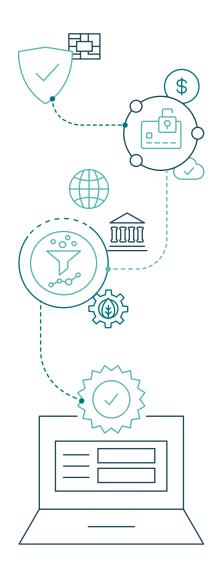
Digital Commerce Authentication Through the New EMV® 3-D Secure Protocol

UL 3DS Self-Test Platform: Promoting end-to-end testing for 3D-Secure technology



Go beyond compliance testing

EMV® 3-D Secure (3DS) certification is the first step in 3-D Secure solution success. And UL's 3DS Self-Test Platform is more comprehensive, scalable and versatile. Our platform now provides testing and compliance services for 3-D Secure, plus real-life, end-to-end simulation and validation across numerous payment scenarios. This plug-and-play platform allows different components to be tested in a scalable and automated UI/UX environment.

Reduce development time

Our 3DS Self-Test Platform is a configurable and versatile web-based platform that simulates the entire 3-D Secure ecosystem based on the EMV 3-D Secure protocol and core functions specification. It offers you the ability to debug, test and verify compliance before submitting test results for formal approval.

Improve go-to-market speed

Our platform provides many features that can help speed up development and improve go-to-market time:

- Single-solution testing environment and formal approval services
- Comprehensive 3DS approval process support
- Enhanced debugging features and interface
- Guaranteed up-to-date EMV 3DS specifications
- EMVCo regulatory and specification compliance
- European PSD2 exemptions for Strong Consumer Authentication (SCA)

User friendly and scalable

The platform provides testing and compliance services in an automated, user-friendly and scalable manner, supporting the most updated protocols for the 3-D Secure framework. The UL 3DS STP is the perfect solution for vendors and service providers that offer 3-D Secure components such as 3DS SDK, 3DS Server, Directory Server or Access Control Server to their customers. That includes providers such as:

- Product providers
- Merchants, PSPs and acquirers
- Payment schemes
- Issuers



The platform provides the ability to debug, test and verify compliance 3-D Secure components before submitting test results for formal approval. It also enables Europe's PSD2 exemptions for SCA. UL 3DS STP keeps the overall overview and control of test projects and test case execution run.

The platform is a self-test environment that gives you the tools to:

- First check a System Under Test (SUT) during development and debugging (Pre-Compliance)
- Apply for UL's 3DS Approval Services and running compliance tests before requesting formal approval (Compliance)

Simulate and verify from cart-to-checkout

UL Merchant Simulator within the Self Test platform offers interoperability and user experience testing for 3DS components. It allows you to test in an end-to-end environment across the acquirer, interoperability and issuer domains. You can simulate a real web shopping experience allowing you to buy goods and validate the experience of a 3DS flow. You can also select various payment cards to trigger challenge and frictionless flows in different browser and app interfaces across different authentication methods.

UL Merchant Simulator helps promote a successful 3DS market

- Test across the three domains: acquirer, interoperability and issuer
- Accelerate availability, help ensure reliability, and improve performance
- Validate product interoperability between vendors, merchants and banks
- Pretest payment brand protocol extensions
- Gain data visibility for the proper collecting and scoring of devices and users
- Test user interface experience for EMV 3DS events

Testing applications

Replace any simulated components with a certified product for interoperability testing.

3DS vendors, PSPs and merchants:

- Test SDKs, website and mobile apps against an EMV
 3DS certified server
- Test server against EMV 3DS certified SDKs within browsers, iOS and Android clients
- Test against functional DS and an issuing bank's ACS

3DS vendors and payment networks:

 Test against EMV 3DS certified merchant requester (server and SDKs for browser, iOS and Android) and an issuing bank's ACS

3DS vendors and banks:

 Test against the DS and an EMV 3DS certified merchant requester (server and SDKs for browser, iOS and Android)



UL's 3DS Self-Test Suite

- Simulates and verifies from cart to checkout
- Triggers 3DS test transaction through simulated merchant page to mimic user experience
- Helps ensure successful 3DS market experience
- Supports the EMVCo 3D-Secure protocol as well as payment brand protocol extensions
- Performs UX/UI test, message, and data elements validation
- Supports flexible plug-and-play interoperability
- Allows testing in simulated e2e environments

Empowering trustworthy commerce

With a focus on today's realities and tomorrow's needs, UL provides the trusted and critical expertise that is required in an interconnected and cashless world. Our payment expertise enables businesses to implement innovations that guarantee regulatory compliance, maintain customer trust, and increase market access.

Ready to create implementation efficiencies? For more information, please visit https://ims.ul.com/contact.



Empowering Trust™