Protocol Analyzer for
Wireless & IP Networks- PacketScan™
(GSM, GPRS, UMTS, SIGTRAN, LTE, Diameter)

Capable of Monitoring 2G, 3G, and 4G Protocols over IP
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Real-time and Offline Analysis
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Includes Call Detail & Statistics Views
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Advanced Filter and Search Features
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Powerful and Customizable Reporting Tools
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Call Trace Capability Over Various Interfaces
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Supports Intelligent Triggers and Actions
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Customize Decode Options
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Overview

GL Communications offers a wide range of centralized monitoring and testing technologies for Wireless and IP networks. GL's **PacketScan™-All IP Protocol Analyzer** supports monitoring all **2G, 3G and 4G** protocols such as GSM, GPRS, UMTS, SIGTRAN, LTE, and Diameter, in addition to **IP protocols** such as SIP, MGCP, MEGACO, Skinny, and H.323.
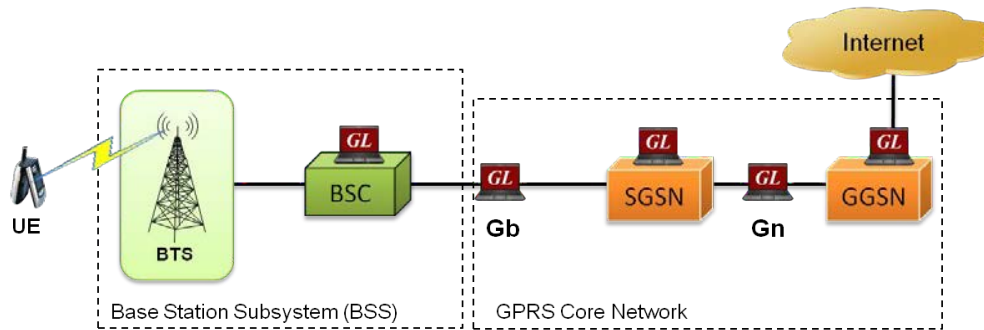
PacketScan™ cellular protocol analyzers support monitoring calls progressing through advanced 3G or 4G networks from a central location, along with the powerful and customizable reporting tools.

For more details, visit http://www.gl.com/packetscan.html and http://www.gl.com/protocol-analyzer-for-all-ip-2G-3G-4G-networks.html.

Common Features

- Advanced filtering and search based on any user selected protocol fields.

- Any protocol field can be added to the summary view, filtering, and search features providing users more flexibility to monitor required protocol fields.

- Trigger intelligent actions based on signaling and traffic conditions

- Support for Multi-technology, Multi-protocol

- Displays Summary, Detail, Hex dump, Statistics, and Call Detail Views.

- Detailed View

  – Displays decodes of user-selected frames from the Summary View.

  – Provides options to display or hide the required protocol layers.

  – Contents of this view can also be copied to clipboard.

- Hex dump View displays the frame information in HEX and ASCII format, the contents of this view can also be copied to clipboard.

- Statistics View displays statistics based on frame count, byte count, frames/sec, bytes/sec etc for the entire capture data.

- Call Detail View displays called/ calling number, released calls, call status, & more.

- Provides a consolidated interface for all the important settings required in the analyzer. All the configuration settings done in any of these options can be saved to a file, loaded from a configuration file.

- Allows the captured frames to be saved to a trace file using different conventions such as user-defined prefixes, date-time prefixes, total number of files, file size, frame count, or time limit.

- Supported on Windows® 7/8 (32 bit and 64 bit) OS.

