DELL EMC NETWORKING OS10 SMARTFABRIC SERVICES

Technical FAQ

SmartFabric Services Tech FAQ

1. **Can I mix and match the Dell EMC PowerSwitch S and Z series product under one fabric?**
   The leaf and spine fabric automation support the Dell EMC PowerSwitch S4100 series, S5200 series, and Z9264 systems. However, switch models must match to create a leaf pair, such as a pair of PowerSwitch S5248 systems, with SmartFabric Services.

2. **How do the additional switches connect to the existing fabric and download the configuration?**
   When a new switch is added to the fabric, the user must first enable the SmartFabric on that switch so that it joins the cluster. The SmartFabric master then automates the required configuration on this switch.

3. **Where is the configuration stored within the SmartFabric?**
   The configuration is stored as a binary in each node within its internal database and is not accessible to the user.

4. **Are there master or backup controllers?**
   There is a 1:n redundancy for the master. Each of the switches in the cluster maintains the state of the fabric.

5. **How does the network respond when the master switch fails?**
   When the master switch fails, a new master is elected and advertises itself as the master. Despite the failed switch being out of service, the fabric state is maintained and all packet forwarding happens normally.

6. **Can the SmartFabric integrate with VMware NSX or Hyper-V?**
   The SmartFabric can set up the underlay network for an overlay NSX deployment. The Dell OpenManage Network Integration (OMNI) for VMware vCenter, handles the infrastructure and transport networks through SmartFabric. The NSX HW VTEP functionality is not yet supported and may be added in future once Dell Networking OS10 supports it. Hyper-V integration is not currently available.

7. **Are hypervisor plug-ins available that enable VM to VM level visibility?**
   OMNI is the plug-in for VMware vCenter.

8. **Can I integrate ToR switches and the MX switches in the fabric?**
   The leaf spine fabric and the MX fabric have different personalities that operate as separate SmartFabric domains.

9. **Can I have all MX9116n switches on MX and create a fabric?**
   This configuration is not currently supported.

10. **Does Smart Fabric Services support FC storage?**
    No. The only services that are currently available include VxRail, backend Isilon, and MX. For additional information on the use of SFS, see *Dell EMC Networking SmartFabric for VxRail Solution Brief*.

11. **How does FC scale in the SmartFabric, namely the Dell EMC PowerSwitch S4148U? Does it behave like the ISL trunking in Brocade SAN?**
    SmartFabric Services does not support FC.

12. **How does SmartFabric integrate with hybrid third-party switches using IEEE?**
    SmartFabric automates uplink port configurations using standard L2 or L3 routing protocols based on the user inputs. The user must properly and manually configure the 3rd party switch connected using uplinks.

13. **Which Dell EMC PowerSwitch S and Z series systems have SmartFabric capabilities?**
    Dell EMC PowerSwitch S4100 series, S5200 series, and Z9264 systems currently support SmartFabric. Dell EMC PowerSwitch S4200 series support can be added based on use cases. For additional information, contact your Dell EMC sales representative.

14. **Does SmartFabric increase the capacity or pool the capacity of all switches in the Fabric such as MAC address, routing, ACL?**
    No. SmartFabric does not change the capacity or pool the capacity of the switches. Each of the capabilities still applies.

15. **Does SmartFabric carry SNMP management capabilities?**
    No. SmartFabric only exposes the Redfish REST API for Northbound interfaces to communicate with the SmartFabric master and manage the fabric.

16. **In SmartFabric, which switch should be connected to the outside world, such as firewalls, load balancers, and routers?**
    SmartFabric is not dependent on what the uplink switches are. Layer2 uplinks are supported as are Layer3 uplinks, such as eBGP and OSPF. If the requirements for connecting to the uplink are met, the fabric can be connected.

17. **Why are the PowerSwitch S4048-ON, S5048F-ON, S5148F-ON, Z9100-ON systems not covered?**
    The models have not yet been tested with SmartFabric and VxRail.

18. **There are two uses cases with S4200 series: Routing with the S4200 with SmartFabric, and using the S4200 as ToR – Leaf for media workload which requires SF. Does the S4200 support SmartFabric?**
    The S4200 series could be added based on workload requirements.

19. **Does the solution reserve fabric resources?**
    With VxRail, Internal Management VLAN 3939 is created and all ports are tagged in VLAN 3939. ISL ports are configured between ToR (or Leaf) switches to form a VLT domain. RPVST+ is enabled and flow control is set to rx on and tx off.
    Note: The spanning tree mode can be changed if needed.

20. **Are there other costs associated with this switch?**
    No. The only requirement is the Dell OS10 Enterprise Edition license.

21. **What uplink speeds are supported?**
    10-100 GbE

22. **Is a 40GbE uplink supported?**
    Yes.

23. **What are uplinks?**
    Uplink ports enable the network to communicate with the larger network. For example, any network links from the ToR (or leaf) switches towards spine switches, routers, and firewalls, would be considered an uplink. Configure these switch ports using dynamic LACP or by using static port channels (default behavior) on the Dell switches when configured with SmartFabric Services.

24. **Will SmartFabric for VxRail be available on the S4048-ON?**
    SmartFabric has not yet been tested with the S4048 system.

25. **Is the SmartFabric Service built into the OS10 image or does that need to be added separately? If it is built in, what exact version of OS10 has that?**
    The functionality comes with OS10. 10.4.1.4 is the initial software version for SmartFabric for VxRail. SmartFabric is supported with S4100 and S5200 series systems. 10.5.0.0 is the latest version of OS10.

26. **Where I can find more information about OMNI?**
    The user guide for SmartFabric and OMNI is available here. Download the Dell EMC OMNI software from the VMware Solution Exchange.

27. **Can other devices be added to the VxRail fabric switches?**
    Yes, if it is another VxRail appliance. The current release of SmartFabric Services for VxRail can only onboard VxRail appliances. Support for non-VxRail appliances will be added in the future.

28. **When will the S5232 and Z9264 systems support SmartFabric?**
    Support for the S5232 and Z9264 (spine only) systems will be aligned with VxRail 4.7.410, along with multirack support.