

INTRODUCTION

ATMs have traditionally been seen as static, simple, unchanging machines; however the software operating and supporting them is incredibly dynamic and complex. Add operational and regulatory complexity and a highly competitive ATM landscape to this and it becomes even more critical to have fast and reliable software at the core of corporate testing suites to cater for rapid new feature, regulation or even new hardware iterations.

RapidFire ATM XFS is a robust and easy-to-use tool designed to provide seamless testing of ATM applications at the CEN-XFS hardware layer.



BACKGROUND

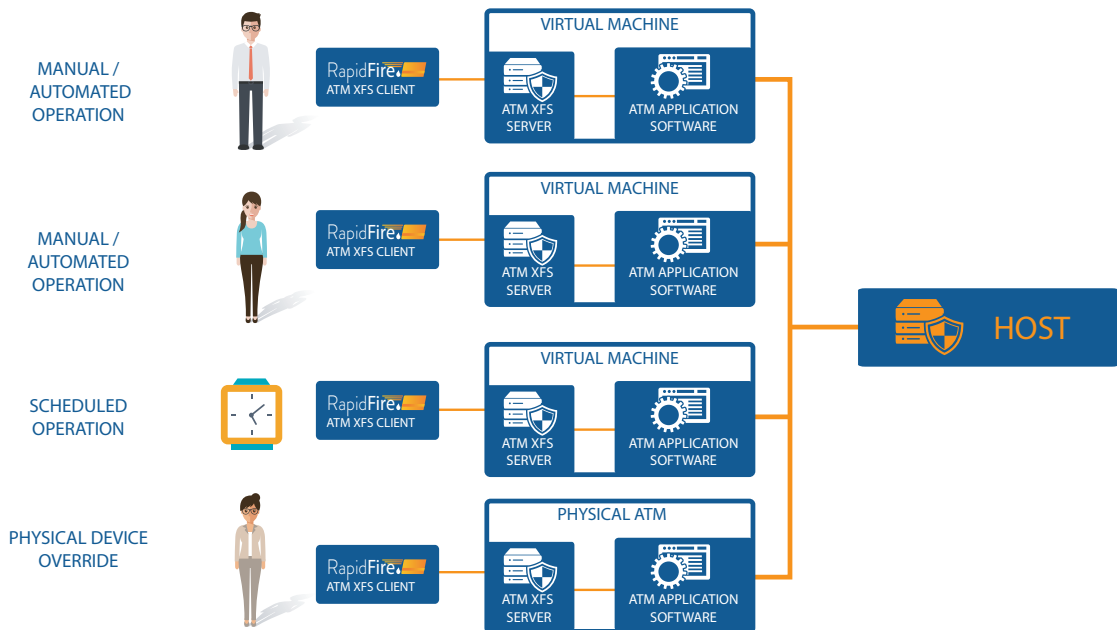
RapidFire ATM XFS is a CEN XFS-level ATM hardware and test automation simulator. Essentially **the software simulates the actual ATM hardware components**, allowing testing of the actual vendor/bank ATM software itself as well as the upstream elements of the switch.

It is key to determine whether this form of testing capacity is required or whether alternatively simulation of the entire ATM (including the ATM hardware and software) as a single 'black-box' is required, as Afferent supports both simulator types in its RapidFire suite.

With RapidFire ATM XFS testing the ATM software itself, test departments can **be confident** that the test results mimic almost exactly what is seen on a physical ATM device, but with the added **high efficiency** (e.g. +300 tests per hour¹) **and reliability** which can only be achieved through automated testing.

Add to this the benefit of being able to run the simulators on virtual machines², test capacity can be massively increased by just setting up additional RapidFire ATM XFS instances. RapidFire ATM XFS therefore allows for a **significant reduction in the time and costs of test cycles** as well as increasing test coverage.

POSSIBLE TEST CONFIGURATIONS



¹Depending on ATM software and virtualisation hardware speed

²RapidFire ATM XFS can also be used on existing ATMs by installing the RapidFire ATM XFS Server component on the physical device,

TECHNICAL SPECIFICATIONS

TEST EMV CARDS

RapidFire ATM XFS supports full EMV emulation, i.e.:

- Scheme compliant / issuer specific Application Cryptogram (AC) generation
- Issuer support including Issuer Chip (ICC) test key configuration
- One-touch Chip cloning
- Full Chip Application (AID) customization

