



2G Network Emulator

Simulates GSM MSC, MGW, HLR, VLR

OVERVIEW

The Valid8 2G Network Emulator provides an all-in-one, cost-effective and ultra-portable 2G network for demonstration, testing and training purposes.

WHAT IT CAN DO FOR YOU

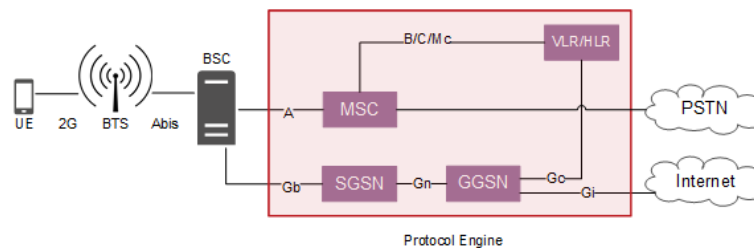
The Valid8 2G Network Emulator is capable of simulating and testing several devices individually or in parallel and is scalable to fit your needs. It enables testing of the A interface and the Gb interface over IP towards the BSC.

WHY IT'S DIFFERENT

- Software based solution can be run on high-end customer hardware/VM to achieve better performance, or in the Cloud (e.g. Amazon AWS) for maximum versatility
- Web-based Graphical User Interface provides customer with intuitive, easy access via browser
- API's used (REST, HTTP) enable automated testing using test tools.
- Emulated nodes behave exactly as true real nodes, due to Finite State Machine architecture
- Testing is scalable across multiple cores and multiple systems

FEATURES

- BSSMAP request/response messages for call handling, mobility management
- Mobile calling - MTC and MOC
- Flexible, configurable dial-plan - options to page other mobiles, simulate PSTN terminated call and play reference media files, or media echo
- SMS - outbound and inbound
- Runs over SIGTRAN/SCTP
- Generate valid and invalid/negative messages and call-scenarios
- Supports sending invalid responses including malformed, dropped and misordered packets
- Alerts and notifications
- Check parameters in messages from SUT and flag errors



SUBSYSTEMS

The Valid8 2G Network Emulator is comprised of multiple subsystems that are available individually or in parallel, and are scalable to fit your needs. The individual emulators are controllable through their call controllers, and the traffic can be captured through use of a remote capture tool such as Wireshark.

- MSC
- VLR/HLR
- SGSN
- GGSN

KPIs

- Call Attempts
- Call Successes
- Call Failures
- Location Update Attempts
- Location Update Successes
- Location Update Failures
- Calls per second (CPS)
- Call setup time
- Call tear down time
- Media Tx Packets (audio)
- Media Rx Packets (audio)

Configurable Parameters

- Call session length
- Concurrent calls/endpoints
- BHCA/CPS

AUTOMATION API

User commands can be fully automated using HTTP API. This includes performing all test control functions as well as collecting results and metrics.

SCRIPTING

The application's subsystems can be edited directly in the browser using Javascript or by using the graphical tools seen below. The Message Workshop allows for creating of test scenarios directly from the hex stream of a remote capture, while the Graphical Editor allows for creating customized call scenarios by dragging and dropping the call flow to meet your test needs.

USE CASES

No items found.

SUMMARY OF SPECIFICATIONS

The Valid8 2G Network Emulator is capable of simulating and testing several devices individually or in parallel and is scalable to fit your needs.

SPECIFICATIONS

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| Protocols | 3GPP TS 08.08, 3GPP TS 48.008 -- BSSMAP / DTAP 3GPP TS 04.08 -- MM / CC 3GPP TS 04.18 -- RR 3GPP TS 03.40, 3GPP TS 04.11 -- SMS IETF RFC3550 - RTP / RTCP |
| Network Layer Capabilities and Security | IPv4, IPv6 (on request) UDP, TCP, SCTP transport modes DNS DHCP TLS 1.2, 1.1, 1.0 SSL 3.0 SRTP Network delays and packet loss |
| Test Scripts | CS MO call CS MT call CS MO-MT call Outgoing SMS Incoming SMS |
| SGSN | Packet Routing and Transfer Functions IP Address Allocation Interface Gb to BSC Interface Gn to GGSN |
| GGSN | Packet Routing and Transfer Functions IP Address Allocation Interface Gn to SGSN Interface Gi to external PDN |
| Counters | Call Attempts Call Successes Call Failures Location Update Attempts Location Update Successes Location Update Failures |
| Measurements | Calls per second (CPS) Call setup time Call tear down time Media Tx Packets (audio) Media Rx Packets (audio) |
| Quality Testing | Voice Quality Analysis QoE |

PRODUCT DETAILS

| | |
|----------------------------|---|
| Hardware | Intel-based; scalable to meet performance needs |
| Options | Base Kit - 2G Network Emulator |
| Operating System | Protocol Engine (Linux-based) |
| User Interface | Browser-based, touch-optimized graphical user interface |
| Automation | HTTP API |
| Hardware Dimensions | M1: 4.5" x 4.5" x 1.75" M3: 19" x 15.75" x 3.5" |
| Power Supply | M3: 520W AC to DC, 100-240v |