

# KaNest® Transactional Testing

**KaNest®** is a simulator to test the implementation of **any application protocol** used by transactional and payment systems.

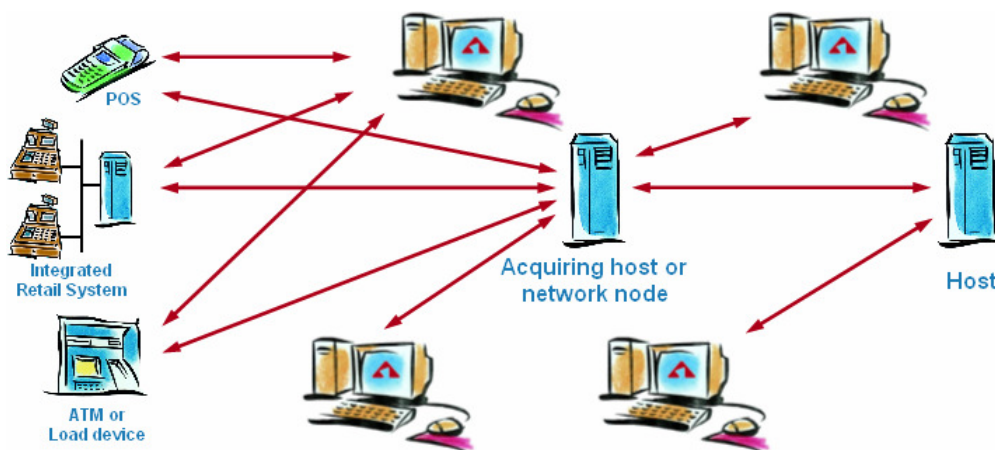
**KaNest®** addresses all test purposes: functional validation, regression testing, stress and load testing, test automation as well as production system monitoring.

**KaNest®** is your best partner to **test, evaluate and certify**:

- **Terminals:** POS, ATMs, PCs, ...
- **Hosts:** Acquirers, Issuers, Processors, ...
- **Switches;**
- **Networks** (private or interbank).

### Key features

- Terminal, Network node or Host simulator
- ISO 8583 compliant
- TLV, fixed or delimited fields
- XML messages
- Multiple simulation channels
- Loop back capability
- Full cryptography (EMV algorithms,...)
- Messages initiated from real cards
- Support of external databases
- Interface with HP Quality Center software
- Load and stress testing
- Test automation
- Remote control



### GALITT Advantage

**KaNest® is recognized as the state-of-the-art simulator for interoperability testing:**

- KaNest® is used by payment associations and networks to certify ISO 8583 partners.
- KaNest® is recognized providing a significant cost saving for payment associations and acquiring institutions certifying POS and PINpads.
- KaNest® may simulate any kind of protocol to test a wide set of transactional systems, including stock exchanges and betting systems.
- KaNest® may perform load and stress testing from a single PC, such as the simulation of 6,000 ATMs or the production of a flow of 900 payment transactions per second.

## STANDARDS SUPPORTED

From STX/ETX protocols to XML protocols and the various versions of ISO 8583 standards (including the 3rd bitmap), KaNest® supports a very large set of message formats.

Concepts of the KaNest® range rely on the “Conformance testing methodology and framework” as defined in the ISO/CEI 9646-1.

## RUNTIME LICENSE

KaNest® users may create ready-to-use Test Suites that can be distributed to be run with a low-cost license, called a Runtime license. Automated pass or fail verdicts are generated and KaNest® provides an integrity mechanism to ensure that the test environment has not been altered by the users.

Other types of licenses include features to edit and run step-by-step test scripts.

## KaNest®-Viewer

Result files created by KaNest® are in a proprietary format comprising a huge set of easy-to-read information. GALITT provides a free viewer to allow anyone to analyze such results.

## KN-R REQUESTER SIMULATION

This module initiates the exchange to solicit the system under test with expected or unexpected behaviors. Messages can be initiated from real cards.

Test Name	Verdict	Date	Duration	In	Out
Requester Test Suite - Try a standard Authorization	Inconclusive	19/09/2008 11:46	00:00:02	2	2
Requester Test Suite - Try an Invalid Amount	Pending	19/09/2008 11:46	00:00:02	2	2
Requester Test Suite - Try an Invalid Cardholder	Pass	19/09/2008 11:46	00:00:01	2	2
Send an Authorization Request (ASCII)	Pass	19/09/2008 11:46	00:00:02	2	2
Send an Authorization Request (EBCDIC)	Fail	19/09/2008 11:46	00:00:01	2	2

## KN-S SERVER SIMULATION

This module provides expected or unexpected responses to requests received from a system under test.

## KN-E REPOSITORY EDITION

This module generates or updates a Repository to implement protocol specifications and create new control and simulation capabilities.

## KN-D REMOTE CONTROL

This module provides an API allowing any Windows™ application to launch test scripts and collect selected results from the simulator. A fully automated test platform can thus be created.

## TURBO MODE LOAD & STRESS TESTING

This mode consists in using a specific KaNest® communication driver for a given protocol. This driver generates a huge throughput of messages per second based on real data.

## HP Quality Center software MODULE

This module enables to drive KaNest® from HP Quality Center software. KaNest® workspaces for acceptance processes can also be updated with data from HP Quality Center software.

## Technical Specifications

### Tested Functions

Protocol application layers for:

- POS
- Integrated retail systems
- ATMs
- Acquiring hosts
- Issuer hosts
- Switches
- Network nodes
- Transaction processors

### Communications

- TCP/IP
- PSTN (modems)
- Null Modem (RS232 cable)
- X25
- SSL
- RFC 1086
- M/Q Series
- Batch file interface

### Formats

- ISO 8583 bitmaps
- TLV (Tag Length Value) Fields
- Fixed and delimited fields
- XML

### Repositories

- ISO 8583 authorization networks (e-rsb, Eufiserv, Base I & SMS, MDS, BIM, SPAN, SID...)
- ATM protocols (NDC+, D912, Logigab, Diego...)
- POS (CB2A, SPDH, Visa II, Hypercom 8583, APACS 30&40, proprietary...)
- XML protocols (EPAS, IFX)
- Private implementations

### Test Suites

- e-rsb, CBcom, CB2A, ...
- ADVT & CCD Acquirer Test Suites for VSDC

### Hardware Configuration

- Pentium PC (1 GHz or above)
- XGA monitor
- 1 Gb RAM
- 1 Gb hard disk space
- CD-ROM drive
- USB port
- Windows™ XP SP2 or SP3 (recommended)