# System Overview

Last update: Jul 12, 2024

Internet (from IPv4 address assigned to Japan or allowed host)

ssh -XY or ssh

**ccfep (ccfep1-4)**
HPE Proliant DL385 Gen10 Plus v2
CPU : AMD EPYC 7763 x2
 (128 cores / node)
Memory: 256 GiB / node

・job submission/check job status
・build/develop/debug software

**ccgpu**
HPE Proliant DL385 Gen10 Plus v2
CPU : AMD EPYC 7663 x2
 (112 cores / node)
GPU : NVIDIA A30 x2
Memory: 256 GiB / node

・develop/debug GPU software

Login Servers: you can log in

jobs

job server

InfiniBand

**Storage**

/home/users/$USER
/save/users/$USER  (only for old users)
Retention period: 1 year after end of use

HPE Clustre Stor E1000
14.8 PB (Lustre 2.15)

/gwork/users/$USER
Retention period: during job execution
 (in principle)

**Type C (ccc001-806)**
HPE Apollo2000 Gen 10 Plus
CPU: AMD EPYC 7763 x2
 (128 cores / node)
Memory: 256 GiB / node
 (1.875 GiB / core)
jobtype: vnode, core

Retention period: only during job execution
NVMe local disk: 1.5 TB / node (11.9 GB / core)
/lwork/users/$USER/$PBS_JOBID

RAM disk: 240 GB / node
/ramd/users/$USER/$PBS_JOBID

**Type F (ccf001-014)**
HPE Apollo2000 Gen 10 Plus
CPU: AMD EPYC 7763 x2
 (128 cores / node)
Memory: 1 TiB / node
 (7.875 GiB / core)
jobtype: largemem

Retention period: only during job execution
NVMe local disk: 1.5 TB / node (11.9 GB / core)
/lwork/users/$USER/$PBS_JOBID

RAM disk: 1,008 GB / node
/ramd/users/$USER/$PBS_JOBID

**Type G (ccg001-016)**
HPE Apollo6500 Gen 10 Plus
CPU: AMD EPYC 7763 x2
 (128 cores / node)
GPU: NVIDIA A100 NVLink x8
Memory: 256 GiB / node
 (1.875 GiB / core)
jobtype: gpu, core

Retention period: only during job execution
NVMe local disk: 1.5 TB / node (11.9 GB / core)
/lwork/users/$USER/$PBS_JOBID

RAM disk: 240 GB / node
/ramd/users/$USER/$PBS_JOBID

Computation nodes: you can't log in
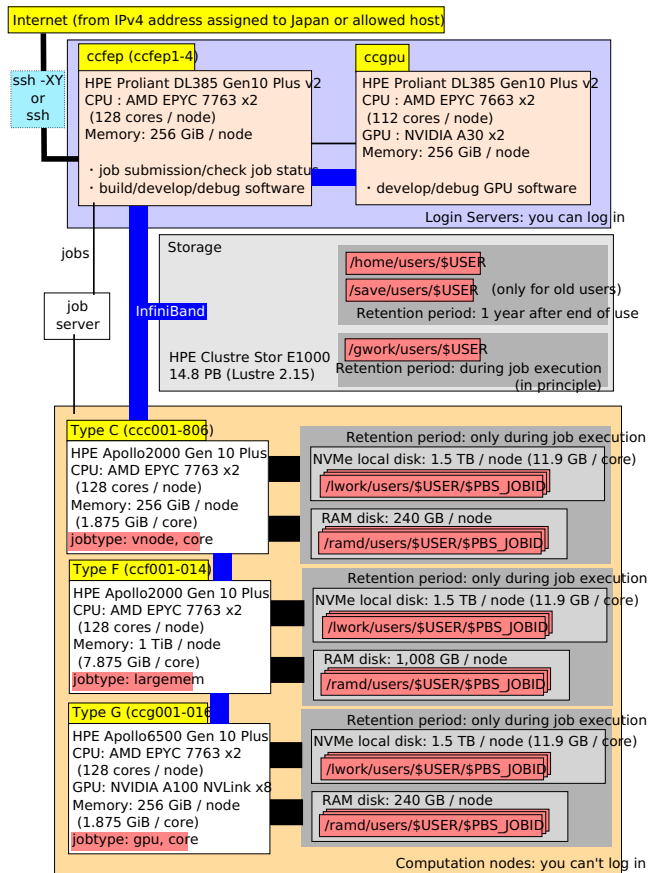
- Only ccfep (ccfep1-4) is accessible from the outside.
- Interactive operation is possible on ccfep (ccfep1-4) and ccgpu.
  - Ccgpu can't access the internet. Download of the files should be done on ccfep.
- Thicker lines in the figure mean broader bandwidth.
- /lwork and /ramd are computation nodes local storage. You can't access them directly from ccfep.
  - It is possible to access them using "remsh" command.
- /ramd is a virtual disk space created on the memory of computation nodes.
  - /ramd usage is also taken into account for the job's memory usage (which is monitored by the system).
- There are no functional differences between /home and /save. The limits value is applied for the sum of /home and /save usage. (/save remains purely for the historical reason.)
- Utilization of /tmp, /var/tmp, and /dev/shm is not allowed. If jobs are using those areas, they are removed without warning.