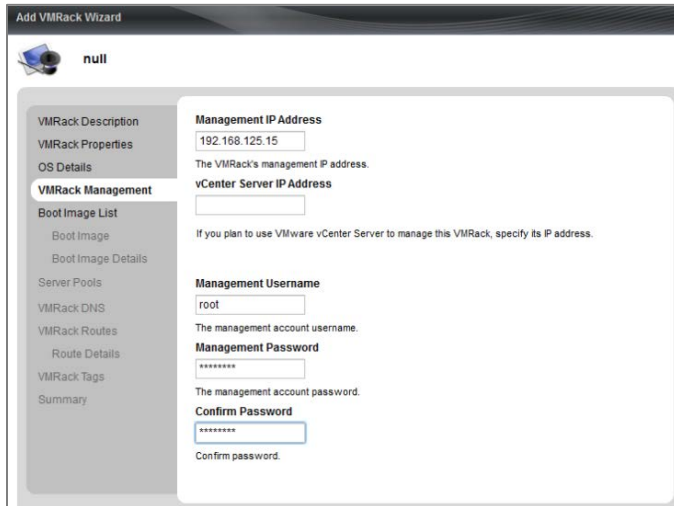
4. In the VM Racks Properties screen Select the **Networking Enabled** checkbox.
5. Set the Network mode to **Trunk**.

AIM Enterprise offers additional Network modes for individual Hypervisor support.

6. Select **automatically configure VMware Standard Switches** and continue by clicking **Next**.
7. SCN Assignment, select **Pool** from the drop down menu.

8. In the OS Details screen provide your VM Rack's **OS**, **OS Sub Type** and **OS Version** by entering the following:
VM Rack OS: **ESX 64bit**, OS Sub type: VMware , OS Version **ESX 4.1**.
9. Continue by clicking **Next**.

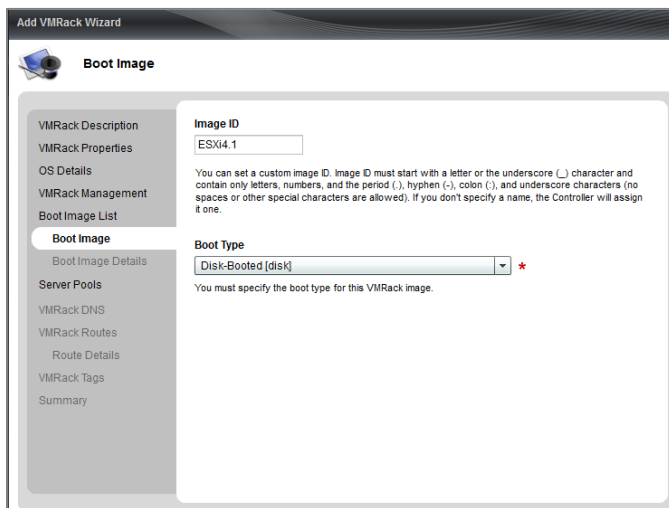
Part 2: Add the ESX VM Rack (continued)



10. In the VM Rack Management screen enter the **IP Address** for ESX, (This is the same IP that you use to access ESX through the viClient, ex; 192.168.12x.15) **username** and **password**, and then click **Next**.

See the Lab Configuration sheet for this information.

11. The next screen is the Boot Image List screen. Click the **Add** button to add an image; in our case will be using a **disk booted image**.



12. For the Boot Image screen enter an image ID or allow AIM to create one for you.

13. Next, select **Disk-booted** image from the Boot Type drop down menu and click **Next**. Verify the Boot image is added to the Boot image list.

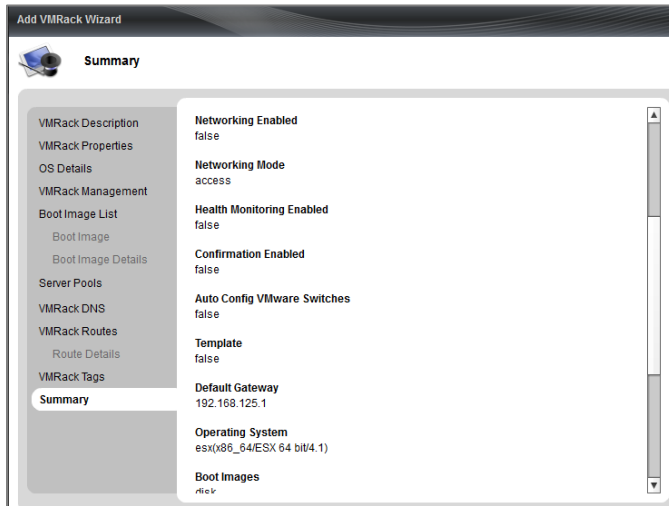
14. Since there are no Server Pools configured at this time move past the Server Pool screen by clicking **Next** to continue.

15. If required to provide additional **DNS** use the VM Rack DNS screen; leave this screen blank it is not used during this exercise. Continue by clicking **Next**.

16. The **VM Rack Routes** screen is used to add additional routes for this VM Rack; leave blank and continue by clicking **Next**.

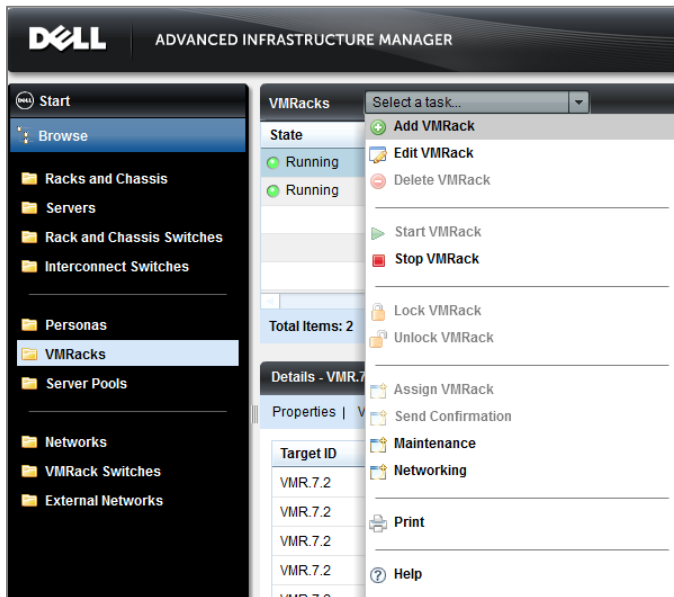
17. **Tags** are used to identify the object; leave **blank** for this exercise and continue by clicking **Next**.

