Array Configuration

Rapid EqualLogic Configuration Series
Implementation Guide

January 2015

Revisions

Date	Description
April 2012	Initial release
May 2012	Included set up information for PS4110 and PS6110 arrays
July 2012	Updated management port configuration
August 2012	Added note for configuring dedicated management port of multiple arrays
December 2012	Updated for latest EqualLogic firmware
December 2013	Updated for v7.0.x firmware
January 2015	Updated for v7.1.x firmware

1   Establish console access

To perform this configuration you will need the following:

- A serial null-modem cable with DB9 connectors (provided with the EqualLogic array).
- A management station (server, desktop, or laptop) running Windows (XP, 7, 2003, 2008) in close proximity to the EqualLogic array (i.e. the serial cable must connect from this system to the storage array). You may also use a Windows host server for this if one is available.
- A terminal emulator such as HyperTerminal, Putty, or TeraTerm. HyperTerminal is only available in Windows XP and 2003. Putty and TeraTerm can be found for download through a quick internet search.
- A range of IP addresses for the storage array. Each new group requires a single IP address, while each new storage requires 2-4 IP addresses. Refer to the prerequisites table.
- The name you want to use for the array
- Name of the PS Series group (new or existing)

Perform the following array initialization steps using the CLI:

1. If not already powered up, turn on the storage array.
2. Open your terminal emulator and configure it to use the serial port (usually COM1 but this may vary depending on your system). Configure serial communications for 9600,N,8,1 and no flow control.
3. Connect the serial cable between the management system and the storage array. The cable must be connected to the active controller – the active controller will have a green LED labeled "ACT".
4. Shortly after the storage is powered on, a login prompt should appear. If it doesn't, then hit enter in the terminal emulator.
5. Login with username **grpadmin** and password **grpadmin**.
6. The array will prompt with: **Would you like to configure the array now?** Type **Y**.
    If not prompted, type **setup** to access the configuration
7. When prompted: **Do you want to proceed** type **Y** again.
8. When prompted with **Member Name [ ]:** provide a name for the storage array (Hint: this name will appear in Group Manager, so use something meaningful).
9. When prompted with **Network interface [eth0]**: press [**Enter**].
10. When prompted with **IP address for network interface [ ]:** type the IP address for the first port on the array (example, 10.10.0.101).
11. When prompted with **Netmask [255.255.255.0]:** type the appropriate network mask, or press [**Enter**] to accept the default.

12. When prompted with **Default Gateway [10.10.0.1]:** type the appropriate default gateway or press [**Enter**] to accept the default.
13. Next, for **Group name [ ]:** provide the name of an existing PS Group (used for management of the storage) that this new array will join, or if this is the first array in a new group, type the name of the new group you want to create.
14. When prompted for the **Group IP address [ ]**: type the IP address of the new group on the SAN, or the existing group that the array will join (for example, 10.10.0.100, this is not the out-of-band management IP address).
15. If prompted with **do you want to create a new group (yes|no)[yes]**: Press [**Enter**].
16. A summary will display ending with the question, **do you want to use the group settings shown above (yes|no)[yes]:** Press [**Enter**] if the information is correct.
17. Enter your password for managing group membership and press [**Enter**].
18. Retype the password for confirmation.
19. Enter your password for the default group administration (grpadmin) account and press [**Enter**].
20. Retype the password for confirmation.

2 Configure the dedicated management port

1. The following steps require static IP addresses for management of the array – these must be IP addresses on a management network (LAN) - not on the SAN. One IP address is required for Group Management and an additional IP address is required for each array in the group. (Refer to the Prerequisites table used to collect these IP addresses).
2. Activate controller management ports using the following instructions:

Note: *ethX* or *X* denotes the dedicated management port in the array controller - **eth4** for PS6100 arrays, **eth1** for PS4110 and PS6110 arrays, and **eth2** for all other arrays.

a. >member select *member-name*
```
(array1)>eth select X

(array1 eth_X)>ipaddress mgmt-port-ip netmask mask

(array1 eth_X)>up
```

This port is for group management only. Make sure it is connected to a dedicated management network.

```
Do you want to enable the management interface? (y/n) [n]: Y

(array1 eth_X)>exit

(array1)>exit
```

Note: Repeat step 2a for each array in the configuration before proceeding.

b. >grpparams
```
( grpparams))>management-network ipaddress mgmt-group-ip

The default management gateway is not configured. You may not be able to

manage this group until you add the default management gateway.

Dedicated management network is enabled. You must use the new management

IP address to manage the group.

( grpparams))>def-mgmt-gateway ipaddress mymanagementgatewayipaddress

( grpparams))>exit
```

3 Array configuration: Group Manager

1. From the management system (or Windows host), open a web browser and connect to the group IP address.
2. The web browser must have Java Runtime Environment installed and must allow ActiveX controls to proceed.
3. Login as grpadmin and provide the password that was selected during the initial setup.

