

Planning and Preparation Guide

Rapid EqualLogic Configuration Series

Switch: Cisco Catalyst 3850

Array: PS6100, PS6500, or PS4100

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

Dell Storage Engineering
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Revisions

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January 2017	Initial release

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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®, VMware® vSphere ESXi™, Red Hat Enterprise Linux®, or FS7600 NAS 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 – Analyzing Dell PS Series Storage with SAN HeadQuarters
<http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/19861450>
- *SAN HQ User Guide*, available for download on <https://eqlsupport.dell.com/>

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

- Dell EqualLogic Configuration Guide, available for download at:
<http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/19852516>
- Dell Storage Compatibility Matrix, available for download at:
<http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/20438558>

2 Prerequisites

2.1 Serial cable

- 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://eqlsupport.dell.com/> and register.

2.2.1 VMware host operating system

- Latest Dell™ EqualLogic Multipathing Extension Module for VMware vSphere installation package (<https://eqlsupport.dell.com/>).
- Latest SAN HeadQuarters installation package (<https://eqlsupport.dell.com/>).
- The VMware vSphere Command-Line Interface (vCLI) environment must be installed on the management server (vmware.com/downloads).
- Latest network device driver update (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)
- Latest Host Integration Tools (HIT) kit installation package (<https://eqlsupport.dell.com/>)
- Latest SAN HeadQuarters installation package (<https://eqlsupport.dell.com/>)

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

2.2.3 Red Hat Enterprise Linux operating system

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

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

2.2.4 FS7600 – Fluid File System

- Fluid File System (or FluidFS) version 3 or later (<https://eqlsupport.dell.com/>)

- Refer to the *Dell EqualLogic FS7600 Installation and Setup Guide* (on <https://eqlsupport.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 data as required and that the FS7600 appliance is not configured (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 FS7600 NAS appliance. It can be downloaded from <https://eqlsupport.dell.com/>

2.3.5 Switch

Reference the *Dell Storage Compatibility Matrix* at <http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/20438558> to determine the recommended switch firmware version. To get the latest update, visit <https://www.arista.com/en/products/switches>. Installation instructions are provided as part of the download. The switch user manual can also be downloaded for reference.

2.3.6 Array

Reference the *Dell Storage Compatibility Matrix* at <http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/20438558> to determine the recommended array firmware version. To get the latest update, visit <https://eqlsupport.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 SAN configuration

Host iSCSI Initiator	Host #1 or FS7600 NAS controller #1	Additional host or FS7600 NAS controller #2	...
Port 1			
Port 2			
Array Target	Array #1	Additional array	...
Port 1 (eth0)			
Port 2 (eth1) (PS6510/PS6210 only)			
Management (Out-of-Band/eth1 or eth2)			
Array Group Management IP (Out-of-Band)			
Array Group Management IP (In-Band)			
Out-of-Band Switch Management Port			
FS7600 NAS cluster IP			Hint: use "Autofill" to complete the IP addresses for the NAS controllers.
FS7600 NAS Cluster Management IP			Hint: use "Autofill" to complete the IP addresses for the NAS controllers.
Internal Network initial IP address			Hint: A private subnet such as 172.16.1.0 can be used

Switch admin password: _____

Array Group admin password: _____ *

Array Group membership password: _____ *

*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 in section **Error! Reference source not found.** whenabling the SAN. The connections between the switch and array use the same port numbers for each array listed. The point-to-point tables demonstrate the same logical view despite the physical differences in the hardware.

