



# Planning and Preparation Guide

Rapid EqualLogic Configuration Series

Switch: Dell Networking or Force10 S60

Array: PS4100, PS6100, or PS6500

Host: VMware ESXi, Windows, Red Hat Enterprise Linux or FS7600 NAS

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## Revisions

| Date          | Description  |
|---------------|--|
| April 2012    | Initial release  |
| March 2013    | Combined all Force10 S60 Introduction documents into one |
| December 2013 | Added FS7600 NAS   |
| April 2014    | Added RHEL configuration information                     |

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# 1 Introduction

This document is one part of a complete installation guide series from the Rapid EqualLogic Configuration Portal. Please make sure that you have the complete set for your configuration before proceeding.

Full link to document site:

<http://en.community.dell.com/techcenter/storage/w/wiki/3615.rapid-equallogic-configuration-portal-by-sis.aspx>

## 1.1 Document use

Keyboard keys are shown in brackets with the actual key bolded.

Example: [**Enter**]

Commands that are to be typed are bolded and shown after the appropriate prompt.

Example:

```
console>enable
```

## 1.2 Intended audience

This document series has been written for system or storage administrators with experience deploying Windows® or VMware® vSphere ESXi™ or Red Hat Enterprise Linux® servers, storage systems, and Ethernet networking. If you are unsure about completing the installation, Dell support is available and ready to assist you.

## 1.3 List of references

- TR1050 – Monitoring Your PS Series SAN with SAN HeadQuarters  
<https://support.equallogic.com/WorkArea/DownloadAsset.aspx?id=8749>

**Note:** A login is required to access the EqualLogic support site.

- *SAN HQ User Guide*, available for download on <https://eqsupport.dell.com/>
- *Dell EqualLogic Configuration Guide*, available for download at:  
<http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/19852516/download.aspx>
- Dell EqualLogic Compatibility Matrix, available for download at:  
<http://en.community.dell.com/techcenter/storage/w/wiki/2661.equallogic-compatibility-matrix-07262013.aspx>



## 2 Prerequisites

### 2.1 Equipment

- A null-modem DB9 serial cable (included with the array)
- A switch serial console management cable (included with the switch)

### 2.2 Software

**Note:** A login is required to access the EqualLogic support site. If you do not have a login, go to <https://eqsupport.dell.com/> and register.

#### 2.2.1 VMware host operating system

- Latest EqualLogic Multipathing Extension Module for VMware® vSphere installation package (<https://eqsupport.dell.com/>).
- Latest SAN HeadQuarters installation package (<https://eqsupport.dell.com/>).
- The VMware vSphere® Command-Line Interface (vCLI) environment must be installed on the management server ([vmware.com/downloads](http://vmware.com/downloads)).
- Latest network device driver update ([vmware.com/downloads](http://vmware.com/downloads)).

Before proceeding, you may need to download a driver update package for your network adapter. Refer to the readme.txt contained in the update file for instructions on updating from the ESXi command line or using VMware Update Manager (VUM).

#### 2.2.2 Windows host operating system

- Latest network adapter device driver update ([support.dell.com](http://support.dell.com))
- Latest Host Integration Tools (HIT) kit installation package (<https://eqsupport.dell.com/>)
- Latest SAN HeadQuarters installation package (<https://eqsupport.dell.com/>)

#### 2.2.3 Red Hat Enterprise Linux operating system

- Latest network adapter device driver update ([support.dell.com](http://support.dell.com))
- Latest Host Integration Tools (HIT) kit installation package (<https://eqsupport.dell.com/>)

#### 2.2.4 FS7600 – Fluid File System

- Fluid File System (or FluidFS) version 3 or later (<https://eqsupport.dell.com/>)
- Refer to the *Dell EqualLogic FS7600 Installation and Setup Guide* (on <https://eqsupport.dell.com/>) for information on installing and configuring the FS7600 NAS appliance.



## 2.3 Configuration settings

### 2.3.1 VMware host operating system

This document assumes that you have already installed VMware ESXi and have applied the latest critical patches available through VMware Update Manager.

To properly configure your vSphere ESXi system, you must also have a management system available. This system must be running Windows (2008, Windows 7, etc.)

### 2.3.2 Windows host operating system

This document assumes that you have already installed Windows 2008 R2 with Service Pack 1 or later and have applied the latest critical security updates available through Windows Update.

