RS Software

RS 3DS 2.0 Testing Platform

Implementing New Technology to Counter New Threats

With the proliferation of online payments, new security threats are surfacing on a daily basis. Since card-present transaction security has improved significantly with the implementation of chip-based transaction authentication measures, fraudsters are now targeting card-not-present environments. Recognizing the need to standardize next generation payment security for card-not-present transactions, EMVCo has released the next version of the three-domain-secure specification [3DS 2.0] to extend its support to new payment channels such as tablets and smartphones, while reducing friction and improving user experience.

3DS 2.0 Testing Suite from RS Software

Using a proven set of processes, methodologies and state of the art security tools, RS Software builds on decades of work for leading brands to protect payment systems around the globe. We have had the unique experience of partnering with the world's largest payment network in their journey to implement 3DS 1.02. Extending this expertise, we have provided consultancy services for 3DS 2.0 implementation to one of the five leading payment networks in the U.S.
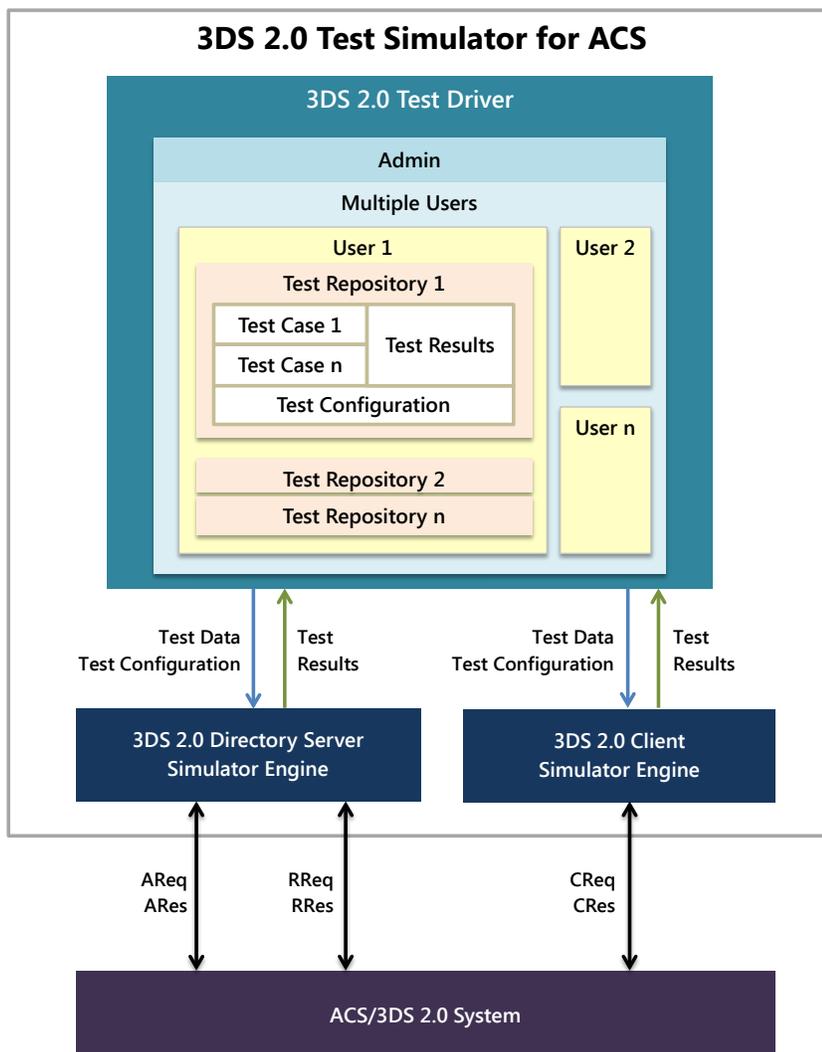
Leveraging our strengths, we have created a unique 3DS 2.0 Test Simulator platform based on this new standard, for payment processors to test their Access Control Server (ACS). The platform tests different components of the entire 3DS 2.0 ecosystem such as ACS, Directory Server (DS), 3DS Requestor, and 3DS Client using the service virtualization technique. The platform comes with an integrated test management suite built for ease of testing. In addition to the testing platform, RS is also providing 3DS testing services to organizations that are implementing 3DS 2.0.

3DS 2.0 Test Simulator

Salient Features

- Architected to support high volume of transactions
- Can be implemented in multiple sites with Active-DR configuration
- Can drive large batches of transactions to test system throughput
- The components are configurable to modify data elements such as response codes
- Built on a multi-tenant model to support multiple users simultaneously
- Supports test management, test case repositories and test case management

A high level schematic of the 3DS 2.0 test simulator configured to test ACS is presented here.

3DS 2.0 Test Simulator for ACS

3DS 2.0 Test Driver

Admin

Multiple Users

User 1

Test Repository 1

| Test Case 1 | Test Results |
| Test Case n | |

Test Configuration

Test Repository 2

Test Repository n

User 2

User n

Test Data
Test Configuration

Test
Results

Test Data
Test Configuration

Test
Results

3DS 2.0 Directory Server Simulator Engine

3DS 2.0 Client Simulator Engine

AReq
ARes

RReq
RRes

CReq
CRes

ACS/3DS 2.0 System

Capabilities

- Simulation of 3DS 2.0 Directory Server (DS)
- Simulation of Access Control Server (ACS)
- Simulation of 3DS 2.0 Requestor Environment (App / Browser based)
- Message templates
  - In compliance with EMV Co 3DS 2.0 Core Specifications
  - With respect to the corresponding 3DS 2.0 component
- Cryptographic features
  - In compliance with request / response message data elements
- Communication Channel
  - Plain Text
  - TLS 1.2

Apart from 3DS 2.0 simulations, the platform also has the following standard test management features:

- Test Tool Administration
- Test Configuration Management
- Test User Management
- Test Case Repository and ability to modify the test cases by individual tester
- Test Execution and Reporting that support the following execution modes
  - Manual send / receive
  - Automated send / receive
  - Throttled send / receive

3DS 2.0 Testing Service

Our testing services for ACS/3DS 2.0 systems include the following:

- Test Management
  - Manage the entire testing program
  - Coordinate with different stakeholders
  - Manage triple constraints of schedule, effort and cost
- Test Design Creation
- Test Matrix Creation

- Test System Management
- Test Execution
    - Functional testing [including White box testing]
    - Regression testing
    - Integration testing
    - Load testing
    - User acceptance testing
- Reports
    - Test findings
    - Test case coverage
    - Test management metrics

About RS Software

RS Software is the leader in vertically integrated solutions involving the deployment and customization of software in highly complex, mission-critical payments environments. The company's exclusive focus on the payments industry for over 25 years forms the basis for its proprietary processes and methodologies that improve time to market for its clients. Its global delivery model and knowledge transfer disciplines ensure that its cross-culture experience enables maximum value to clients from start to finish.