Part 2: Add the ESX VM Rack (continued)



- On the last screen of the Add VM Rack wizard you are provided with a summary, click **Finish** if the presented configurations are acceptable.

Part 3: Start the VM Rack and Verify Operation



- Select the VM Rack you just added and **assign** it to the ESX server that you discovered in **step one**.
- Start** the VM Rack.
- Verify that the Controller **starts** the server and **boots** ESX. This can also be verified using the vClient.

This lab ends with Part 3, step 3. Please continue as instructed.

Dell AIM Training Lab08: Discovering New Virtual Machines In AIM

Lab 08 Objective: Discovering New Virtual Machines In AIM

In this lab, you will perform the following tasks:

- Discover a new virtual machine server in AIM
- Create a new virtual machine in ESX4.1
- Verification of new servers

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 1/2 hour to complete

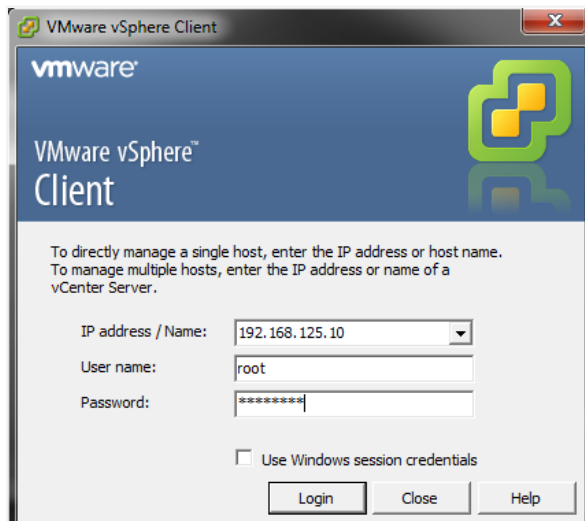
Prepare for the Lab

The following is included in the course materials:

1. Location of ESX 4.1 server
2. Running AIM controller
3. Lab Configuration Sheet

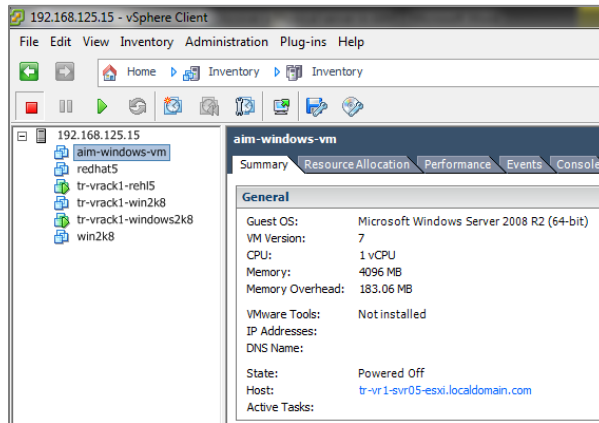
Note: ESX4.1 has may have already been added to your AIM environment as a VM Rack; if this has not already been done do it now before continuing by following the steps in Lab01 Installing ESX.

Part 1: Discover A New Virtual Machine Server



1. Launch the vi client and login to your ESX4.1 server with **root/aim4dell**.
2. **Create** a new virtual machine and power it on.
3. From the vi client inventory page select your ESX4.1 server, this will be on the left side of the screen, **right click** on it and select **New Virtual Machine**.
4. Select **custom** and provide a **name** for your virtual machine.
5. Select **datastore**, this is where you want the files stored for your virtual machine.
6. Select **virtual machine version: 7** and continue.
7. For the Guest OS; choose **Microsoft Windows; version 2008 R 2**.
8. Accept the **default** for processors.

Part 1: Discover A New Virtual Machine Server (continued)



9. For VM memory choose **4 GB**
10. For Network connections accept the **default**.
11. Accept the default for SCSI Controller
12. Select **Do not create Disk**.
13. Click **Finish** to complete the new virtual machine.
14. The new virtual machine is now created and ready to be powered on.
15. Select the virtual machine you have just created for discovery and **power it on**.
16. The virtual machine will PXE boot and get discover by AIM.

This lab ends with Part 1, step 16. Please continue as instructed.

Dell AIM Training Lab09: Server Migration Utility

Lab 09 Objective: Server Migration Utility

In this lab, you will perform the following tasks:

- Prepare your Windows base image for Persona creation.
- Create a volume for your image/Persona on the EqualLogic Storage Array.
- Use SMU to copy the Windows image to iSCSI Target
- SMU logs and audit trail
- Migrate Windows images to iSCSI storage

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 1 hour to complete

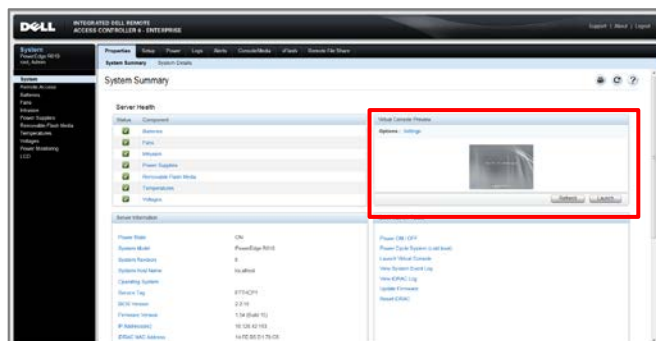
Prepare for the Lab

The following is included in the course materials:

1. Location of server with a Windows 2008 image install locally
2. Location of the SMU ISO image
3. Lab Configuration Sheet

Part 1: Accessing your Windows server

1. Access to your Windows 2008 server by first logging into the host server using the DRAC, see the Lab Configuration sheet for system management and login in credentials.

