

IEEE 2030.5 Test Tools and QA Services



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 interoperate with other products. QualityLogic’s interoperability experts have the expertise to help you understand, create, validate and certify interoperable Smart Energy products.

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.

IEEE 2030.5 Test Tools

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 conformant implementations of IEEE 2030.5 Client and Server, and they provide real-world IEEE 2030.5 event 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 with real devices from other vendors or simulating devices or head-end servers that would be communicated within real-world installations.

The Ad Hoc testers also help identify problems that occur in communications and diagnose the causes. They support applications ranging from demand-response to EV charging to DER management. Recent enhancements support testing of most of the CA Rule 21 smart inverter communications requirements.

Functional Test Suites

IEEE 2030.5 Functional Test Suites are a quick, convenient way to test IEEE 2030.5 device functional conformance to the CSEP-defined certification requirements.

The Functional Test Suites implement Server tests and Client tests covering the five core Function Sets and 10 optional Function Sets specified by CSEP.

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These include direct load control, price communication, messages to energy control systems and their owners, messaging, security, discovery, and more.

UL and TTA (Korea) use QualityLogic's test tools for IEEE 2030.5 Conformance testing. FTS testers are valuable in your product development process to ensure conformance to the specification. Using the FTS saves you significant investment in comparable internal test development and maintenance, while ensuring a smooth and cost-effective certification process.

IEEE 2020.5 QA Services

- The **IEEE 2030.5 Developer's Workshop** provides a conceptual understanding of IEEE 2030.5, a technical walkthrough of IEEE 2030.5, training on QualityLogic's test tools, and best practices for conformance and interoperability testing of IEEE 2030.5.
- The **IEEE 2030.5 Conformance Test Program** uses the tests defined by the Consortium for SEP 2 Interoperability (CSEP) for its Phase 1 certification test harness release. QualityLogic's IEEE 2030.5 test tools were approved by CSEP as the first official certification test harness for IEEE 2030.5. The Conformance Test Program is used by UL and TTA to conduct conformance certification testing.

- **QualityLogic Technical Support** is invaluable for developers who are working to implement IEEE 2030.5, or implementers who are using the standard in a pilot, demonstration or deployment project.

Tech Support provides quick answers to technical questions, saving time and costs in developing or deploying the technology.

- **Test planning, test development and test execution** of IEEE 2030.5 implementations can be valuable services that save time and money while ensuring the commercial quality of products.

Integration testing can leverage QualityLogic's test tools to quickly identify interoperability issues and provide detailed engineering information to developers charged with solving such issues.

- **Custom test tool development** can include special enhancements to the QualityLogic test tools, integration with other test tools, or development of specialized test tools for unique requirements. For example, some vendors or integrators may need tools that simulate hundreds of IEEE 2030.5 clients. QualityLogic can start with its current knowledge and test tool technology to quickly develop such a tool.



For More Information

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