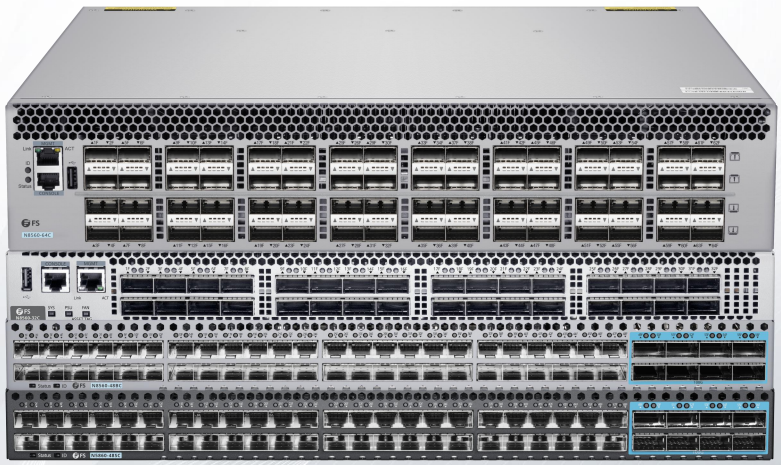
N5860 And N8560 And NC8200 SERIES STACKING GUIDE

Better understand the concepts and procedures to manage FS N5860, N8560, NC8200 series switches stacks



Overview

This stacking guide is intended to provide a true stacking solution for N5860, N8560 and NC8200 series data center switches.

This guide provides a unified data plane and recommended connection for stacking switches. When switches assembled into a stack, the switches synchronize their actions so that network operation, like spanning tree protocol, VLAN, and stack port trunks, is able to span across all of their Ethernet ports.

Models of Switch

- N5860-48SC
- N8560-48BC
- N8560-32C
- N8560-64C
- NC8200-4TD
- NC8200-8C
- NC8200-24BC

What is Stacking?

N5860 and N8560 and NC8200 series switches can be connected to other switches and operate together as a single unit, this configuration is called "stacks", and is useful for quickly increasing the capacity of a network.
Stackable switches can be added or removed from a stack as needed without affecting the overall performance of the stack. Depending on its topology, a stack can continue to transfer data even if a link or unit within the stack fails. This makes stacking an effective, flexible, and scalable solution to expand network capacity.

Stacking Precautions

- The stacking port does not support auto-negotiation. For example, a 10G port can only use 10G transceivers for networking, but cannot use 1G transceivers.
- Physical member ports in a stack port must be the same type.
- The port will not support stacking after split configuration setting. For example, the 40G port which has been split into 4x 10G port, can't be used as stacking port.
- The FS software version running on a switch that you plan to add to a switch stack must either be the same as the master switch version.
- The number of member switches in a stack should not exceed the recommended value.
- The bend radius of optical fibers or cables must be larger than the minimum bend radius. The minimum bend radius of SFP+ cables is 25 mm; the minimum bend radius of AOC cables is 30 mm; the bend radius of optical fibers is generally greater than or equal to 40 mm.

N5860-48SC Switch

The 10Gb L3 leaf switch N5860-48SC is ideal for small-sized data centers and cloud computing services.

Data Platform

P/N	N5860-48SC
Port Support Stacking	Ports 1-56
Port Type	10G, 100G
Mixed Stacking Port	Support Mixed Stacking Between 10G, 100G Ports
Max. Number of Stacking Port	20
Max. Number of Switches Per Stack	2 Units
Same Models Stacking	Yes
Mixed Stacking Between other Series	No

Stacking Port Display

The following figure 1 show the locations of ports that can be used as stack ports on the switches, and the stacking ports are both could be used as business ports.

- **N5860-48SC**

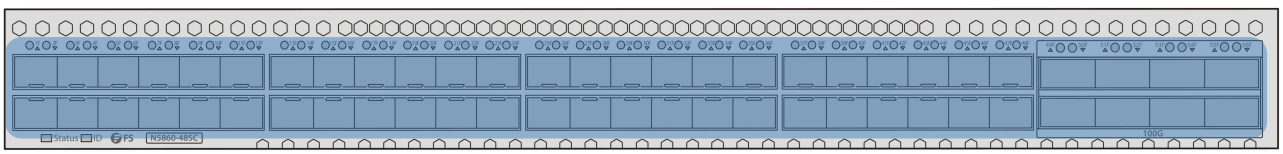


Figure 1

Recommended Stacking Connection

The following figure 2 show the appearance of N5860-48SC, and the figures illustrate how to connect these ports in different stack connection models.

