Centralized Architecture Creation for ITI Management Information System at Ministry of Labor.

Ministry of Labor controls the functioning of all the Industrial Training Institutions (ITI) in the country. More than 5000 of these institutions are spread across all states and union territories in India. A project was undertaken to create a centralized architecture to capture the information in respect of all the ITI. The project had two separate sub project. While one sub project handled the aspect of data collection for finance, academics and logistics management at each of the ITI the other subproject handled the collection, collation and reporting on all the data collected from the ITI's on a centralized data center. The centralized data center fulfilled the following conditions:

- High Availability—avoiding a single point of failure and achieving fast and predictable convergence times. Such an architecture provided an uptime of 99% or above of the data center operations.
- Scalability—Allowing changes and additions without major changes to the infrastructure, easily adding new services, and providing support for hundreds of dual-homed servers.
- Simplicity—providing predictable traffic paths in steady and failover states, with explicitly defined primary and backup traffic paths. The simplicity of the data center design ensured easy maintainability of the developed data centre infrastructure.
- Security: Since the entire developed system was expected to be made available to the stakeholders over the internet, it needed to be comprehensively secured. The security architecture provided at the minimum firewall to create a militarized zone, an Intrusion Detection System (IDS) a secured socket layer (SSL) and a comprehensive system of indentifying each user through the use of user Identification and passwords.

All the hardware components used adhered to international standards and with high through put. The developed architecture along with the availability of 8Mb bandwidth at the data center produced a response

time of not more than 5sec for typical transactions at the user end in the field.

Vendors in the IT industry were invited to bid on the created architecture and consultants from GCS were responsible for providing overall strategy and direction to World Bank on the project.