

Webinar Recap: SunSpec Modbus Work Group Development – June 17, 2025

The SunSpec Alliance hosted a detailed webinar to preview the upcoming SunSpec Modbus Work Group relaunch, providing attendees with a comprehensive overview of the initiative's focus areas for the year ahead. Led by Dylan Tansy, Kudrat Kaur, and Jay Johnson, the session highlighted Modbus architecture, current adoption trends, implementation resources, and a roadmap for future work group efforts.

The webinar began with an overview of SunSpec Modbus' architecture and its standardized approach to addressing the challenges of proprietary register mappings. With over 50 existing information models and wide adoption across grid codes like IEEE 1547, SunSpec Modbus is now used by over 80% of grid-tied inverters for compliance, and more than 90 products or product lines have already been certified.

Dylan Tansy reviewed available implementation resources, including the specification documents, an Excel-based reference model, and online training courses. He also detailed the ecosystem for testing and certification, which includes authorized third-party test labs and tools like the SunSpec Dashboard and SunSpec Express remote certification program.

Security was a central topic. Jay Johnson presented a live demonstration of encrypted Modbus TCP communication using TLS, a significant step forward in protecting device interfaces over public networks. He also outlined future work group tasks such as mutual authentication, cipher suite selection, crypto agility, PKI development, and enhancing access control.

A major point of discussion was the need for formalized client-side testing. While server certification is well-established, client testing still lacks clear criteria. Jay Johnson introduced a draft test procedure covering key functions like device discovery, data interpretation, and error handling. Participants were invited to join the work group to refine this draft and contribute to the publication process.

Another key objective for the group is finalizing the test results reporting specification. Kudrat Kaur discussed current issues such as log file formatting, multi-test handling, and the need for human-readable logs—topics that will be addressed in upcoming meetings.

The session also previewed new development initiatives. Dylan Tansy announced plans for implementation guides tailored to standards such as SAE J3068 and various European grid



codes. He also introduced a proposal to adopt Evo Power's grid forming model as a SunSpec Modbus standard, a response to growing industry demand. Additionally, he shared progress on the 900 series modular energy storage models, designed to improve upon the scaling limitations of previous versions.

The webinar concluded with a Q&A session. Tom Tansy raised important questions about work group structure, the need for TLS security tutorials, and potential alternatives to IEEE 2030.5. It was emphasized that all specifications will be developed through consensus, with SunSpec acting as a facilitator rather than a directive body.

The first official work group meeting is scheduled for June 18, 2025, and is open to all. Non-members were encouraged to explore SunSpec Alliance membership options, including a 30-day trial license and limited-time discounts.