QualityLogic

# QualityLogic IEEE 2030.5 Test Tools

QualityLogic has developed the industry's first test tools and testing services to ensure the interoperability of IEEE 2030.5 products and conformance to the specification.

## Key Benefits

### Leader in Interoperability

- QualityLogic has developed the industry's first test tools and testing services to ensure the interoperability of IEEE 2030.5 products and conformance to the specification

### Approved by SunSpec

- QualityLogic's Test Tools are the first to be approved by SunSpec for their IEEE 2030.5 CSIP Certification Program.

### Domain Expertise

- QualityLogic works with industry alliances and consortiums to design, develop and support test tools for certification programs for smart grid standards.

## Overview

In the Smart Energy market, early products set expectations – positive or negative. That's why it's critical to be sure your products comply with relevant standards, work within smart grid systems, and inter-operate with other products. QualityLogic's interoperability experts have the expertise to help you understand, create, validate and certify inter-operable Smart Energy products.

## Solution at a Glance

The QualityLogic IEEE 2030.5 Test System includes four test suites – Ad Hoc Testers for IEEE 2030.5 clients and servers and Functional Test Suites (FTS) for IEEE 2030.5 clients and servers.

## Ad Hoc Testers

IEEE 2030.5 Ad Hoc Testers are actual conforming implementations of IEEE 2030.5 Client and Server, and they provide real-world IEEE 2030.5event simulations and thorough analysis of IEEE 2030.5 messages. QualityLogic's IEEE 2030.5 Ad Hoc Testers allow you to set up complex scenarios for IEEE 2030.5 clients and servers and ensure conformance to the IEEE 2030.5 Application Protocol Specification.

The two testers, IEEE 2030.5 Client Ad Hoc Tester and the IEEE 2030.5 Server Ad Hoc Tester, each support all commonly implemented elements of the Application Protocol Specification. The tools provide you with the ability to simulate "golden reference" implementations of IEEE 2030.5 compliant products and conduct interoperability testing.

The Ad Hoc testers are valuable for exploring use case scenarios by simulating devices or head-end servers. They provide conformance checking as well as detailed message logs for analysis and debugging.

## Functional Test Suites

The IEEE 2030.5 Functional Test Suites (FTS) are a quick, convenient way to test IEEE 2030.5 device functional conformance against a formal industry certification test specification. The Functional Test Suites implement the Server tests and Client tests covering the core Function Sets and optional Function Sets specified by a specific test specification. The test suites are designed to be both pre-certification tests for vendors and for certification testing by Nationally Recognized Test Labs.

Currently, QualityLogic FTS implement the conformance tests defined by the Consortium for SEP2 Interoperability (CSEP) and the SunSpec IEEE 2030.5 CSIP Conformance Test Program.

### DER Ad Hoc and FTS Versions

Our IEEE 2030.5 certification and interoperability test tools have added support to SunSpec's IEEE 2030.5 CSIP Conformance Procedures. The following additional support is available now:

- Conformance tests for Distributed Energy Resources – e.g., Solar, Storage and EVs – and EV charge scheduling based on the most recent IEEE 2030.5 standard.
- Additional support in the Ad Hoc Testers for CA Rule 21 DER Integration and Interoperability Testing. These testers are being used for simulating either head-end or clients in smart inverter and demand response research activities as well as to trouble-shoot interoperability issues in pilots and demonstrations using IEEE 2030.5.
- Support for testing the IEEE 2030.5 Common California Rule 21 Implementation Guide for Smart Inverters, also known as CSIP. The tools are approved for the SunSpec CA Rule 21 Conformance certification program.

### Demand Response and Pricing FTS

The IEEE 2030.5 conformance test program defined by the Consortium for SEP 2 Interoperability (CSEP) is focused on direct load control, price communication, messages to energy control systems and their owners, messaging, security, discovery, and more.

QualityLogic's IEEE 2030.5 FTS Version 2 was approved by CSEP as the official certification test harness for IEEE 2030.5. The Conformance Test Program is used by UL and TTA (Korea) to conduct conformance certification testing for demand response applications or products.

### Related IEEE 2030.5 Test Services

**IEEE 2030.5 Developer Training and Support:**

- 2-day on-site workshops and email/phone Technical Support for developers.

**Test planning, development and execution:**

- We can offer valuable services that save time and money while ensuring the commercial quality of products.

**Custom test tool development:**

- QualityLogic starts with its current knowledge and test tool technology to quickly develop customized implementations for conformance or interoperability testing.

### About QualityLogic

QualityLogic is a major contributor to the standardization of DER communications throughout the world. In addition to development and certification test tools, we offer training for IEEE 2030.5 development and we offer pre-certification testing and consulting to vendors and utilities working to build a DER management communications infrastructure using the emerging communications standards.

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