### 2.3.3 Red Hat Enterprise Linux operating system

This document assumes that you have already installed RHEL 6.5 or later and have applied the latest critical security updates available through Linux.

### 2.3.4 FS7600 NAS with Fluid File System

If you have a FS7600 appliance, you must be running FluidFS version 3 or later. This document assumes that all BIOS and firmware are up to date as required and that the FS7600 appliance is unconfigured (or has been re-initialized if previously configured).

Refer to Chapter 7 of the *Dell EqualLogic Group Manager Administrator's Manual* for complete details on configuring the FS7610 NAS appliance. It can be downloaded from <https://eqsupport.dell.com/>

### 2.3.5 Switch

Reference the *EqualLogic Compatibility Matrix* at <http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/19856862/download.aspx> to determine the recommended switch firmware version. To get the latest update, visit <http://force10networks.com>. Installation instructions are provided as part of the download. The switch user manual is also available to download for reference.

### 2.3.6 Array

Reference the *EqualLogic Compatibility Matrix* at <http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/19856862/download.aspx> to determine the recommended array firmware version. To get the latest update, visit <https://eqsupport.dell.com/>. Update instructions and release notes are available with the latest downloads.



## 2.4 Configuration information

Your iSCSI SAN configuration requires several static IP addresses. Complete this form and have it available for reference during the configuration.

Table 1 IP addresses needed for configuration

| Host iSCSI Initiator                    | Host #1 or FS7600 NAS controller #1 | Additional host or FS7600 NAS controller #2 | ...   |
|---|-------------------------------------|---|---|
| Port 1                                  |                                     |   |   |
| Port 2                                  |                                     |   |   |
| Port 3                                  |                                     |   |   |
| Port 4                                  |                                     |   |   |
| Array Target                            | Array #1                            | Additional array                            | ...   |
| Port 1 (eth0)                           |                                     |   |   |
| Port 2 (eth1)                           |                                     |   |   |
| Port 3 (eth2) <sup>1</sup>              |                                     |   |   |
| Port 4 (eth3) <sup>1</sup>              |                                     |   |   |
| Management (Out-of-Band or eth2/eth5)   |                                     |   |   |
| Array Group Management IP (Out-of-Band) |                                     |   | Array Group Admin password:<br>-----*   |
| Array Group Management IP (In-Band)     |                                     |   | Array Membership password:<br>-----*  |
| Out-of-Band Switch Management Port      |                                     |   | Switch Admin password:<br>-----   |
| FS7600 NAS cluster IP                   |                                     |   | <b>Hint:</b> use "Autofill" to complete the IP addresses for the NAS controllers. |
| FS7600 NAS Cluster Management IP        |                                     |   | <b>Hint:</b> use "Autofill" to complete the IP addresses for the NAS controllers. |
| Internal Network initial IP address     |                                     |   | <b>Hint:</b> can use a private subnet such as 172.16.1.0                          |

<sup>1</sup> Not used for PS4100

\*These may be the same password – see the PS-series Group Administration guide for more information.



### 3 Connectivity diagrams

Use the appropriate diagram and point-to-point table when cabling the SAN.

Figure 1 Dell Networking S60 and EqualLogic PS4100 (table on page 12)