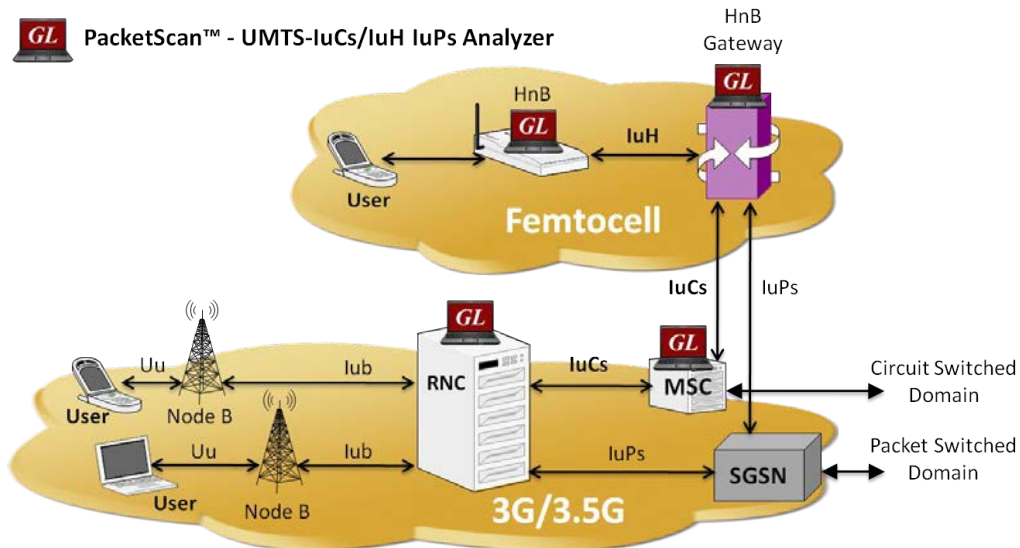# GPRS Gb and Gn Protocol Analysis

Features

- Decode and analyze signaling and user data protocols over Gb and Ga/Gn interfaces.
- Provides details about routing area update, PDP activation, and traffic patterns in the network.

Screenshots

- Summary, Detail, Hexdump view
- Filtering Criteria
- Statistics View
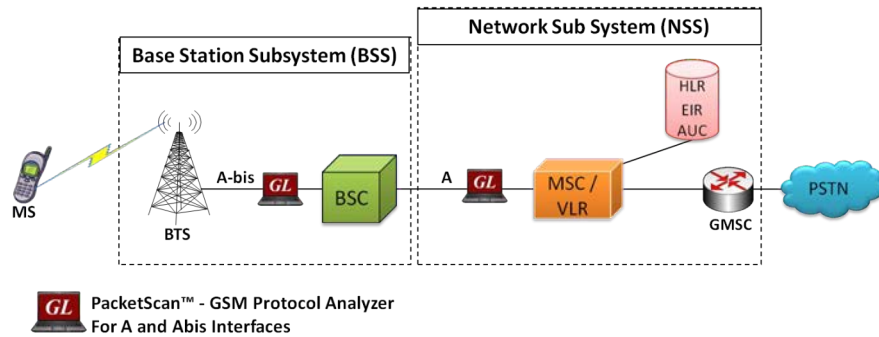- Protocol Stack

UMTS IuCs and IuPs over IP Protocol Analysis

Features

- Test RNC, MSC, Home NodeB (HnB) and Home NodeB Gateway (HN GW) entities.
- Decode and analyze different control plane protocols i.e. NBAP, RNSAP, RANAP and more over IuCS, IuH, and IuPS interfaces.
- Supports decoding of AMR and AMR_WB codec with IUUP Header

Screenshots

- Summary, Detail, Hexdump view
- Filtering Criteria
- Statistics View
- Protocol Stack

GSM A and Abis over IP Protocol Analysis

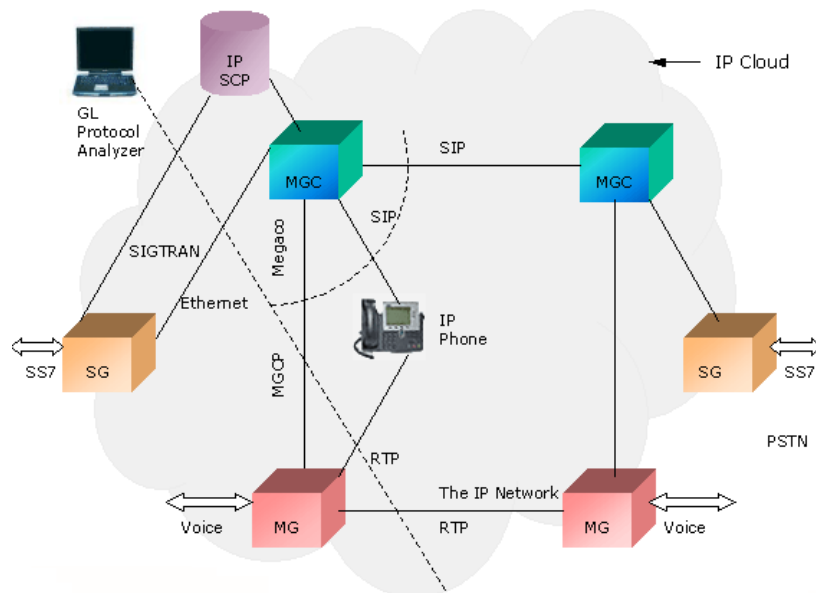PacketScan™ - GSM Protocol Analyzer
For A and Abis Interfaces

Features

- Decode and analyze complete GSM protocol stack on A and Abis interface.

