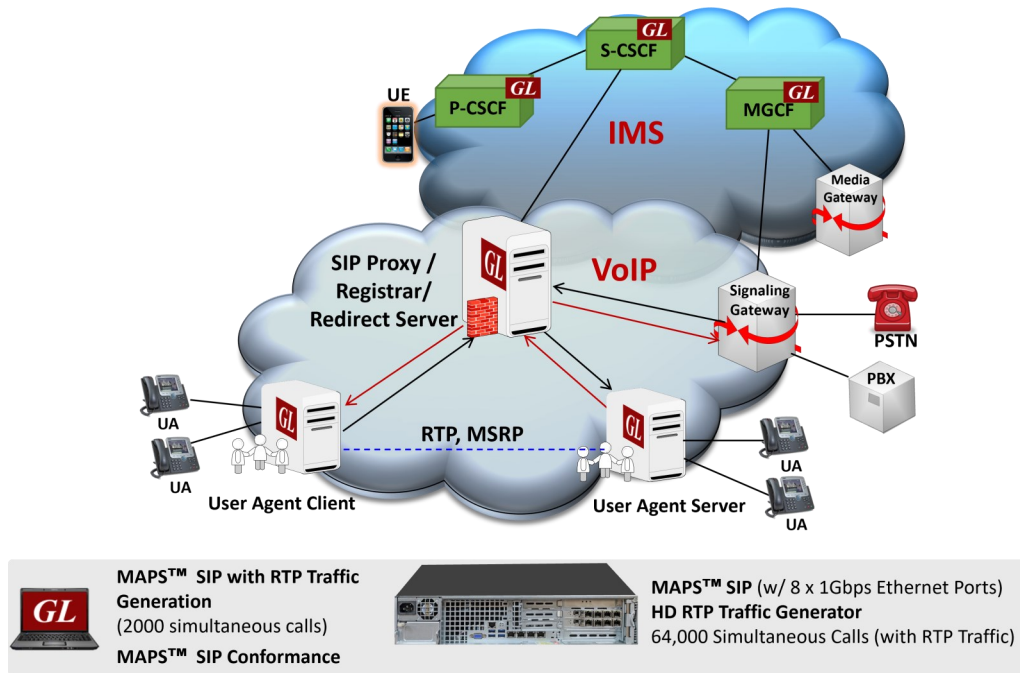


MAPS™ SIP Conformance Test Suite



Overview

GL's **MAPS™ SIP Conformance Suite (PKS121)** is designed with 400+ test cases, as per SIP specifications European Telecommunications Standards Institute (ETSI) TS 102 027-2 V3.1.1 (2004-11). The SIP Conformance Suite is based on the protocol standards used for testing the conformance of various SIP Server and Client entities. It includes inbuilt scripts (*.gls) for Proxy conformance, Redirect Server conformance, Registrar conformance, UAC conformance, and UAS conformance to test the Proxy, Redirect Server, Registrar, UAC, and UAS as per ETSI standard.

The application is also available as **MAPS™ SIP (PKS120)**, which supports emulation of SIP signaling with various RTP traffic options and can be used to emulate any interface in a SIP network.

For more details on MAPS™ SIP Protocol Emulator refer to [MAPS™ SIP Protocol Emulator](#) webpage.

For more details on MAPS™ SIP Conformance Suite, refer to [MAPS™ SIP RTP Protocol Simulator](#) webpage.

Main Features

- Generates and processes SIP valid and invalid messages
- Supports testing UAC, UAS, Proxy, Registrars, Registrants, Redirect Servers, and other SIP entities
- Handles strict routing and loose routing, when requests are routed through proxies
- Conformance Test Specification for SIP (IETF RFC 3261)
 - UA behaving as client server - User Agent Client (UAC) - User Agent initiating requests, and User Agent Server (UAS) - User Agent responding to requests
 - Redirect Server - User Agent Server redirecting requests
 - Proxy - making requests on behalf of other clients
 - Registrar - accepts REGISTER requests
 - Registrant - sends the REGISTER messages



818 West Diamond Avenue - Third Floor, Gaithersburg, MD 20878, U.S.A
(Web) www.gl.com - (V) +1-301-670-4784 (F) +1-301-670-9187 - (E-Mail) info@gl.com