AUTOMATE EASILY THROUGH ADVANCED RECORD AND REPLAY FEATURES

- Interaction-based test case recorder
- Integrated touch screen record and replay support (Primary ATM and secondary SOP screens support)
- One-touch accelerated or original speed replay to allow for faster execution if needed
- Scheduled and bulk test case replay functionality

SHARE RESOURCES TO SPEED UP TESTS

RapidFire ATM XFS supports fast sharing of resources between the application instances including:

- Project-based grouping of virtual test cards (including drag-and-drop importing / exporting)
- Drag-and-drop based test case sharing
- Cassette and encrypting pin pad (EPP) configurations via the database import and export feature

COMPREHENSIVELY VALIDATE TEST CASES

The RapidFire ATM XFS record and replay framework provides comprehensive testing functionality. Validate a given test case based on a large set of criteria:

- Pixel-level screen and receipt validation
- Inclusive and exclusive masking-based screen validation
- Active FDKs and EPP keys state validation
- Device states
- Dispensed note types and totals
- Fixed time delays between user or application driven events
- Supervisor panel states

BE LOCATION INDEPENDENT

- Remotely test ATM applications without the need for physical hardware
- To test physical hardware, drive ATMs remotely using RapidFire ATM XFS
- Connect locally or via a VPN to the target ATM as the client and server components communicate via local network protocols

TEST POSITIVE AND NEGATIVE FLOWS

Test all possible transaction flows by being able to configure device states at a click of a button. Test what happens when cassettes are empty, a printer runs out of ink, or when a card reader is no longer available.

Supported negative testing options include, but are not limited to:

- **All XFS configurable device faults, including:**
 - Device offline
 - Fraud
 - Empty / low supplies
 - Hardware failures
- **EMV specific options:**
 - Chip hardware / software failure
 - Card block
 - Application block
 - Pin try exceeded
 - AC generation failure

TEST MOST STANDARD DEVICES

Full device emulation³ of the following devices is included:

Cash Dispenser
Cash in only and Cash Recycler Modules
Card Reader, Contactless Card Reader
Sensor and indicator Unit
Cheque (Item) Depositor
Electronic PIN Pad
Text Terminal Unit
Item / Envelope Depositor
Receipt Printer, Printer Scanner, Statement and Document Printer
Bar code reader

³RapidFire ATM XFS supports both Simple (Single) and Compound XFS device configurations

TECHNICAL SPECIFICATIONS

SCALE TESTING CAPACITY

- Quickly add or remove virtual ATM instances to scale testing needs without huge cost

VIRTUALISE CARDS EASILY THROUGH CLONING

- Convert existing physical EMV test cards to virtualized cards with the built-in card cloning functionality

TEST THE SOP AND VIEW DEEP TRACING

- Supervisor operating panel (SOP) support, including touch sensitive secondary screen and legacy Text Terminal Unit (TTU)
- Realtime XFS message tracing and logging

MODIFY TEST CASES EASILY

- Flows change and so can test cases. RapidFire ATM XFS has a built-in, user-friendly graphical test case editor, including screenshot editor
- Portable test case formats
- Batch test case updater – a tool useful for bulk updating test cases when screen images change e.g. branding updates

AUTOMATED REGRESSION

SCHEDULE YOUR TESTCASES

Run continuous tests even when the test lab is empty. RapidFire ATM XFS can be scheduled to run at any time, allowing for regression testing to be performed overnight, while bespoke (manual) testing can be performed during the day when testers are available.

INTEGRATE WITH 3RD PARTY ISSUE TRACKING SYSTEMS

- RapidFire ATM XFS logs failed or warning tests automatically to Atlassian™ JIRA workspaces; it also automatically resolves issues if results show success

EXTEND EASILY WITH PLUGIN ARCHITECTURE

- The RapidFire plugin architecture is designed for extensibility. Additional customer-specific plugins can be developed quickly and easily when needed

EXTENSIVE REPORTING

- Easily store, report on and share existing test case flows with an archivable PDF-based test flow including screen images
- Individual test results are reported with rich transaction meta-data, validations and expected vs. actual results
- Summarize easily for management with summary test result reports including ATM type, Passed, Warning, Skipped and Failed tests

CUSTOMER TESTIMONIAL


“ RapidFire has transformed our ability to deliver high quality change quickly to our global ATM estate. Previously, test cycles were long and resource intensive, dependent on working ATM hardware and access to card test packs. With RapidFire we can execute test packs quickly and focus on resolving issues. ”

- GLOBAL ATM TEST MANAGER
TRAVELEX WORLDWIDE

CONTACT INFO

Find more information on the other features the RapidFire range offers.

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