3.1 Set required RAID policy

Complete the following steps for each member.

1. Click on the member in Group Manager that has not been configured to select it.

2. When prompted, select **Yes** to configure RAID for that member then click **Next**.

3. Set the desired RAID policy and accept the default **Immediately expand group capacity** setting. Click **Next** to view the summary.

4. Click **Finish** to begin a background initialization of the disks with the selected RAID setting. Continue with the array setup while the initialization completes in the background.

3.2 Upgrade array controller firmware

1. Download the latest array firmware from https://eqlsupport.dell.com/secure/login.aspx (login required).
2. To update array firmware on the member, go to the **Maintenance** tab and click **Update firmware**.
3. When prompted for a password, supply the grpadmin password.
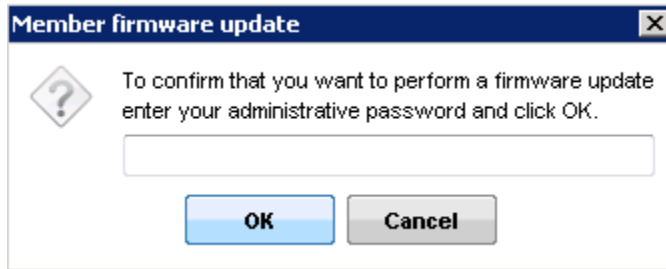
4. Navigate to the downloaded *.tgz file and click **Upgrade** (or **Update**) in the **Action** column.
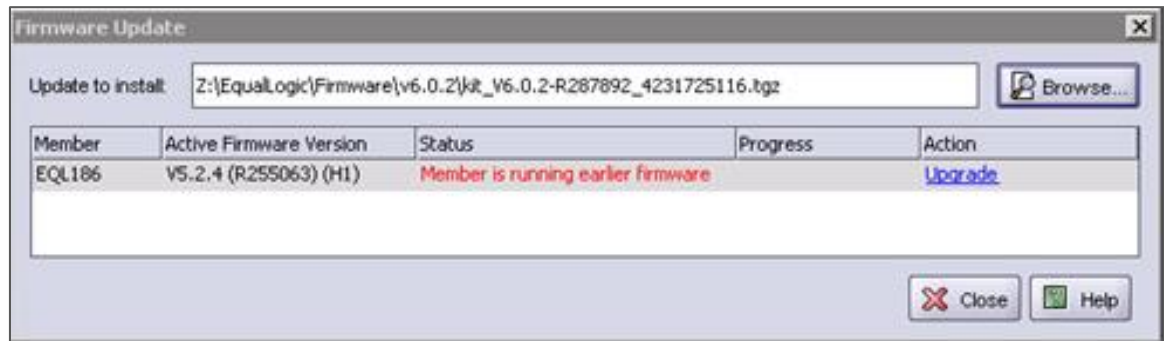
5. Once the update is complete, click **Restart** in the **Action** column.
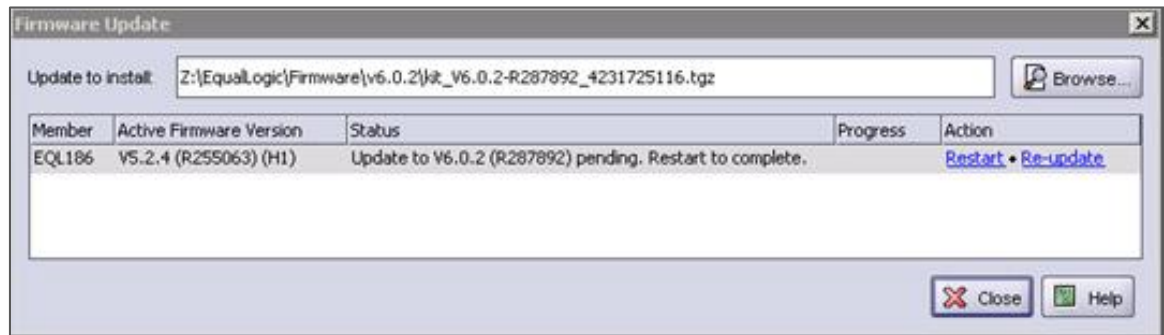
6. Group Manager will be temporarily disconnected as the array completes the controller update and restarts.
7. After a few minutes, Group Manager re-connects automatically and reports the **Member is up to date**.

Note: The second Controller Module may report as "not installed" until the firmware update has completed. The 2nd controller firmware update will start automatically.

Once the array has restarted, close the web browser to disconnect any Group Manager session and then open a new browser session and login again before proceeding.