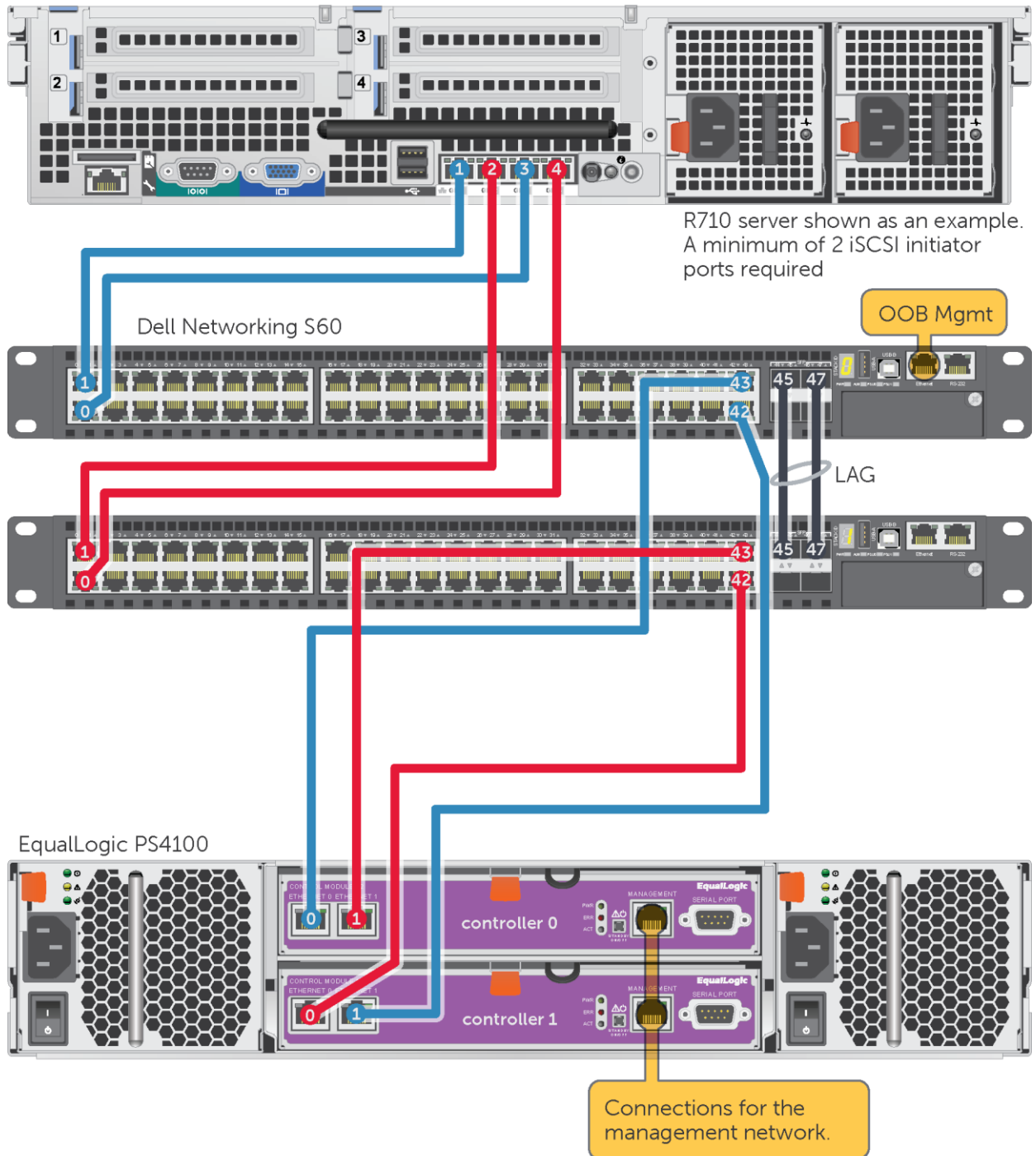


Figure 2 Dell Networking S60 and EqualLogic PS6100 (table on page 12)

