



connectTMxf

Business Case Study 2012

CLOUD BASED EMAIL SERVICE AT SBI Life

Requirement: Provide a reliable, high performance email system with rich web, desktop and mobile client access for their branch users. The email system is to be secure, highly available, externally hosted, fully managed and integrated with the in-house HO email system.

Solution: Mithi in partnership with Trimax, provided a high performance and highly available infrastructure hosted on an external data center at Trimax, with two forms of mail archival. This mission critical solution is based on Connect Xf (email & collaboration software) which has a native web client and support for desktop mail access and mobile client access over standard protocols.

Top Benefits: A low cost - no compromise solution with 99.9% uptime, high scalability, rich mobile device access, 24/7 support, and easily extendible functionality.

SBI Life provided Lotus Notes accounts to their HO users but found the cost of extending this facility to nearly 8000 branch users prohibitively expensive. Also the team at SBI Life did not want to deal with the complexity of maintaining and managing a large email setup in house. As a result they opted for a hosted email solution for the branch users.

However, the hosted email solution they chose did not have the capability to integrate with the Lotus notes setup at the HO, so it was set-up on another email domain viz. sbi-life.com.

SBI Life Insurance Co Ltd (SBI Life) is a joint venture between State Bank of India and BNP Paribas Assurance. SBI Life is registered with an authorized capital of Rs 1000 crores. State Bank of India owns 74% of the total capital and BNP Paribas Assurance the remaining 26%.

SBI Life extensively leverages the SBI Group as a platform for cross-selling insurance products along with its numerous banking product packages such as housing loans and personal loans.

SBI Life's access to over 100 million accounts across the country provides a vibrant base for insurance penetration across every region and economic strata in the country ensuring true financial inclusion. SBI Life products are available across 14,500 plus State Bank Group branches, which are supplemented by over 700 full-service branches of SBI Life. Additionally, the products are available through more than 75,000 Insurance Advisors.

Challenges faced

Some of the key challenges SBI Life faced with the solution for branch users were

Slow performance	The email network was frequently clogged during peak hours, resulting in late delivery of mail.
Inadequate Security	The users received excess spam mail, and the security vulnerabilities in the system were unmanageable.
Disjointed Directories & Contact Information	It was difficult to share contact information between the HO and the branch offices

Partner Profile

Trimax IT Infrastructure & Services Ltd. (Trimax) is a leading end-to-end IT Services and Solutions Provider offering Data Center setup, Management and Operational Services, System Integration and Managed Infrastructure Services; catering to diverse businesses from sectors like Government, BFSI, IT/ ITES and Transport.

Task Force

The management at SBI Life soon realized that they will need to alter the fundamental design and architecture of the email system that served their branch offices to get rid of such nagging bottlenecks.

With a rapidly expanding business and a continuously growing pan India user base, they wanted a hassle-free email system, which could be easily scaled up with their growing needs besides providing higher performance, higher availability, easier manageability and better security.

 **"The combination of Mithi's proven expertise on email and collaboration technologies and Trimax's capabilities with running scalable data center services, have helped us create a scalable and highly available collaboration platform on the public cloud."**

- J.B. Bhaskar (CIO & Executive Member).

The team at SBI Life outlined the following key requirements for the new set-up:

- ▶ Integration with the HO mailing system (Lotus Notes) for sharing the same address space and the contact information, which currently was happening manually.
- ▶ Archival capability for backup of the mail boxes of key employees and for compliance purposes.
- ▶ An email set-up hosted and managed by a solution provider on an external cloud, with a road map for building in new functionality and integrate newer forms of collaboration as they evolve.

The team at SBI Life outlined the following key requirements for the new set-up:

- ▶ A Solution Provider who understood messaging and collaboration in depth and could provide design level support to ensure a reliable and scalable solution.
- ▶ This was not possible/feasible with the existing vendor as they did not have a business focus on email solutions - email was one of their many offerings..

A hosted Email Solution powered by Connect Xf

Mr. J. Bhaskar, CIO of SBI Life, formed a task force headed by Mr. Pravin Ghate (Head Infrastructure ISG) to seek out an alternative solution, to address their key requirements and mitigate the challenges faced with their current system.

