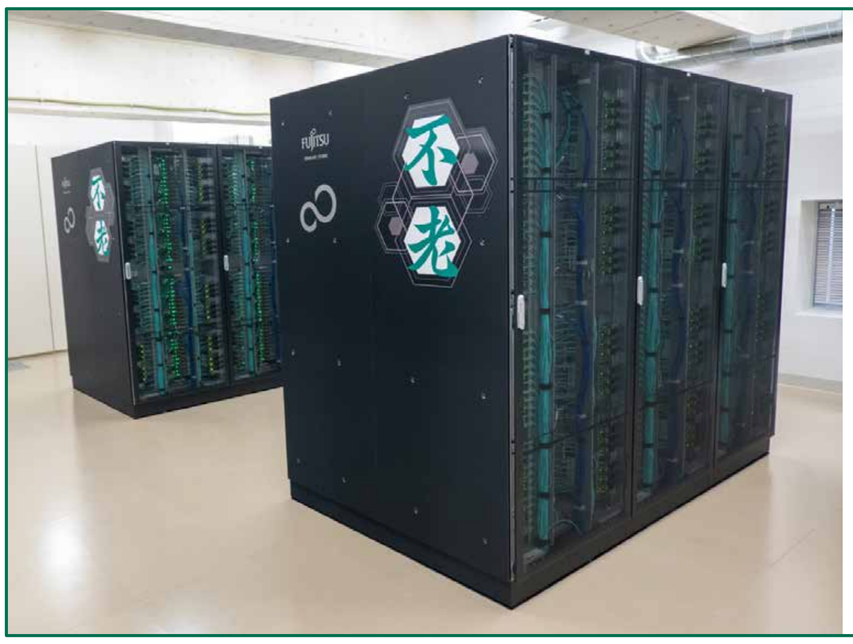
Supercomputer "Flow" System Overview

Information Technology Center, Nagoya University **http://www.icts.nagoya-u.ac.jp/en/center/**

Supercomputer "Flow" consists of four computing subsystems and two storage systems. Total theoretical peak performance is **15.88 PFLOPS**. Users can use all subsystems by one account. Computing service has begun on July 1st, 2020.

End of operation: Mar. 2026
"Flow NEXT" (TBD) launch: Oct. 1, 2026

Type I Subsystem



The world's first regular service of "Fugaku" type system

Useful for programs developed on "K", FX10, and FX100.

FUJITSU Supercomputer PRIMEHPC FX1000
- A64FX CPU×1 socket, 2,304 nodes
- 3.3792 TFLOPS×2,304 nodes = **7.782 PFLOPS**

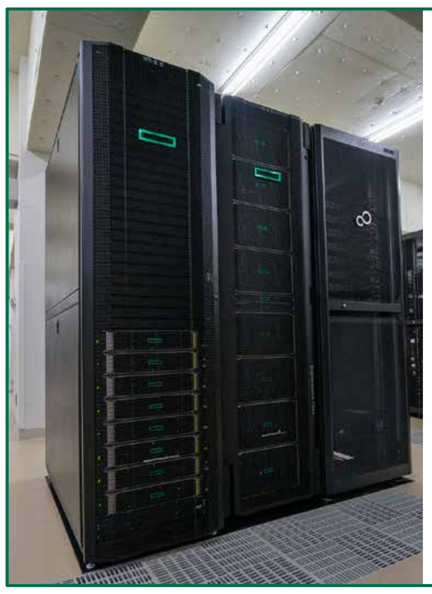
Type II Subsystem

Our first large scale GPU system

Suitable for data science, machine learning, and AI researches.

FUJITSU Server PRIMERGY CX2570 M5
- Intel Xeon CPU×2 sockets + NVIDIA V100 GPU×4, 221 nodes
- 33.888 TFLOPS×221 nodes = **7.489 PFLOPS**
- 6.4TB/node SSD available, also providing local shared storage (BeeGFS / BeeOND / NVMesh)

Type III Subsystem



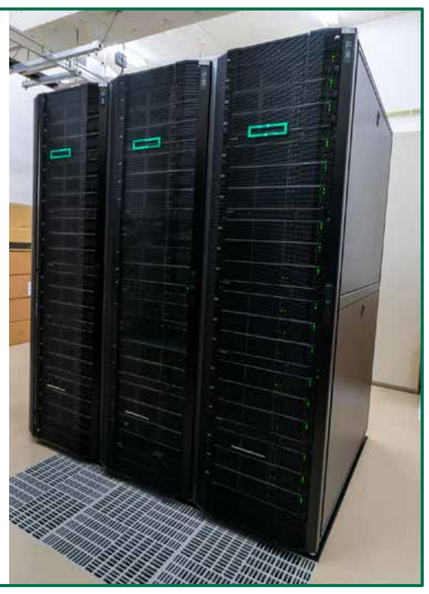
Huge size memory system. Suitable for large scale pre-/post-processing and visualization.

HPE Superdome Flex
- Intel Xeon CPU×16 sockets + NVIDIA Quadro RTX6000×4, 2 nodes
- **24TiB** huge size memory / node
- connected to visualization systems

Cloud System

Supporting both traditional batch jobs and time appointing batch/interactive jobs.

HPE ProLiant DL560
- Intel Xeon CPU×4 sockets, 100 nodes
- 5.376 TFLOPS×100 nodes = **537.6 TFLOPS**



Storage System

Consists of 30 PB HDD RAID storage (Hot storage) and optical disk archive system for long-term data archival (Cold storage).

Hot storage:
- **FUJITSU PRIMERGY RX2540 M5 / ETERNUS AF250 S2 + DDN SFA18KE / SS9012, 30PB,** RAID6, FEFS

Cold storage:
- **SONY PetaSite scalable library, 6 PB/Max 10.89 PB**