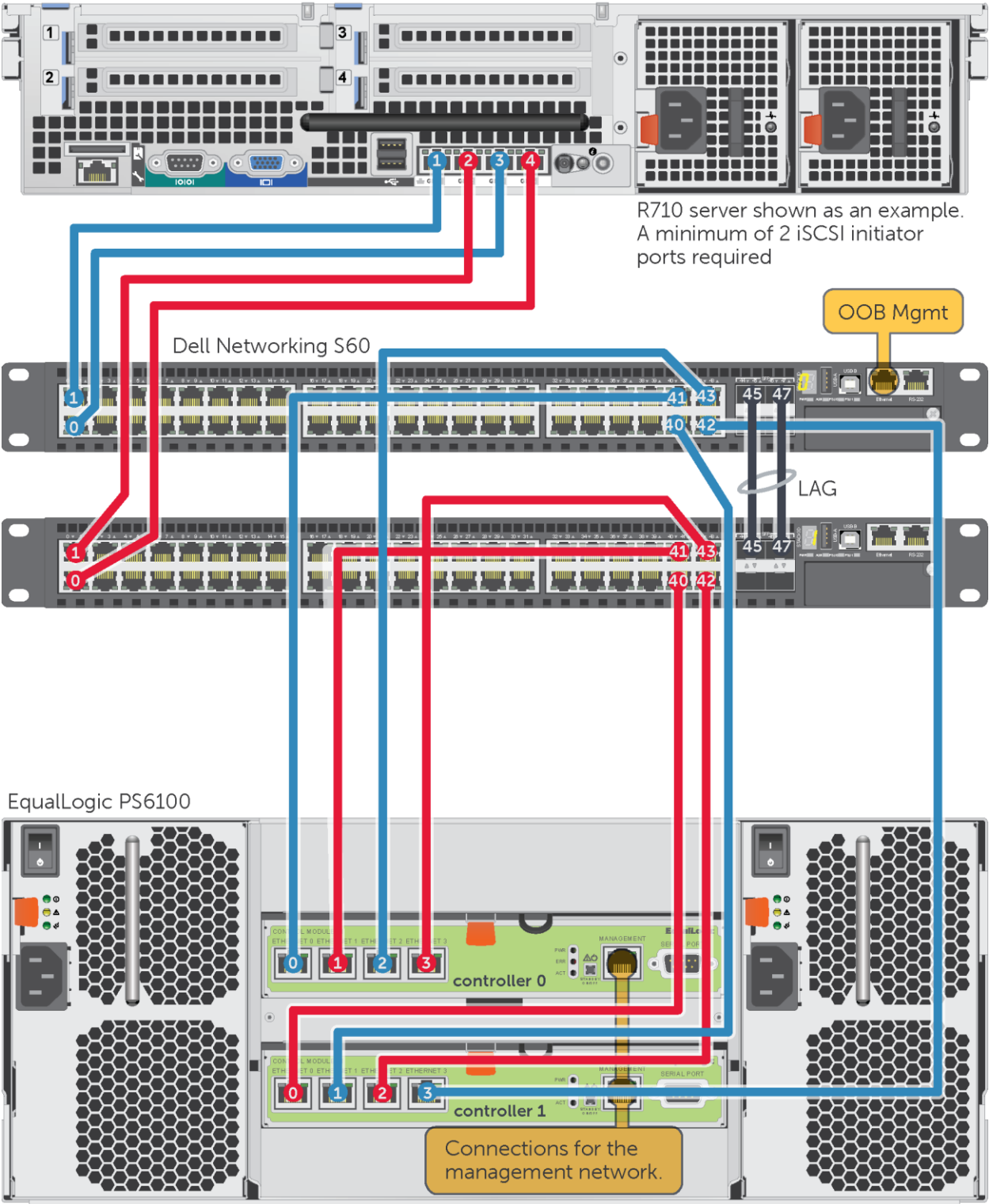




Figure 3 Dell Networking S60 and EqualLogic PS6500 (table on page 12)