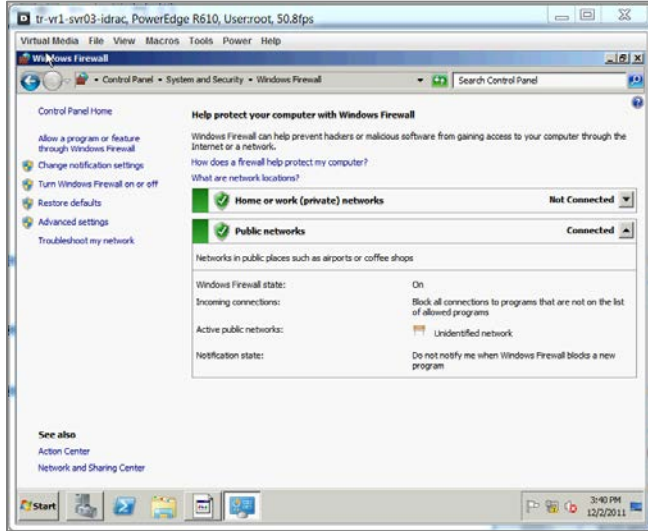


2. Open the virtual console and log into the Windows server.



Part 2: Preparing your Windows 2008 image (Before SMU)

Once you have logged into your Windows server you can begin with your Persona preparation.

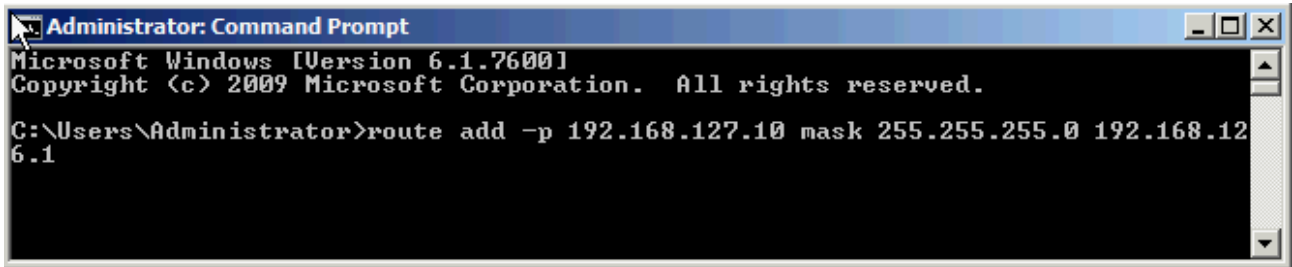


1. First **turn off** Windows Firewall.
2. Access the Control Panel by clicking the **Start** button on the left lower area of the Windows screen.
3. Click **System and Security**
4. Click **Windows Firewall**.
5. Click **Turn Off Windows Firewall**.
6. When complete **close** the Control Panel.

FYI: In a production environment your customer may not want to turn off the Windows Firewall, in these cases the following ports will need to be opened to allow for proper AIM Persona Agent operation

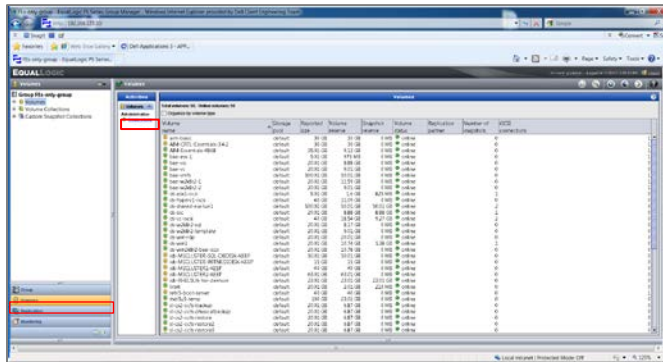
- TCP 3260**
- UDP 3261 and 1867**
- SSL 2867**

7. Continuing with your Persona preparation by **adding a static route** to the iscsi storage device.

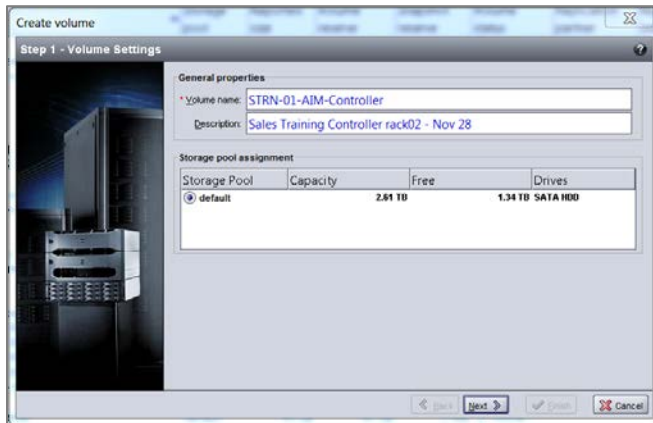


Part 3: Creating a volume on EqualLogic

Begin this exercise by opening your browser to the training EqualLogic Storage Array and creating a volume for your AIM Controller.



1. Enter **http://192.168.127.10/** into the browser URL field.
2. Access the EqualLogic using the following credentials:
3. User: **gpadmin**
4. Password: **scalent**
5. From Navigation bar on the left of the screen click **Volumes**.
6. Under Activities click **Create Volume**.



7. Enter the following into the **Create volume wizard**:
8. Enter a **volume name**:
TRN-0X-AIM-Controller ('X' signifies your assigned number 1-4).
9. Enter a **description** that has your assigned equipment name and class date.
10. Click **Next**.

11. The next screen to open is Step 2- Space, where you enter the size and provision type for the volume, enter the following:

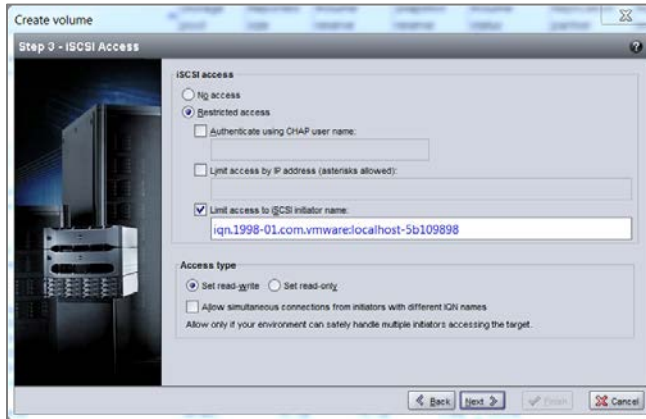
Volume size: **30 GB**

Select **Thin Provisioned** volume by clicking on the check box

12. Click **Next**.

Part 3 Creating a volume on EqualLogic (Continued)

In Step 3 of the Create Volume Wizard you are asked to provide an access method for this volume. This is very important when using AIM as not to allow the image to be accessed by other server hosts in the environment, guaranteeing that there is only one Controller at one time.



13. Select the Restricted Access radio button.
14. Select the Limit access to iSCSI initiator name checkbox.
15. Enter the initiator name for your host, for this exercise use iqn.1991-05.com.microsoft.your first name. Record this for later use in a txt document.
16. Click Next.
17. Review the Summary of the Create Volume Wizard and click Finish if acceptable.



