# ThinkSystem N1380 Neptune enclosure rack configurations
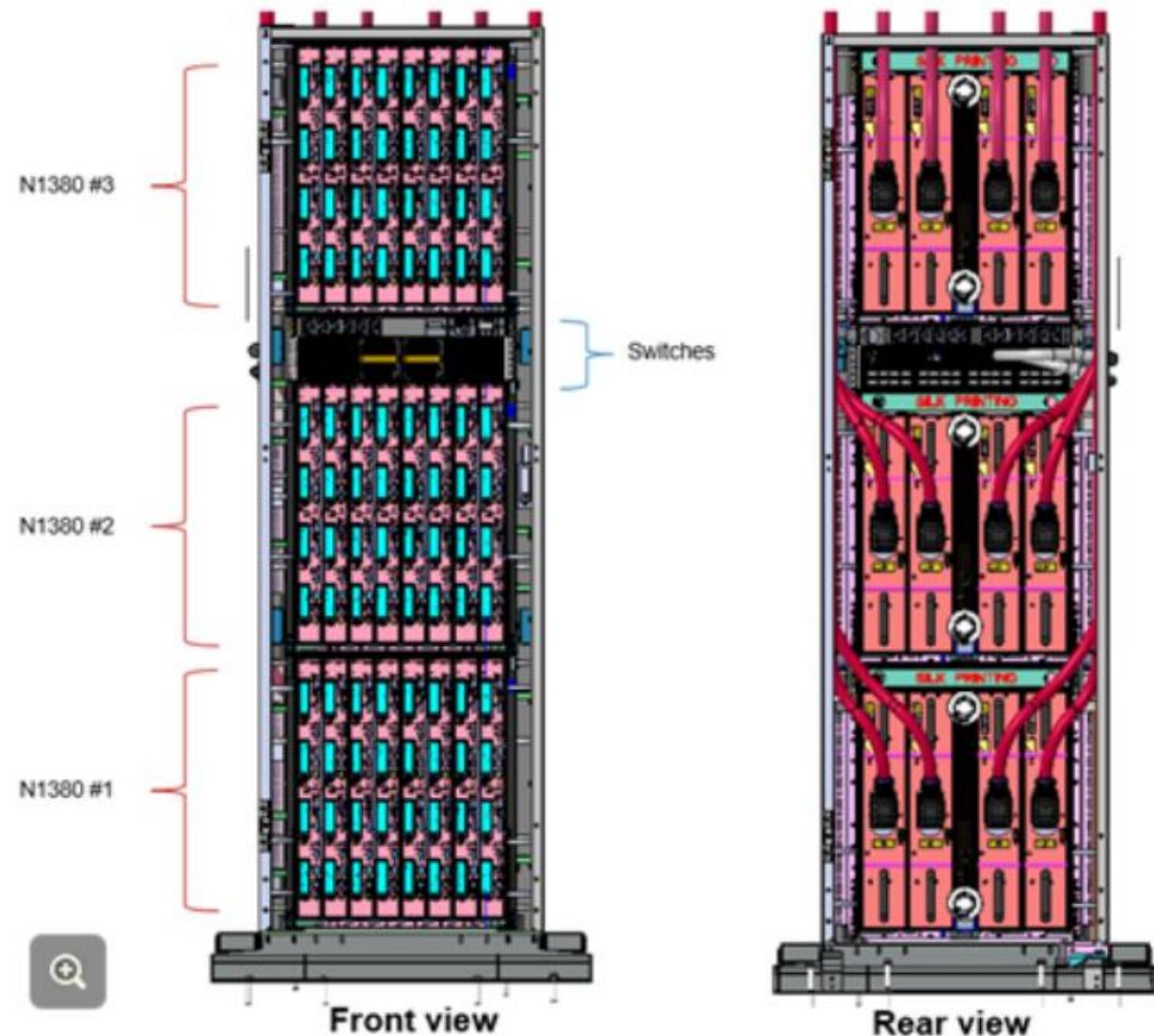
Product features, technical specifications