- Supports BSSAP, DTAP, BSSMAP , and GSM MAP protocols.

Screenshots

- Summary, Detail, Hexdump view
- Filtering Criteria
- Statistics View
- Protocol Stack

SIGTRAN Protocol Analysis

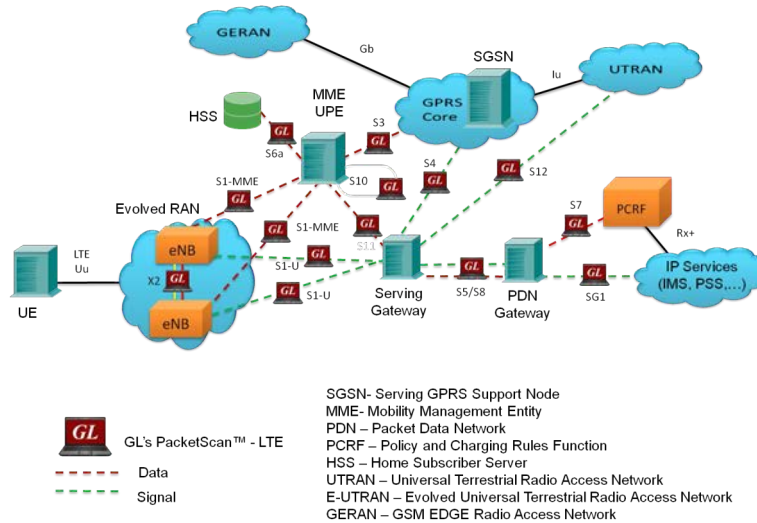PacketScan™ - SIGTRAN, MGCP, Megaco, RTP, SIP Protocol Analyzer

Features
- Decode and analyze SCTP, and user adaptation (UA) layers such as M2UA, M3UA, M2PA, SUA, IUA, ISUP and GSM MAP
- Permits testing and verification of Signaling Gateways.

Screenshots
- Summary, Detail, Hexdump view
- Filtering Criteria
- Statistics View
- Protocol Stack

LTE (Long Term Evolution) Protocol Analysis

SGSN- Serving GPRS Support Node
MME- Mobility Management Entity
PDN – Packet Data Network
PCRF – Policy and Charging Rules Function
HSS – Home Subscriber Server
UTRAN – Universal Terrestrial Radio Access Network
E-UTRAN – Evolved Universal Terrestrial Radio Access Network
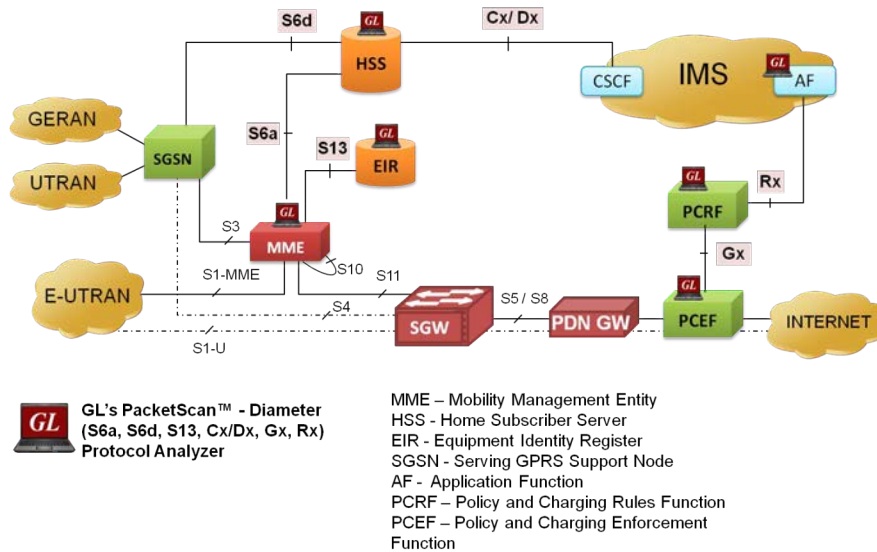GERAN – GSM EDGE Radio Access Network

