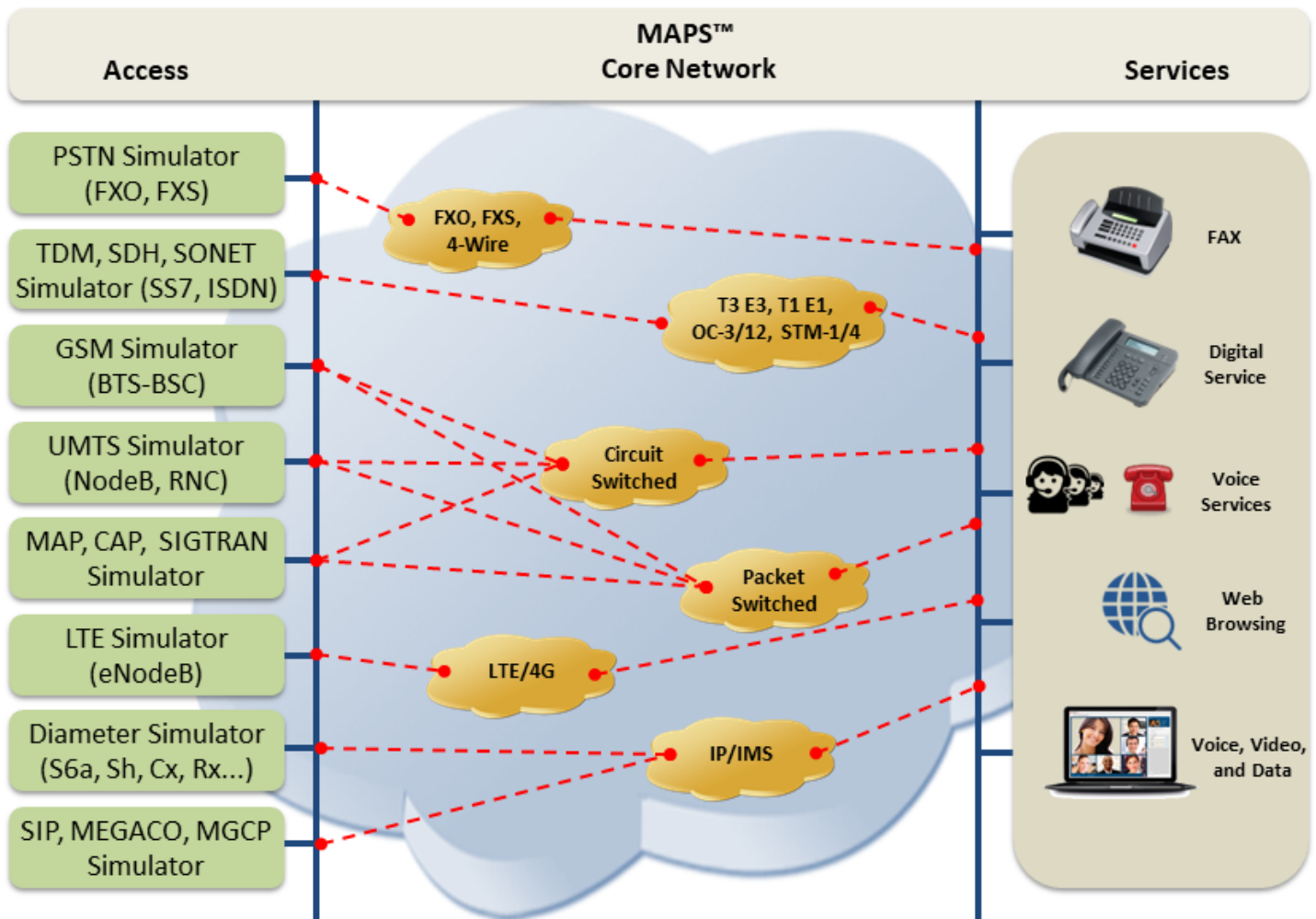


Bulk Call Generators for TDM, VoIP and Wireless Networks



Overview

Testing network performance with high call volume is extremely important to Wireless Carriers, Internet Service Providers, and Equipment vendors: to ensure that quality of experience does not degrade with call intensity, volume, protocol or traffic; that heavy loads, and stress do not degrade stability or scalability of the network, during pre- and post-deployment; that advanced features and services are not compromised due to call intensity or call volume.

Stress and loading processes can help test and simulate worst case scenarios and provide confidence that the network will continue to function under such conditions. Bulk Call Generators require an advanced network appliance which can generate and sustain high volume of calls with heavy traffic. If VoIP, then packets must be generated and output with high precision timing, zero packet loss and in the proper order.

GL offers automated, scripted, multi-user, multi-protocol, high capacity Bulk Call Generators. MAPS™ (Message Automation and Protocol Simulation) platform is the basis for all signaling protocols and for traffic generation – whether voice, tones, digits, fax, data, or video. MAPS™ covers legacy PSTN, next generation VoIP, and Wireless equipment, interfaces, and networks as depicted. Interfaces can be Analog, TDM, Ethernet 10/100/1000/10,000, or Wireless. Some of GL's Bulk Call Generators for various technologies: TDM, VoIP and Wireless

- MAPS™ High Density (HD) for Wireless (GSM, UMTS, LTE, CDMA) Networks
- MAPS™ High Density (HD), RTP ToolBox™ and PacketExpert 10G™ for IP/VoIP Networks
- MAPS™ for CAS, FXO FXS, ISDN, SS7, MAP, CAP, INAP, BICC protocols in TDM Networks

For more information, please visit [Bulk Call Generators](#) webpage.



