Energy Efficient Network for BIMAN
A New Industry Standard Single Network to Support Their Business Requirements

"Shaking hands with Boeing we took this project very seriously to ensure the Quality of work and had relied on Spectrum heavily. Best part is we never had to regret about our decision!"

- Name

Biman Bangladesh Airlines is the national flag carrier airline of Bangladesh. Its main hub is at Shahjalal International Airport in Dhaka and it also operates flights from its secondary hubs Shah Amanat International Airport in Chittagong and Osmani International Airport in Sylhet. The airline provides international passenger and cargo services to Asia and Europe, as well as major domestic routes inside Bangladesh. It has air service agreements with 42 countries and currently flies to 16 different countries and more than 750 employees.

Boeing had partnered **with Biman Bangladesh Airlines** in developing a new network and computing infrastructure to bring it to a level equivalent to industry standards. Biman Bangladesh Airlines facilities wanted to have a New Industry Standard Single Network to support their business requirements. *Spectrum had won the bid*

over a competitive tender and had accepted the challenge this prestigious and large network deployment.

The work included connecting *11 buildings* in with fiber backbone and bringing *700 users* in a single network with data center, server, storage, LAN, radio network Microsoft emailing, antivirus solution and firewall services.

Major IT Requirement were addressed in this project were

Email access with web, outlook, mobile etc.

Firewall setting for websites, specific IP, specific user, domain, ports etc.

Users able to communicate with IM, Audio, video, conference in LAN

Backup solution and restore

*Outcome that made **Biman happy***

Overall Cost Reduced

Less electricity is used to power the servers savings costs

Less electricity is required to cool the servers saving costs

Core Parking in Server 2008 R2 saves energy by shutting down the cores which are not being used saving costs

Certain jobs are now scriptable thanks to PowerShell and may be run at off peak times **99.99% Uptime**

Easy to manage computer and Users centrally

Can update push manually or automatically

Bandwidth cost reduce

Before *Spectrum* Implemented the Network

Managing servers were COSTING A LOT

Higher DOWNTIME was hampering the business

Higher percentage of Network Failures had hassled Biman a lot

Data loss occurrence has been significantly deteriorating their operation performance

Scattered system has been a reason of not being to manage it properly

Solutions Implemented to Operate Biman Network Smoothly

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
SQL Server for Data Base management

- **Exchange Server with Database Availability Group** (DAG) for Data base cluster
- **System Center Configuration Management** (SCCM) for auto Operating systems deploy, Manual/automatic patch deploy, customized package deploy
- **Office Lync** for IM, Audio, Video, conference
- **Group Policy Management** for Group/OU/Users based policy deploy
- **Thread management Gateway** (TMG) for Internet Access, firewall, proxy, block/allow web sites
- **Windows Server Update Service** (WSUS) for patch download and push to user's computers and servers.
- **Storage Area Network (SAN)** for storage operation for data store
- **DC** and **DR** with replication
- **Highly Available Clustered** scenario using iSCSI storage