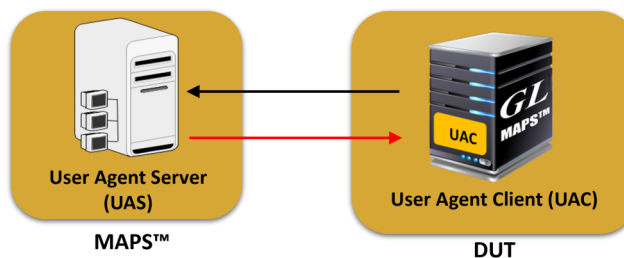
Tested Sequences

- Test Purposes for Registration
 - Registrant endpoint Test cases
 - Registrar endpoint Test cases
- Test Purposes for Call Control (UAC)
 - Call Establishment from Originating endpoints
 - Call Release from Originating endpoints
 - Session Modification from Originating endpoints
- Test Purposes for Call Control (UAS)
 - Call Establishment from Terminating endpoints
 - Call Release from Terminating endpoints
 - Session Modification from Terminating endpoints
- Test Purposes for Proxy
 - Message Processing > Request Test cases
 - Message Processing > Response Test cases
 - Transaction > Client Test cases
 - Transaction > Server Test cases
- Test Purposes for Redirect Servers
 - Call Establishment Test cases
 - Call Release Test cases

Configuration Scenarios

Scenario 1: MAPS™ acting as UAS and testing UAC

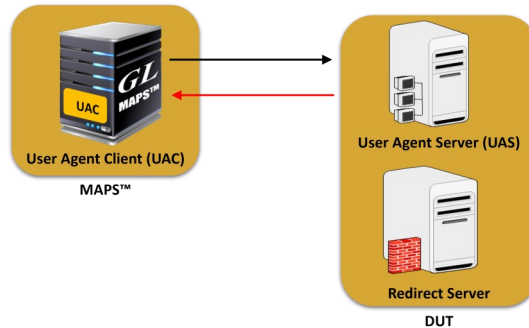
MAPS™ acting as UAS receives messages from UAC (DUT) that generates SIP messages.



Configuration Scenarios (Contd.)

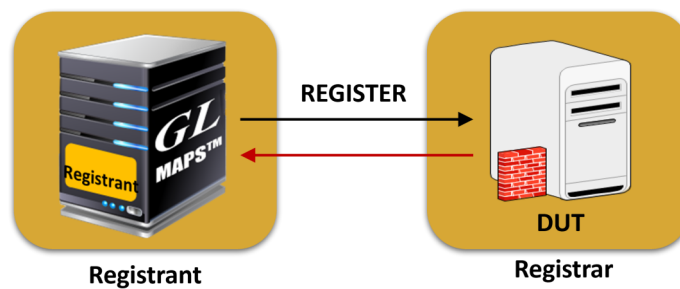
Scenario 2: MAPS™ acting as UAC and testing Redirect Server / UAS

MAPS™ can be configured to act as UAC and to test Redirect Server and / or UAS. This allows the redirection call scenarios to be automated and test DUTs.



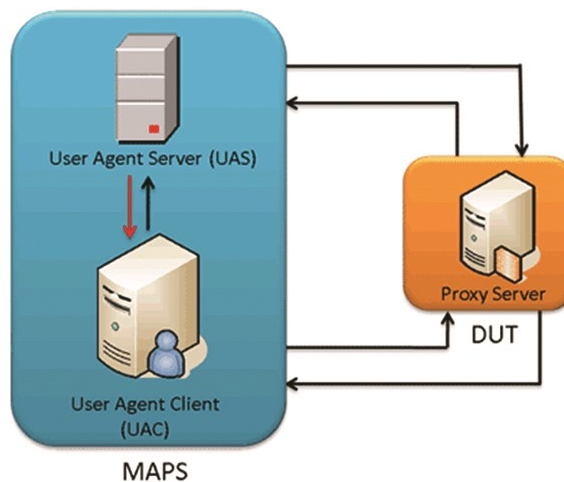
Scenario 3: MAPS™ acting as Registrant to test Registrar

MAPS™ can be configured to act as Registrant and to generate registration request messages to automate the entire Registrar (DUT) testing.



Scenario 4: MAPS™ acting as UAS and UAC to test Proxy Server

MAPS™ can be configured to act as UAC and UAS simultaneously so that entire Proxy testing can be automated.



UAS Conformance Testing

MAPS™ acts as UAC and sends request messages to conform UAS (DUT). To emulate the messages generated by UAC, users can execute the set of UAS_Conformance inbuilt scripts.

The following figure displays execution of UAS Conformance script **UAC_SIP_CC_TE_CE_V_001.gls**, which ensures that the DUT on receipt of an INVITE request sends a Success (200 OK) response or provisional response (100 trying and 180 Ringing).

