

# HP OpenCall Home Subscriber Server software

Data sheet



HP delivers solutions that span both current networks and future all-IP networks. Migrate safely toward new networks and services—stay in control of today's business and technology while implementing tomorrow's.

Services in all-IP networks can be delivered real-time, person-to-person. Activate a variety of services on an IP Multimedia System (IMS)/Multi-Media Domain (MMDS) network to offer subscribers a rich media experience—services that your customers will quickly adopt when offered enhanced multimedia communications.

The HP OpenCall Home Subscriber Server (HSS) leads the industry as a mission-critical component for these next-generation networks. It provides integrated subscriber data storage and management for instant group communication services within the network. Whether you are migrating an existing wireless platform, converging wireless with your wireline, or delivering broadband services, HP OpenCall HSS gives you a smooth, cost-effective transition.

## Key benefits and features

- **Protect your 2G investments and leverage them to jumpstart your 3G/all-IP network.**

Don't put your solid, already-profitable 2G business plan at risk. SS7-based connectivity allows the HP OpenCall HSS to interoperate with any 2G GSM network. HP OpenCall HSS uses the same general computing platform, management systems, and provisioning architecture as the HP OpenCall HLR, allowing our HLR customers to quickly integrate IMS services into their existing networks with a minimum of churn.

- **Tailor your initial IMS/MMD investment to both your current needs and scale your network economically as you expand services.**

Flexible architecture allows operation on a wide range of hardware platforms (Linux, HP-UX, HP NonStop) and easy data interface with standard SQL datastore technology.

- **Provide high-quality service to greater and greater numbers of subscribers with scalability.**

The HP OpenCall HSS is designed to provide a scalable, multi-million subscriber capacity in an IMS network on proven HP NonStop platforms—platforms already in service in today's telecommunication networks. HP has provided the world's largest subscriber profile management services built on general computing platforms—not switches. This expertise is built into the fundamental design of the large-scale, reliable, high-performance HP OpenCall HSS available today for your IMS network.

- **Integrate new elements based on existing and anticipated standards.**

Commercial-ready HSS is based on 3GPP and 3GPP2 standards and is guaranteed to support those interfaces. It uses standards-compliant Diameter-based Cx/16 and Sh/11 interfaces.

- **Offer enhanced and new revenue-generating services.**

The HP OpenCall HSS supports standardization of IMS Application Servers (AS), the platform on which customer services are built. The HP OpenCall HSS enables IMS network programmers to share data and use common startup or execution scripts among different Application Servers. This valuable data can easily be accessed via the standards-compliant HP OpenCall Sh interface.

# Bring new IP-based services to your customers today. Personalized, device-independent, transport-independent—IMS-ready HP solutions help keep you out front.

- **Quickly deploy SIP services across the 2G data network core to speed the transition from trial to deployment when you want a risk-free revenue trial.**

Use the HP OpenCall HSS pre-IMS security functions to quickly deploy when you want to try new revenue-generating services. The extended authentication features also provide standard-compliant Authentication and Key Agreement (AKA) authorization, single password entry, and TISpan-compliant HTTP-Digest authorization.

- **Proven interfaces put you ahead.**

HP OpenCall HSS is built on a solid foundation of experience with 200 million subscribers already using the HP OpenCall HLR—an important element in many existing 2/2.5G networks—on which its design and technology is based. HP OpenCall HSS has already proven its extensive capabilities and interfaces in multiple trials worldwide.

## Meeting the challenges of 3G

Rolling out a next-generation network presents numerous challenges, including:

- Reconciling new services and data with legacy services and existing data. New IMS-ready systems and services should operate in parallel with your existing systems.
- Avoiding dependencies on proprietary equipment. Proprietary equipment in your network can limit flexibility and cede undesirable influence over growth and change in the network to a single equipment vendor. HP offers demonstrable, standards-based support for all network interfaces, assuring ongoing support for and availability of the broadest range of IP services
- Integration issues unique to your system. You deserve access to a team of experienced integrators to help address and resolve issues specific to your network.