Figure 1 Cisco Catalyst 3850 and PS4100 configuration

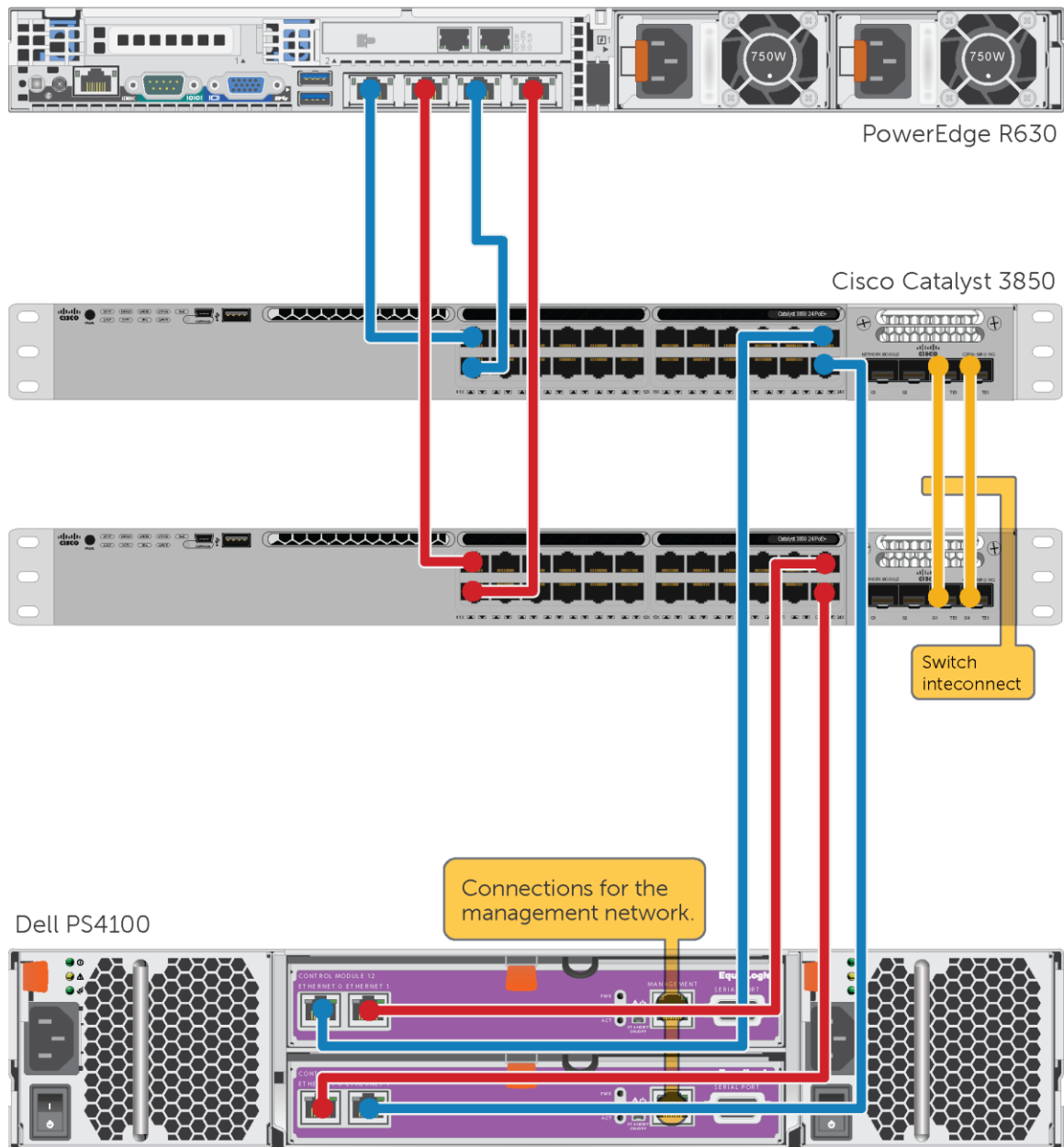


Figure 2 Cisco Catalyst 