



TRAINING ON IEC 60870-5-101 and -104

What: Implementing and using the standards IEC 60870-5-101 and -104 protocols

Duration: 2 days training

Overview

Attendees are introduced to the IEC 60870-5-101 and -104 protocols, their implementation and their usage. During this course, attendees learn how the protocols are organized and the meaning of the different options offered by the protocols. Detailed hands-on examples, centered on relevant application problems, ensure that all attendees become fully familiar with the standard protocols.

Recommended Audience

The course is intended for engineers and technicians involved in implementing, installing, configuring, maintaining or operating utility automation and control systems, using the IEC 60870-5-101 and -104 standards.

Prerequisites

Attendees should have a basic understanding of typical communication protocols. Moreover, they should be familiar with common serial and network communication principles.

Objectives

At the end of the course, attendees will be able to

- Explain the organization of the IEC 60870-5-101 and -104 standards
- Interpret the standardized device documentation to be supplied by device manufactures
- Explain the impact of the different standard parameters
- Implement the standard protocols
- Use the standards to interrogate a device
- Use the standards to supply data to a SCADA control center

Contents

- Introduction of IEC TC 57 standardization and standards
- IEC TC 57 reference architecture (showing the position of the various IEC TC 57 standards)
- Organization and protocol principles of the standards IEC 60870-5-101 and -104
- IEC protocols overview and basic concepts
- Using the IEC protocols to interrogate a device
- Using the IEC protocols to supply data to the SCADA control center
- Security of transport layer (IEC TS 62351) and conformance testing (IEC 60870-5-601 / -604)
- Comparison with DNP3 and IEC 61850, mapping of IEC 61850 CDCs to IEC 60870-5-101/104 ASDUs
- Hands-on training using fully functional software for controlled (similar to a server, in the RTU) and controllable stations (similar to a client, in the SCADA system)
- Market situation
- Practical examples
- Questions and answers

Conditions

- Courses run usually from 8:30 a.m. to 5:00 p.m. (other times possible)
- Courses can be held either at client facilities or at any other place (to be negotiated)
- Depending on the specific needs that arise before or during the training we could add other topics. We are quite flexible to provide you exactly what you need!
- Presentation language is English
- A CD-ROM is included, containing all necessary software and documentation. Fully functional software for 101 and 104 for controllable and controlling stations running for 6 months for evaluation is provided.
- For courses with hands-on training attendees have to bring their own computers

Interested experts contact the following address please:

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