

## AN HSS TOOL AT YOUR FINGERTIPS



**A LIGHTWEIGHT IMS AND LTE DEVELOPMENT AND TEST TOOL OFFERING HSS FUNCTIONALITY.**

**LIGHTWEIGHT HSS – INCLUDE A COST-EFFECTIVE HSS FUNCTIONALITY  
IN YOUR TEST ENVIRONMENT.**

### **RUN ANYWHERE**

- Developed in Java, it can run on any workstation or server found in IMS equipments or applications development environments.
- Does not need any specific hardware or costly database software.

### **FULL AND CONFORMANT HSS**

- Implements the Cx & Sh interfaces and the 3GPP Generic User Profile.
- Built on the MARBEN Diameter stack which has proven standard compliance, it passed interoperability tests.

### **EASILY AND QUICKLY OPERATIONAL**

- Relying on JavaDB and including a preconfigured schema, it is up and running in ten minutes.
- Can be operated by any developer or integrator because it does not require any knowledge nor configuration in database or clustering.
- A single Graphical User Interface gives access to all HSS Emulator functions.

**FOCUSED ON FUNCTIONAL TESTING – ENHANCE AND SECURE YOUR TEST  
COVERAGE ALL ALONG YOUR DEVELOPMENT.**

### **RICH TEST HELPERS**

- Trace and logging facilities for monitoring and checking correct interaction of the developed module with an HSS.
- No scripting is required, developers can focus on their data sets.
- Database browsing, filtering, load and extraction enable for reliable status checks and tests result assessment.

### **FROM UNIT TO INTEGRATION TESTS**

- Can be used on developer's desktop for unit or component testing.
- Dimensioned to handle the hundreds of thousands user profiles required during integration test phases.

### **TARGET APPLICATIONS**

CSCF testing  
Application server testing  
IMS and LTE test beds

### **About Marben**

A leading provider of key software solutions for next generation service-driven networks.

**More than 25 years of  
experience**

Delivers interoperable, robust and efficient signaling, routing and AAA solutions to accelerate the delivery of network services.

### **Marben Customers**

Alcatel-Lucent, Amdocs, Ciena, Cisco, Ericsson, Fujitsu, HP, Nortel, NEC, Nokia Siemens Networks, Oracle, Tellabs, Verizon, ...

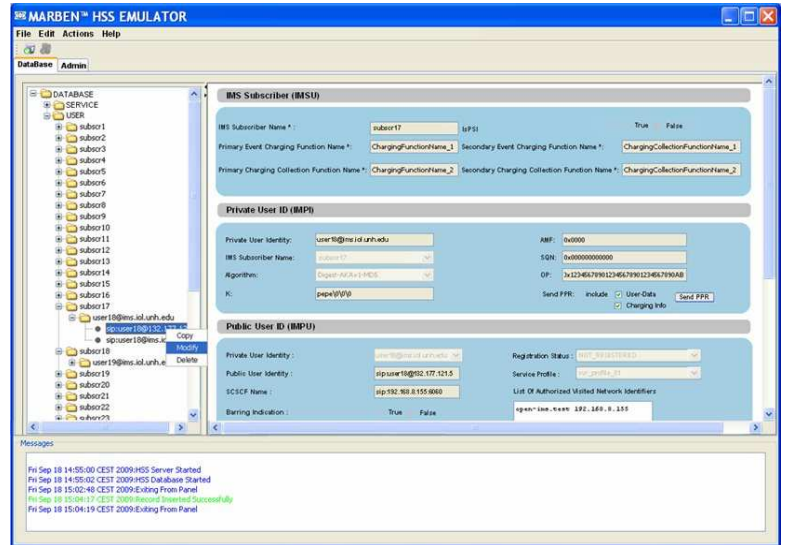
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## TECHNICAL OVERVIEW

MARBEN HSS Emulator is a standalone application. Written in full Java, it is fully platform-independent. HSS Emulator is all in one package which does not have any specific hardware or software requirement. It installs and is ready to run in a matter of minutes.

HSS Emulator handles CSCF queries for user registration, deregistration, authentication, profile download and update. Namely, all Cx messages (UAR/UAA, SAR/SAA, LIR/LIA, MAR/MAA, PPR/PPA, RTR/RTA) are supported together with initial filter criteria and trigger points.

On the AS side, MARBEN HSS Emulator covers the most complex use cases of HSS functionalities as anticipated by 3GPP. It implements the full Sh interface message set (UDR/UDA, PUR/PUA, SNR/SNA, PNR/PNA) as well as transparent data for the storage and retrieval of any telecom service-specific data.



### SUBSCRIBER PROFILE DATABASE

MARBEN HSS Emulator uses a relational database for storing subscriber profiles and service definitions. Subscriber data model follows 3GPP definition of the Generic User Profile (GUP). Subscriber profiles can contain multiple private identities which in turn contain multiple public identities. The service definition allows declaring services with multiple public identities, the associated trigger points and initial filter criteria.

MARBEN HSS emulator database can be loaded with a few subscriber profiles when used by individual developers, as well as with hundreds of thousands of profiles when used in IMS test beds aimed at simulating real network usage test cases.

Database provisioning can occur either through the GUI for small additions or modifications or by using XML files for bulk input of large numbers of users.

### GRAPHICAL USER INTERFACE

MARBEN HSS Emulator Graphical User Interface (GUI) gives a straightforward and intuitive access to the subscriber database. It displays all subscriber information together in a single screen, and allows you to filter and query the database for gathering groups of subscriber profiles.

The GUI lets you access all MARBEN HSS Emulator statistics, trace and log messages. Trace and log messages give comprehensive information on HSS use by other IMS networks nodes both at protocol level, in order to diagnose interoperability problems, as well as at 3GPP interface level to allow checking correct functional use of HSS capabilities. Trace and log levels are dynamically adjustable and can be browsed online with the GUI or saved for offline inspection.

## CONTACTS

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## CONFORMANCE

Base Protocol: RFC 3588, 3539  
Subscriber data: 3GPP TS 23.008 and TS 29.240  
Sh interface: 3GPP TS 29.328 and TS 29.329  
Cx interfaces: 3GPP TS 29.228 and TS 29.229

## RELATED OFFERS

**MARBEN C++ Diameter** and **MARBEN Java Diameter** two native language implementations of the Diameter protocol featuring more than 20 Diameter interfaces.

Relying on our team of experienced IMS engineers we can deliver consulting, training, turn key projects.

## SYSTEM REQUIREMENTS

Java RE 1.6.

MARBEN HSS Emulator has been tested on Windows x86, RedHat Linux 5.0 on x86, Solaris 10 Sparc and X86, HP-UX 11.31 PA-RISC and Itanium.