Connecting to the Sustainable Future with 5G Wireless and M2M Gateway Technology

Presented by
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Securely deploying large-scale cellular SCADA connectivity with Energy DSOs

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Large-scale cellular connectivity

Device management

Firewall & VPN
Data center 1

Firewall & VPN
Data center 2

Network monitoring, NOC/SOC

Cellular networks

Azure, AWS

Backup solution for critical sites

500-10000 x IoT Gateway
Grid trends

• Automation increasing everywhere in grids
• Volumes up, prices down
• IT departments taking control of IoT projects
• Result:
  • Huge cloud of edge devices
  • Build & operate with low OPEX per node
  • Must be secure
Lessons learned: Security & deployment

• Cybersecurity
  • Seek network simplicity to improve reliability
  • Firewall as VPN is the only viable VPN solution
  • Isolating from the internet is not a strategy; defence-in-depth is mandatory
  • Cloud security is critical for DSOs
  • Scrutinize the minute details of how your vendor establishes chain of trust in zero touch

• Deployment
  • You need Design Thinking to create fluid operations (physical & digital)
  • Device management automation & zero touch is the key tool
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Specification Requirement:

1. Redundant SCADA Server with Historian - Mitsubishi direct offering
2. Redundant Hot-Standby PLC System for WTP (Water Treatment plant) - Mitsubishi direct offering
3. Standalone PLC and HMI System for RWPH (Raw Water Pumping Station) - Mitsubishi direct offering
4. Redundant PLC System for CWPH (Clear Water pump House) - Mitsubishi direct offering
5. RTU on GPRS Based communication over DNP3 Protocol for OHSR (Over head Service Reservoir) - 210nos Offered with help / product support from Advantech
6. RTU on GPRS Based communication over DNP3 Protocol for MBR (Membrane Bio Reactor Technology) - 04nos Offered with help / product support from Advantech
Objectives:

- Process Automation Dept. in India formed in the Year -2014.
- Approval from various Govt. Sectors applied and successfully achieved.
- Tie up with various EPC’s for the supply of Automation System

Offering:

**Turnkey solutions: STIC (Supply, Test, Install & Commission)**

- Concept, Design, Engineering, Manufacturing and Commissioning
  - Preparation of functional design specifications
  - Design, Configuration & Programming of PLC/DCS System
  - Design & Development SCADA & Interface configurations.
  - Electrical & Control Panels - Engineering, Assembly & Testing
  - Preparation of Detailed Drawings & Documentation.
  - Offer Factory Acceptance Tests
  - Installation, Commissioning & Site Acceptance Tests
  - Training, Maintenance Procedures for System
  - O&M Support
Co-Creating the Future of the IoT World