

Computing and network environment at the RIKEN Nishina Center

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We are operating the Linux/Unix NIS/NFS cluster systems^{1,2)} at the RIKEN Nishina Center (RNC).

Figure 1 shows the current configuration of the Linux/Unix servers at the RNC. We have adopted Scientific Linux as the operation system. The host *RIBF.RIKEN.JP* is used as the mail server, NFS server of the user home directory */rarf/u/*, and the NIS master server. Mailing list services are also supported. This is a core server for the RNC Linux/Unix cluster with approximately 600 registered user accounts. The hosts *RIBF00/01* are used as SSH login servers to provide access to external users, and as general-purpose computational servers, printer servers, and gateways to the RIBF intranet.

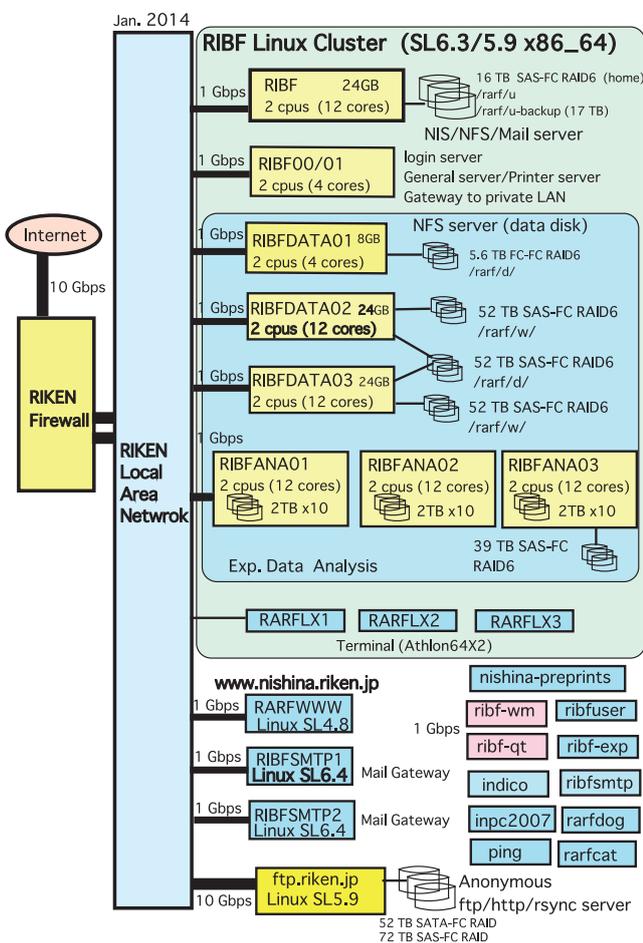


Fig. 1. Configuration of the RIBF Linux cluster.

The file servers *RIBFDATA02/03* and analysis servers *RIBFANA01/02/03* are mostly used to store and analyze experimental data at RIBF. We have a 156 TB RAID system to store the experimental data.

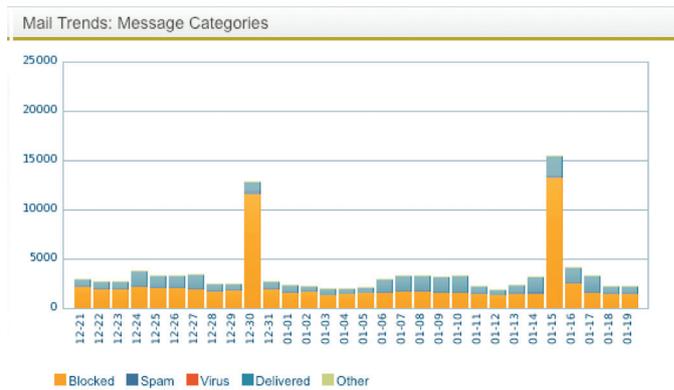


Fig. 2. Mail Trends: Message categories by PMX.

In the April of 2013, a 39 TB RAID was added for data analysis for the EURICA experiment.

The hosts *RIBFSMTP1/2* are the mail front-end servers, and they are used for tagging spam mails and isolating virus-infected mails. Two sets of HP PloLiant DL-145 G3 were installed in 2007, and they were replaced by DL-320e G8 in 2013. The latest version of the Sophos Email Protection-Advanced (PMX 6.0.3) has been installed on these. Figure 2 shows the Mail trends by the PMX for 30 days. Orange indicates the number of spam mails blocked by the IP blocker. Approximately 70 % of the incoming mails are blocked.

The Integrated Digital Conference (INDICO) system³⁾ has been operated at the host *indico.riken.jp* since 2007. We replaced the hardware and software of this server in February 2013 in order to improve the function and reliability. The indico was updated from indico 0.94 to 0.99.

The host *NISHINA-PREPRINTS* is an electric preprint server. Other servers installed in 2007 such as *ribf00/01* and *ribf-exp* are planned to be replaced by DL-320e G8 in this fiscal year.

An anonymous ftp server, *FTP.RIKEN.JP*, is managed and operated at the RNC. Major Linux distributions, including Scientific Linux, Ubuntu, Debian, etc., are mirrored daily at the ftp server for the convenience of their users and for facilitating high-speed access. A 72 TB RAID system was installed in January 2014 to replace two old RAID systems to ensure the high reliability of the operation.

References

- 1) <http://ribf.riken.jp/comp/>
- 2) T. Ichihara et al.: RIKEN Accel. Prog. Rep. 46, 214 (2013).
- 3) <http://indico-software.org/>

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