Features

- Decode and analyze full LTE protocol stack.
- Test eNodeB or UE over S1, S3, S4, S5 (or S8), S6a, S10, S11, S13 and X2 interfaces of the LTE network.
- The protocols supported for decoding across all these interfaces are NAS, S1AP, X2AP, eGTP, GTP-U, Diameter, SCTP, UDP, TCP, and IP

Screenshots

- Summary, Detail, Hexdump view
- Filtering Criteria
- Statistics View
- Protocol Stack

Diameter Protocol Analysis

MME – Mobility Management Entity
HSS - Home Subscriber Server
EIR - Equipment Identity Register
SGSN - Serving GPRS Support Node
AF - Application Function
PCRF – Policy and Charging Rules Function
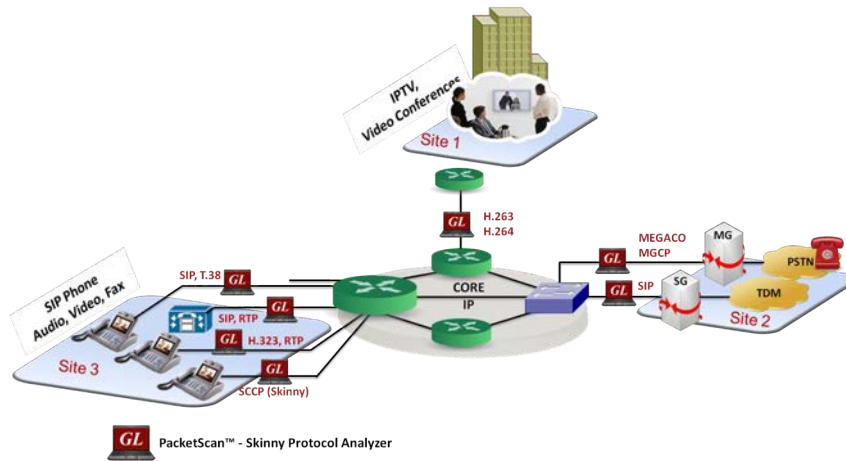PCEF – Policy and Charging Enforcement Function

Features

- Monitor thousands of Diameter sessions over S6a, S6d, Cx, Dx, Zn, Zh, Wx, Gq, Gy, Sh, Dh, Gx, Rf, RO, Wg, Wm, Pr, Wa, Wd, Rx interfaces.

Screenshots

- Summary, Detail, Hexdump view
- Filtering Criteria
- Statistics View
- Protocol Stack

SIP, MGCP, MEGACO, H.323, Skinny Protocol Analysis

Features

- Test IP phones, Gateways, IP Routers and Switches, and Proxies.
- Detail Packet Data Analysis (PDA) and extensive graphical reports

See Protocol List for more details.

Screenshots

- Summary, Detail, Hexdump view
- Filtering Criteria
- CDR and Statistics View
- SIP Call Flow
- MEGACO Call Flow
- H.323 Call Flow

Buyers Guide

PKV100 – PacketScan™ (Real-time and Offline)

PKV101 – PacketScan™ - Offline

PKV301 – LAN Switch w/ Mirror Port

PKV105 – SIGTRAN Offline Analyzer

PKV106 – Offline SIGTRAN Analyzer (Optional with PacketScan™)

PKV103 – IP Based GSM and UMTS Analyzer, requires PKV100

PKV109 – Offline IP Based GSM and UMTS Analyzer (Optional with PacketScan™)

PKV107 – LTE (Long Term Evolution) Analyzer, requires PKV100

PKV108 – Offline LTE (Long Term Evolution) Analyzer (Optional with PacketScan™), requires PKV101

PKV104 – FaxDDT38™ - Decodes Fax images in TIFF format from PCAP files

PCD103 – AMR Codec for PacketScan™

PCD104 – EVRC Codec for PacketScan™

PCD105 – EVRC-B Codec for PacketScan™

PCD106 – EVRC-C Codec for PacketScan™

PKV170 – NetSurveyorWeb™ (Network Surveillance Software) for IP Network

PKV171 – Network Surveillance Agent Toolkit