3850 and PS6100 or PS6500 configuration

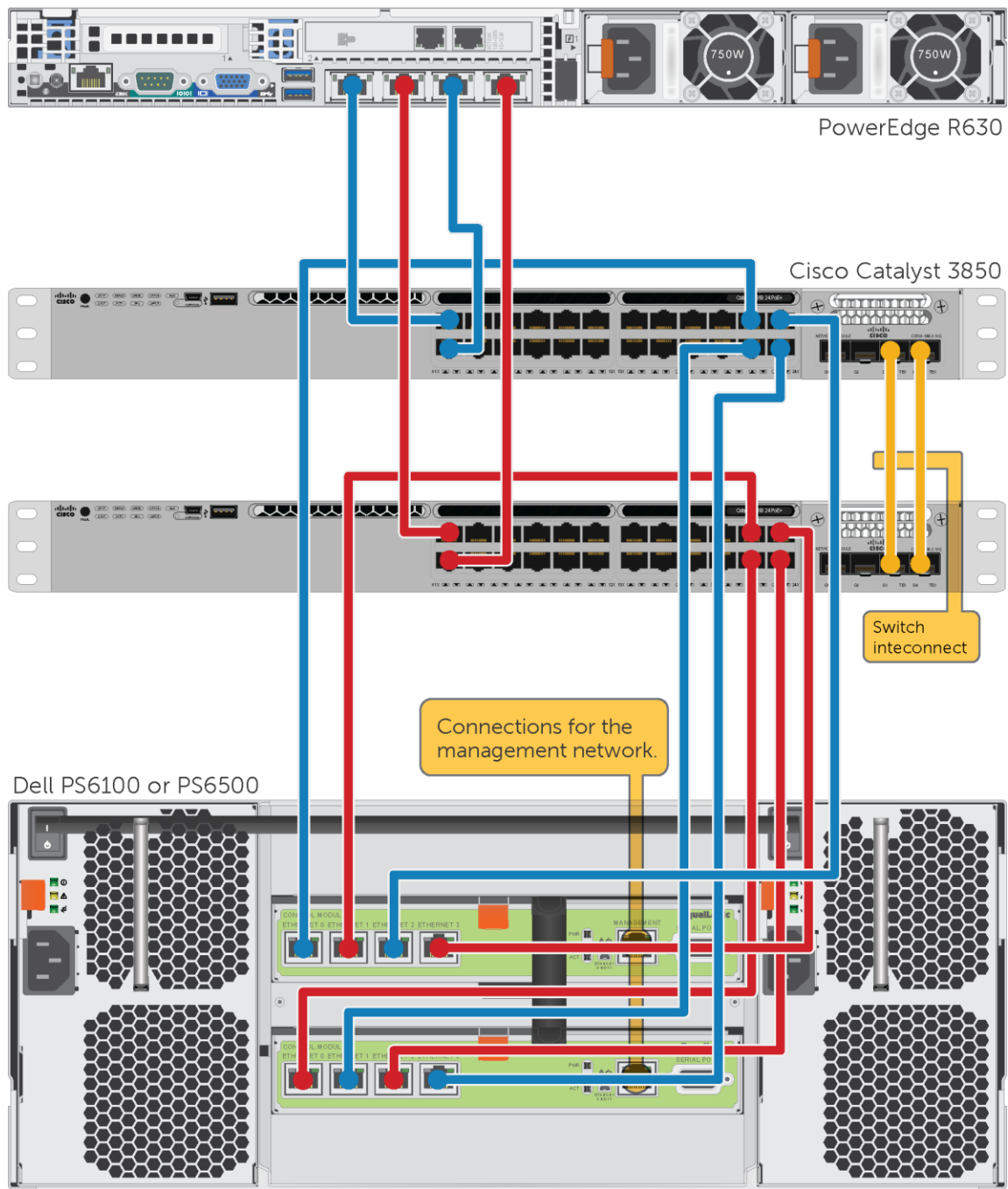
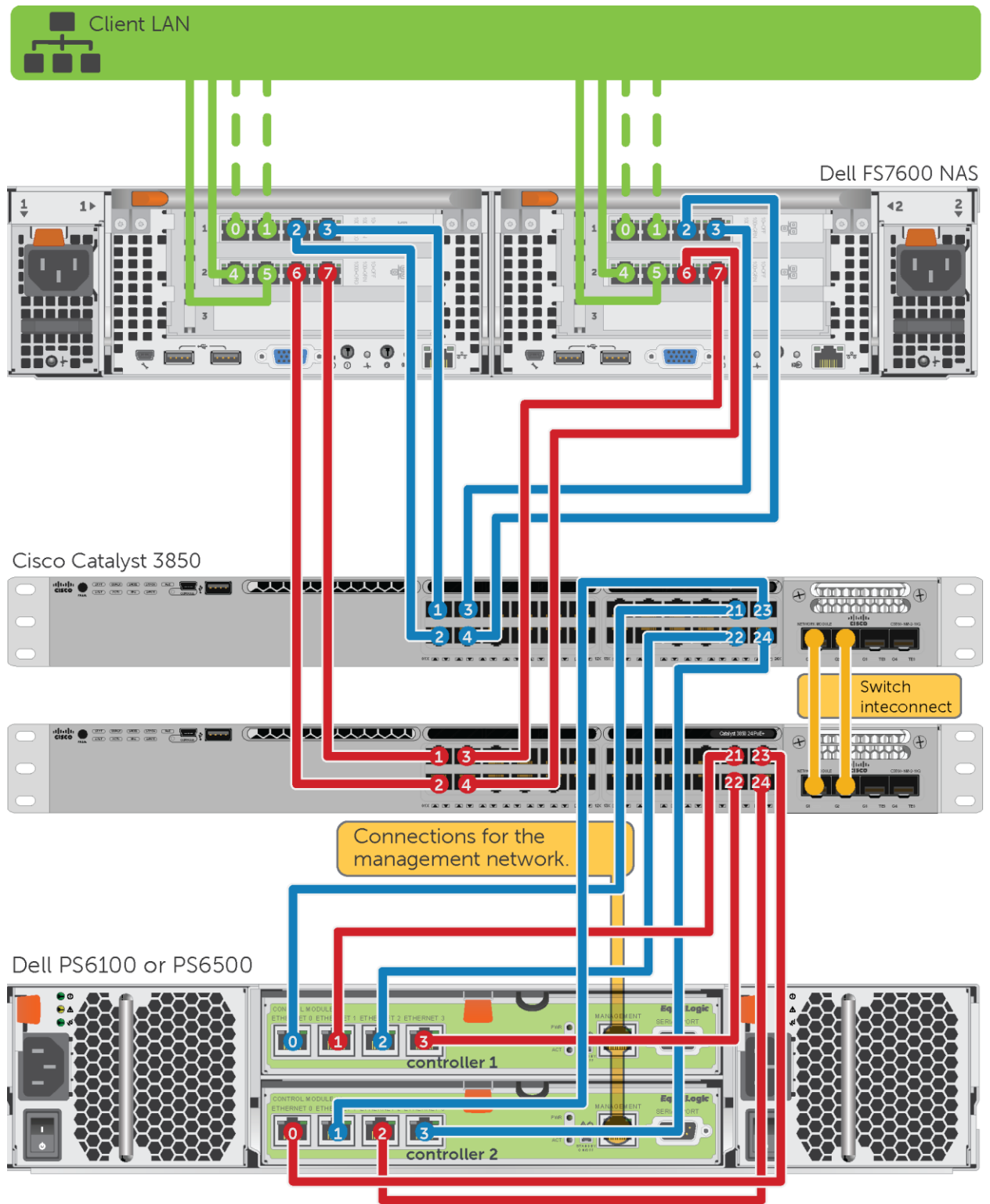


