Case Study

ICCP/TASE.2 Bridge Between Control Centers

The Context

The client, a major energy state Transmission Company in India, has introduced a new control center near its headquarters. The new control center needs to exchange data with the Power Management Company that is managing the regional/national load dispatch center over ICCP (Inter-Control Center Communications Protocol). ICCP or IEC 60870-6/TASE.2 is specified by utility organizations around the world as the standard to enable data exchange between utility control centers, utilities, regional control centers, and Non-Utility Generators.

The client’s load dispatch center is responsible for scheduling and dispatch of electricity over the inter-regional links in accordance with grid standards, supervision and control over the inter-regional links to ensure stability of the power, and energy accounting. State control center needs to exchange data with the load dispatch center as per Grid code.
The newly installed state control center has an EMS system supporting ICCP version 2 (2000-08), whereas the regional load dispatch center has a GE EMS system supporting ICCP version 1 (1996-08). These two systems are not compatible with each other. Kalkitech’s SYNC 4000 was deployed along with an ICCP peer to support both versions and allow for exchange of data with each other.

**Solution**

The stated solution consisted of the following:
- SYNC 4000 with 4 Ethernet ports, ICCP Peer protocol driver
- ABB Spider Network manager
- GE XA21 SCADA

Load dispatch center SCADA system GE XA21 is connected to SYNC 4000 protocol gateway over ICCP over a redundant link. SYNC 4000 ICCP Peer server was connected to ABB Spider network manager for sending data monitored from inter-grid boundary points. Data from ABB system is exchanged to GE system and vice versa.

**Tools Used**
- Kalkitech’s EasyConnect configuration tool
- ICCP Configuration tool – SISCO

![Solution Architecture Diagram](image-url)