Ensure Interoperability of your mCommerce ecosystem with UL's Mobile Test Center



MOBILE TEST CENTER

The process of testing mCommerce implementations can now be performed in a smoother, simpler and more efficient way through UL's Mobile Test Center:

- Test against a representation of the infrastructure: We provide
 POS and handset benches which together form a representation
 of the market for issuers and vendors. Allowing you to test
 against the real thing, avoiding interoperability issues in the
 field.
- Utilize test experts to support your team: Subject-matter experts can run the test service for you and analyse issues, or

- support your team in their test activities. They have experience in technologies and standards such as EMV, MIFARE, Global Platform and HCE.
- Optimize your test process: Our test processes ensure high confidence levels while keeping the test effort low. They incorporate our best practices from across the globe and save you from reinventing the wheel.
- **Test tools and automation:** We simplify issue analysis and reduce overall testing time through using state-of-the-art test tools and automate processes.

Representation of the infrastructure

- 40+ global and regional POS terminals
- 20+ NFC handsets with different OS versions
- Reference payment applications and secure elements including cloud-based

Test experts for support

- Executed 1000+ test and certification services
- Practical experience in technologies (HCE, cloud-based) and standards such as EMV, MIFARE, Global Platform

Mobile Test Center

- Set up 15+ test centers to improve efficiency
- Supported payment schemes in optimizing test and certification processes

Optimized test process

- Complete mobile and payment portfolio of test tools
- Robot set-up for automated testing

Test tools and automation

BENEFITS OF UTILIZING THE MOBILE TEST CENTER

- Scalability: we make use of real components during testing and have incorporated best practices to improve overall efficiency. Our test team is highly experienced and has acquired knowledge in all of UL's projects and testing activities, in various industry domains, including payments and mobile.
- **Reliability:** testing with real devices will allow you to get a clear overview of the problems you may face in the market.

This allows you to mitigate risks upfront by informing customer service, adjusting your service or educating your consumer.

• Independence: choosing an independent party ensures there will be no conflict of interest and provides the possibility to facilitate problem solving, if the issue is within the reference component. convenient to your daily business practice and internal processes.

MOBILE TEST CENTER SERVICES

VENDOR SERVICES

Our vendor services are focused on the Radio Frequency communication between NFC devices (e.g. NFC handsets, contactless cards, NFC stickers, POS terminals). The NFC antenna varies with respect to size, shape and position. From the RF perspective this hugely affects the communication performance, especially when the NFC devices are tapped in different orientations. Metal parts, angles and distance can cause issues, which can easily be resolved when knowing them upfront, so you can ensure your NFC device works with all other devices in the field.



| Vendor Services | Goal |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------|
| L2 Interoperability test service | Focuses on establishing the NFC connection between NFC devices. This is additionally to the testing cur- |
| | rently executed during EMVCo L1 contactless certification and differs from this as it uses real devices (e.g. |
| | handsets/POS terminals) to test against and executes test cases from a user perspective. |
| L2 Interoperability debug session | Same execution as the L2 test services, but with a focus on issue analysis and debug. |

INTEGRATOR SERVICES

Issuers, acquirers and MNOs integrate their solutions and it is crucial to ensure all functionalities work with all other components in the field. Issues found in this domain are: approving a high value payment without PIN; transaction timeouts; incompatible configurations between the virtual card and POS terminal. Avoid these issues with our services.

| Integrator Services | Goal |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| L3 Functional use case acceptance test service | Ensures all functionalities of the issuer solution (payment application, Wallet, Handset and SE) work correctly by testing the use cases. |
| L3 Interoperability & performance test service | Ensures all functionalities of the issuer solution work on the different handsets and contactless terminals installed in the field. |
| L3 Debug session | Same execution as the L3 test services, but with a focus on issue. |

CUSTOMIZED SERVICES AND SERVICES FOR SCHEMES

As scheme owner, large issuer or MNO you take a central role in the ecosystem and have the responsibility to organize a smooth and interoperable ecosystem. Doing this efficiently will demand standardization and test processes. We support you in setting up and running these activities.

| Customized Services | Goal |
|---------------------|---------------------------------------------------------------------------------------------------------------|
| Build | Set-up a Mobile Test Center, based on our blueprint developing, e.g., test policy, test processes, test envi- |
| | ronment and test specification. |
| Operate | Execute the customized test services on behalf of the customer. |
| Transfer | Transfer our operational activities to the customer and ensure continuation of the MTC in-house. |