Arista 7050S

Switch Configuration Guide for Dell PS Series SANs

Dell Storage Engineering
September 2016

A Dell Deployment and Configuration Guide
# Revisions

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2016</td>
<td>Initial release</td>
</tr>
</tbody>
</table>

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1 Introduction

This document illustrates how to configure the Arista® 7050S switch for use with Dell™ PS Series storage while using Dell best practices. The recommended configuration uses Dynamic Link Aggregation Groups (LAGs) for inter-switch connections.

This document may be used independently or as part of the Dell Rapid EqualLogic (PS Series) Configuration portal, which is a collection of documents intended to assist users in deploying Dell PS Series iSCSI SAN solutions: http://en.community.Dell.com/techcenter/storage/w/wiki/3615.rapid-equallogic-configuration-portal-by-sis.aspx.


1.1 Document conventions

Table 1 lists the formatting conventions used in this document.

<table>
<thead>
<tr>
<th>Format</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bold</strong></td>
<td>User input</td>
<td>Dell&gt;enable</td>
</tr>
<tr>
<td><em>Italic</em></td>
<td>Placeholder or variable</td>
<td><em>your password</em></td>
</tr>
<tr>
<td><em>Italic&gt;</em> <em>brackets&gt;</em></td>
<td>Separate variables</td>
<td><em>&lt;ip address&gt;</em> <em>&lt;mask&gt;</em></td>
</tr>
</tbody>
</table>

1.2 Audience

This switch configuration guide describes an optimal configuration following Dell best practices for a PS Series iSCSI SAN and is intended for storage or network administrators and deployment personnel.
1.3 Switch details

Table 2 provides an overview of the switch configuration.

Table 2 Switch specifications

<table>
<thead>
<tr>
<th>Arista 7050S</th>
<th></th>
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<tbody>
<tr>
<td>Switch vendor</td>
<td>Arista</td>
</tr>
<tr>
<td>Switch model</td>
<td>7050S</td>
</tr>
<tr>
<td>Switch firmware</td>
<td>4.17.0F-3304146.4170F</td>
</tr>
</tbody>
</table>

**Note:** For proper functionality, the switch must be at the switch firmware version shown in Table 2 before proceeding with this configuration. Using previous firmware versions may have unpredictable results.

The latest firmware updates and documentation can be found at: [arista.com](http://arista.com). This site requires a login.
1.4 Cabling diagram

The cabling diagram shown below represents the Dell recommended method for deploying your servers and PS Series arrays.

![Cabling Diagram]

Figure 1  Cabling diagram
Dell recommended switch configuration

These steps show you how to configure two Arista 7050S switches with a LAG. The switches are interconnected using two of the 40GbE Quad Small Form-factor Pluggable (QSFP) uplink ports, and the LAG is configured for Dynamic Link Aggregation Control Protocol (LACP).

2.1 Hardware configuration

1. Power on the two switches.
2. Connect a serial cable to the serial port of the first switch.
3. Using PuTTY or another terminal utility, open a serial connection session to the switch.
4. 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.
5. Connect the (QSFP) LAG cables between the switches by connecting port 49 on switch 1 to port 49 on switch 2. Connect port 50 on switch 1 to port 50 on switch 2. See this configuration in Figure 1.

2.2 Delete startup configuration

**Note:** The following commands will delete all configuration settings.

```
localhost>enable
localhost#delete startup-config
localhost#reload
```

System configuration has been modified. Save? [yes/no/cancel/diff]:no
Proceed with reload? [confirm]

**Note:** The switch will reboot.
2.3 **Cancel Zero Touch**

The following message will appear when the switch has completed the reload process:

No startup-config was found.
The device is in Zero Touch Provisioning mode and is attempting to download the startup-config from a remote system. The device will not be fully functional until either a valid startup-config is downloaded from a remote system or Zero Touch Provisioning is cancelled.
To cancel Zero Touch Provisioning, login as admin and type 'zerotouch cancel' at the CLI.

Alternatively, to disable Zero Touch Provisioning permanently, type **zerotouch disable** at the CLI.

**Note:** The device will reload when these commands are issued.

```
localhost login: admin
localhost> zerotouch cancel
```

**Note:** The switch will automatically reboot

```
localhost login: admin
localhost> enable
```

2.4 **Convert LAG ports from 10GbE mode to 40GbE mode**

```
localhost# configure
localhost(config)# interface ethernet 49/1, 50/1
localhost(config-if-Et49/1,50/1)# speed forced 40gfull
```

**WARNING!**
Changing the speed setting from 10G to 40G on this port will cause all the interfaces on the switch to flap.

Do you wish to proceed with this command? [y/N] **y**

```
localhost(config-if-Et49/1,50/1)# end
localhost# copy running-config startup-config
localhost# reload
```

**Note:** The switch will automatically reboot
2.5 Configure out of band (OOB) management port

localhost login: admin
localhost>enable

localhost#configure
localhost(config)#interface management 1
localhost(config-if-Ma1)#ip address <ip address/mask>
localhost(config-if-Ma1)#exit

2.6 Configure login credentials

localhost(config)#username admin privilege 15 secret <yourpassword>

2.7 Configure Queue Buffer Management

localhost(config)#platform trident mmu queue profile my_profile
localhost(config-queue-my_profile)#egress unicast queue 1 threshold 4
localhost(config-queue-my_profile)#exit
localhost(config)#platform trident mmu queue profile my_profile apply

2.8 Enable Jumbo Frames

localhost(config)#interface ethernet 1-48
localhost(config-if-Et1-48)#mtu 9214

2.9 Configure flow control

localhost(config-if-Et1-48)#flowcontrol receive on

**Note:** Do not enable send (Tx) flow control on any port.

2.10 Configure portfast and spanning-tree (RSTP)

localhost(config-if-Et1-48)#spanning-tree portfast
localhost(config-if-Et1-48)#exit
localhost(config)#spanning-tree mode rstp
2.11 Configure Dynamic Link Aggregation using LACP

localhost(config)#interface Port-channel 200
localhost(config-if-Po200)#mtu 9214
localhost(config-if-Po200)#exit

2.12 Configure QSFP28 ports for LAG
These commands assign two 40GbE QSFP ports to the Port-Channel

localhost(config)#interface ethernet 49/1,50/1
localhost(config-if-Et49/1,50/1)#mtu 9214
localhost(config-if-Et49/1,50/1)#flowcontrol receive on
localhost(config-if-Et49/1,50/1)#channel-group 200 mode active
localhost(config-if-Et49/1,50/1)#end

2.13 Save configuration

localhost#copy running-config startup-config

2.14 Configure additional switch
Repeat the commands from sections 2.2–2.13 to configure the second switch.

Note: The preceding procedure places all switch ports in the default VLAN. If you prefer to place ports in a non-default VLAN, refer to the documentation for your switch.
A  Additional resources

Dell.com/support is focused on meeting your needs with proven services and support.

Dell TechCenter is an IT Community where you can connect with Dell Customers and Dell employees for the purpose of sharing knowledge, best practices, and information about Dell products and your installations.

Storage Solutions Technical Documents on Dell TechCenter provide expertise that helps to ensure customer success on Dell Storage platforms.

Referenced or recommended Dell publications:

- PS Series Configuration Guide
- Dell Storage Compatibility Matrix
- PS Series Technical Documents