DELL S4810 STACKING SCRIPT

A brief how-to guide to stacking S4810 switches.

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Document Purpose: To empower someone who has no prior experience with FTOS, or stacking in FTOS, to quickly create a functioning stack of Dell S4810s. A script and side notes are included at the end. This is not meant to be an all-encompassing document on stacking, but simply to get you through setting up a PoC at a client site.

Objective: Stack three (3) S4810 units using 40G user-ports 56 and 60 on each unit.

Hardware: Three (3) S4810s connected in a ring topology.

Code version: 8.3.12.0 – bootcode 1.2.0.2

Preliminary Things to Understand:

- A stack-group is a group of either four (4) consecutive 10G ports or one (1) 40G port

  10G ports are numbered 0-47 – in other words, stack-groups 0-11

  - Ports 0-3 – stack-group 0
  - Ports 4-7 – stack-group 1
  - Ports 8-11 – stack-group 2
  - Ports 12-15 – stack-group 3
  - Ports 16-19 – stack-group 4
  - Ports 20-23 – stack-group 5
  - Ports 24-27 – stack-group 6
  - Ports 28-31 – stack-group 7
  - Ports 32-35 – stack-group 8
  - Ports 36-39 – stack-group 9
  - Ports 40-43 – stack-group 10
  - Ports 44-47 – stack-group 11

  40G ports are numbered 48, 52, 56, and 60

  - Ports 48 – stack-group 12
  - Ports 52 – stack-group 13
  - Ports 56 – stack-group 14
  - Ports 60 – stack-group 15

- A stack-unit refers to an individual switch in the stack. By default, all standalone switches are numbered as stack-unit 0. With OS version 8.3.12.0, renumbering occurs automatically after the switches are configured for stacking and rebooted. Switches can be renumbered manually from the privilege-exec prompt using the stack-unit x renumber y command. Once you do that, the switch will reboot automatically.

- A switch’s priority setting dictates whether it will be the stack Master, the Standby or a Member. The Master is the switch with the highest integer setting and the Standby is the one with the second highest, and so on (for example, priorities 14, 13 and 12 equate to the Master, Standby and Member of a 3-switch stack). To set priority, use the stack-priority <0-14> command on each individual switch.
OK – let’s get to it!

Overall Steps:

1. Set the switch’s Priority
2. Define which stack-groups (read: Ports) will be used to create the stack
3. Enable the physical Interfaces
4. Save configuration
5. Reboot
6. Verify stacking parameters

Switch Stack Layout

Steps 1-4 for Each Switch:

**NOTE:** Enter the exact same configuration lines on each switch in the stack, but remember to change the priority setting for each, depending on whether the switch will be the Master, the Standby or a Member. The “stack-unit” number will be automatically changed by FTOS during the reboot in Step 5.

```
conf t

! (Set the switch’s priority. This switch will be the stack Master)
stack-unit 0 priority 14

! (Define which stack-groups will be used for stacking, Confirm by selecting “yes”)
stack-unit 0 stack-group 14
yes
stack-unit 0 stack-group 15
yes

! (enable the 40G ports that will be used for stacking)
interface fortygig 0/56
no shutdown
Interface fortygig 0/60
no shutdown
exit
exit

! (Save configuration)
wr mem
```
Step 5:

Reload all the switches simultaneously. Each switch’s “stack-unit” number will automatically be renumbered to 0, 1 and 2.

Step 6:

Verify stacking is correct using the following commands on the Master switch:

sh system
sh system stack-ports

DONE!

Side Notes:

- Make sure the OS version on the switches support stacking (version 8.3.10.2 or higher).
- Stacking can be configured using 10G or 40G ports, but not a mix of both.
- The ports that are configured for stacking bandwidth between switch units are automatically bundled by FTOS and use a proprietary LAG encapsulation. LACP or static LAG’s do not need to be configured manually.
- You can negate the configuration commands presented with a preceding “no” keyword
- Read the formal Dell white paper on stacking for a more comprehensive understanding.