



# TTsuite-SUA

## The Test Suite for Analyzing the SUA Peers Signaling Gateway and Application Server

### Features

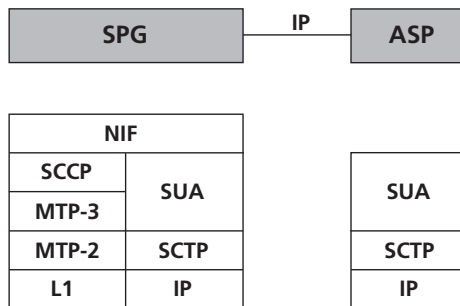
- 108 full-featured tests for SUA peers including
  - State and Traffic Maintenance (ASP/SGP)
  - Signaling Network Management (ASP/SGP)
  - Management (ASP/SGP)
  - Connectionless Data Transfer (Common)
  - Routing Procedures (Common)
  - Reassembly Procedures (Common)
  - Connection Oriented Procedures (Common)
  - SCTP Connection Management
- Tests for valid, invalid and inopportune SUA protocol behavior
- Exhaustive set of context parameters for flexible adaptation of SUA tests to a SUA implementation under test
- Fully automated test execution
- Platform-independent test execution
- Test tracing on different levels of detail
- Test definition and documentation in the standardized test notation TTCN-3

### Benefits

- Standards-based testing according to SUA specifications
- Fast and simple test execution and analysis
- Repeatability of tests and full support of test automation
- Platform independence and rapid integration in existing test environments
- Flexibility through usage of the constantly evolving standardized test notation TTCN-3

### Applications

- Media Gateway
- Signaling Gateway
- Application Server



SUA Protocol Entities

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### Standards

- RFC 2960 "Stream Control Transmission Protocol", SCTP: Stream Control Transmission Protocol, 2000-10
- RFC 3309 "Stream Control Transmission Protocol (SCTP) Checksum Change", update RFC 2960, 2002-09
- RFC 3868 Signaling Control Part User Adaptation Layer (SUA), 2004-10
- ISO/IEC9646-1: "Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts"
- ISO/IEC9646-2: "Information technology – Open Systems Interconnection – Conformance testing methodology and framework - Part 2: Abstract Test Suite specification"
- ETSI ES 201 873-1 TTCN-3 Core Language V4.1.1 (2009-06)

### Reference Platforms

- Java 6
- Windows 7 (32bit or 64bit) / Vista / XP / 2000
- Linux Red Hat - v7.1 (x86/GTK)
- Linux SuSE - v9.1 (x86/GTK)

The screenshot displays the TTsuite-SUA execution management interface. The main window is titled "TTCN-3 Execution Management - TTworkbench Professional". It features a menu bar (File, Edit, Navigate, Search, Project, Run, Window, Help) and a toolbar. The interface is divided into several panes:

- Test Cases:** A tree view on the left showing the test suite structure, including "SUA\_ATS" and "SUA\_SGP\_ASPTM\_1" through "SUA\_SGP\_ASPTM\_5".
- Expected TTCN-3 Templates:** A table listing templates such as "ASPDwnAck", "CommonHeader", "octetstring", "reserved", "messageClass", "messageType", "messageLength", and "ASPDwnAckParamet".
- Data:** A table showing the actual data values for the templates, including "version", "reserved", "messageClass", "messageType", "messageLength", "ASPDwnAckParamet", and "address".
- Properties V:** A table at the bottom left showing test execution statistics: Total: 108, Executed: 1, None: 0, Pass: 1, Inconclusive: 0, Error: 0.
- TTTCN-3 Graphical Logging:** A diagram at the bottom right showing the sequence of events and messages between SUA components, including "Leaving test body", "send ASPDown", "receive", "match", "send H\_SCTP\_SHUTDOWN", "receive", "match", "H\_SCTP\_SHUTDOWN\_COMPLETE", and "send".

Test Management, Execution and Analysis for SUA