About SPARSO:

Bangladesh Space Research & Remote Sensing Organization (SPARSO)

Space Technology applications in Bangladesh started in 1968 through the establishment of APT ground station in the then atomic Energy Centre. This station was put under SARC of the BAEC in 1972. Earth Resources Technology satellite (ERTS)

Program was taken up in Bangladesh with the advent of American ERTS and it was renamed as (BLP) Bangladesh Landsat Program with the renaming of the program by NASA. SPARRSO was created in 1980 by merging SARC and BLP.

The National Assembly passed an act in 1991 creating this organization. It is an autonomous organization under the Ministry of Defense.

They have a heterogeneous network consisting of mixture of Windows, Apple clients and various Smart Phones. End users require always on anywhere access to their email, Document site, IM, Video conference in LAN, remote access to the network data, mail services with high availability. Users also require around the clock access to this data.

IT Requirements

The IT requirements are:
Email access with web, outlook, mobile etc.

- Database server, Group Mail, Distribution groups, transport rules
- Central management for users and computer
- IM, Audio, Video conference
- Role based policy management
- USB restriction, Wallpaper, Desktop, drive, roaming profile policy
- Users able to work from any computer
- Reduce Bandwidth cost
- Backup solution and restore
- Windows XP Professional and Windows 7 clients
- Centrally download updates and push all machine from central server

Challenges:

- Managing all DC and DR servers, and all users computer
- The servers were expensive to manage and server downtime (failures, maintenance etc.) was a effecting the business.
- 99.9% uptime all services
- IM from external network
- Reduce power, Cooling, servers cost
- Multiple server on a single server
- IM integrate with mail services
- Similar/ reliable infrastructure
- A more cost effective solution
- Less downtime, site recovery when failed one site
- Prevent lost any mail data, server data
- Secure network and system
- Central management users rules and accessibility for head office, principal branch and all branch offices
- Central Authentication and authorization from central server
- Common mail server for all users
- Mail server redundancy for application and database both

Solutions:

- Active Directory Domain Services (AD DS) for user authentication and authorization.
- Active Directory Federation Services (AD FS)
- Active Directory Certificate Services (AD CS) for certificate services
- Domain Naming Service (DNS) for name to IP and IP to Name conversation
- Office Lync for IM, Audio, Video, conference
- Group Policy management for group/OU/ users based policy deploy
- Storage Area Network (SAN) for storage operation for data store.
- DC and DR with replication
- Highly Available Clustered scenario using iSCSI storage.
- Exchange server for mail services
- Share Point server for document management
- VMware for server HA, consolidation and reduce power, cooling cost
- SAN for virtualization servers and common shared storage access for all servers
- Office Lync for IM, Audio, video conference, Desktop sharing, remote support, presentation
- Separate Authentication and mail access for internal and external users

Picture/ Testimonial

Benefits to SPARRSO

❖ Cost Reduced	❖ 99.99% Uptime

❖ Less electricity is used to power the servers savings costs ❖ Less electricity is required to cool the servers saving costs ❖ Certain jobs are now scriptable thanks to Power Shell and may be run at off peak times	❖ Services may be moved from one site to another site preventing downtime ❖ Easy to manage computer and Users centrally ❖ Can update push manually or automatically ❖ Bandwidth cost reduce