

Computing and network environment at the RIKEN Nishina Center

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We operate the Linux cluster systems¹⁾ at the RIKEN Nishina Center (RNC).

Figure 1 shows the current configuration of the Linux servers at the RNC. Scientific Linux (SL) 7 and CentOS 8 have been installed in these systems.

CentOS 8 was released in September 2019, and it was announced that support will be planned until 2029. However, in December 2020, there was a sudden announcement that support would end at the end of 2021. Therefore, we need to replace CentOS 8. In the high-energy and nuclear physics community, it has been proposed to migrate from CentOS 8 to CentOS stream 8.²⁾ Therefore, we have migrated CentOS 8 to CentOS stream 8 in December 2021.

The host *RIBF.RIKEN.JP* is used as the mail server, NFS server of the user home directory, and NIS master server.

The hosts *RIBFSMTP1/2* are the mail gateways used for tagging spam mails and isolating virus-infected mails. The latest version of Sophos Email

Protection-Advanced (PMX 6.4.9) was installed. The support for Sophos PMX is scheduled to end in July 2023. Figure 2 shows the mail trends in 2021. Approximately 33% of the incoming mails were blocked by the PMX ip-blocker.

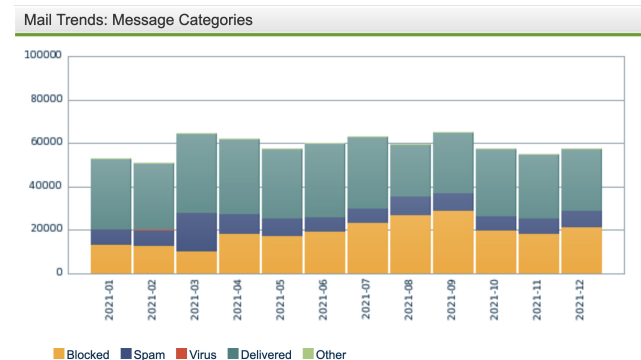


Fig. 2. Mail trends: message categories in 2021.

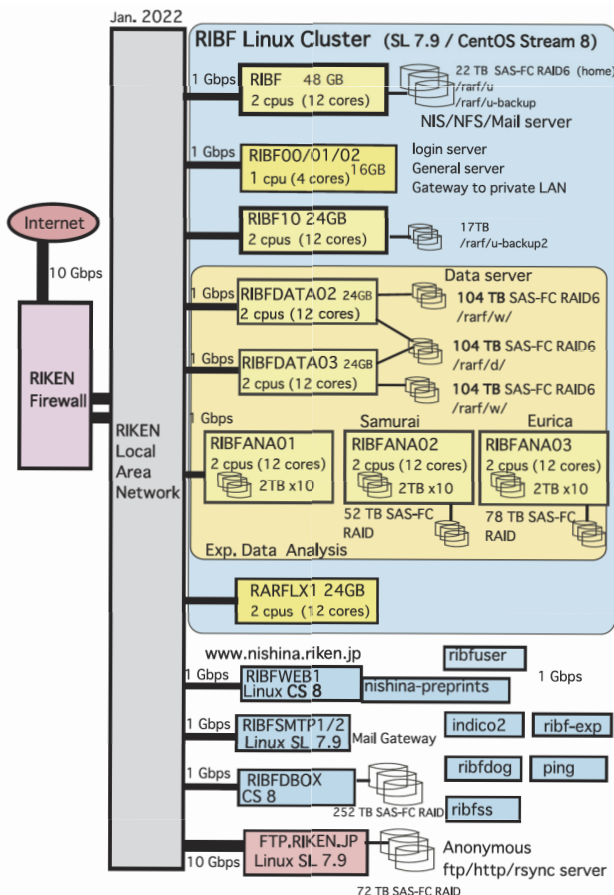


Fig. 1. Configuration of the RIBF Linux cluster.

A new TeX software, TeX Live 2021 was installed in the *RIBF00* and *RIBF01* servers. The Japanese font in TeX was changed from IPAex font to HaranoAji-Fonts.³⁾

Temperature control in the computer server room is important to prevent failure. The latest Cacti software⁴⁾ was installed in the server *RIBFSS*, which monitors the temperature of the server rooms and some experimental rooms.

An anonymous ftp server, *FTP.RIKEN.JP*, is managed and operated at the RNC. Major Linux distributions are mirrored daily for the convenience of the users, and for facilitating high-speed access. Linux distributions Alma Linux, Rocky Linux, and Springdale Linux, which are binary compatible to the Red Hat Enterprise Linux, were newly archived in the server in 2021.

We have been operating approximately 70 units of wireless LAN access points in RNC for the convenience of experiments and daily work. Two units of new wireless LAN access points (WAPM1266R) were installed in the experimental hole of the Linac Bldg. in 2021.⁵⁾

References

- 1) T. Ichihara *et al.*, RIKEN Accel. Prog. Rep. **54**, 120 (2021).
- 2) <https://linux.web.cern.ch/>.
- 3) <https://github.com/trueroad/HaranoAjiFonts>.
- 4) <https://www.cacti.net/>.
- 5) <https://ribf.riken.jp/comp/net/wireless.html>.

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