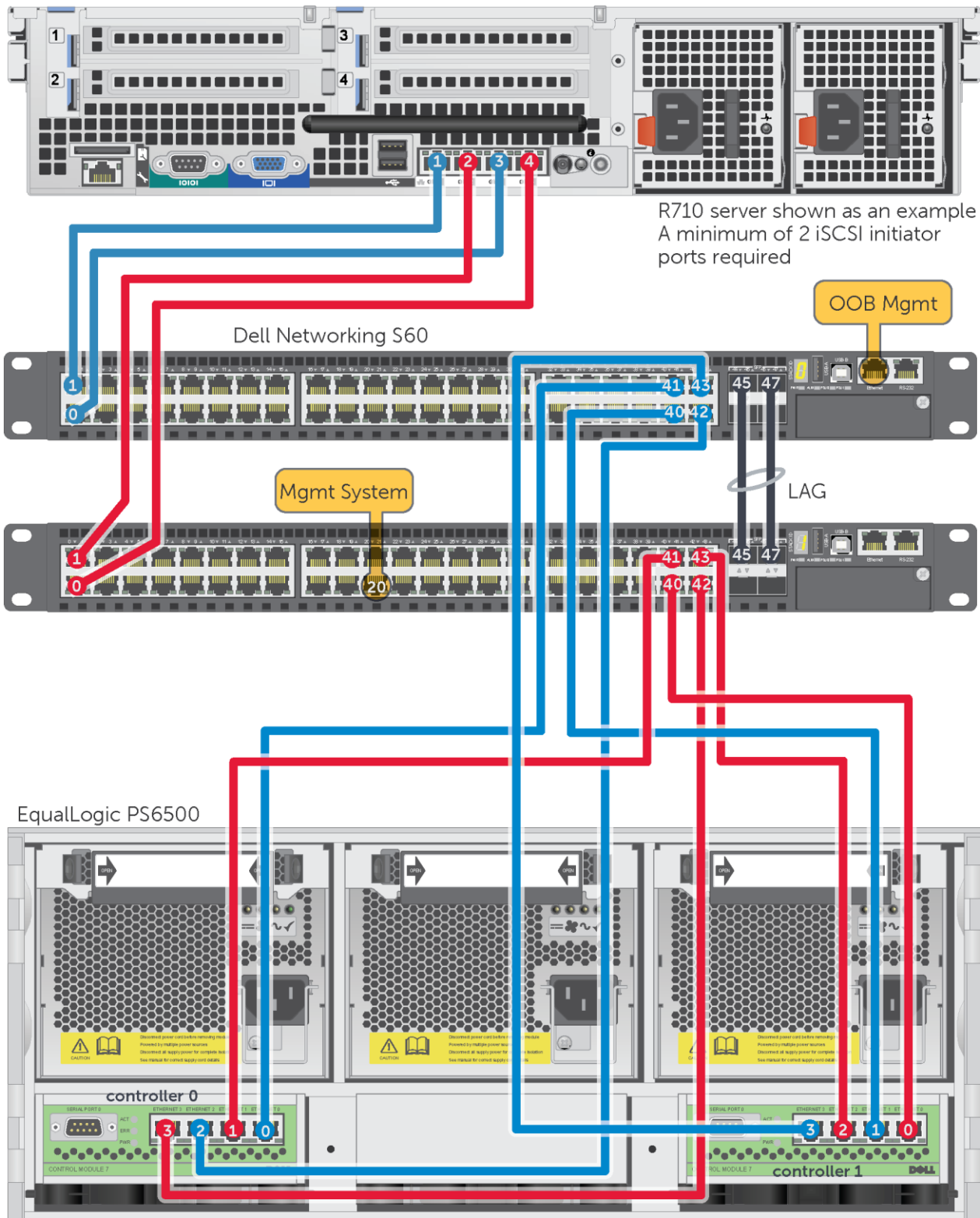


Figure 4 Dell Networking S60 with EqualLogic FS7600 NAS and PS6100 (table on page 13)