Figure 3 Cisco Catalyst 3850 and PS6100 or PS6500 with FS7600 NAS configuration



3.1 Point-to-point connection tables

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

Table 2 Cisco Catalyst 3850 connections with the PS4100

	Switch 1 Port	To		Switch 2 Port	To
	1	Server 1, port 1		1	Server 1, port 2
	2	Server 1, port 3*		2	Server 1, port 4*
Array 1	23	Controller 1, port 0		23	Controller 1, port 1
	24	Controller 2, port 1		24	Controller 2, port 0

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

Table 3 Cisco Catalyst 3850 connections with the PS6100 or PS6500

	Switch 1 Port	To		Switch 2 Port	To
	1	Server 1, port 1		1	Server 1, port 2
	2	Server 1, port 3*		2	Server 1, port 4*
Array 1	21	Controller 1, port 0		21	Controller 1, port 1
	22	Controller 2, port 1		22	Controller 2, port 0
	23	Controller 1, port 2		23	Controller 1, port 3
	24	Controller 2, port 3		24	Controller 2, port 2

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

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

Table 4 Cisco Catalyst 3850 connections with the PS6100 or PS6500 and FS7600 NAS

	Switch 1 Port	To		Switch 2 Port	To
FS7600 NAS	1	Controller 1, port 3		1	Controller 1, port 7
	2	Controller 1, port 2		2	Controller 1, port 6
	3	Controller 2, port 3		3	Controller 2, port 7
	4	Controller 2, port 2		4	Controller 2, port 6
Array 1	21	Controller 1, port 0		21	Controller 1, port 1
	22	Controller 1, port 2		22	Controller 1, port 3
	23	Controller 2, port 1		23	Controller 2, port 0
	24	Controller 2, port 3		24	Controller 2, port 2