

SCOUT

A framework for testing heterogeneous IP telephony systems



SCOUT – GS Lab’s test framework for IP Telephony – is designed to automate end to end testing of heterogeneous telephony systems. In a typical IP telephony system, multiple network entities such as SIP proxies, media servers, PSTN gateways, participate in a call. To ensure correctness of such a system, thorough testing of each entity in isolation is not sufficient. It is necessary to test how the entities interact in various end user scenarios. SCOUT views the system from an end-user's perspective. It provides multiple telephones (end points) in the system and allows simulation of various end user scenarios. SCOUT features help test correct behavior of an IP telephony system when it is deployed in the field.

SCOUT Differentiators	Enabling Features	Tester Benefits
IP-PBX Testing	<ul style="list-style-type: none">Testing of all standard IP-PBX featuresMake/receive VoIP callsUser registrations and provisioning	<ul style="list-style-type: none">☑ Scriptable call flow at both end points of a call☑ Multiple user creation☑ Multiple simultaneous calls with different call flows
PSTN Integration	<ul style="list-style-type: none">PSTN integration using FXO/FXS or PRI linesActs as PSTN provider as well as a phone device	<ul style="list-style-type: none">☑ Make/receive analog/digital PSTN calls☑ Make calls with one leg as PSTN and on leg as VoIP☑ Same call flow scripting for PSTN end points
Scriptable Call flow	<ul style="list-style-type: none">Behavior of a call end point is scriptableTone detection, send/receive DTMFSynchronization with end points of different calls.Extensibility – invoke external programs	<ul style="list-style-type: none">☑ Answer, set flags, play audio, send/receive DTMF, hangup☑ Detect specific tone at an end point☑ Execute custom programs during a call
Log based validation	<ul style="list-style-type: none">Capture logs from various entities involved in a test runLook for expected messages in logsMaintain captured logs for all runs for debugging/failure analysis	<ul style="list-style-type: none">☑ Fail a test if expected message not found in logs☑ Use captured logs while filing a bug, no need to re-run the test
Testlink Integration	<ul style="list-style-type: none">GS Lab contributed a patch to TestlinkTestlink invokes SCOUT, SCOUT runs tests, sends results back to Testlink	<ul style="list-style-type: none">☑ Run single test / test-suites from Testlink web interface☑ Use Testlink to record test results

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