Recommended stack connections are shown in ring topology which is more stable and reliable.

- **Same Models**

N5860-48SC Stacking Shown for Reference

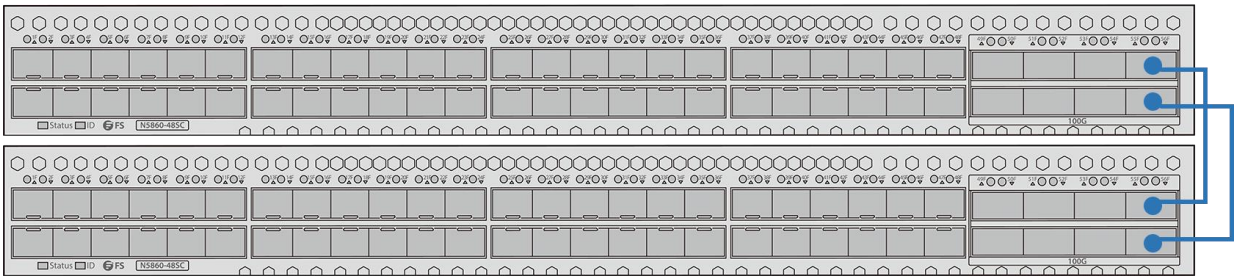


Figure 2

Stacking Configuration Settings Reference:

For details about the configuration settings on N5860-48SC, please see the **Configuration Guide**.

N8560 Series Switches

High performance stackable L3 25G/100G switches are ideal for medium and large data centers and cloud computing services.

Data Platform

P/N	N8560-48BC	N8560-32C	N8560-64C
Port Support Stacking	Ports 1-56	Ports 1-32	Ports 1-64
Port Type	25G, 100G	100G	100G
Mixed Stacking Port	Support Mixed Stacking Between 25G, 100G Ports	Support Mixed Stacking Between 100G Ports	Support Mixed Stacking Between 100G Ports
Max. Number of Stacking Port	20	20	20
Max. Number of Switches Per Stack	2 Units	2 Units	2 Units
Same Models Stacking	Yes	Yes	Yes
Mixed Stacking Between N8560 Series	No	No	No

Note: For 25G switch N8560-48BC, port 4N+1 - 4 (N+1) is a group by default. For example, if port 1 in the same group is added to the VSL, the port 2, 3 and 4 are automatically added to the VSL and cannot be used as ordinary interfaces.

Stacking Port Display

The figure 3, 4 and 5 show the locations of ports that can be used as stack ports on the switches, and the stacking ports can both be used as business ports.