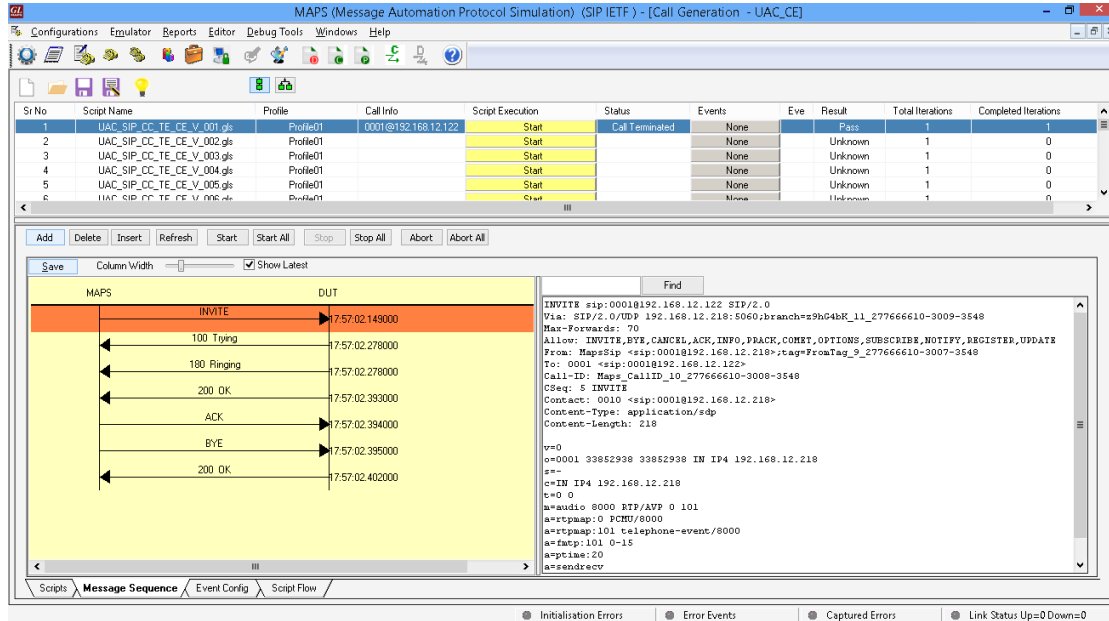


Figure: UAS Conformance Script

UAC Conformance Testing

MAPS™ acts as UAS and receive request messages from UAC (DUT) and responds back conforming the endpoint. To emulate the reply messages generated by UAS, users can execute the set of UAC_Conformance inbuilt scripts.

The following figure displays execution of UAC Conformance script **UAS_SIP_CC_OE_CE_V_002.gls**, which ensures that on receipt of request messages from UAC (DUT) are replied back with the reply messages as seen in the **Message Sequence**.

