Bangladesh Research and Education Network

A High-Speed Data-Communications for Academic and Research Communities

University Grants Commission (UGC) of Bangladesh, on behalf of the Ministry of Education (MoE), is currently implementing the Bangladesh Research and Education Network (BdREN) under HEQEP with assistance from World Bank. Now BdREN is in its initial phase. It will be a high-speed data-communications network that is independent of the commercial internet and is dedicated to meeting the needs of the academic and research communities of both public and private sectors.

BdREN with its multi-gigabit capability aims to connect all universities, research institutions, libraries, laboratories,healthcare and agricultural institutions across the country and to support geographically dispersed academics, scientists and researchers with reliable access to high-end computing, simulation tools and datasets.

"Spectrum's participation in implementing DWDM Backbone, MPLS Backbone and Unified Communication had significantly impacted the entire project positively. The team had done great job and we appreciate that."

- *Name*

"BdREN is connected to several international research communities in Asia Pacific, Europe and North America, via the Trans-Eurasia Information Network 3 (TEIN3) and Internet2. The connectivity coverage includes Malaysia, China, South Korea, Japan, Thailand, Vietnam, Philippines, Singapore, Indonesia, Australia, Europe and the United States"

Challenge was to Connect Institutions

Academic and Research Institutions were lacking a common network through which they can be interconnected and can communicate each other to share their views and information. They had their own isolated but not a shared one.

BdREN project has enabled access to research bandwidth and connectivity to World Wide Research Education network. By ensuring reachability of dedicated transmission node to each institutes at their door step. This included deployment of advance network equipment's at each institutes and establishment of MPLS transmission backbone country wide.

Achievements Through Hard Work

Connected both public and private academic institutes across the country under a single robust platform

Educational Institutes started getting access to research bandwidth via this platform.

They can now communicate and collaborate with other both within and beyond national boundary.

Their access to the Data Center Cloud Platform resources increased their productivity.

Educational Institutes can boost up research and development by getting.Access to interactive online teaching will boost up these institution's research and development.

Solutions That Made It Happen

▶ Triple play network architecture
▶ MPLS backbone
▶ Enable seamless communication service to education institutes countrywide via dedicated transmission backbone
▶ Provide research bandwidth to educational institutes
▶ Central MCU server for Video end points
▶ Content server for streaming recorded session to user
▶ Central Call Manager server for handling voice call session
▶ Application to host online meeting with foreign education institutes

- ▶ Ensure integration of Wireless Access Point to connect Video Conferencing system
- ▶ Integration of Cloud Computing Platform with the Data Network
- ▶ Deploy Network Monitoring System to monitor both data and transmission network