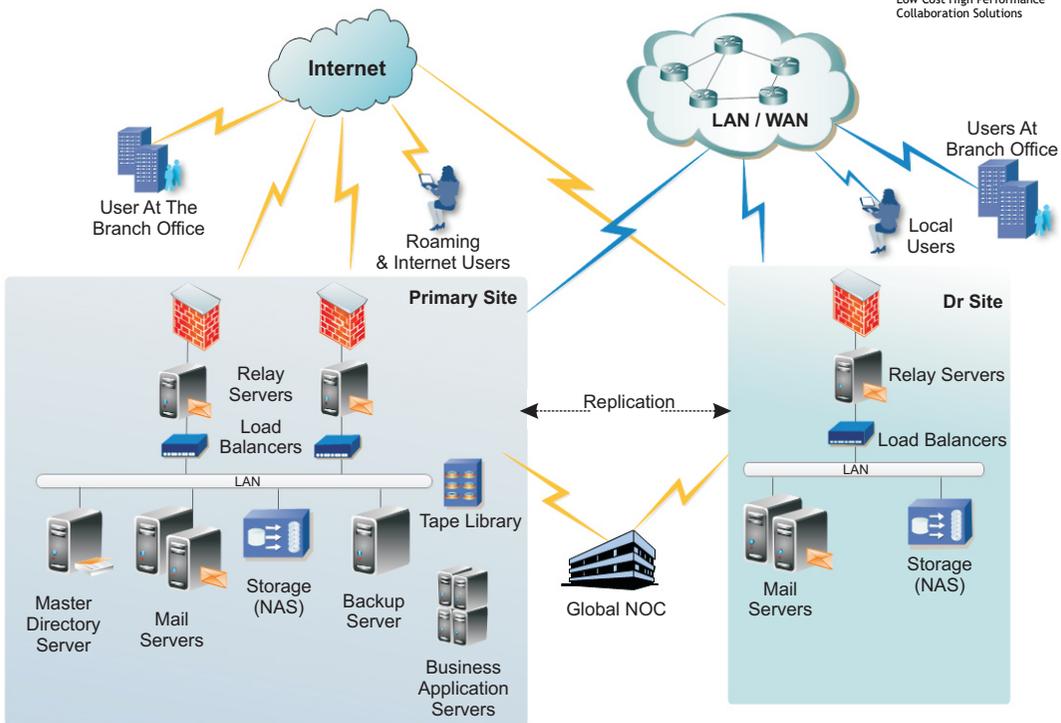
Using their experience with the current system and projecting their requirements into the future, the task force started creating a requirement document. After extensive research, evaluations and discussions with vendors, the team led by Mr. Pravin Ghate came out with the RFP (Request for Proposal) document.

After studying the RFP, Mithi's solution designers created a proposal based on the proven Mission critical solution stack of Connect Xf to be hosted and supported on the cloud platform provided by Trimax. This solution by design was highly available since each layer in the solution had inbuilt redundancies and was easily scalable due to the inherent stateless nature of the mail servers

While Trimax a leading provider of data center and system integration services, provided carrier grade infrastructure, experience and capabilities in running and supporting data center services, Mithi provided deep experience with setting up and running highly available, scalable and high performance collaboration infrastructure, based on Connect Xf. Mithi was able to help Trimax create a highly resource efficient and low cost hosted email offering that not only matched the requirements set forth by SBI Life but was also amongst the lowest cost offering.

After extensive purchase committee deliberations, due diligence, reference checks and costing analysis, the SBI Life team selected the solution proposed by Mithi & Trimax.

High Performance Architecture



The Solution

Key Elements

- ▶ The solution is designed to have redundancy at all levels, e.g. there are multiple relay servers, clustered load balancers, multiple mail servers, a DR site, multiple Internet links, etc.
- ▶ The components are configured to support an auto fail over, when any one of the component fails. e.g. if a relay server fails, the entire mail flow seamlessly continues through the other relay server. (The exception is the DR site, which needs manual intervention to switch over and switch back.)
- ▶ The number of components at each level can be easily extended to scale up the solution as the usage grows. E.g. if the solution has to cater to more users, the IT team has to simply add additional relay and mail servers and scale up the storage.