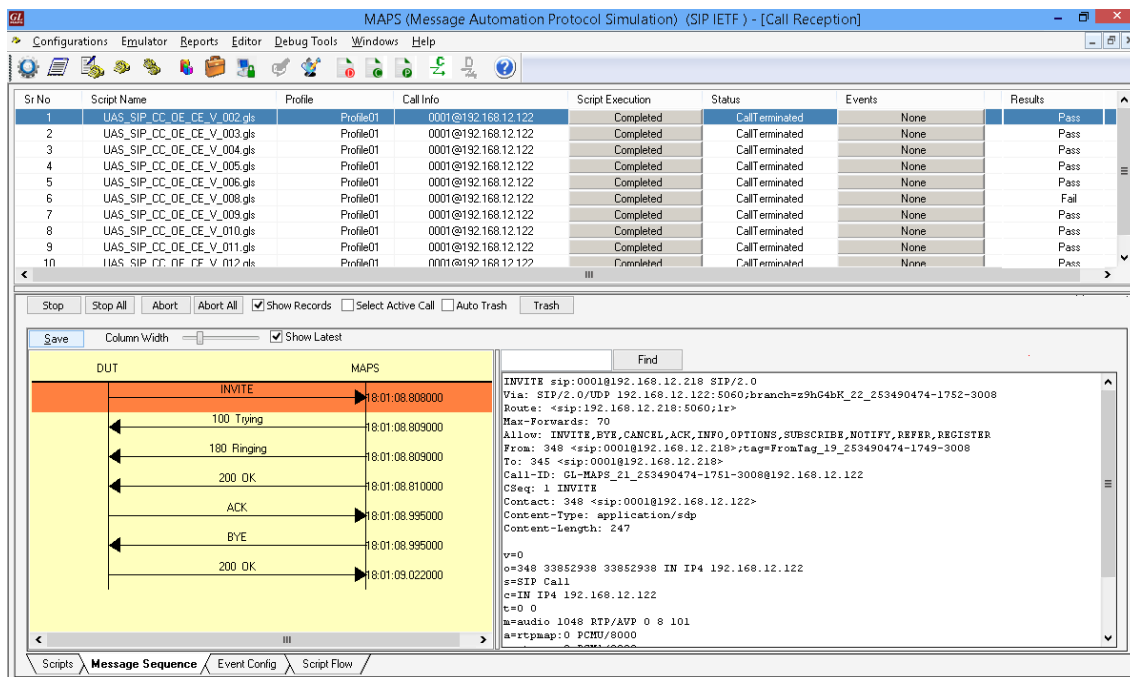


Figure: UAC Conformance Script

Proxy Conformance Testing

MAPS™ can be configured to act as both UAS and UAC sending and receiving SIP messages while testing proxy (DUT).

As shown in the figure below, MAPS™ is configured to act as UAC and UAS simultaneously and the entire Proxy testing is automated. The third party Proxy Server (DUT) is used to receive and reply back to the Proxy Conformance messages.

The figure below shows **PROXY_SIP_CC_PR_MP_RQ_V_002.gls** script is executed, which ensures that the DUT on receipt of INVITE request including a Max-Forward header is set to 0, sends an “Too many hops (483 Too many hops)” request failure as response.

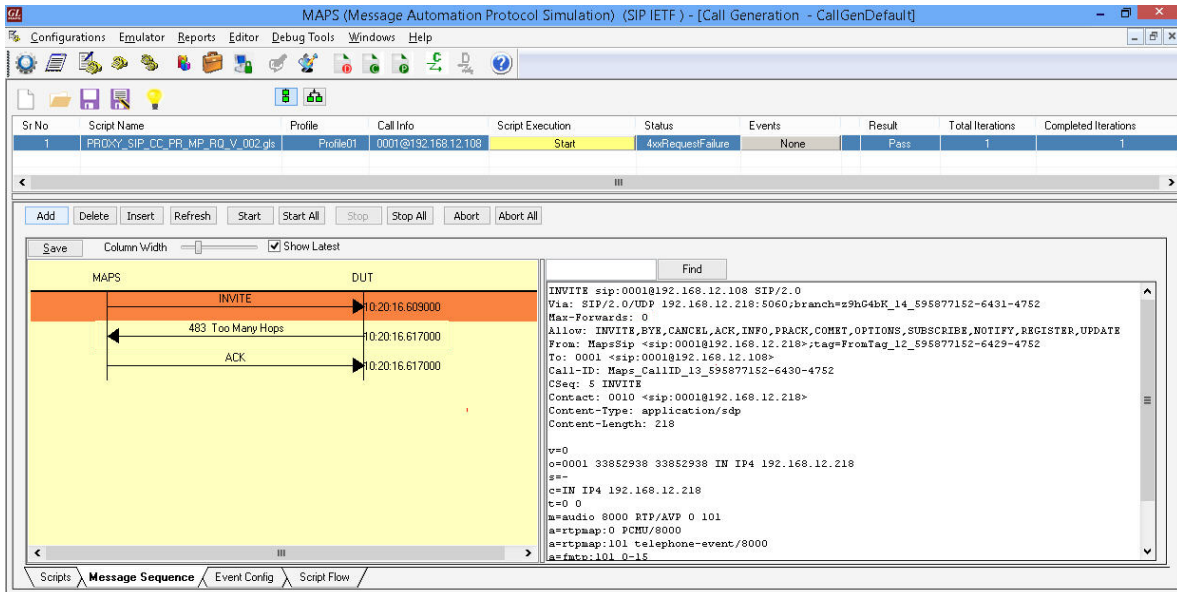


Figure: Proxy Conformance Script

Buyer's Guide

Item No	Product Description
PKS121	MAPS™ SIP Conformance Test Suite (Test Scripts)
PKS120	MAPS™ SIP
PKS102	RTP Soft Core for RTP Traffic Generation
PKS108	RTP Voice Quality Measurements
PKS106	RTP Video Traffic Generation
PKS211	T.38 Fax Simulation over UDPTL
PKS200	RTP Pass Through Fax Emulation, requires one of the licenses below, (w/dongle)
PKS202	2 Fax Ports, RO
PKS203	8 Fax Ports, RO
PKS204	30 Fax Ports, RO
PKS205	60 Fax Ports, RO
PKS206	120 Fax Ports, RO
PCD103	AMR codec for MAPS™
PCD104	EVRC codec for MAPS™
PCD105	EVR_B codec for MAPS™
PCD106	EVR_C codec for MAPS™
PCD108	EVS codec for MAPS™
PCD109	OPUS codec for MAPS™

For more details, refer to [MAPS™ SIP RTP Protocol Simulator](#) webpage.



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