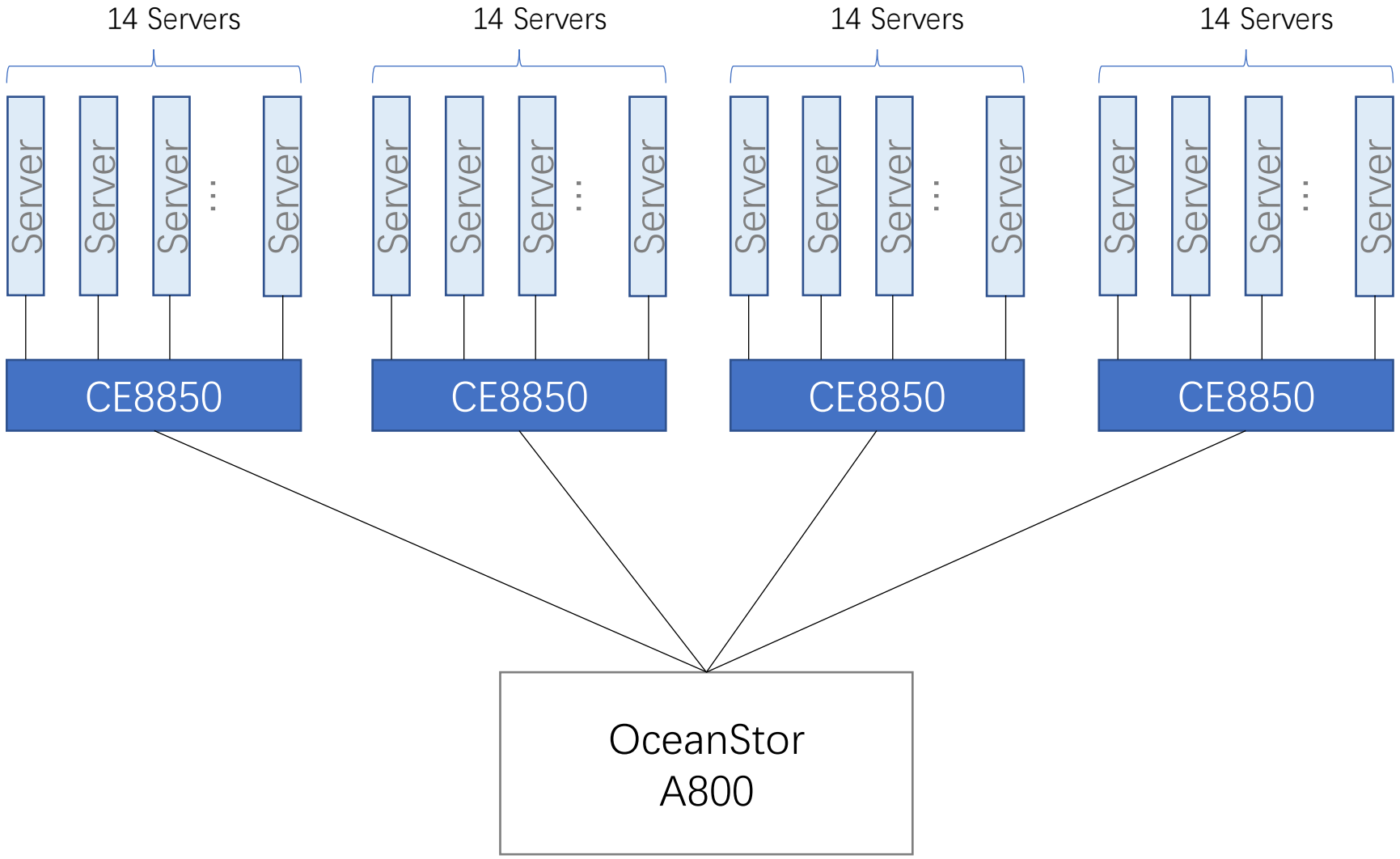
OceanStor A800 with LSPC with 56 hosts System Description

Network topology



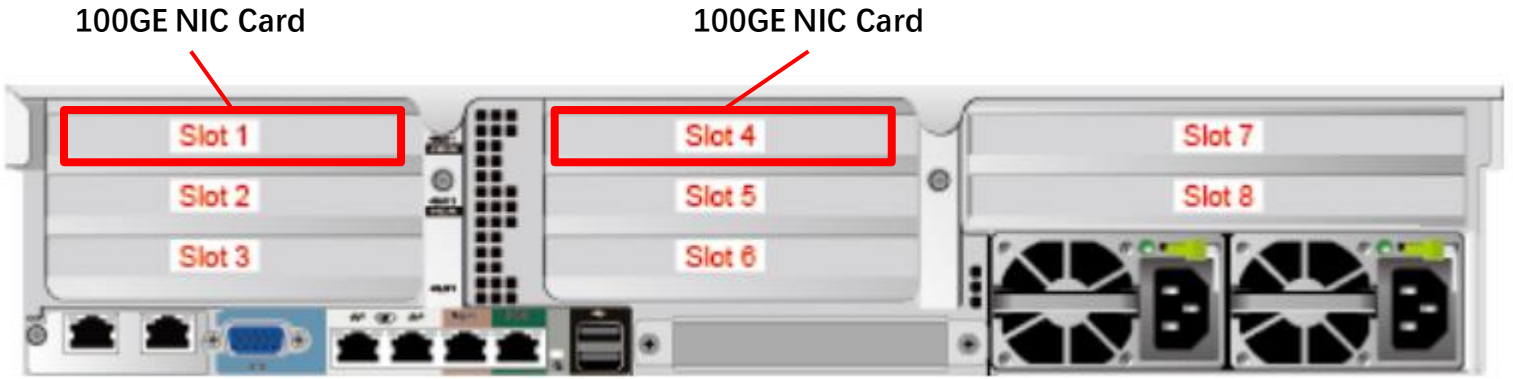
Total 56 servers as benchmark host. Each Server is connected to one switch by 2X100GE RoCE

One OceanStor A800 is connected to four switches with 32x200GE RoCE.