Key components

- ▶ Security Gateway : External third party security gateway servers (Relay servers) handle incoming and outgoing mail flow. These servers are configured to scan connections, accept valid connections, scan the mail, clean the mail and deliver the mail to the next hop.
- ▶ Mail Servers : Connect Xf mail servers provide mail access to the end users using the POP/IMAP/HTTP and SMTP protocols to the mails stored on the NAS.
- ▶ Load Balancers(clustered): External third party open source software based load balancers accept connections for all protocols from end users and distribute them equally amongst the mail servers.
- ▶ Shared Storage: A NAS device provides storage for the mail store.
- ▶ Directory Server : A Connect Xf Master directory server, provides for the provisioning and configuration management
- ▶ Archival Server: A Connect Xf Archival server handles the archival mail traffic and stores it on a different volume of the NAS.

Management and Maintenance

- ▶ Multiple administrators having different roles are allowed limited access to perform provisioning and management tasks like creating users, modifying their properties, taking backups, etc.
- ▶ Changes to the directory are automatically replicated to all other servers.

Mail flow and Collaboration application access

- ▶ Incoming mails from the Internet land on the relay servers, are scanned for viruses and other malicious content and only the clean mail are sent forward to the load balancer. The load balancer forwards the mail to the available mail server which delivers the mail locally.
- ▶ Users connect to the load balancer for accessing their mailboxes, calendar stores, address books and the chat application. They do so using **Baya** the collaboration client on the web or a desktop client like **Thunderbird** or **MS Outlook** or compatible mobile devices like **iPad**, **iPhone**, **Android phones/pads/tabs** and **Blackberry**
- ▶ Mail being sent out by the users are first delivered to the mail servers, which push these to the relay servers, which in turn directly deliver the mail over the Internet.

Implementation at SBI Life

The deployment involved careful selection and sizing of components and servers to ensure reliability in the setup. After the deployment and configuration, the Mithi-Trimax team performed deep tests and real life simulations of high mail flow, failure mode effect, site failure drills, etc. The migration was smooth with the switch over to the new system being done in a few minutes thereby causing near zero disruption to the end users. This was well supported by careful monitoring by the Mithi team and deep preparation by the Trimax and SBI Life teams to handle end user queries

Benefit Summary



“ A mail shot to 8000 users that earlier took 30 mins, now got completed in 10 mins – a 300% jump in performance.”

- Pravin Ghate (Head Infrastructure ISG).

Challenges /Requirements	How the solution addressed them
Availability and Reliability	<ul style="list-style-type: none"> • 99.9% uptime, by virtue of redundancies in each layer of the solution architecture and automatic monitoring of the servers. • Fully functional DR site with data replication allowing the DR site to be active and online in the matter of about 1 hour. • All components in active-active mode, allowing automatic switch over to the next active component when one fails.
Security and Archival	<ul style="list-style-type: none"> • Third party security gateway servers as the first point of landing for the mail, which scan the incoming and outgoing mail for Viruses and Spam. • Mail flow control via extensive mail policies, and other global controls • Role based administration to allow different levels of administration • A copy of every mail sent and received is retained in the Compliance Archive store. A search interface allows authorized personnel to locate mail based on the mail attributes and content. • A Personal Archive account is provided to key people for the purpose of mailbox backup and restoration in case of a disaster.
Management, Scalability and Performance	<ul style="list-style-type: none"> • 24/7 support desk provided by Trimax with back to back support from Mithi. • The Admin Console enables easier day-to-day management of the email system, providing domain and enterprise level control to Administrators. It provides over 25 types of MIS reports classified into Activity reports, Mail traffic reports and Server statistics to help Administrators improve overall server performance leading to better resource utilization. • Easy to scale by adding more components at each layer. E.g. just adding one more mail server to the server farm would scale up the system to handle 3000+ more users
Email Mobility	<p>Email, chat, calendar, and address book access via open standard compatible clients like iPad, iPhone, Android phones/tabs/pads and email on BlackBerry.</p>