

IEC -61850 applied to Substation Automation - Comprehensive Training Program

Kalkitech announces a 3-day comprehensive seminar cum training workshop on IEC-61850 standards for Substation Automation. This training will cover the theory behind IEC-61850 by reviewing the salient standards of IEC-61850 and supplement it with demonstrations of 61850 communication between clients and servers, IED-to-IED communications using GOOSE messages, the philosophy of inter-operable engineering and configuration using Substation Configuration Language with demonstration of 61850 engineering tools like SCL Manager etc.

Day 1 covers a broad overview of 61850 as well as the usage or application of 61850 as it is intended by substation automation designers. The sessions walk the audience through the steps of creating a substation specification using SCL (called the SSD file), examining IED capabilities (ICD files), importing IEDs into the specification and configuring them to finally generate a Substation configuration description (SCD file). Day 1 ends with an introductory session on the object models of the 61850 ACSI.

Day 2 expands on the object models of 61850 related to Reporting, Logging, Setting groups, GSE messaging, Control commands, and then details the relationship between 61850 abstract specifications and the underlying MMS protocol which is used to transport 61850 messages. This session ends with a quick description of the ASN.1 encoding of 61850/MMS messages on the wire and provides the foundation to understand the last session of the day which is a demonstration of 61850 client-server communication. The demo introduces the audience to tools for simulating clients and servers as well as a tool for viewing the protocol traffic on the wire.

Day 3 provides an understanding of the 61850 modelling of substation information in the form of Logical Nodes and Common Data classes, the protocol layers applicable to 61850, an overview of substation to control-center communication with demonstrations of protocol gateways used for this purpose. The day ends with a final session on related advanced technologies like CIM, phasor measurement units for Wide Area Monitoring and Security.

The training workshop is of value to Power utilities and personnel involved with the implementation and commissioning of substation automation solutions using IEC-61850

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