- **N8560-48BC**

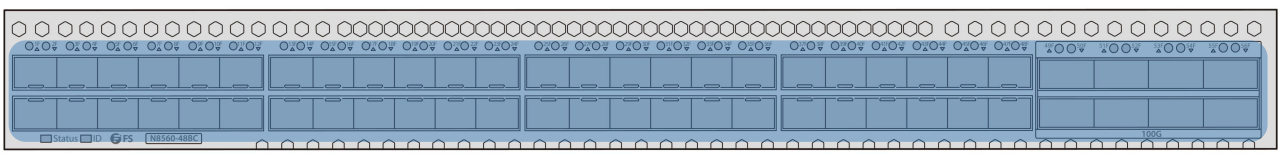


Figure 3

- **N8560-32C**

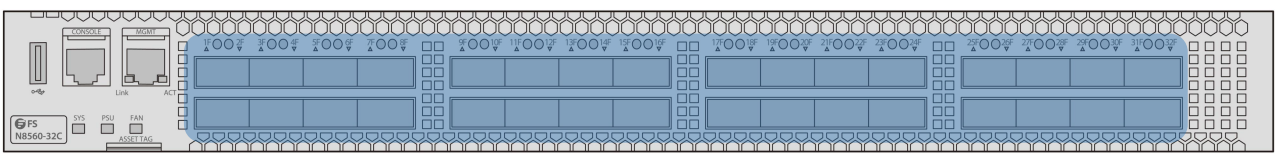


Figure 4

- **N8560-64C**

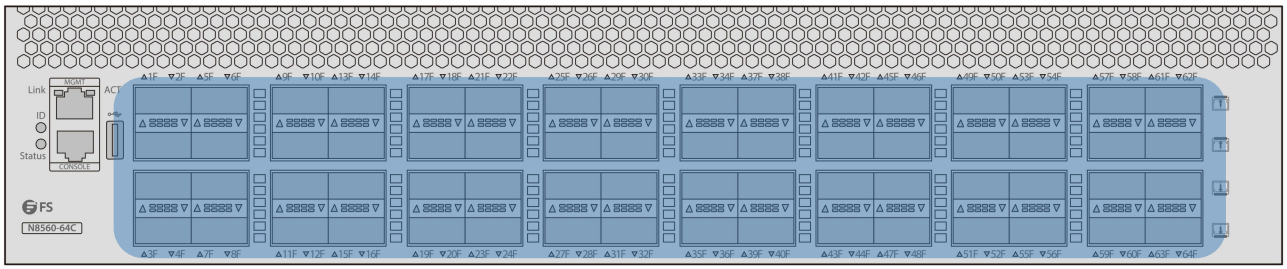


Figure 5

Recommended Stacking Connection

The following figure 6 show the appearance of N8560 series, which may be different from your selected model. The figure illustrates how to connect these ports in different stack connection models.

Recommended stack connections are shown in ring topology which is more stable and reliable.

- **Same Models**

N8560-48BC Stacking Shown for Reference

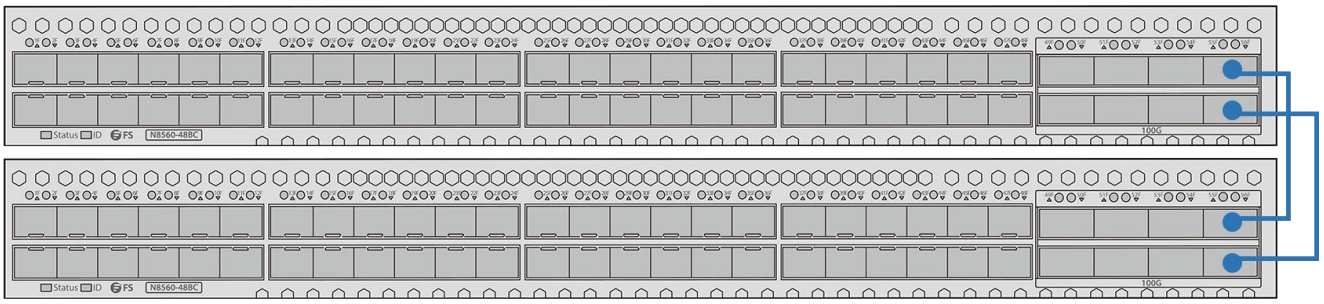


Figure 6

Stacking Configuration Settings Reference:

For details about the configuration settings on N8560 series switches, please see the **Configuration Guide**.

NC8200 Series Switches

High performance stackable leaf-spine L3 switches are ideal for for medium-size data centers and large enterprise networks.

Data Platform

P/N	NC8200-4TD	
	NC8200-8C	NC8200-24BC
Port Support Stacking	Ports 1-8	Ports 1-24
Port Type	100G	25G, 100G
Mixed Stacking Port	Support Mixed Stacking Between 100G Ports	Support Mixed Stacking Between 25G, 100G Ports
Max. Number of Stacking Port	20	20
Max. Number of Switches Per Stack	2 Units	2 Units
Same Models Stacking	Yes	Yes
Mixed Stacking Between NC8200 Series	No	No
Note: For the line card NC8200-16Q, stacking is not supported.		

Stacking Port Display

The figure 7 and 8 show the locations of ports that can be used as stack ports on the switches, and the stacking ports are both could be used as business ports.

