Computing and network environment at the RIKEN Nishina Center

T. Ichihara,[*1] Y. Watanabe,[*1] and H. Baba[*1]

We are operating Linux NIS/NFS cluster systems[1,2] at the RIKEN Nishina Center (RNC).

Figure 1 shows the current configuration of the Linux servers at the RNC. We have adopted Scientific Linux (SL), which is a clone of Red Hat Enterprise Linux (RHEL), as the operating system. Since the support of SL5 is scheduled to be terminated in March 2017, the SL5 OS installed in some servers is planned to be replaced with SL7 by the end of March 2017.

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. This is the core server for the RIBF Linux cluster with approximately 700 registered user accounts. Because five years have passed since the installation of this sever, we are preparing to replace the server and RAID file system.
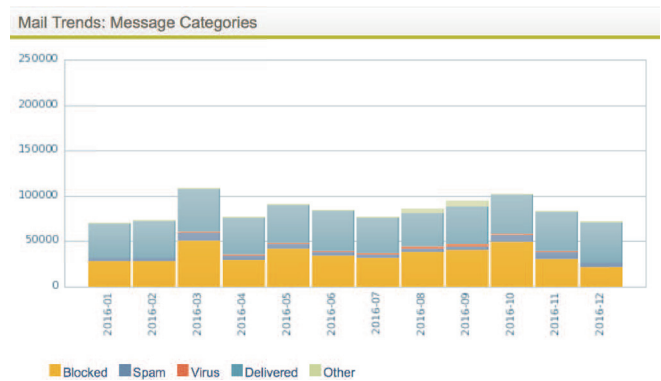

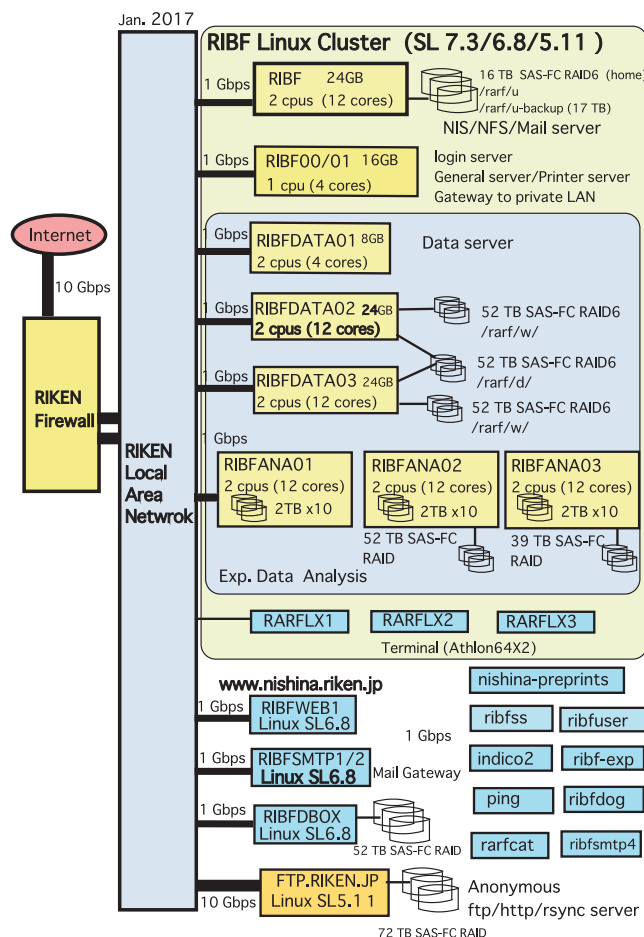Fig. 2. Mail trends:message categories in 2016

isolating virus-infected mails. The latest version of Sophos Email Protection-Advanced (PMX 6.3.3) has been installed on these servers.

We noticed that virus-infected mails were occasionally not detected by PMX in the case of new types of virus. Therefore, we added a new rule to PMX to isolate and remove executable image files attached in mail because they are often aimed at virus infection. As a result, most of the viruses in mails are successfully blocked by PMX. Figure 2 shows the mail trends of PMX in 2016. Approximately 1.5% of the incoming mails were infected by viruses in the year 2016, which is 14 times the yearly average for 2015.

An anonymous ftp server, *FTP.RIKEN.JP*, is managed and operated at the RNC. Major Linux distributions, including Scientific Linux, Ubuntu and CentOS, are mirrored daily for the convenience of their users and for facilitating high-speed access. An HP PloLiant DL-380G6 server was installed in 2009, and it is scheduled to be replaced by DL-380G9 in March 2017. Simultaneously, the OS will be upgraded from SL 5.11 to SL 7.3 .

We have been operating approximately 70 units of wireless LAN access points in RNC[3]. Almost the entire radiation-controlled area of the East Area of RIKEN Wako campus is covered by wireless LAN for the convenience of experiments and daily work. Since the devices used for the Wireless LAN access points became obsolete, all of them were replaced by WAPM-1166D or WAPS-APG-600H in 2016, which supports the protocols of 802.11b, 11g, 11a, 11n, and 11ac.

Fig. 1. Configuration of the RIBF Linux cluster.

The hosts *RIBFSMTP1/2* are the mail front-end servers, which are used for tagging spam mails and

References
1) https://ribf.riken.jp/comp/
2) T. Ichihara et al., RIKEN Accel. Prog. Rep. **49**, 205 (2016).
3) https://ribf.riken.jp/comp/net/wireless.html

[*1] RIKEN Nishina Center