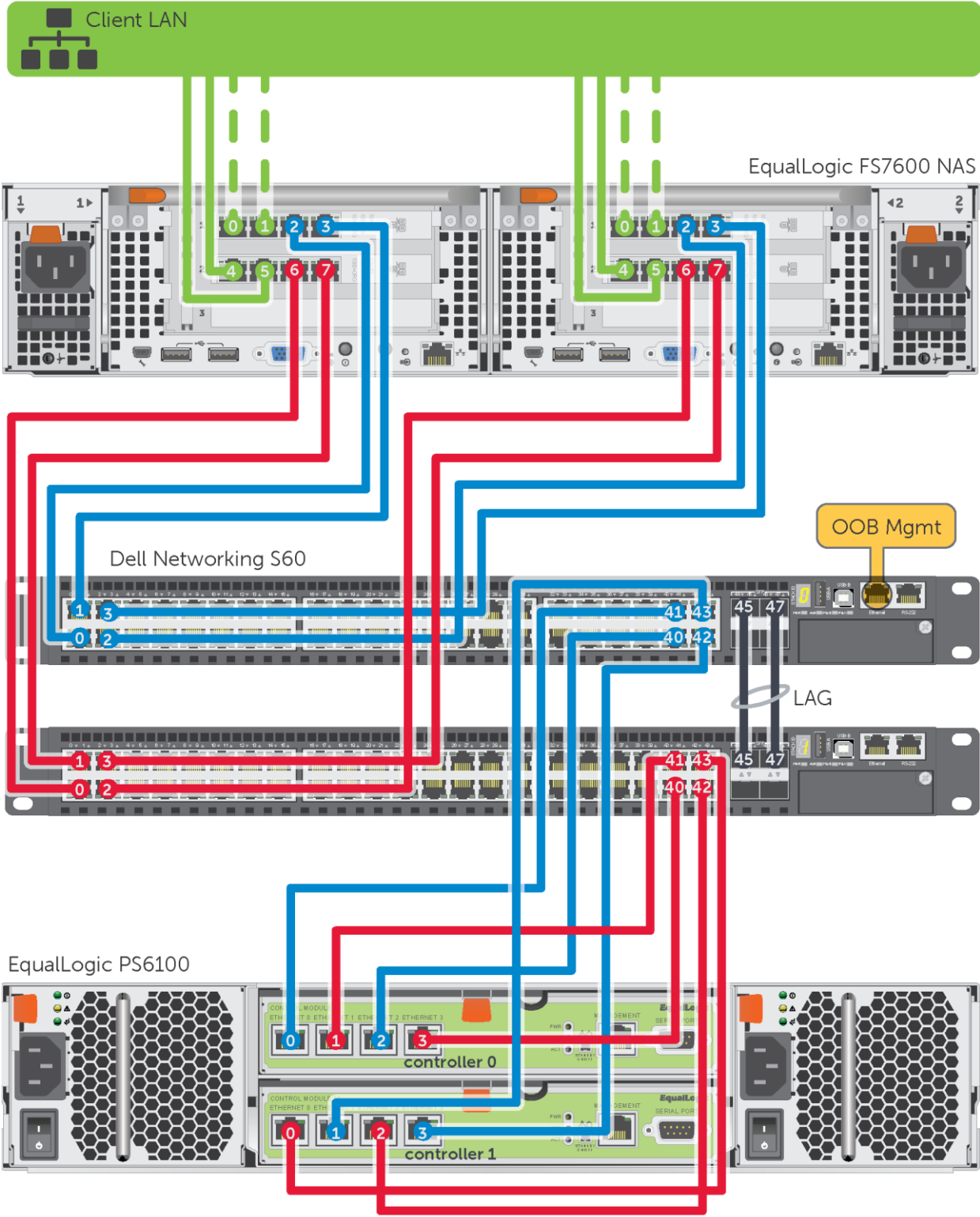
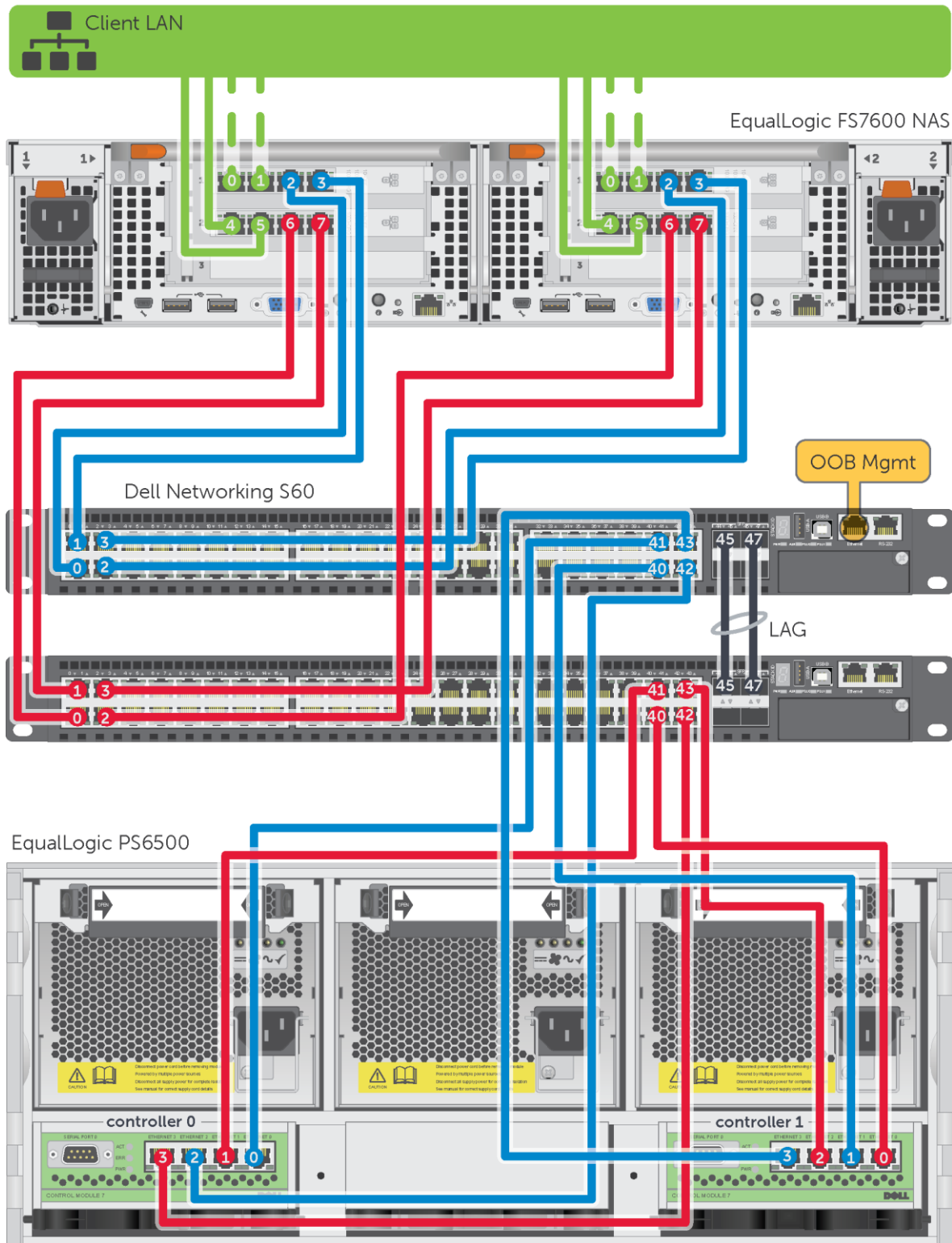


