Resources - 2003

Super Computer System

FUJITSU VPP 5000

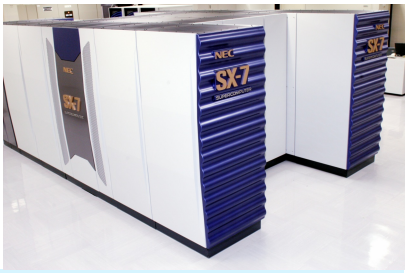
FUJITSU VPP 5000 has a vector-parallel architecture, providing you the performance up to 288 GFLOPS using 30 processor elements (PEs). With this computer, a large scale calculation can be performed; for example, a quantum chemistry calculation which would need 3 to 16 GB memory and also a high-performance computing based on the message-passing library(MPI). Total main memory is about 256 GB, and as a peripheral configuration the sysytem has about 3 TB RAID disk device which provides you a huge amount of storage. For the researchers of molecular simulation and wave packet dynamics, it is indispensable to store their results.

SGI SGI 2800, Origin 3800

SGI 2800 is a super-parallel computer which consists of 192 CPUs, and the logical shared memory is provided by its CC-NUMA architecture. Its peak performance is about 115 GFLOPS and it can be used for large scale molecular dynamics calculation and Monte Carlo method such as protein structure simulation. The total memory size is 192 GB, but in practice it is limited up to 128 GB under the present configuration. It can be used for large scale calculation of electronic state. On the other hand, Origin 3800 consists of 128 CPUs and has 128 GB memory. Its peak performance is 102 GFLOPS. As a peripehral configuration, the system has about 4 TB RAID disk device.

General perpose Fast Calculation System

NEC SX-7



NEC SX-7 is a vector-parallel computer which provides you the performance up to 282 GFLOPS and a shared memory of 256 GB. It has a vector computing unit just like VPP5000, and enables high-speed processsing of large scale programs which is difficult to be paralleled in distributed memory system. About 4.5 TB RAID disk device is also available in this system.

NEC TX7

NEC TX7 is a scalar parallel computer with shared memory. Its peak performance is 332 GFLOPS. It consists of 2 nodes, each of which has 32 CPUs and 128 GB memory. You can use this machine for executing rather small jobs and also large scale parallel jobs. As a peripheral configuration, the system has about 3 TB RAID disk device. It is mounted with Intel Itanium2 CPU and installed Linux OS.

Front-end server

NEC TX7 is a front-end machine of RCCS. Users are not allowed to enter directly to the supercomputers (VPP5000, SGI 2800, and so on) and the general purpose machines (SX-7 and TX7) and have to login to this machine first. The job-queuing system (JQS) of the Center is also controlled by the machine. It is mounted with Intel Itanium2 CPU and installed Linux OS.

File Server

The file server consists of 2 sets of NEC TX7 (1 CPU model) with PA-8600 CPU. It is NFS-mounted and provides home directories for more than 700 users in the system of supercomputer and general-purpose computers. It has 6 TB RAID type disk device and backup tape device with high reliablity and high-speed I/O performance.