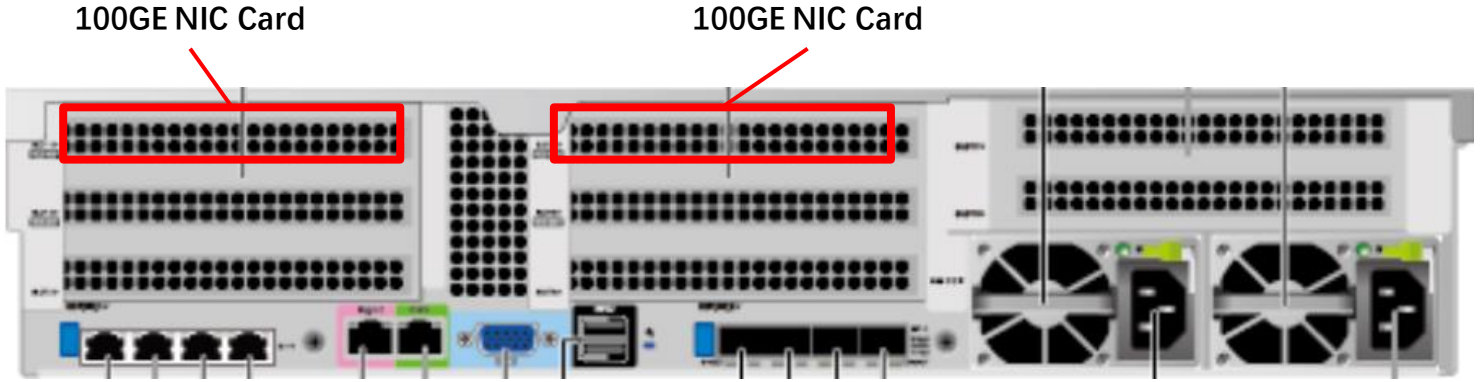
Benchmark Host Server

Two Types of host server:

Type1: a commercial DP2200 node, equipped with 2 100GE NIC Card



Type2: Taishan 2280 V2 Server, equipped with 2 100GE NIC Card



Storage Node

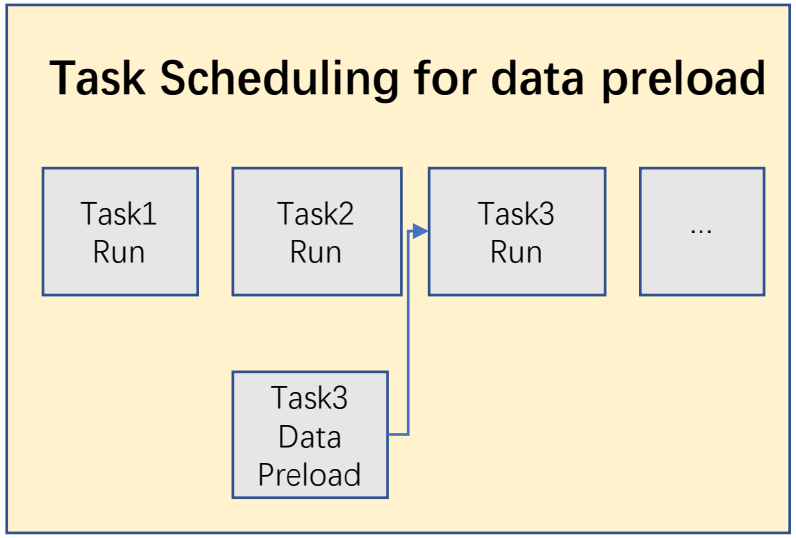
The storage node is one OceanStor A800 appliance.

Switch

CE8850-SAN is a commercial high performance Ethernet switch supporting 32x100GE ports and 8x400GE ports. The host servers are connected to the 100GE ports and the storage nodes are connected to the 400GE ports using 400G QSFP-DD to 2x200G QSFP56 breakout active optical cables

Data Pre-load in Task Scheduling with LSPC

In training scenario, the access regularity of training data is generally predictable. Therefore, the LSPC(Local Smart persistence Cache) feature provided by A800 AI Solution can be used to pre-load part of the data before the training procedure real start. During the training process, data hitting in LSPC can be returned directly, and data that does not hit is routed to A800 controller for remote access. By leveraging the capabilities of LSPC and A800 controller together, higher bandwidth and lower latency can be achieved.



For example, task 2 is computing-bound, and the bandwidth requirement is low. When task 2 is running, the data required by task 3 can be pre-loaded to the LSPC in advance.