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Applications

- Load PBX, Switch, Gateways/Routers
- Test IVR, Voice Mail, VoIP phones
- Generate/Accept tens and thousands of calls
- Voice, Fax, Digits, Tones, Data, Video traffic generation
- Automate Regression testing
- Feature testing
- Remote operation
- Scripting: Python and Java
- Voice, Data Quality, Quality of Service

Call Generation Capacity per Appliance

The following lists the products across TDM, IP/ VoIP, and Wireless networks and the call generation capabilities on a multicore system. These performance numbers are associated with a particular codec, while other codecs may provide higher call densities.

Product	Call Generation Capacity/Appliance
MAPS™ FXO FXS	Hundreds of FXO, FXS, Analog calls
MAPS™ TDM (ISDN, SS7, CAS) (32-bit only)	Hundreds of T1's and E1's support Direct OC-3/STM-1 OC-12/STM-4 (10's)
MAPS™ SIP	1600 (scales up to 100K to 200K simultaneous calls with multiple probes)
PacketGen™ - SIP	1000 (scales up to 2000 simultaneous calls)
MAPS™ SIP I	1600
MAPS™ GSMA	1100
MAPS™ MAP	4400
MAPS™ INAP	2400
MAPS™ ISUP SIGTRAN	3500
MAPS™ LTE S1	1500
MAPS™ Diameter	1000
MAPS™ UMTS GnGp	6000

[MAPS™ High Density \(HD\)](#) for Wireless can be configured to generate bulk calls over GSM, UMTS, LTE, and CDMA networks. MAPS™ High Density (HD) or MAPS™ provides a reliable integrated solutions for simulation, monitoring, troubleshooting any [Wireless 2G, 3G and 4G Mobile Networks](#) in the lab.

[MAPS™ High Density \(HD\)](#) for IP/VoIP Platform supports SIP, SIP-I, MEGACO, MGCP, SIGTRAN, MAP, CAP, INAP, BICC, and similarly other protocols. This network appliance provides a modular and flexible solution to generate real voice calls using industry standard voice codecs.

[RTP ToolBox™](#) is another GL's testing tool for IP/VoIP Platform capable of RTP traffic simulation. Various statistical reports are provided for the packets transmitted on a session including Packet Loss, Jitter, Delay, Quality Metrics, Signal Level, Call, Echo Return Loss and others.

[MAPS™](#) for TDM is also capable of generating high volume of calls with Octal T1E1 Cards, and establish traffic over variety of protocols CAS, ISDN, SS7, FXO FXS, MAP, CAP, BICC, INAP, GSM.

Bulk Call Generation and Analysis

Bulk Call Simulation allows quick configurations to easily create different test scenarios with scripts and profiles. These tests can be run simultaneously or sequentially (queue up tasks in succession).

MAPS™ also includes extensive statistical and graphical features to help visually analyze the bulk call generation. Graphs for Call Success Ratio, and Call Status are plotted in real-time.

The screenshot displays two windows from the MAPS software. The 'Load Generation - default' window is in the background, and the 'Statistics' window is in the foreground.

Load Generation - default

- Total Calls To Generate: *
- Max Active Calls: 10000
- Statistical Distribution: Fixed
- Call Rate: 1800
- Scripts: SipCallControl
- Profile: Profile0003
- Start Time - 2015-05-14 14:47:

Statistics

Call Stats | Message Stats | Reset

Statistic Name	Total Calls	Active Calls	Completed Calls	Passed Calls	Failed Calls	Calls/Sec
Default	0	0	0	0	0	0
Outgoing and Inc...	2159430	112	2159318	2159318	0	1872
Registration	0	0	0	0	0	0

Call Success Ratio | Call graph

Refresh 1 Sec

Calls/Sec

Simultaneous Calls

Buyer's Guide

Item No	Product Description
PKS109	MAPS™ SIP HD
PKS120	MAPS™ SIP Emulator
PKS126	MAPS™ SIP I Emulator
PKS101	SIP Core (additional)
PKS102	RTP Soft Core for RTP Traffic Generation
PKS160	MAPS™ UMTS-IuCS/IuH
PKS124	MAPS™ MGCP Protocol Emulation with Conformance Test Suite
PKS122	MAPS™ MEGACO Emulator
PKS130	MAPS™ SIGTRAN Emulator
PKS139	MAPS™ Diameter Emulator
PKS140	MAPS™ LTE S1 Emulator
PKS142	MAPS™ LTE eGTP (S3, S4, S5, S8, S10, S11 & S16) Emulator
PKS141	MAPS™ LTE X2 AP Emulator
XX648	MAPS™ ISDN Emulator
XX649	MAPS™ SS7 Emulator
XX651	MAPS™ CAS Emulator
XX624	MAPS™ FXO FXS Emulator (only for tProbe™)
XX692	MAPS™ GSM A Emulator
XX693	MAPS™ GSM Abis Emulator
XX694	MAPS™ MAP Emulator
XX696	MAPS™ CAP Emulator
PTE001	tProbe™ Dual T1 E1 Laptop Analyzer with Basic Analyzer Software

Note: PCs which include GL hardware/software require Intel or AMD processors for compliance.

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