Enrolling Smart Meters

The Path to IP5b

01 THE CHALLENGE

The Smart Metering Implementation Programme (SMIP) is a UK government plan involving the roll-out of over 53 million electric and gas smart meters. The SMIP represents a significant implementation challenge for the electricity and gas industries, involving numerous parties and stakeholders, with the Data Communications Company (DCC) leading the activity.

A total of 6 million first generation smart meters known as SMETS1 devices, supported by the meter manufacturer Secure Meters, need to be enrolled in the DCC network.

Secure Meters contracted Critical Software to build a robust solution to meet DCC requirements for enrolment and adoption – the 'Integration Path Option 5b', defined by the Department for Business, Energy & Industrial Strategy (BEIS).

02 THE SOLUTION

Critical Software built a solution that met Secure Meters' requirements and ensured compliance with wider UK industry standards.

The solution allowed easier alignment with the migration procedures outlined in the SMETS1 Transition and Migration Approach Document (TMAD); real-time switchover capability to minimise customer loss-of-service, including scheduling to maintain performance at a lower cost; and end-to-end security.

User interoperability between smart meters was also accommodated in the solution, satisfying industry requirements set by BEIS and the DCC.

03 THE RESULTS

The IP5b project enabled Secure Meters to deliver a complete service catalogue and full system availability within the scope of new rules established by the DCC.

Given the significant market share of Secure Meters SMETS1 devices in the UK, Critical's solution will help to ensure the broadest possible customer base can immediately benefit from interoperability.

The work carried out received praise from Secure Meters, who recognised Critical's flexibility and attention to detail which contributed to the timely success of the project, all the while maintaining the high quality standards demanded by the DCC and Secure Meters.

04 THE TECHNOLOGY

Techniques:
Scrum, Digital Certificate

Languages:
Python, C#, XPath

Protocols:
HTTP, DUIS, SMETS1, JSON, XML

Frameworks:
Angular, Log4net, OWIN, Quartz.NET, TestNG, PowerShell

Areas:
Java, Testing, .NET Core, .Net, Windows, SQL, Linux

Critical
software

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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We are CMMI Maturity Level 5 rated.
For a list of our certifications & standards visit our website.