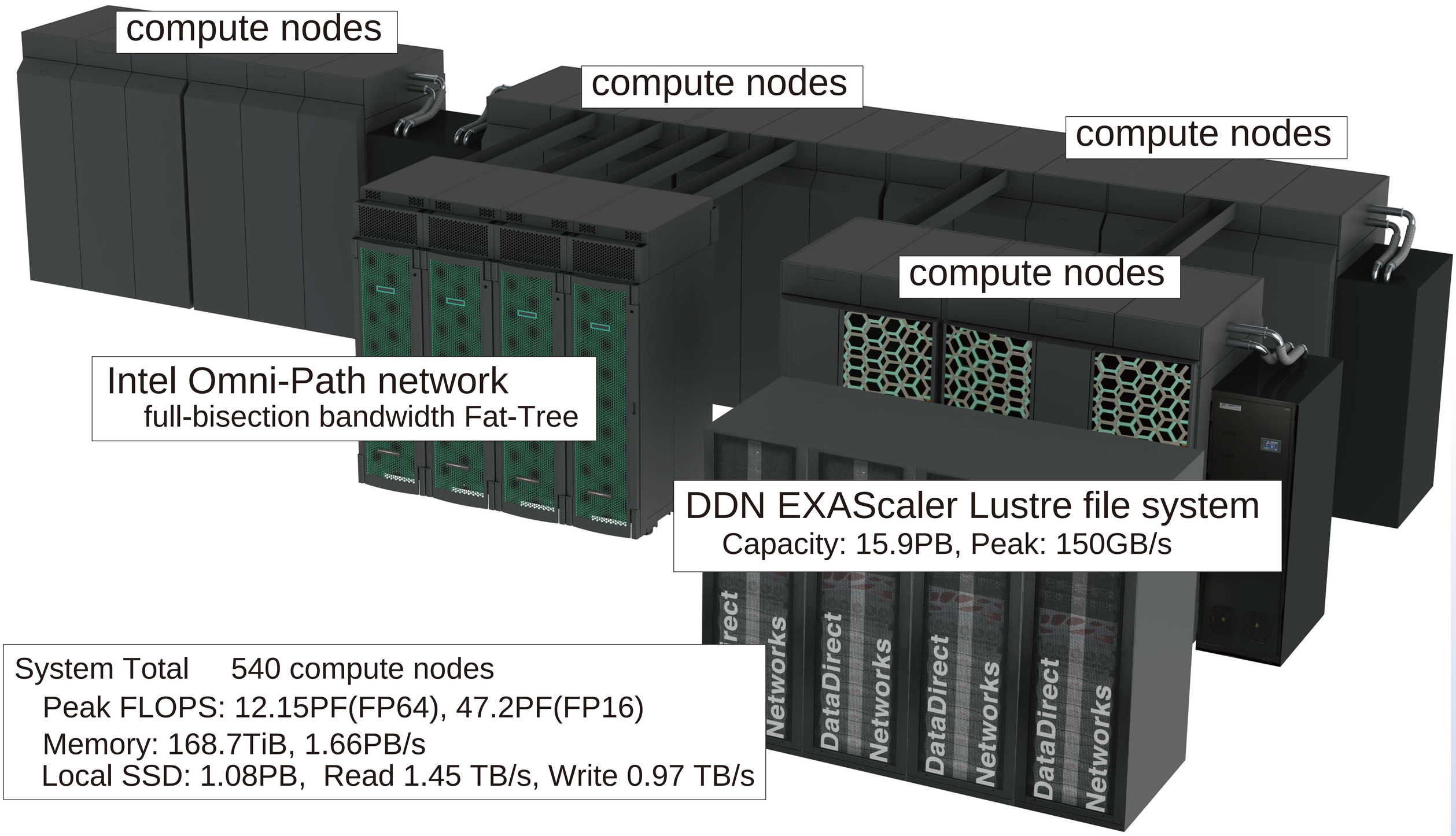
TSUBAME3.0

Cloud/Big-Data/Green Supercomputer

Overview



System Total 540 compute nodes
Peak FLOPS: 12.15PF(FP64), 47.2PF(FP16)
Memory: 168.7TiB, 1.66PB/s
Local SSD: 1.08PB, Read 1.45 TB/s, Write 0.97 TB/s

Data Center Facilities

Cooling systems

Cooling of the supercomputers is very important in term of power consumption. TSUBAME3.0 employs free cooling using warm water cooling technology to minimize the power for cooling systems.

Cooling tower (evaporative, closed type) is installed on the roof of the building.

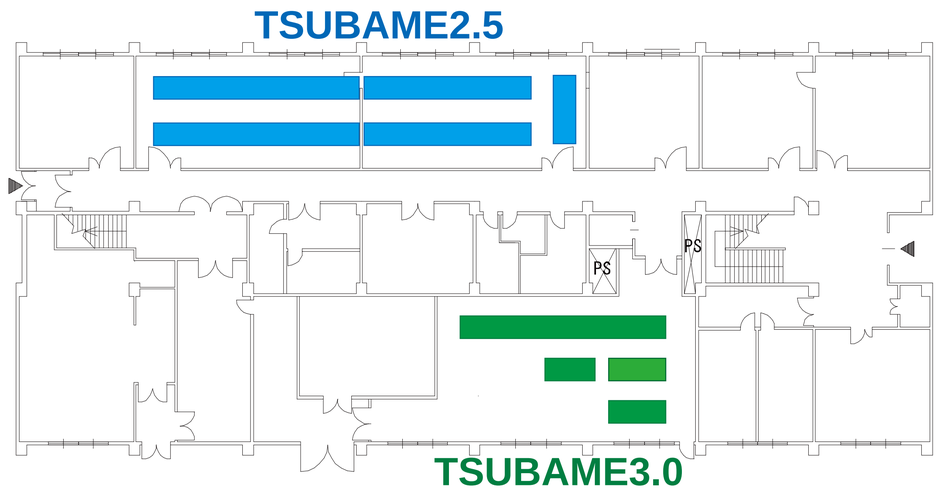
The cooling tower provides 32 degrees C or lower water to the system even in summer in Tokyo.

For storage, network, and other management servers, rear doors are attached to the racks, which cool the hot air from the servers to reduce the load of air conditioners.

Floor space

The water cooled compute nodes also increase their weight.

For high density installation in the server room, we reconstruct the floor base to have 1ton per square meter durability.



Power Supply

For TSUBAME3.0 compute nodes, we introduced 420V high voltage power supply to reduce power loss.