

# TTsuite-SIP

## The Test Suite for Analysing Internet System Components, Voice-over IP, and SIP, the 3G Signaling Protocol

### Features

- Full-featured tests for
  - User Agent behaving as a client or server
  - Proxy – outbound and simple proxy
  - Redirect server
  - Registrar
- Tests for valid, invalid and inopportune SIP protocol behavior and syntax variations in SIP messages
- Exhaustive set of context parameters for flexible adaptation of SIP tests to the SIP implementation under test
- Fully automated test execution
- Platform-independent test execution (supported platforms: Linux, Windows 2000 and XP Professional)
- Test tracing on different levels of detail
- Summary of test results
- Test definition and documentation in the standardized test notation TTCN-3

### Benefits

- Standards-based testing according to SIP 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

- Softswitches
- Gateways
- Application servers
- Conference bridges
- Interactive Voice Response Systems (IVR)
- SIP-Enabled FW/NAT
- SIP multimedia servers
- 2.5G/3G cellular devices
- IP phones
- Connected PDAs
- Video terminals
- Soft phones
- Voice enabled Web and e-commerce solution

### Reference Platforms

- Java 5.0 (Sun, IBM or BEA)
- Microsoft Windows Vista and XP, x86-32
- Red Hat Enterprise Linux 5.0, x86-32 and 4.0 update 2, x86-64, GTK
- Fedora 7, x86-32 and x86-64, GTK
- SUSE Linux Enterprise Server 10, x86-32, GTK



### Standards (Conformance Tests and TTCN-3)

- RFC 3261 SIP: Session Initiation Protocol, 2002-06
- ETSI TS 102 027-2 Ver. 4.1.1 IETF SIP RFC 3261; Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification, 2006-07
- ETSI ES 201 873-1 TTCN-3 Core Language V3.2.1, 2007-02

### Standards (Test Framework Support for IMS) - 23 RFCs

- RFC 2327 SDP: Session Description Protocol, 1998-04
- RFC 2976 The SIP INFO Method, 2000-10
- RFC 3262 Reliability of Provisional Responses in the SIP, 2002-06
- RFC 3263 Session Initiation Protocol (SIP): Locating SIP Servers, 2002-06
- RFC 3264 Offer/Answer Model with the Session Description Protocol (SDP), 2002-06
- RFC 3265 Session Initiation Protocol (SIP)-Specific Event Notification, 2002-06
- RFC 3311 The Session Initiation Protocol (SIP) UPDATE Method, 2002-09
- RFC 3313 Private SIP Extensions for Media Authorization, 2003-01
- RFC 3323 A Privacy Mechanism for the Session Initiation Protocol (SIP), 2002-11
- RFC 3326 The Reason Header Field for the Session Initiation Protocol (SIP), 2002-12
- RFC 3327 SIP Extension Header Field for Registering Non-Adjacent Contacts, 2002-12
- RFC 3329 Security Mechanism, 2003-11
- RFC 3428 SIP Extension for Instant Messaging, 2002-12
- RFC 3455 Private Header (P-Header) Extensions to the SIP for the 3rd-Generation Partnership Project (3GPP), 2003-01
- FC 3515 The Session Initiation Protocol (SIP) Refer Method, 2003-04
- RFC 3608 SIP Extension Header Field for Service Route Discovery During Registration, 2003-10
- RFC 3680 Session Initiation Protocol (SIP) Event Package for Registrations, 2004-03
- RFC 3841 Caller Preferences, 2004-08
- RFC 3891 Replaces Header, 2004-09
- RFC 3892 Referred By, 2004-09
- RFC 3903 SIP Extension for Event State Publication, 2004-10
- RFC 3911 Join Header, 2004-10
- RFC 4028 Session Timers, 2005-04

### Standards (on request)

- RFC 2617 HTTP Authentication: Basic and Digest Access Authentication, 1999-06
- RFC 2833 RTP Payload for DTMF Digits, Telephony Tones and Signals, 2000-05
- RFC 3312 Integration of Resource Management and SIP, 2002-10
- RFC 3320 Signaling Compression (SigComp), 2003-01
- RFC 3420 Internet Media Type message/sipfrag, 2002-11
- RFC 3485 The SIP and SDP Static-Dictionary for Signaling Compression (SigComp), 2003-02
- RFC 3325 Private Extensions to the SIP for Asserted Identity within Trusted Networks, 2002-11