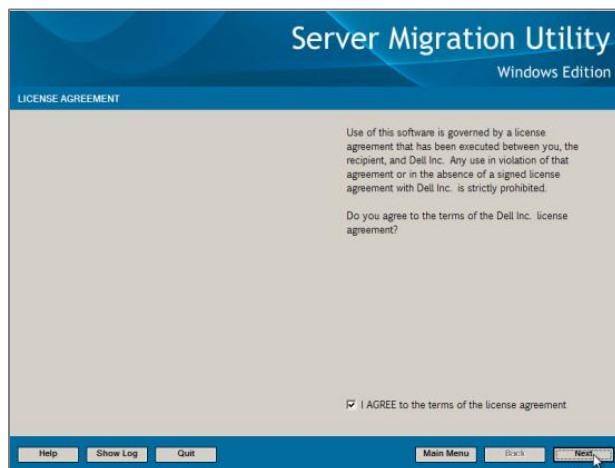
18. Verify that your Volume has been created.
19. Log out of the EqualLogic and close your browser.

Prior starting Step 4, follow the steps above to make the AIM SMU utility available to boot the server from the AIM SMU utility.

Part 4: Copying a Windows Image To An iSCSI Target

To begin the local disk migration to the iSCSI LUN created in the previous step, you must boot the server to SMU. This is done by connecting the SMU media, either CD-ROM or USB, and rebooting the server to the SMU media. The utility boots the system and automatically loads the SMU application.

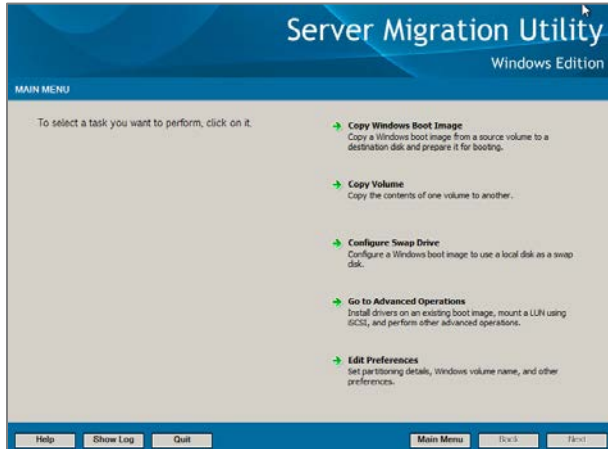
1. Using the VI Client access the Training Repository, IP **192.168.12x.15**
2. When VI Client opens click on your host 192.168.12x.15, then open the **Configuration Tab**
3. Under the Hardware list click **Storage**
4. Right click on **Repository** and then click **Browse Datastore**
5. Open the **VMware ISO directory**
6. Right click on **AIM 3.4.2 Training ISO's**, to open this directory.
7. Right click on **dell_smu_win32_xxxxxx.iso** and then select **Download**.
8. **Download** the ISO to your desktop.
9. **Close** the VI Client.



10. Using the system DRAC **Virtual Media** mount the SMU, the utility will boot the system and automatically loads and opens the SMU application.
11. Once running, **accept** the license agreement and click **next**.
12. Select **Go To Advanced Operations**.
13. Next select **Mount a LUN via an iSCSI Connection**.
14. Now enter the **initiator name** that you previously enter as the initiator for the LUN created in step24 (iqn.1991-05.com.microsoft.your first name).
15. Enter the **iSCSI target portal IP address** (192.168.127.10) and port (3260) and then click **Next**.



Part 4 Copying a Windows Image To An iSCSI Target (Continued)



16. Select the **target portal** from the Mount LUN screen and click **Next**.

17. Click **Main Menu**

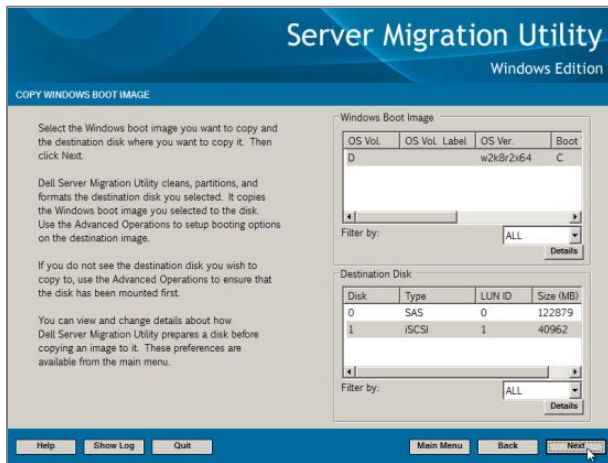
18. Select **Copy Windows Boot Image**.

19. The next screen should display the following:

Windows Boot Image

➤ Image on the local disk
Destination Disks:

- The local hard disk
- The iSCSI LUN
- The USB key



20. Select the boot image (source) and the iSCSI LUN (destination) and click **Next**.

21. Review choices and click **Next** to confirm.

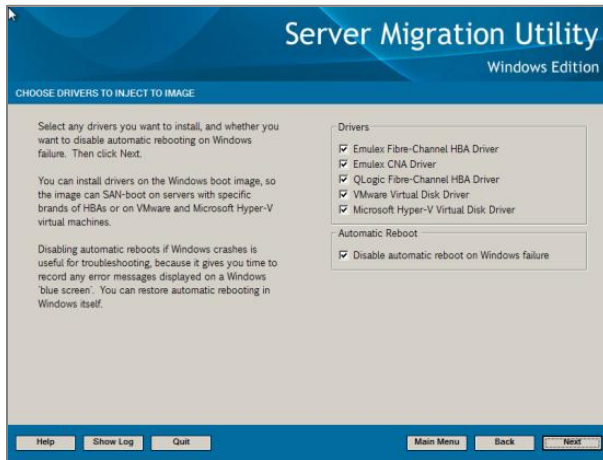
22. Click **Ok** to proceed, the copy utility window provides information on how the copy is progressing.

23. Click **Ok** when the copy finishes.



Part 5: Injecting Drivers into the copied image

Next, install additional drivers on the migrated image that will allow the image to be booted via Fiber-Channel connection using the server's HBA or inside a virtual machine such as VMware or Microsoft Hyper-V.