Figure 5 Dell Networking S60 with EqualLogic FS7600 NAS and PS6500 (table on page 13)



## 3.1 Point to point connection tables

**Note:** Add servers and arrays to the configurations as needed using the same connection patterns.

Table 2 Dell Networking S60 connections with the EqualLogic PS4100

|                | Switch 0 Port | To                   |  | Switch 1 Port | To                   |
|----------------|---------------|----------------------|--|---------------|----------------------|
|                | 0             | Server 1, port 3*    |  | 0             | Server 1, port 4*    |
|                | 1             | Server 1, port 1     |  | 1             | Server 1, port 2     |
|                |               |                      |  |               |                      |
| <b>Array 1</b> | 42            | Controller 1, port 1 |  | 42            | Controller 1, port 0 |
|                | 43            | Controller 0, port 0 |  | 43            | Controller 0, port 1 |
|                | Ethernet      | OOB Mgmt             |  |               |                      |

\* Use of the 3rd and 4th host ports is optional. At least two ports are required.

Table 3 Dell Networking S60 connections with the EqualLogic PS6100 or PS6500

|                | Switch 0 Port | To                   |  | Switch 1 Port | To                   |
|----------------|---------------|----------------------|--|---------------|----------------------|
|                | 0             | Server 1, port 3*    |  | 0             | Server 1, port 4*    |
|                | 1             | Server 1, port 1     |  | 1             | Server 1, port 2     |
|                |               |                      |  |               |                      |
|                |               |                      |  | 20            | Mgmt System**        |
| <b>Array 1</b> | 40            | Controller 1, port 1 |  | 40            | Controller 1, port 0 |
|                | 41            | Controller 0, port 0 |  | 41            | Controller 0, port 1 |
|                | 42            | Controller 1, port 3 |  | 42            | Controller 1, port 2 |
|                | 43            | Controller 0, port 2 |  | 43            | Controller 0, port 3 |

\* Use of the 3rd and 4th host ports is optional. At least two ports are required.

\*\* The EqualLogic PS6500 Mgmt system connection is required only if a Windows host will not be used for management activities.



Table 4 Dell Networking S60 connections with the EqualLogic FS7600 NAS and PS6100 or PS6500

|                | <b>Switch 1 Port</b> | <b>To</b>            |  | <b>Switch 2 Port</b> | <b>To</b>            |
|----------------|----------------------|----------------------|--|----------------------|----------------------|
| <b>FS7600</b>  | 0                    | Controller 0, port 2 |  | 0                    | Controller 0, port 6 |
|                | 1                    | Controller 0, port 3 |  | 1                    | Controller 0, port 7 |
|                | 2                    | Controller 1, port 2 |  | 2                    | Controller 1, port 6 |
|                | 3                    | Controller 1, port 3 |  | 3                    | Controller 1, port 7 |
|                |                      |                      |  |                      |                      |
| <b>Array 1</b> | 40                   | Controller 1, port 1 |  | 40                   | Controller 1, port 0 |
|                | 41                   | Controller 0, port 0 |  | 41                   | Controller 0, port 1 |
|                | 42                   | Controller 1, port 3 |  | 42                   | Controller 1, port 2 |
|                | 43                   | Controller 0, port 2 |  | 43                   | Controller 0, port 3 |

