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Cisco Nexus Hyperfabric — Bringing Up 100G Fabric Secondary Switches

Overview

Cisco Nexus Hyperfabric currently ships with QSFP-DD ports in a static 400G port speed configuration. Cisco Nexus Hyperfabric supports subrate speeds, such as 40G or 100G, on 400G QSFP-DD ports. However, these ports must first be manually configured for subrate speeds before these ports will establish link and form an adjacency.

This document outlines the recommended procedure for binding switches into a fabric and manually configuring port speeds to establish 100G or other subrate speed fabric adjacencies.

Default Hyperfabric switch port configuration

Hyperfabric switch ports are hardcoded in the firmware by default with these configurations:

- QSFP-DD ports are set to 400G speed by default. The ports that are QSFP-DD depend on the switch model:
  - HF6100-32D—Ports 1_1 to 1_32
  - HF6100-60L4D—Ports 1_31 to 1_34
- 1/10/25/50G interfaces are always set to 10G (HF6100-60L4D).

Primary and secondary switches

In Cisco Nexus Hyperfabric, there is a concept of a primary switch, which is the first switch brought online with connectivity to the cloud. All subsequent switches are considered to be secondary switches and can leverage the primary switch for cloud connectivity if the switches are not using the out-of-band management interface.

Bring up a 100G fabric secondary switch

In this procedure, switches must be bound to the fabric and manually configured before fabric links are established. As a result, each switch must have its own independent management port connection to the Cisco Nexus Hyperfabric cloud controller to complete this manual port configuration and fabric bind process.

This procedure assumes that your data center environment has copper connectivity to provide cloud connectivity for the out-of-band management port on one or many secondary switches. This procedure refers to procedures in the *Cisco Nexus Hyperfabric—Getting Started* document to provide the complete steps.

Follow these steps to bring up a 100G fabric secondary switch.

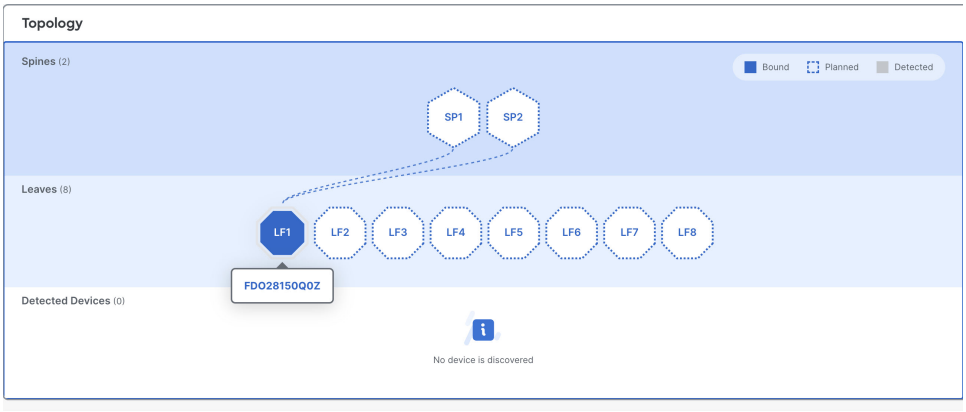
Step 1 Connect one of the switches to the Cisco Nexus Hyperfabric cloud service.

See the "Connect the first switch to the Cisco Nexus Hyperfabric cloud service" procedure in the *Cisco Nexus Hyperfabric—Getting Started* document.

Step 2 Bind the switch to the fabric.

See the "Bind the switches" procedure in the *Cisco Nexus Hyperfabric—Getting Started* document.

Figure 1: Example of a bound switch



Step 3 Configure the fabric connections.

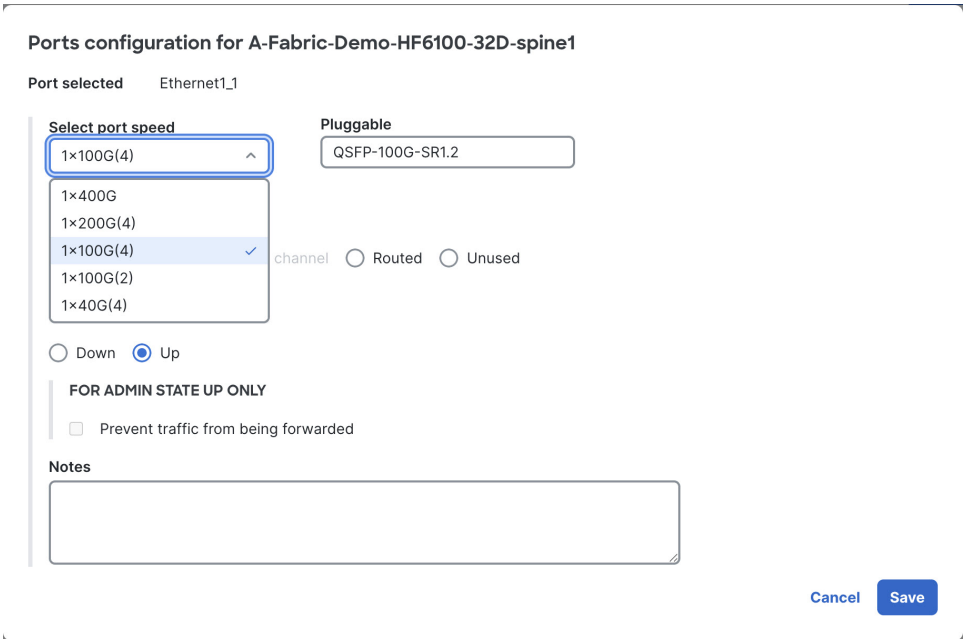
See the "Configure fabric connections using auto-cabling" or "Configure fabric connections manually" procedure in the *Cisco Nexus Hyperfabric—Getting Started* document.

Step 4 On both peer interfaces, set the port speed to **1x100G(4)**, and set the port role to **Fabric**.

For the port speed, the number in parenthesis indicates the number of lanes.

See the "Configure ports" procedure in the *Cisco Nexus Hyperfabric—Getting Started* document.

Figure 2: Choosing the port speed



Step 5 Push the configuration changes.

See the "Finish and commit the design" procedure in the *Cisco Nexus Hyperfabric—Getting Started* document.

Step 6 Connect the cables to the switches as specified in the fabric blueprint.

Step 7 Verify that connectivity is established.

a) In the Cisco Nexus Hyperfabric GUI, choose **Fabrics**.

b) Click the fabric that contains the switch.

In the **Topology** area, the borders for the switch positions should be green.

Figure 3: Example of switch positions with green borders

c) Click a switch position, then click the switch name.

d) In the **Configure** area, click **Port configurations**.

The **Admin state** and **Link state** should both have green up arrows, and the role should be set to "Fabric".

Trademarks

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