• Switch NC8200-4TD and Line Card NC8200-8C

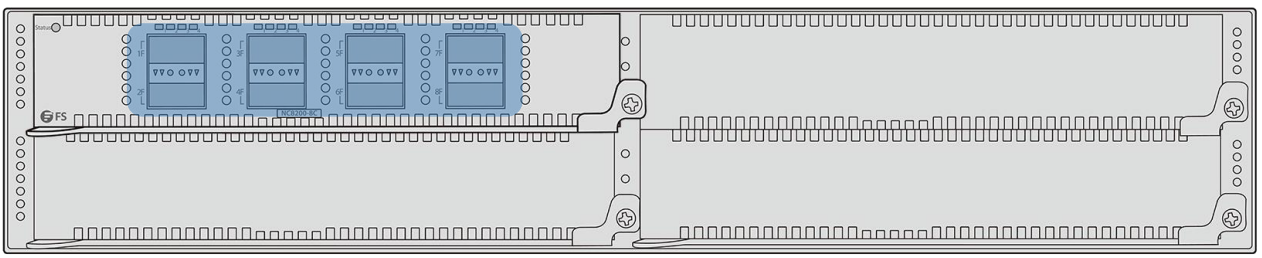


Figure 7

• Switch NC8200-4TD and Line Card NC8200-24BC

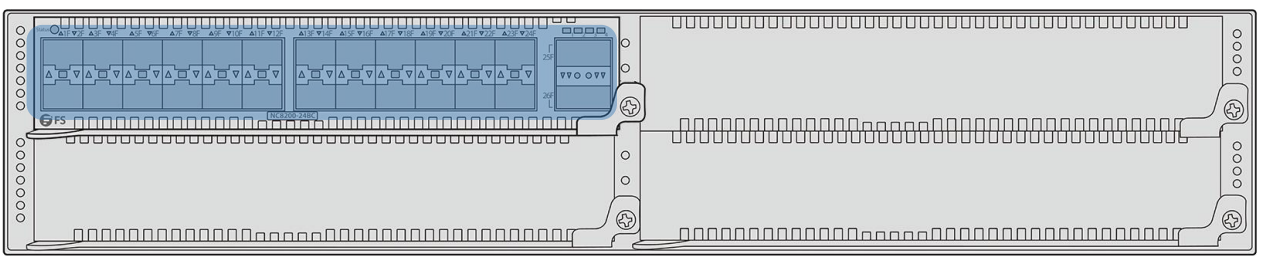


Figure 8

Recommended Stacking Connection

The following figure 9 show the appearance of NC8200 series, which may be different from your selected model. The figure illustrates how to connect these ports in different stack connection models.

Recommended stack connections are shown in ring topology which is more stable and reliable.

- **Same Models**

NC8200-4TD Stacking Shown for Reference

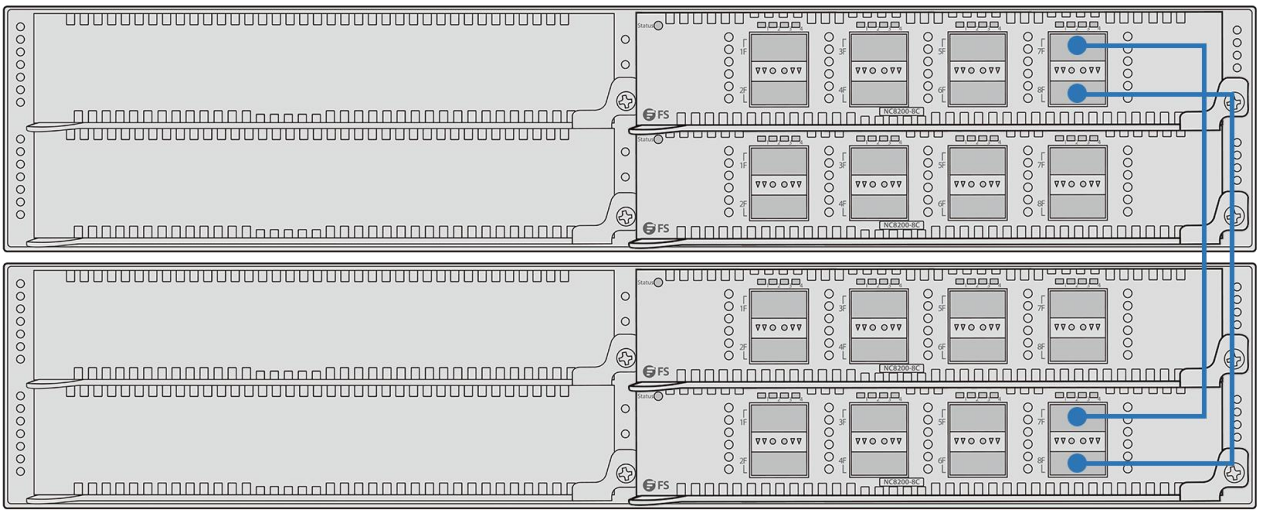


Figure 9

Stacking Configuration Settings Reference:

For details about the configuration settings on NC8200 series switches, please see the **Configuration Guide**.

FAQ

Q1: What is the stack distance supported?
A1: The recommended stacking distance should be within 30m of the same machine room.

Q2: Can I do LACP configuration after stack?
A2: After stacking, operations such as LACP (link aggregation) can be carried out as usual. Stacking does not affect other functional configurations.

Q3: The configuration I made before stacking is lost, how to deal with it?
A3: We recommend that you clear the configurations such as VLAN configuration before stacking. And you can reconfigure on the master switch after the stack is complete.

Q4: When stacking how is bandwidth calculated?
A4: The formula for calculating the stack bandwidth is: Stack Bandwidth = Number of stack member ports in stack ports x Bandwidth of a single stack member port.