

## IED Integration and Automation Training

**Course:** Using IEC 61850 with the SMP Gateway Training  
P-TTRN-0111-00

**Duration:** 1 day

**Overview:**

This training builds on the basic concepts introduced in the **Using the SMP Gateway Training**. Participants are introduced to the IEC 61850 international substation automation standard and to its application in real world situations. Detailed hands-on examples, centered on relevant application problems, ensure that participants become fully familiar with the technical aspects of using the SMP Gateway in an IEC 61850 automation project.

**Recommended Audience:**

The course is intended for engineers and technicians involved in installing, configuring, maintaining or operating substation automation and control systems, using the IEC 61850 standard.

**Prerequisites:**

**Using the SMP Gateway Training** is a prerequisite for this class.

**Objectives:**

At the end of the course, participants will be able to:

- Understand the scope, concepts and capabilities of IEC 61850.
- Understand the IEC 61850 substation architecture and the underlying networking technologies.
- Use the SMP Gateway to integrate IEC 61850 devices.

Note that focus of the course is on the use of IEC 61850 devices in real substation automation applications, not on the technical implementation of the standard.

## Contents:

- IEC 61850 substation automation
  - Structure and format
  - Application services including reading, controls, reporting, and logging
  - Object and device information models
  - Substation Configuration Language (SCL)
  - Peer to peer communication, GSSE and GOOSE
- Using the SMP Gateway in IEC 61850 applications
  - Integrating IEC 61850 and legacy devices
  - Reporting data
  - GOOSE messaging

## Conditions:

- This course must be combined with Using SMP Gateway Training.
- Courses run from 8:30 AM to 4:30 PM, for one day.
- Courses can be held at Cooper Power Systems' Montreal City offices or at client facilities.
- Each participant will receive printed notes.
- Availability of specific field devices to be used for hands-on exercises must be arranged for ahead of time.
- For courses given at its offices, Cooper Power Systems provides the SMP Gateways and computers for the hands-on exercises.

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