Computer and network system at RCNP

H. Togawa[a], M. Nomachi[a,b], H. Shimizu[c] [1] and A. Hosaka[d] [1]

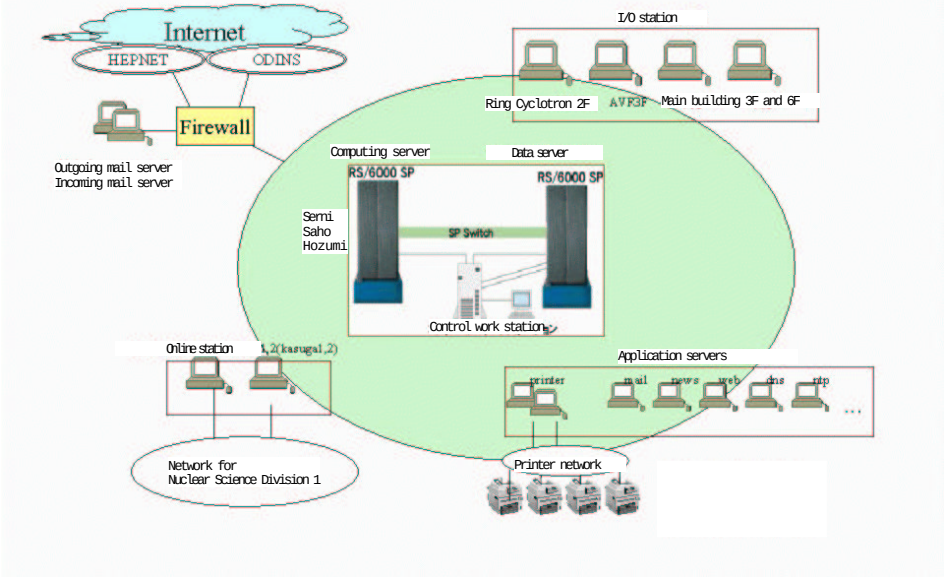
[a] *Research Center for Nuclear Physics (RCNP), Osaka University, Ibaraki 567-0047, Japan*
[b] *Department of Physics, Osaka University, Osaka 560-0043, Japan*
[c] *Department of Physics, Yamagata University, Yamagata 990-8560, Japan*
[d] *Numazu College of Technology, Numazu, Shizuoka 410-0022, Japan*

Computer and network system at Research Center for Nuclear Physics (RCNP) provides high performance for data analysis and numerical calculations. A part of this system is used also as an on-line data acquisition system for experiments at the RING cyclotron.

The computing facility of RCNP is composed of the central computer complex, the super-computer system located both at RCNP and at the cybermedia center at Osaka University, and various computer subsystems. Those computers can be accessed from personal computers, X terminals and workstations in RCNP through the site-wide network. Research collaborators around the world can also access them through the worldwide network.

The RCNP network consists of "Nuclear science network", "Accelerator science net work", "Computing network" and "General purpose network". The nuclear science network is mainly used for the data acquisition at the cyclotron facility. The accelerator science network is mainly used for the accelerator control and monitoring. The computing network connects computers in the RCNP central computer system. The general-purpose network is used for connecting the former three networks. PCs, X terminals and workstations in offices are also connected through the general-purpose network.

Figure 1: Configuration of the new computer and networking system



[1] Present address: RCNP

In December 2000, we have replaced the computer and network system. The new system has features of 38 TB disk storage for experimental data, 20 TB tape robot storage, and secured network systems. A schematic view of the system is sketched in figure 1.

In tables 1 and 2 monthly integrated CPU time is listed both before and after the replacement. Because of the trouble on the monitoring system, a part of the table is missing. The number of active users, who uses those server more than one minute CPU time, is also listed.

More details about the computer and network system are presented at

http://www.rcnp.osaka-u.ac.jp/Divisions/CN/index.html

Table 1: The CPU time and active users on 2 major servers

Month	CPU time (hours)		Active users (user)	
	miho	miho2	miho	miho2
4	4368	2160	247	41
5	4752	3072	249	54
6	4536	3432	233	69
7	3816		253	
8	6120	4728	251	57
9	7224	6024	252	53
10	7080		259	
11	4272	2400	257	43

The data of november contains only before 24th.

Table 2: The CPU time and active users on new servers

Month	Interactive CPU time (hours)			Batch CPU time (hours)	
	senri	saho	hozumi	senri	saho
12					
1	581.2	948.2		732.8	6329.2
2	358.7	465.1	892.4	1804.0	4169.3
3	287.6	283.0	721.8	1678.7	4654.9