Dell EMC Networking – Deploying Native Fibre-Channel

Cheat Sheet on deploying Fibre-Channel using the Dell EMC S4148U-ON

Abstract
Short configuration guide on S4148U as a native fibre-channel switch

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Revisions

Date	Description
April 2018	Initial release

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Support:

Other:

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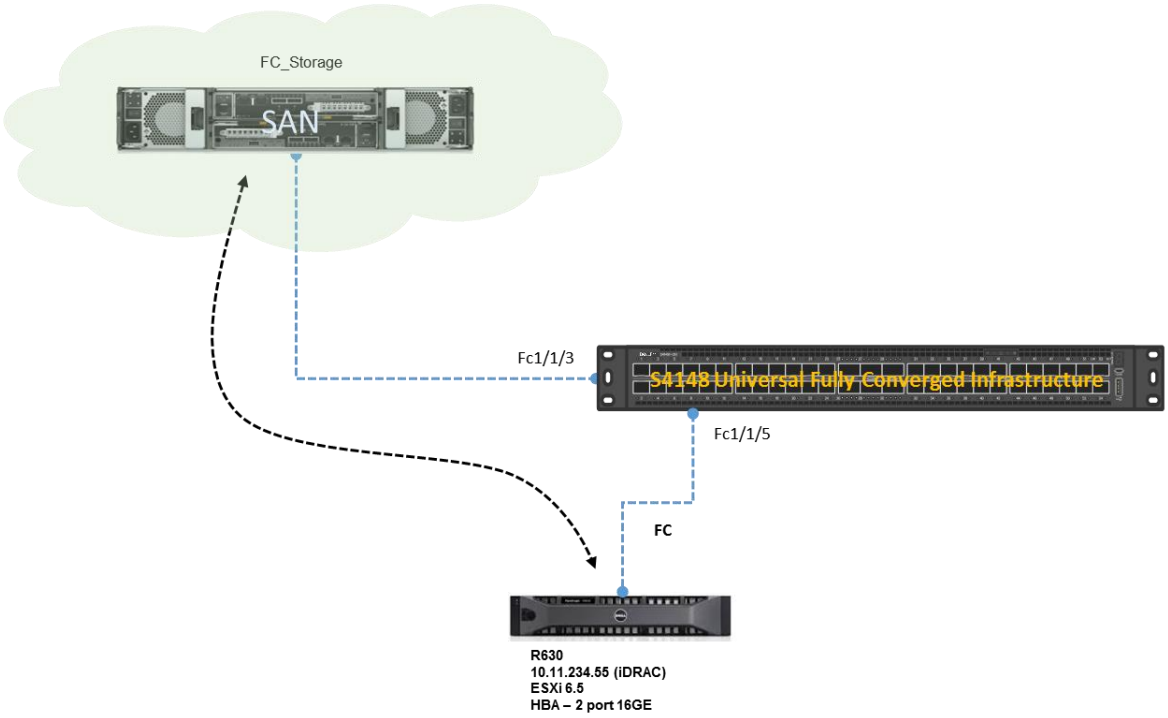
Test Setup

Figure 1 shows the setup used to test native Fibre-Channel deployment on the Dell EMC S4148U. The following list describes the setup:

- Traffic is uni-directional, from host to target
- Storage traffic is generated by the server
- The S4148U is running OS10 (10.4.0(X2))
- The target storage device is an emulated FC target (SAN Blaze)
- Connection is at 16Gbps

Figure 1 Dell EMC S4148U-ON Fibre-Channel test setup



A Configuration Details

A.1 S4148U-ON as FC Native Switch

1. Enable FC feature and create domain ID
    a. **Switch#** conf t
    b. **Switch(config)#** feature fc <domain_ID>

2. Configure the Ethernet interface as fibre-channel interface
    a. **Switch#** conf t
    b. **Switch(config)#** port-group 1/1/1
    c. **Switch(conf-pg-1/1/1)#** mode fc <16g-2x or 8g-4x>
    d. **Switch(conf-pg-1/1/1)#** end
    e. **Switch#**

