

I.1: Design, development and commissioning of new email system for users in RRCAT

RRCAT email system provides email facility to very large number of users. Currently the number of users is about 2000. The email based communication is very widely used in RRCAT and its usage has been ever increasing.

In last few years, to keep pace with the Digital India initiative of Government of India, many work flow based software systems have been developed and implemented in RRCAT. All these software systems are based on the philosophy of paperless work, thus the use of email system has increased multi-folds in recent years. To meet the enhanced requirements of users as well as demands of work flow based paperless software systems, it was imperative to upgrade existing email system. Thus to fulfil current requirements and considering the future needs, new email system has been designed and developed with the latest tools and techniques.

Following are some of the salient features of the new email system:

- Faster access and delivery of emails.
- Advanced search facility with improved performance.
- Enhanced user space (double as compared to earlier system) to all users.
- Reliable setup, failure of hardware/ software components will be automatically taken care by the redundant components working in load balanced and fail-over mode, without any interruption of service.
- Highly scalable system to facilitate smooth functioning of the system; even when there is sudden increase in the email traffic.
- Very friendly user interface - emails can be easily composed with enhanced features (Richtext, Hyper Text Markup Language (HTML) format etc.) and easily searched with multiple options.
- User friendly interface for secure email access over internet.

The new email system was released to all the users in the last week of September 2017. Figure I.1.1 shows snapshot of the login screen and Figure I.1.2 shows typical screen after successful login.



Fig. I.1.1: Snapshot of login screen.

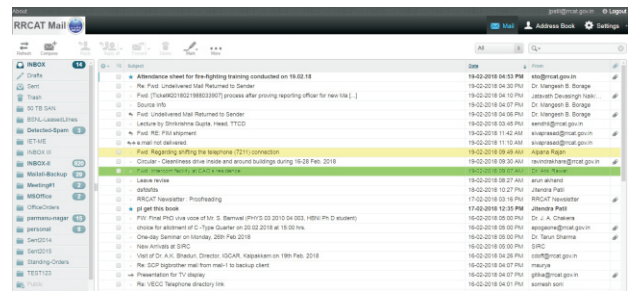


Fig. I.1.2: Snapshot of home screen after successful login.

The complete email system consists of eight number of servers, 10 Gigabit (10G) ethernet switches, Storage Area Network (SAN) based storage and SAN switches. Mail delivery servers, spamfilters, virus filters and Simple Message Transfer Protocol (SMTP) authentication servers have been installed and configured using open source software tools. Web based Graphical User Interface (GUI) has been developed for the users to access their emails. Two numbers of 10 Tera Bytes (TB) capacity SAN based storage systems have been configured to provide space to the users. This also provides storage space to various other components like spam filters, log files, user profiles etc. Logical diagram of the new email system is shown in Figure I.1.3.

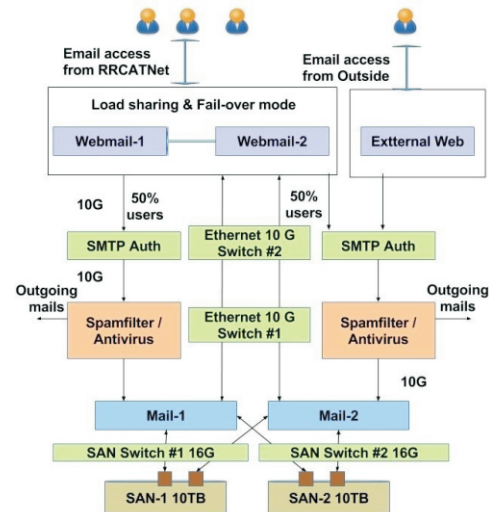


Fig. I.1.3: Logical diagram of the new email system.

A highly available and scalable email system has been designed, developed and commissioned for the users in RRCAT to suffice the requirements for a next couple of years. The system has been designed with prime objectives of increased user convenience and highly reliable operation on 24x7 basis.

Reported by:
Jitendra Patil (jpatil@rrcat.gov.in) and Alpna Rajan