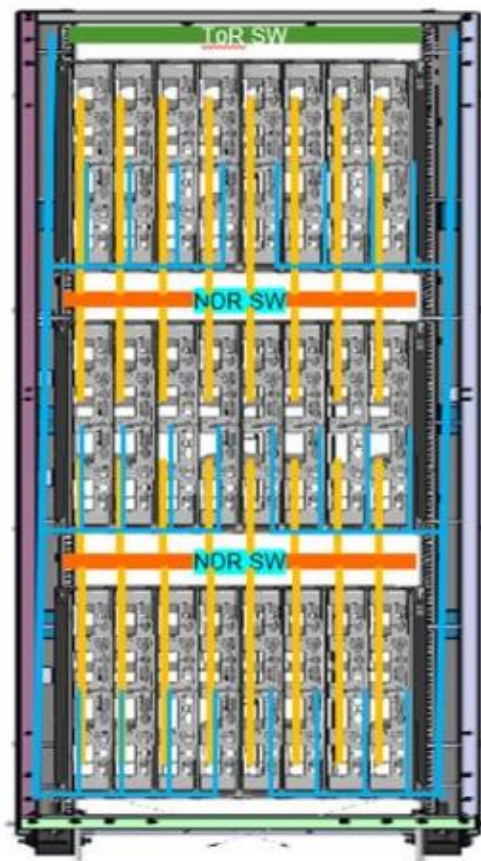# N1380 enclosure rack configurations and requirements

- 42U and 48U racks are supported (Diagrams showing 42U racks are shown here as an example)
- Up to three N1380 enclosures can be installed in a rack
- A 3-phase power cord can be directly connected to the PCS – a PDU is not necessary
  - A PDU is required when installing a switch in the same rack, but it is recommended to install switches in a different rack
- Mixed chassis support
  - DW612S and N1380 enclosures can be installed in the same rack
- Support for manifolds with series loop
- A lift tool is required to install or remove a node tray or PCS

N1380 #3

N1380 #2

N1380 #1

Switches

**Front view**

**Rear view**
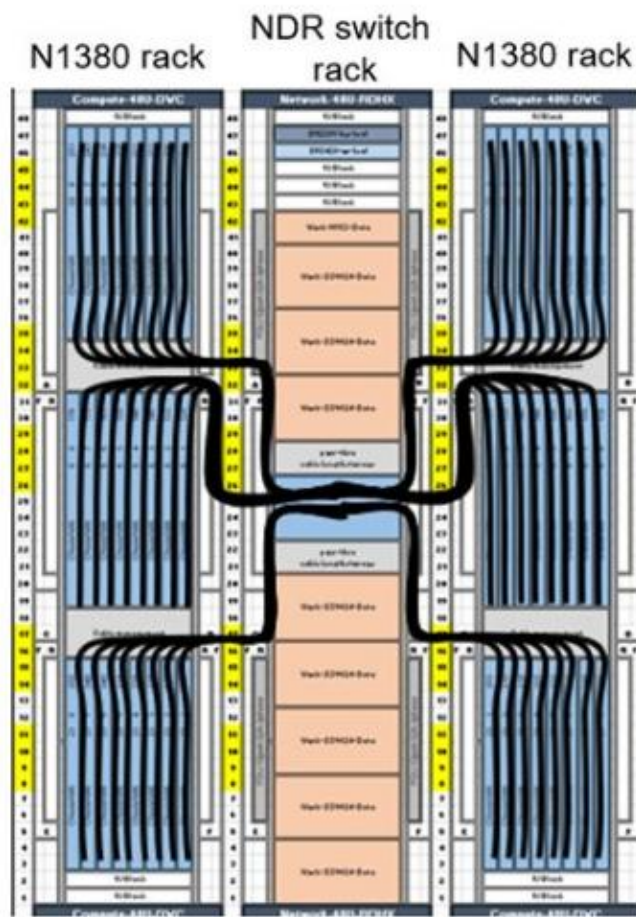
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# Network cable routing

In-rack:

- InfiniBand (IB) cables (yellow) are vertically routed to the NVIDIA NDR switches
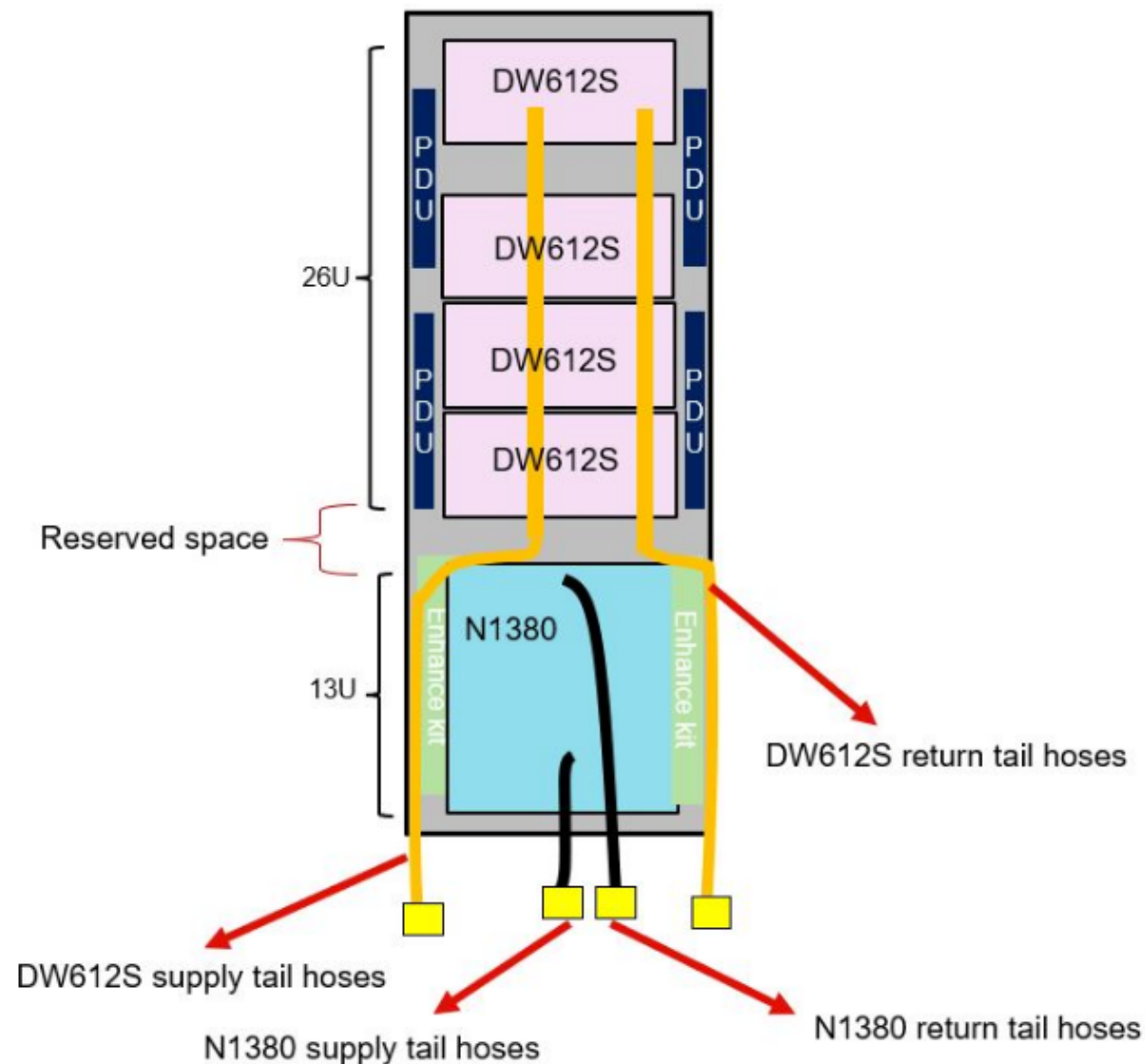- 1 G and 2 G cables (blue) route to the sides of the rack and then go up and down

Out-of-rack:

- IB cables (black) route to one side of the rack and connect to the NDR switch rack





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# Mixing the N1380 with the DW612S in a rack