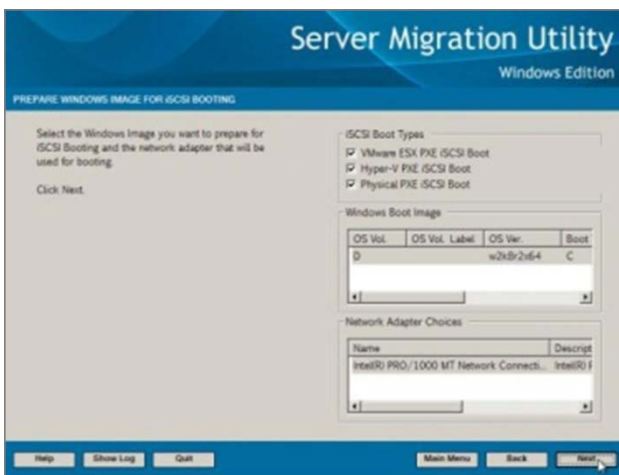


1. From the **Choose Drivers to Inject to Image** screen **select** the drivers that you want to inject into the copied image.
2. Select the **Disable automatic reboot on Windows Failure** option.
3. Then click **Next**.

Note: You should also disable automatic reboot on Windows failure, this allows for easier troubleshooting should the image fail to boot and present with a blue screen

Part 6: Preparing the Windows 2008 image for iSCSI Booting

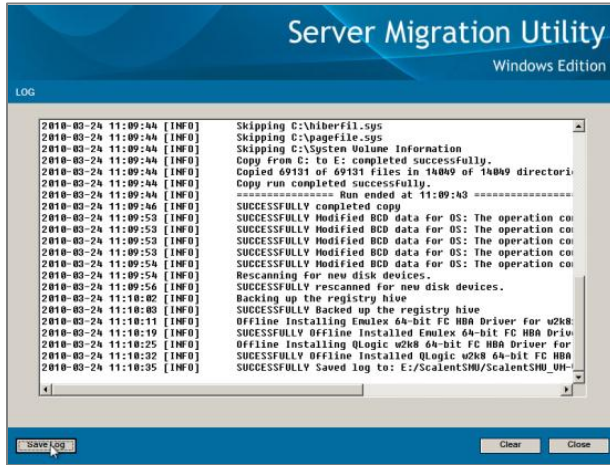
After copying the image to the iSCSI LUN and injecting the FC-SAN drivers the next step is to prepare the NICs for iSCSI booting. It is important to note that if you plan to iSCSI-boot the image in a Hyper-V VM, you must choose the same number of NICs as you have configured in the VM.



1. From the SMU "**Advanced Operation menu**":
2. Select "**Prepare Image for iSCSI Boot**"
3. Select the **iSCSI boot types** that you want to prepare the image for.
4. Select the **boot image** you want to prepare and the network adapters you want to use for iSCSI booting

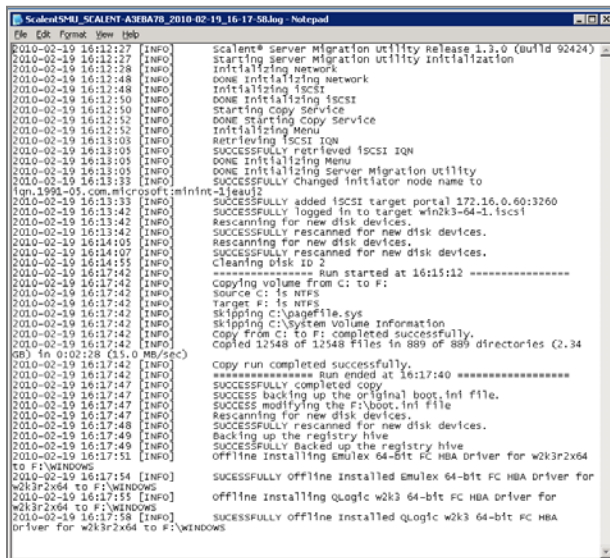
Note: It is recommended to "prepare" all NICs as the boot NIC may not be easy to identify. You can select multiple NICs by holding down Ctrl key and clicking on each adapter.

Part 7: Viewing And Saving SMU Logs



1. Diagnostic information about operations SMU performs is saved to a log file stored in the main memory of the server where SMU booted. The “**Show Log**” button is available from most menus.
2. You can save the log to the server's local disk or removable media.

Part 8: SMU Audit Trail



1. An audit trail is created on the migrated image.
2. After the persona is booted (**Lab 10**): cd to **C:\DeIISMU** folder and open the log file containing the migration information.

Additional information:

- If your source Windows image had additional volumes (such as Data volumes) associated with it, you must copy them separately using the Volume Copy option of SMU.
- If you plan to boot the copied Windows boot image on the same server where the source image was installed, the best practice is to remove the local disk with the original Windows boot image installation from the server.

This lab ends with Part 8, step 2. Please continue as instructed

Dell AIM Training Lab10: Adding Personas to the AIM Environment

Lab 10 Objective: Adding Personas to the AIM Environment

In this lab, you will perform the following tasks:

- Add persona to AIM Environment
- Assign persona to a server
- Start persona
- See how the server assign to the persona is reconfigure

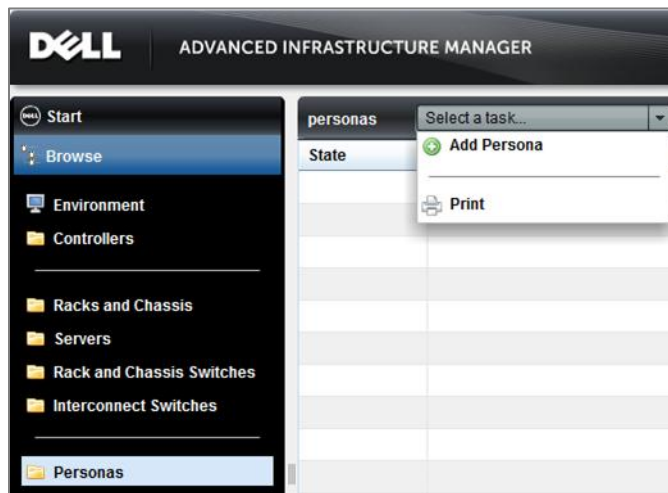
Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 15 minutes to complete

Prepare for the Lab

The following is included in the course materials:

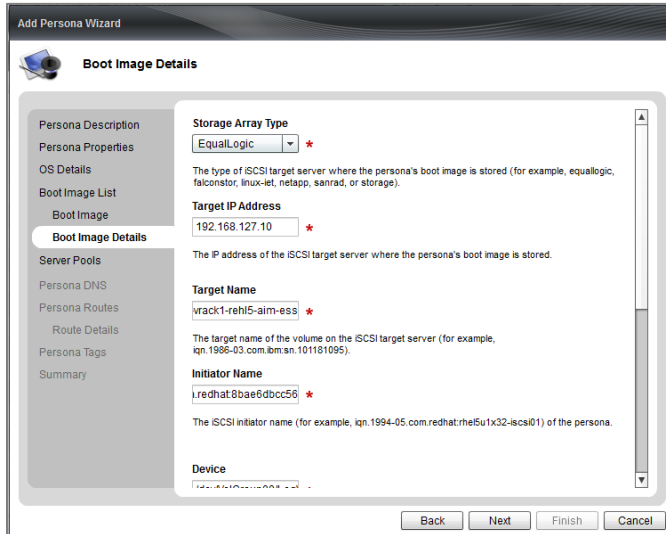
1. Information on how to Login to the AIM console
2. Username and password
3. Lab Configuration Sheet

Part 1: Adding Persona to AIM Environment



1. From the Aim console select **Personas** then click Select a task submenu and Select **Add Persona**.
2. Next, provide a persona **ID**, **Name** and **Persona description** and click **Next** to continue.
3. In Persona Properties select **Agent Exists** and **Networking enabled**, for Network Mode select **Auto** and continue.
4. Next you are asked to choose an SCN Assignment Type, select **Pool** and then click **Next**.
5. Enter the Persona Operating System (Windows 64-bit), OS type (Windows 2008) and OS version (R2), then continue by clicking **Next**.
6. Click the **Add button** to add a boot image.
7. Provide an image ID (leave blank and the Controller will provide one for you, next select the Boot Type; select **iSCSI-Booted** and then click **Next**.

Part 1: Adding Persona to AIM Environment (continued)



8. Now provide the **details** for the storage: Storage Array type (EqualLogic), target IP address (see the Lab Configuration sheet for IP), target name, and initiator name. (This information can be obtained from the LUN you have previously created in your EqualLogic SAN.)

TIP: The Target name is the **iqn** of the **iscsi volume** and can be obtained from the **Volume Name** field for the volume in the EqualLogic Console.

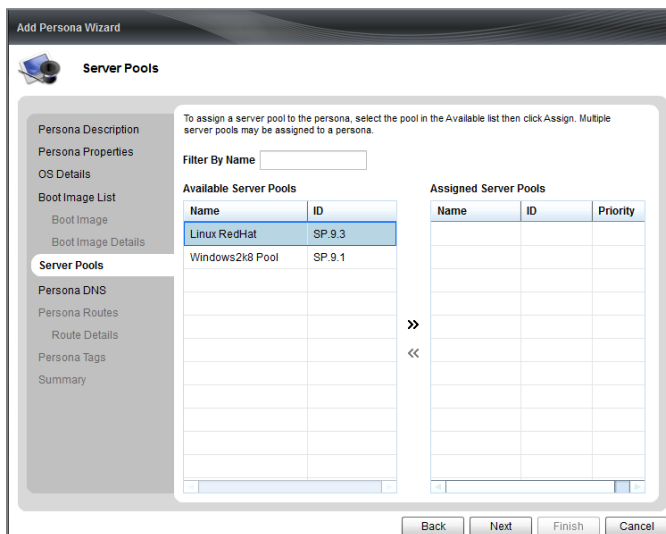
The initiator name is the **iqn** provided within **SMU** during Image creation.

9. Click **Next**.

FYI: If creating a Linux Persona

It is necessary to provide device information when creating a Linux Persona.

- Enter the file system type and kernel information.



10. If you have **server pools** you can assign them to the persona by highlighted and moving it to the right pane. This step will be done during a later lab.

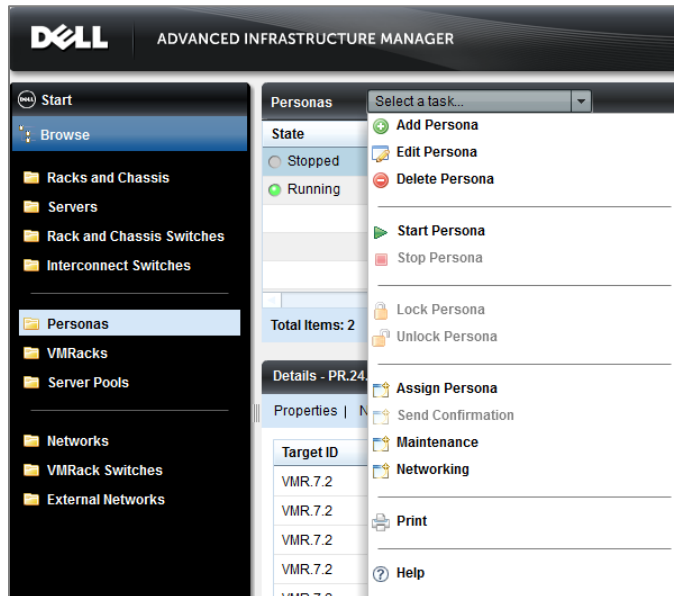
11. **DNS server** information can be added at this time, for this exercise leave this field bland and click **next** to continue.

12. Additional **routes** can be added using physical and virtual networks as well as physical and virtual NICs. Continue without adding routes by clicking **next**.

13. **Tags** used for identification can be added for this persona. Continue without adding Tags by clicking **next**.

14. Next, review the Add Persona Wizard Summary and click **Finish**.

Part 2: Starting the Persona within the AIM Environment



1. Now you can start the persona by selecting **Start Persona** from the Select a Task drop menu.
2. Next you are asked to assign the Persona either to a specific server or from any server, for this exercise select **specific server**, then select one of your discovered Physical servers (server 4 or 5 in your chassis or rack).
3. While the server is booting you can verify the state of the persona from the AIM console.

Additional Information:

If you select ANY the AIM controller will find a suitable server for the persona by comparative analysis from information stored within the AIM XML database.

