

Implementing High Availability environment for IMAP/POP3 users

Highlights

- Designed and configured the client's infrastructure into a advanced platform for hosting IMAP and POP3 applications and making them accessible from variety of IMAP/POP clients.

- Reduced the costs by using less Application licenses, Servers, memory, data storage and network bandwidth.

- Designed high availability infrastructure featuring advanced clustering, replication and server fault recovery.

- Increased productivity by seamless failover and switch to other application server without OS level clustering.

The Client:

A Office automation conglomerate based out of North America.

Challenges

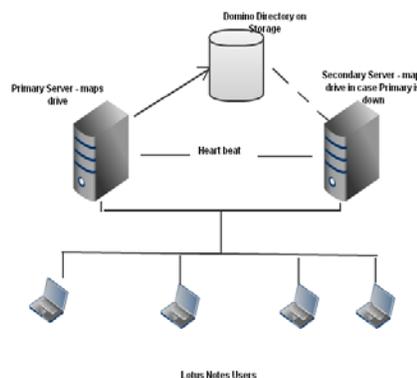
The Organization had a lot of users with IMAP/POP3 accounts and a high availability environment was needed for IMAP/POP3 users. These users were distributed on different servers.

Suggested Solution:

There were two solutions to implement the High Availability environment for IMAP /POP3 users :

Solution-1

In this case we had to use MS OS level clustering. There were two Domino servers on two separate physical servers. When there is a need to switch server or there is a hardware failure, the server1 starts the Domino process on the server2 or vice versa. In both cases, the servers operate under the same SERVER.ID and same IP address.



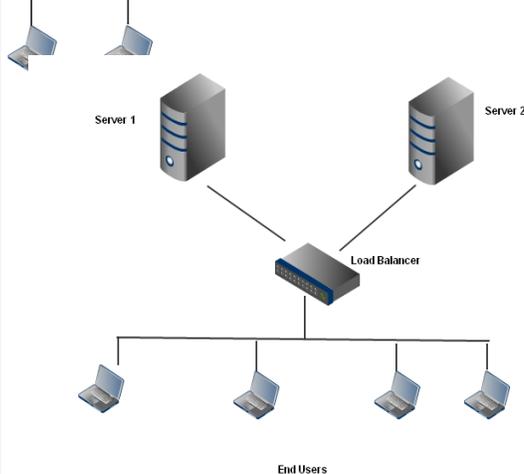
The benefit of this architecture is that if one server goes down, the second server takes control. It maps the shared disk, where Domino data is located and starts Domino server on the second server. The OS clustered Domino server appears to end users under the same name and same IP address. If there are systems that access Domino by host name, such as POP3/IMAP /LDAP/HTTP, they will successfully reach the server.

But in case of OS cluster, users may need to re-open databases. Also this solution was more costly and we had to get one more server and do MS OS level clustering.



Solution-2

We analyzed the current architecture of the client and found this solution which was more economical and could be implemented in current configuration with some additional configuration and existing load balancer.



We found that the servers were running Domino Release 8.5.2 and there was a new notes.ini parameter "IMAP_UIDVALIDITY_ROOT=<n>" that was introduced in this release only.

We moved the needed IMAP/POP3 user's mail files to two servers in a cluster. Then this feature was implemented on these two servers and a unique url was assigned to the two servers and configured in load balancer.

So now if one of the domino servers in the cluster goes down, the other server will take over the full control through load balancer and the notes.ini parameter will simultaneously synchronize the IMAP client with the replica being accessed after a fail over.

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Version -
2015/C05/1.0

The Benefits

- Increased performance
- Less downtime for IMAP/POP3 users
- Stable cluster environment