Pay attention to the following when using both types of enclosure in a single rack:
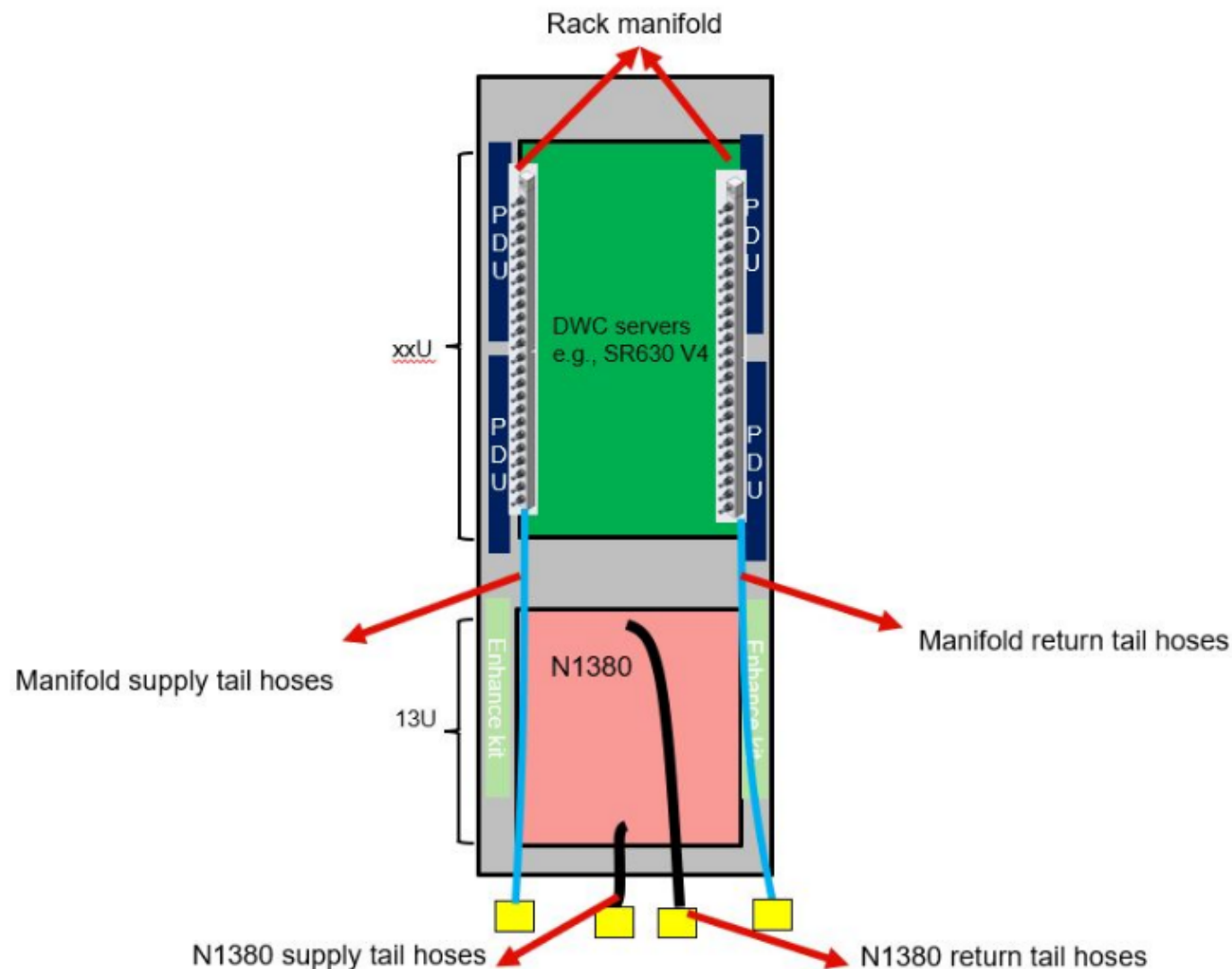
- Deploy the N1380 in the lower position
- Reserve sufficient space below the DW612S enclosures for DW612S tail hoses
- No support for the DW612S DWC PSU

# Mixing the N1380 with DWC servers in a rack

Pay attention to the following when using the N1380 with DWC servers in a single rack:

- Deploy the N1380 in the lower position
- There is support for RDHX (rear door heat exchanger)

Rack manifold

PDU

PDU

DWC servers
e.g., SR630 V4

xxU

PDU

PDU

Manifold supply tail hoses

Manifold return tail hoses

Enhance kit

N1380

Enhance kit

13U

N1380 supply tail hoses

N1380 return tail hoses

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# Serial water flow configuration

The N1380 supports serial water flow configuration with the following limitations:
- Only two N1380 enclosures deployed with SC750 V4 compute trays can be used.
- Due to chassis hose length limitations, chassis must be stacked with no space in between.

**A.** First enclosure
**B.** Second enclosure
**1.** Hose supply for the first enclosure – connected to the facility supply
**2.** Hose return for the first enclosure – connected to the hose supply for the second enclosure
**3.** Hose supply for the second enclosure – connected to the hose return for the first enclosure
**4.** Hose return for the second enclosure – connected to the facility return

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