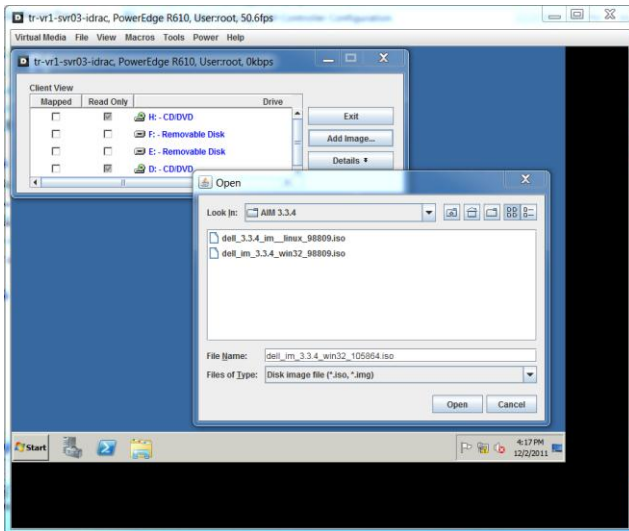
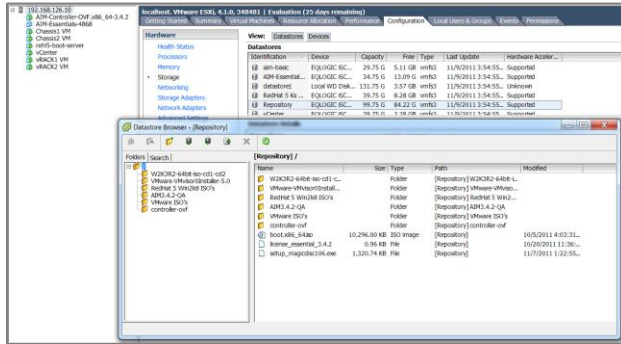
If you had selected a virtual machine as the host server for the persona open the viClient, here you can watch how AIM seamlessly works within ESX to start the VM, and create required vswitches and port groups. If the Persona is shut down from the AIM Console AIM will also initiate the destruction of the vswitch and port group.

Part 3: Install the AIM Persona Agent on the Persona

1. Once you have successfully started your Persona install the AIM Persona Agent; this is located in the Repository Datastore on your ESX system. Download it onto your desktop and then use the Virtual Media feature of the DRAC to make it accessible to your Windows server.

The AIM Persona Agent software is located in the Repository; this is the same software datastore that you used in Lab 1 – Installing ESX. Following the steps as you did in Lab 1, download the **dell_im_win32_XXXXXX.iso** (name may vary) to your desktop.

Part 3 Install the AIM Persona Agent on the Persona



2. Using the VI Client access your ESX server 192.168.12x.10 and then open the Configuration Tab.
3. Under the Hardware list click Storage
4. Right click on **Repository** and then click **Browse Datastore**
5. Open the AIM 3.4.2 Training ISO's file directory and right click on **dell_im_win32_XXXXX.iso**, and then select Download.
6. Download the ISO to your desktop.
7. When the download has completed close the VI Client.
8. Click on Virtual Media within the Virtual Console of the Windows server.
9. The Client View opens, click **Add Image...**
10. From the Open dialog box navigate to the dell_im_win32_XXXXX.iso that you have downloaded to your desktop.
11. Click **Open**.
12. Next select the checkbox associated with the iso.
13. This will make the files within the ISO available, select the **Setup_Persona.exe** file and then run the executable. No reboot is needed.
14. **Disconnect** the mapped file.
15. **Exit** from the DRAC console.

In a Production environment you would add the AIM Persona Agent to the migrated copy of this base image after it has been booted as a Persona, this way you do not alter the base image.

This lab ends with Part 3, step 15. Please continue as instructed.

Dell AIM Training Lab 11: Working with Server Pools

Lab 11 Objective: Adding Server Pools into the AIM Environment

In this lab, you will perform the following tasks:

- Add Server Pools to the AIM environment.
- Assign a persona to a server or server pool

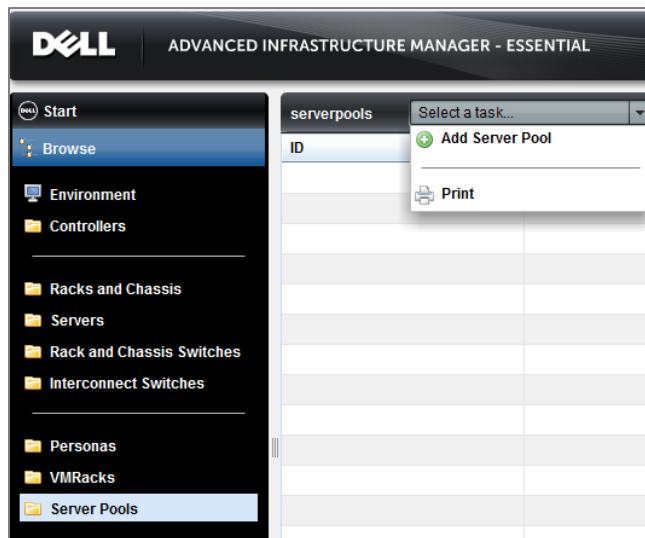
Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 20 minutes to complete

Prepare for the Lab

The following is requires for this lab:

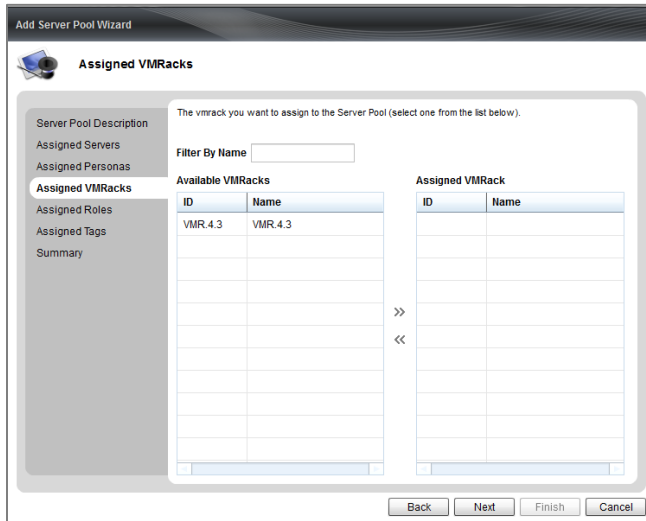
1. Physical servers has been discover in AIM
2. Lab Configuration Sheet

Part 1: Adding Server Pools to the AIM Environment.



