

01 THE CHALLENGE

Today, there are many smart meter implementation projects taking place around the world. Some of these have developed their own regulations and protocols which the smart energy industry must adhere to when communicating across networks.

Suppliers require evidence from smart meter device manufacturers which demonstrates that the manufacturers' devices will work on their networks. To achieve this, they need a validation solution providing assurance that a device meets all necessary requirements from an independent party. That's where Critical Software's SMITEn (Smart Meter Integrated Test Environment) can help.

02 THE SOLUTION

We developed SMITEn to provide:

- A simple test infrastructure for setup and maintenance.
- An integrated toolkit that makes it easier to implement GBCS, SMETS and DUIS release updates.
- A single solution supporting all test scenarios including emulated, physical and end-to-end.
- An emulated communications hub and gateway connections.
- A dedicated, bespoke solution from an independent supplier.

Leveraging its success developing smart meter test tools such as the GBCS Integration Testing for Industry (GFI), Critical Software developed SMITEn so that the energy industry and consumers can more rapidly realise the benefits of investments made in new smart meter devices and the infrastructure they use.

SMITEn provides a simple and flexible environment with an integrated toolkit that supports all testing scenarios. It provides real and emulated connectivity to suit

different client needs and enables simple replication of issues and verifiable fixes.

The initial version of SMITEn addressed challenges in the UK, using our experience of the Data Communications Company (DCC) infrastructure, GBCS, SMETS1, SMETS2, GFI and Parse and Correlate as well as other key niche technologies and protocols.

Having proven to be a significant success in these cases, SMITEn can be easily configured to test against different protocols and regulations for other projects.

03 THE RESULTS

In addition to the customisable testing environment provided by SMITEn, we offer a comprehensive list of services to clients who wish to take a more "managed service" approach. Additional installation, configuration and integration support - on or off a client's site - is available as part of our solution. Training options, automated test specification services, issue resolution support, evidence pack development, technical consultancy, software stack and hardware stack provision and implementation are also available.

We also provide Smart Metering Testing as a Service (SMTaaS), where experts are sent smart meter devices and a full remote testing service is provided.

If you'd like to find out more about how we can help develop a bespoke SMITEn or SMTaaS package to suit your needs, please get in touch.

04 THE TECHNOLOGY

- Robot Framework
- Apache Kafka
- Java
- Python

ABOUT CRITICAL SOFTWARE

Critical Software provides systems and software services for safety, mission and business-critical applications. We work closely with our clients, helping them to meet the most demanding standards for performance and reliability.

We were founded in 1998, with NASA our very first client. Today, we work across many international industries and have offices across the globe.

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