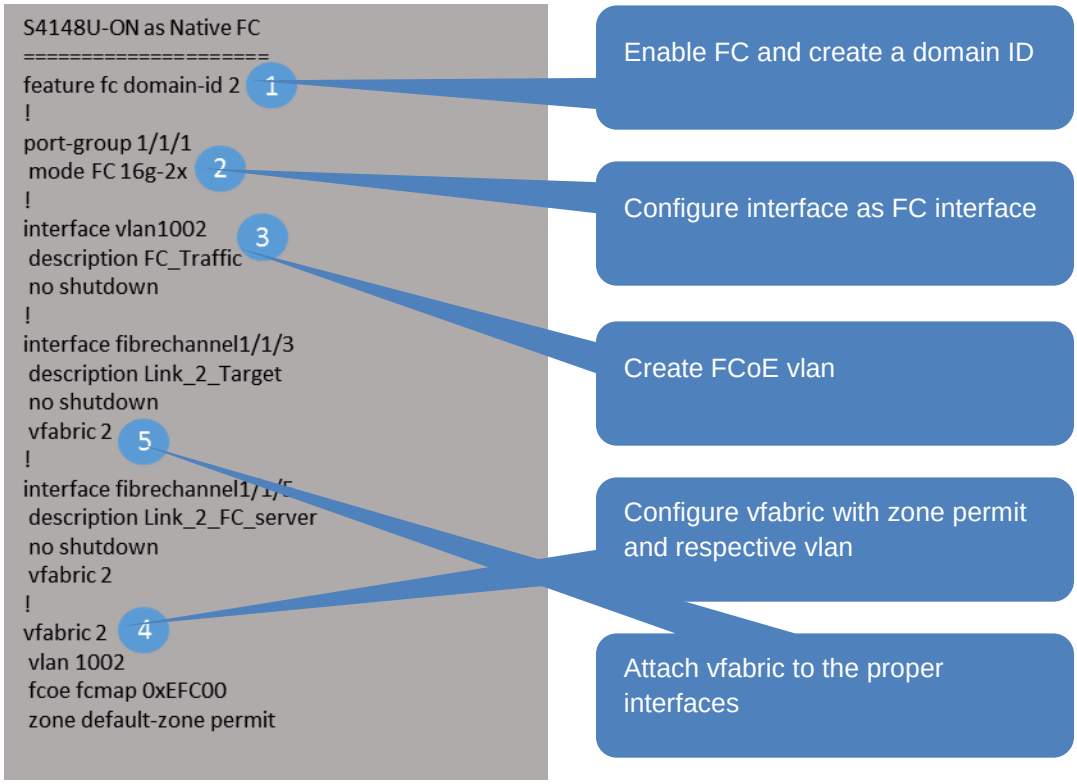
3. Create FCoE vlan
    a. **Switch#** conf t
    b. **Switch(config)#** int vlan 1002
    c. **Switch(config)#** end
    d. **Switch#**

4. Create the vfabric. This is the storage fabric on which specific zones are attached. In this case, a default is created and anyone is permitted to connect to this zone.
    a. **Switch#** conf t
    b. **Switch(config)#** vfabric <id>
    c. **Switch(config-vfabric-id)#** vlan 1002
    d. **Switch(config-vfabric-id)#** fcoe fcmap <0xefc00-0xefcff>
    e. **Switch(config-vfabric-id)#** zone default-zone permit
    Configure allow or deny default-zone. No specific zone is being configured. To configure a specific zone, use "zoneset" command.
    f. **Switch(config-vfabric-id)#** end
    g. **Switch**

5. Attach vfabric to the proper interfaces
    a. **Switch#** conf t
    b. **Switch(config)#** int range fibrechannel 1/1/3-1/1/5
    c. **Switch(config-range-fc1/1/3-1/1/5)#** vfabric 2
    d. **Switch(config-range-fc1/1/3-1/1/5)#** end
    e. **Switch#**

A.2 Switch configuration output

The following screen capture shows the entire configuration as it appears on the S4148U-ON.



```
S4148U-RU24# show fc ns switch

Total number of devices = 3

Switch Name              10:00:14:18:77:20:88:cf
Domain Id                2
Switch Port              fibrechannel1/1/3
FC-Id                  02:0c:00
Port Name                20:05:00:11:0d:d3:01:00
Node Name                20:05:00:11:0d:d3:01:00
Class of Service         8
Symbolic Port Name       SANBlaze V6.3.1 FC Port
Symbolic Node Name
Port Type              N_PORT
Registered with NameServer    Yes
Registered for SCN       No

Switch Name              10:00:14:18:77:20:88:cf
Domain Id                2
Switch Port              fibrechannel1/1/3
FC-Id                  02:0c:01
Port Name                20:05:00:11:0d:d3:01:01
Node Name                20:05:00:11:0d:d3:01:01
Class of Service         8
Symbolic Port Name       SANBlaze V6.3.1 FC PortSANBlaze V6.3.1 FC Port
Symbolic Node Name
Port Type              N_PORT
Registered with NameServer    Yes
Registered for SCN       No

Switch Name              10:00:14:18:77:20:88:cf
Domain Id                2
Switch Port              fibrechannel1/1/5
FC-Id                  02:14:00
Port Name                10:00:00:90:fa:8e:06:40
Node Name                20:00:00:90:fa:8e:06:40
Class of Service         12
Symbolic Port Name       Emulex PPN-10:00:00:90:fa:8e:06:40
Symbolic Node Name       Emulex LPe16002B-M6-D FV10.2.315.26 DV11.2.156.20 HN:R630-R7-R2-RU37 OS:VMware ESXi 6.5.0
Port Type              N_PORT
Registered with NameServer    Yes
Registered for SCN       Yes
```