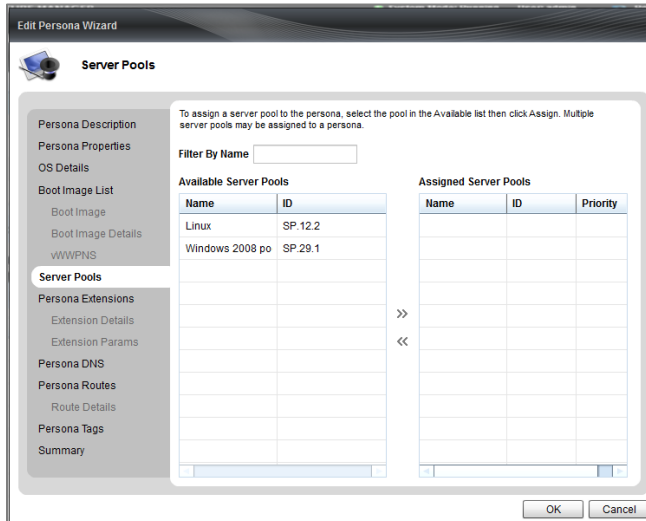
1. From the navigation pane select **Server Pools**,
2. Next, open the **Select a Task** drop down menu.
3. From the drop down menu click on **Add Server Pool**.
4. Provide **Server Pool ID, Name** and **description**.
5. Select the servers you want part of this Server Pool from the **available Servers pane** and **add** it to the **Assigned Servers pane**.
6. Next, select one of the **persona** that you created in Lab 09 and 10 to be assigned to this Server Pool, you can choose it from the **Available Personas pane**.

Part1: Adding Server Pools to the AIM Environment (continued)



7. If you have a **VMRack** and wanted to be used by this Server Pool you can selected here and add it to the Assigned VMRack; **do not** enter a VMRack at this time and click **next** to continue.
8. Role can also be assigned to be use by this Server Pool add it now; **do not** enter a Role at this time and click next to continue.
9. Tags can be used to associate with this Server Pool:**do not** enter a Tag at this time and click **next** to continue.
10. Make sure you have the correct information in your summary and click **Finish**.

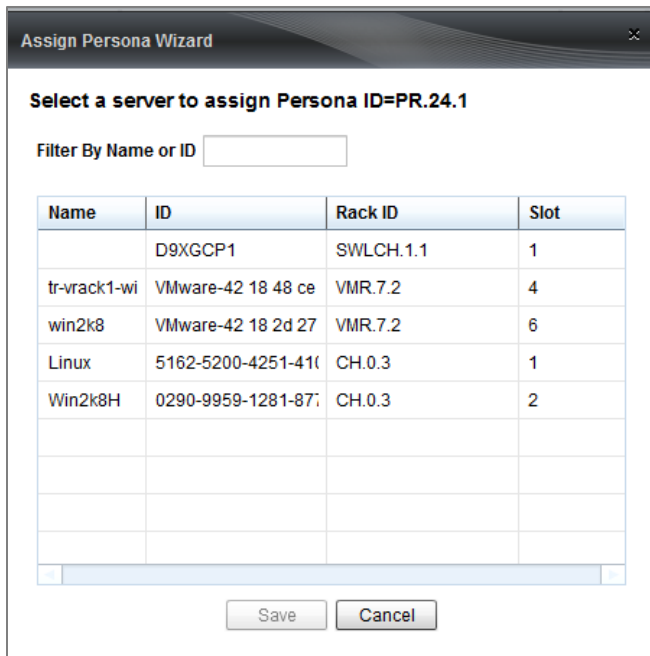
Part 2: Assigning A Persona To A Server Pool



1. To assign a persona to a Server Pool; select the **persona** and **right click** on it
2. From the task menu select **Edit Persona**
3. Then click on **Server Pools**; select a Server Pool from the **Available Server Pools** column and then click the **arrows** pointing to the right, the selected server pool will now appear in the Assigned Server Pools column.
4. Click **Ok** to finish.

Part 3: Assigning Persona To A Server

This Part is a separate operation and not part of the previous parts associated with assigning a persona to a server pool. This operation is used when assigning a persona to a single server only.



5. **Select** the **persona** you want to assign to a server to and **right click** on it.
6. From the next pane, select **Assign Persona** and then **select** the **server** you want from the available server list as shown in the picture on the left.
7. To complete this task click **Save**.

This lab ends with Part 3, step 7. Please continue as instructed.

AIM Solution 01

Customer Stated Problem: New hardware provisioning takes too long

In this lab, you will perform the following tasks:

- Understand the customer's problem.
- Determine the correct solution for the customer's problem.
- Design a functional solution for this problem using the lab "How-to" sheets.
- Modify your AIM environment to use your solution.

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 2 hours to complete.

Prepare for the Lab

The following is included in the course materials:

1. Lab Demo Requirement Sheet
2. Lab "How-to" sheets
3. Lab Configuration Sheet

What is the correct solution for the customer's problem?

Begin this lab by planning a solution and presentation comprised from the lab How-to sheets; once a plan is in place implement your solution within your AIM environment. Prepare to discuss your solution with the class.

AIM Solution 02

Customer Stated Problem: How can I reduce the time it takes to recover from a Server failure?

In this lab, you will perform the following tasks:

- Understand the customer's problem.
- Determine the correct solution for the customer's problem.
- Design a functional solution for this problem using the lab "How-to" sheets
- Modify your AIM environment to use your solution

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 6-8 hours to complete.

Prepare for the Lab

The following is included in the course materials:

1. Lab Demo Requirement Sheet
2. Lab "How-to" sheets
3. Lab Configuration Sheet

What is the correct solution for the customer's problem?

Begin this lab by planning a solution and presentation comprised from the lab How-to sheets; once a plan is in place implement your solution within your AIM environment. Prepare to discuss your solution with the class.

AIM Solution 03

Customer Stated Problem: How can I move my application from a Development to a Test environment?

In this lab, you will perform the following tasks:

- Understand the customer's problem.
- Determine the correct solution for the customer's problem.
- Design a functional solution for this problem using the lab "How-to" sheets
- Modify your AIM environment to use your solution.

Refer to the Lab Configuration sheet for network and system assignments and access information. This lab will take approximately 6-8 hours to complete.

Prepare for the Lab

The following is included in the course materials:

1. Lab Demo Requirement Sheet
2. Lab "How-to" sheets
3. Lab Configuration Sheet

What is the correct solution for the customer's problem?

Begin this lab by planning a solution and presentation comprised from the lab How-to sheets; once a plan is in place implement your solution within your AIM environment. Prepare to discuss your solution with the class.