

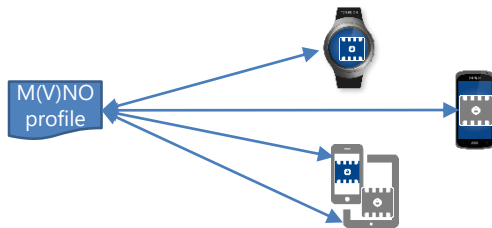
M(V)NO Profile - eSIM Interoperability Testing

Mitigating the risk of negative business consequences of de-facto interoperability issues by an cost efficient managed testing service.

The Challenge

Again and again combinations of a concrete M(V)NO eSIM profile and a concrete mobile device with its eSIM show interoperability issues. This happens although the involved technical components (eSIM, LPA) went through GCF / PTCRB conformance testing. The problem can be caused by the eSIM profile itself or the eSIM / LPA due to a spec which here and there shows some room for different interpretations.

This interoperability challenge is a specific one in the eSIM universe due to the fact that an M(V)NO eSIM profile needs to work with various today's and forthcoming eSIM/LPA implementations. It did not exist in the UICC world where the UICC and the M(V)NO profile had a fixed 1:1 relationship and were both created by the same party.



For a given M(V)NO eSIM profile, interoperability needs to be ensured with different eSIMs / devices – the ones in market and over time newly launched devices.

The Solution

Based on its deep and broad experience and leveraging its own tool set, COMPRION provide the Test2Match testing service.

The following aspects are tested:

Remote SIM Provisioning

Test that all activities related to profile life-cycle management (Download, Enablement, Disablement) can be performed.

Profile compliance

Verify profile syntax, semantic and structure in relationship to TCA / SIMAlliance technical specifications.

Profile interoperability: File System

Compare downloaded and installed profile on eSIM with eSIM profile specification (MF, (A)DF-s, EF-s, File Control Parameters).

Profile interoperability: Security domains

Compare generated security domains on eSIM with eSIM profile specification.

Applications, RFM Applications

Compare generated Applications / RFM Applications on eSIM with eSIM profile specification.

Applets

Check if installation parameters are syntactically correct according to ETSI and meaningful and if all utilized Java APIs are available.

HTTPS connectivity (e.g. for SCP81)

If applicable: Test if the URL can be resolved to an IP address via DNS. Test if a HTTPS connection can be established.

NAA's Authentication

For the NAA, it is tested if the correct algorithm and correct keys are used for authentication.

RAM/RFM

For the installed RAM/RFM application with its given install parameter, it is tested if the parameters are correctly applied, e.g. MSL, Access Domain / Privileges.

Customer Segment

- M(V)NOs
- Companies testing on behalf of M(V)NOs:
 - SM-DP+Provider
 - OEMs
 - EUMs
 - Chip / module manufacturers

Addressing the security and confidentiality concern

COMPRION is well aware that a real M(V)NO eSIM profile contains critical and confidential data. Therefore COMPRION puts all necessary provisions into place to ensure the security and confidentiality of the data, i.e.:

- Transfer of the eSIM profile is always encrypted.
- The eSIM profile is stored and tested on equipment which is neither connected to COMPRION's campus LAN nor to the internet.
- COMPRION only deals with profiles, which do not contain valid credentials / access keys to the M(V)NO network and systems: The M(V)NO is requested to obfuscate this data, before sending the profile to COMPRION.

Also the outcome of the testing is critical and COMPRION handles it with the necessary confidentiality.

Related COMPRION Products

- Test2Match service, leveraging e.g. the following tools:
 - eUICC Profile Creator
 - eUICC Profile Manager Explorer and Loader (M2M or Consumer)
 - Network Bridge with Remote Control

Business benefit

The Test2Match service is an important element, complementing other elements, e.g. GCF / PTCRB device conformance testing. It significantly reduces the tap into of issues after the eSIM profile has already been delivered to customers and to suffer from unsatisfied customers and customer care effort, negative press, loss of credibility, etc.

COMPRION's standardized Test2Match service enables all M(V)NOs to mitigate the risk of profile – eSIM/device interoperability issues. As it is provided as a testing service, conducted by COMPRION experts, there is no requirement on a detailed expert level in eSIM technology on M(V)NO side. As the M(V)NO does not need to invest in any tools itself, the Test2Match service is very cost efficient and the testing cost is scalable – to meet the M(V)NOs demand for coverage.

Get in touch with us to discuss your specific business need:

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COMPRION

Test Solutions for a Connected World

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