3.3 Configure array controller ports

1. Select the array.
2. Open the **Network** tab for the member array.
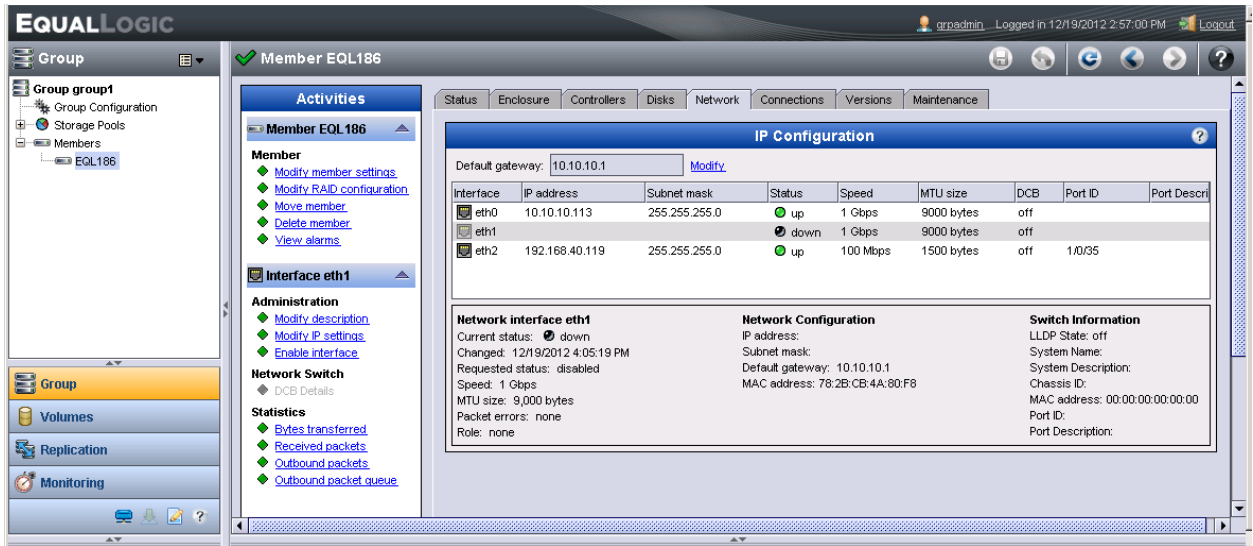
> **Note**: This figure is an example. The number of interfaces will vary depending on the array model used.

3. Double click **eth1** and enter the appropriate IP address (documented in the Prerequisites section of the preparation document from the [Rapid EqualLogic Configuration Portal](#)) and subnet mask, then click the checkbox next to **Enable this interface** and click **OK**.
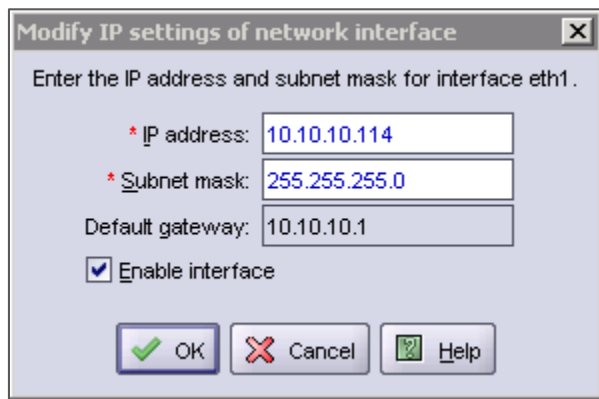
4. Repeat for all remaining interfaces. Only select **restrict to management access** if this port is connected to a separate management network (not the SAN).

Note: This figure is an example. The number of interfaces will vary depending on the array model used.

3.4   Enable SNMP read-only access

1. From Group Manager, select **Group configuration** and click on the **SNMP** tab.
2. Click **Add** and provide an SNMP community name to be used for read-only access.

Note: If you don't know which community name to use, enter public as shown.

3. Click **OK**.
4. Click the icon that looks like a diskette to save the configuration.

3.5 Create volumes

1. In the Equallogic PS Series Group Manager, click **Volumes** on the left toolbar.
2. Click **create volume**.
3. Enter volume name and description, and then click **Next**.

4. Enter the **Volume size**, choose thin or non-thin provision, enter the **Snapshot reserve** size, and then click **Next**.

5. Select **None (do not allow access)**, click **Skip to end**, and then click **Finish**.

Note: Volume Access setup is illustrated in the Host Configuration documents on the Rapid EqualLogic Configuration Portal http://en.community.dell.com/techcenter/storage/w/wiki/3615.rapid-equallogic-configuration-portal-by-sis.aspx