IEC 61850 fundamentals, application and testing in digital substations

2 days | English | Cpuc01en

Get a thorough introduction to the IEC 61850 standard in a combination of theoretical and hands-on sessions. Work in a digital substation environment with IEDs from different vendors and redundant network architecture for station and process bus. Learn how to efficiently test all aspects of IEC 61850 substations, like IEDs, communication services, protection functions and time synchronization with all OMICRON IEC 61850 testing solutions.

Objectives

> Understand all parts of the IEC 61850 standard and know its applications
> Use the Client/Server, GOOSE and Sampled Values services for power utility automation
> Know the benefits of configuring the substation communication with the help of the Substation Configuration Language (SCL)
> Performing commissioning and functional testing of IEC 61850 based IEDs and systems

Content

> Basics of IEC 61850
> Data models and services
> Specific communication mappings
> Client/Server communication for SCADA applications
> GOOSE analysis and applications
> Sampled Values on the digital process bus
> Configuration and engineering based on the SCL
> Basic aspects of communication networks
> Analyze IEC 61850 based communication systems
> Hands-on testing of IEC 61850 IEDs and systems in the environment of a fully digital substation

Solutions

IEDScout, StationScout
GOOSE Configuration Module, Sampled Values Configuration Module, IEC 61850 Client/Server
ISIO 200, DANEO 400
CMC test sets with Ethernet adapter

Audience

Technical staff from electric utilities or companies involved in project planning, commissioning or maintenance of IEC 61850 systems

Prerequisites

Basic knowledge of electrical engineering