

Supercomputer "Flow" system overview



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.

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, 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 + 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 + NVIDIA Quadro RTX6000 * 4, 2 nodes
- **24TiB** huge size memory / node
- connected to visualization systems



Cloud system

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

HPE ProLiant DL560

- Intel Xeon CPU * 4, 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

- Phase1 484 TB, Phase2 (2021.02~) **6 PB/Max 10.89 PB**

