Webinar Q&A

Strategic Approaches to IEEE 1547.1 / UL 1741 SB Certification

On April 8, 2025, QualityLogic held a webinar to provide the latest updates on IEEE 1547.1 and UL 1741 SB certification and testing requirements as well as the company's 1547.1 test tools. These are answers to the questions that came up during the presentation.

Question: Is the same must trip detection available in Keysight oscilloscopes, or is it only for Yokogawa?

Currently, the new must trip detection has been implemented for Yokogawa oscilloscopes, as the majority of our customers use their equipment. However, we have collaborated with other equipment providers, including Keysight and others, and we are open to supporting Keysight oscilloscopes in future versions of our software.

Question: Could we certify the communication interface, then maybe some test on the client side based on the client's requirements?

Partial testing based on client requirements alone does not satisfy IEEE 1547 certification. The standard requires a full suite of tests as defined by the procedures. While there is flexibility in how those tests are executed (e.g., local vs. remote), the complete set must be performed. For details about your specific system, we recommend a one-on-one consultation.

Question: What support is available for Grid Forming certification tests?

Grid forming, also known as "black start" capability, allows an inverter to form a microgrid by generating voltage and current from a zero-state. While this is similar to intentional islanding, it is not part of IEEE 1547. Instead, it falls under various European national standards. Currently, our certification processes do not include grid forming tests.

Question: In your Pacific Power Mix Form, can you mix DC source in with the AC or DC load in with the AC?

Yes, we offer an AC + DC mode that allows this type of mixing. While this wasn't detailed in the webinar slides, our product datasheets and supporting literature provide more comprehensive information.

Question: Are there plans to add automated testing for anti-islanding?

Yes, anti-islanding test automation is in our product development plans. We will share updates with our customers as progress is made.

Question: Does QualityLogic offer a solution for IEEE 2030.8?

IEEE 2030.8 pertains to testing specifications for microgrids. While we do not have a test tool specifically dedicated to 2030.8, some of our existing tools may be applicable depending on the communication protocols and testing objectives. This standard is also closely tied to an upcoming UL specification. We can support microgrid testing to the extent that it involves IEEE 1547 behaviors or other protocols we currently support.

Question: We want to certify our BESS system to IEEE1547. Our system is in MW. Do we really have to hook up any hardware to our system to run the IEEE 1547 certification test?

Certification typically requires full-power testing, including the use of hardware such as grid simulators or DC supplies. The specifics will depend on your certification body (NRTL). In most cases, yes, you will need hardware. However, QualityLogic offers flexible solutions, including test automation via communication protocols (IEEE 2030.5, SunSpec Modbus, or DNP3). You can either let us control the power equipment while you develop your communication protocol or use our test tool in "step dialog" mode for manual control. Communication protocol testing is mandatory.

Question: Is the scope for islanded mode DER excluded from IEEE 1547?

IEEE 1547 includes anti-islanding requirements to prevent unintentional islanding. However, it does not cover intentional islanding scenarios. Those are being addressed separately by the IEEE 1547.4 working group. If you intend to validate intentional islanding capabilities, those tests will be outside the 1547 standard.

Question: Is there a 1547.4 timeline?

We are not as closely involved in the IEEE 1547.4 working group as we would like at this time. While work is ongoing, we recommend contacting active members of the working group for the most accurate timeline updates.

Question: Is the 1547 test tool separate from a 2030.5 Server?

It depends on the context. For IEEE 1547 certification involving 2030.5-based inverters, our test tool functions as a 2030.5 server to simulate 2030.5 server behavior and create 1547 specific resources. However, for CSIP (California Smart Inverter Profile) certification, we offer a separate test suite designed specifically for client or server certification. While both test tools utilize the IEEE 2030.5 standard, CSIP certification testing is distinct from IEEE 1547 certification.

Question: Can the QualityLogic Server test tool be used to test the client capability to work with Intermediate CAs?

Yes, our test tool supports provisioning certificates issued by intermediate CAs. In our upcoming update, we are adding a user-friendly GUI that will enable users to configure certificate chains from any CA, making it easier to accommodate your own CA generated TLS certs.