QualityLogic

IEEE 2030.5 CA Rule 21 DER Workshop

The CA PUC mandates certification of IEEE 2030.5 implementations by March 22, 2020. That's not much time to develop a conformant implementation. Jump start your efforts with our two-day private training class. Our class is held in-person at the company's office and provides an environment where attendees can interact directly with one of the leading experts on 2030.5/CSIP. We've been teaching the 2030.5 class for over 5 years and trained over 100 software engineers in seven countries on IEEE 2030.5/CSIP.

What People Say

"The 2-day IEEE 2030.5 training course was perfect for understanding the technical details of the protocol as well as CA Rule 21 and the CSIP guidelines. Using the QualityLogic ad hoc test harnesses has also allowed us to start developing compliant software very rapidly."

– Stephen S. of Errigal

"Awesome workshop! I gained a better understanding of 2030.5 and CSIP as well as the guidelines about certification."

– M. Rubin from a major Smart Inverter Manufacturer

Workshop at a Glance

Implementing IEEE 2030.5 isn't simple. Our analysis shows that 18 (out of 30) IEEE 2030.5 Function Sets will need to be implemented to satisfy the Common Smart Inverter Profile (CSIP) for CA Rule 21. This workshop will help you get over the hurdles that IEEE 2030.5 implementation presents and provide you with solid and practical technical understanding of IEEE 2030.5 and CSIP.

On-Site Workshop Designed for Teams In

- Vendors developing IEEE 2030.5 servers, end-device clients, and aggregator clients to meet CA Rule 21 requirements

- Vendors/system integrators/aggregators planning to acquire and use IEEE 2030.5 compliant products for DER communications

- End-user utilities, ISOs/RTOs and regulators specifying IEEE 2030.5 products

- Test labs planning to certify IEEE 2030.5 products for the SunSpec CA Rule 21 Program

Day one

Session Title	Session Description
Session 1: Background	• Smart grid landscape • 2030.5 purpose • CSIP's guide to Rule 21
Session 2: IEEE 2030.5 Introduction	• Open standards • Discovery process • Function sets and categories • Servers and clients • Security
Session 3: Function Sets/Categories	• Support resources • Common resources • Smart energy function sets
Session 4: Support and Common Resources	• IEEE 2030.5 conventions • Device capability • Basic resources (design, end device, time)
Session 5: Smart Energy Function Sets	• DER and DERP • Metering and mirrored meter • Pricing • Events and randomization
Session 6: Rule 21 & CSIP Overview	• Core functionality • DER functions • Usage scenarios
Session 7: CSIP Communications	• Scenarios: inverter, aggregator, EMS • 2030.5 communications, security, and authorization
Session 8: CSIP Basic Functions	• DER devices, groups, events, and controls • Scheduling and prioritization

Day two

Session Title	Session Description
Session 9: CSIP & IEEE 2030.5 Function Sets	• High-level architecture • 2030.5 function sets • Inverter identification/end device
Session 10: CSIP Utility/ Aggregator	• Group assignment of inverters • Utility server start-up • Utility/aggregator operations • DER controls and curves
Session 11: Polling and Subscription	• Polling • Subscription/notification • Example usages
Session 12: DER Event Scenarios	• Simple event scenario • Multiple events scenario • Conflicting events scenario • Rules of 2030.5 event handling
Session 13: Meter Data, Status, and Alarms	• Metered data from DERs • Status information from DERs • Alarms from DERs • Error handling
Session 14: Introduction to QualityLogic Tools	• Testing CSIP using QualityLogic tools • Functions Test suit tool • Ad-hoc test tool
Session 15: Conformance and Certification	• CSIP and SunSpec • SunSpec DER test plan • SunSpec certification program