



GE VERNOVA

IEEE POWERTALKS

Asset Management and Optimization

Efficiently Managing and Optimizing Power Assets in Geographically Dispersed Locations

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Customer challenges:

Accessing assets at geographically dispersed locations

**No standard two-way
communication
available**

**Limited onsite
Resources & Data
bandwidth**

**Corporate IT policy
on cyber Security**



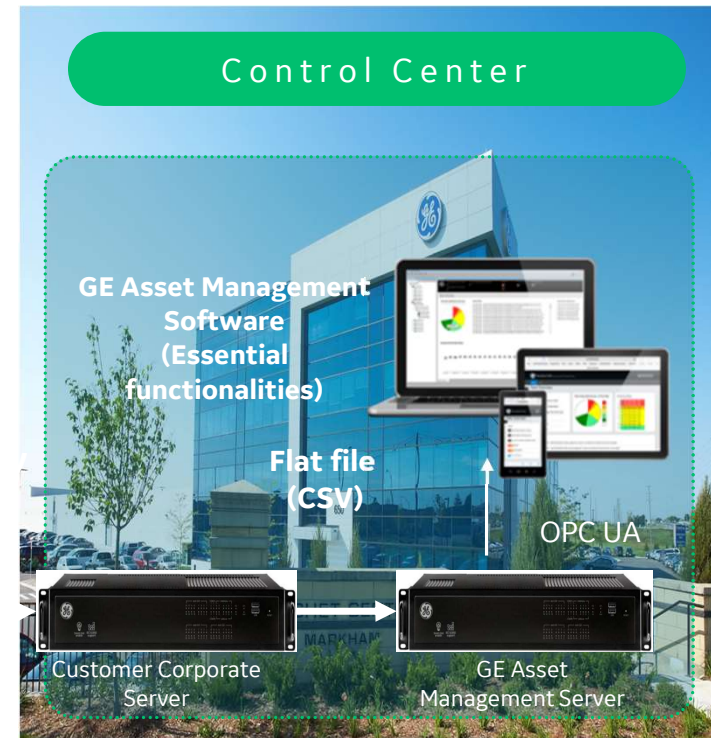
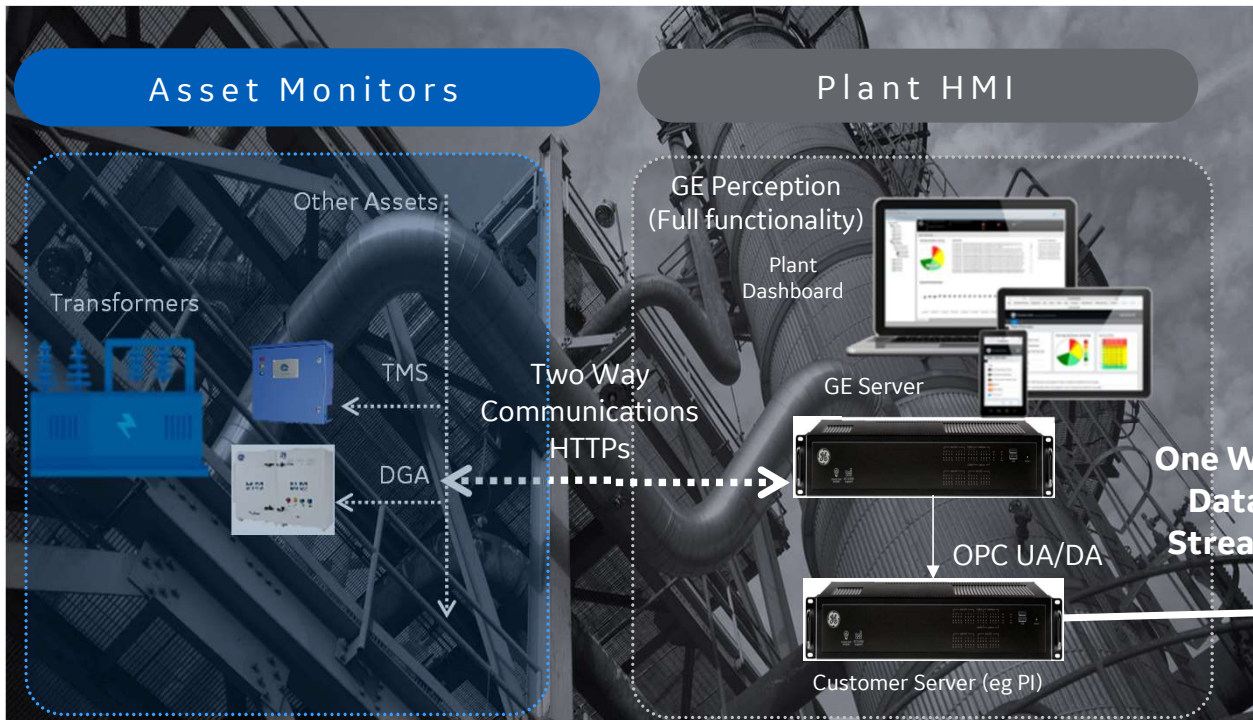
GE Case Study- O&G Plants located at remote locations



Solution

- ✓ Data Conversion in field from standard format to Flat files
- ✓ Secure transfer through one way network firewall from the OT network to the IT network used in the headquarters
- ✓ The central corporate level software automatically ingested the data files at set intervals.

Architecture



Outcome

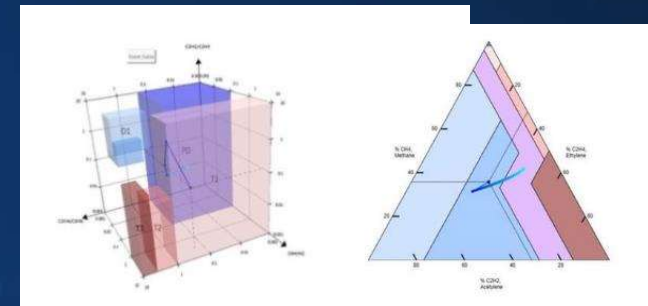
Data Conversion

Manual offline data transmission and ingestion converted into a fully automated online mechanism.

Critical health data access

- Power, Voltages, Transients
- Capacitance, Electrical Partial Discharge (PD), Tan Delta
- Dissolved Gas and Moisture Readings
- Thermal and Moisture Models calculations
- Service and general alarms
- Asset Rankings

Less labor intensive and more frequent critical asset parameter reporting to the HQ



Data access limitations and mitigations

Health Data	Locations with standard communication	Geographical dispersed location	Mitigation
Measured & calculated values	✓	✓	
Fleet Ranking	✓	✓	
Trend charts	✓	✓	
Grouped Alarms	✓	✓	
Diagnostic tools	✓	✓	
Individual Alarms	✓	✗	Locally configured matching with field
Expert Recommendation tool	✓	✗	Accessible in field
Remote asset configuration	✓	✗	Accessible in field
Alarms modifications	✓	✗	Locally configured matching with field
Variable data Frequency	✓	✗	Unified optimum import frequency e.g. hourly
Multiple data types	✓	✗	A unified format for representation on a single software platform



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