- Uncertainty. You should be able to choose a reliable partner who is a long-term leader in the industry and can offer products with proven success.

The HP OpenCall Home Subscriber Server has been designed and built by HP, a world leader in IT-IP networks, to address these challenges.

The HP OpenCall Home Subscriber Server has been tested with numerous vendor IMS/MMD products to validate its ability to drop into new networks with minimum interruption, with maximum support from experienced HP integrators.

Its interfaces are fully standards-compliant, so you can confidently introduce the HP OpenCall HSS into a network, knowing HP will help you successfully achieve interoperability and synchronization.

Standards-compliant interfaces support a mixed, multi-vendor environment. You can introduce new components from diverse sources into your network; no need to be dependent on a single source.

In addition, HP's expert integrators have built on their experience of integrating the HP OpenCall HLR into multi-vendor wireless networks for two decades, and can quickly and affordably upgrade your network to the new IMS/MMD technologies.

HP OpenCall is a leading telecommunication provider supplying a breadth of reliable, innovative and cost-effective telecommunications products to service and network equipment providers. These products include: Home Location Register (HLR), Intelligent Network Server (INS) Service Control Point capabilities, Media Resource Function (MRF), Prepaid Billing, IP Signaling Transfer Gateway, Diameter, SS7, and Instant Group Communications. HP OpenCall will continue to lead the industry with scalable and affordable voice and data communications and multimedia solutions with HP OpenCall HSS as a core component.

## Architectural description

The HP OpenCall Home Subscriber Server is the core data storage and management element in the IMS or MMD network.

Network operators can provision and access subscriber data, subscriber access information, IMS/MMD service information, and feature lists. Within the IMS/MMD network, the HP OpenCall HSS supports interfaces to the call session control server with routing/roaming information. It also provides authentication, authorization and naming/addressing resolution, and helps to resolve subscriber location. It acts as the database for application services, storing service profile data and data for the application server itself.

HP OpenCall HSS 3.00 for Non-Stop S-Series platform is the newest release, network ready, with attributes detailed below. This release sets the new industry benchmark for co-locatable HSS-HLR capability.

### Proven availability with data synchronization

HP OpenCall HSS Release 3.00 allows replication of the subscriber database in real time—allowing failover to a standby system in the unlikely event of a system failure.

Fifteen years of industry-proven experience enabling 100 percent operational availability of HP OpenCall HLR is applied to the HSS. The same real-time Application Database Synchronization (ADS) subsystem is used to replicate data between two HP OpenCall HSS installations.

### Extended authentication

The HP OpenCall HSS supports the primary IMS authentication procedures using an Authentication and Key Agreement-based, mutual authentication security architecture as specified in 3GPP TS 33.102. HP OpenCall HSS will also support TISpan-compliant delegated HTTP Digest authentication and Network Access SubSystem (NASS) bundled authentication for next-generation network terminal support. In addition, it provides a password authentication ability, allowing the initiation of new services without requiring the complexities of a full AKA-based user terminal.

### Enhanced data handling and synchronization

Unique, state-of-the-art HP OpenCall data-handling technology extends HSS capabilities with functions that can notify external applications (or services) when data changes are made, reducing the need to request subscriber data updates.

The enhanced interface supports non-local data storage on external hardware, allowing a simple system recovery to a redundant database in the unlikely case of failure.

## All-IP network compatible IMS Diameter interface (Cx and Sh)

The HP OpenCall HSS is designed to operate with any vendor's network-standards-compliant Call Session Control Function (CSCF) or Application Server (AS).

Its interfaces strictly conform to the IMS reference architecture that other all-IP networks standards bodies are adopting, following 3rd Generation Partnership Project (3GPP)'s lead: 3GPP, 3GPP2, Telecoms & Internet converged Services & Protocols for Advanced Networks (TISpan), CableLabs, among others.

- The Cx interface is the key network interface to request subscriber profile information—to register, authenticate and locate subscribers—by connecting HSS with the CSCF.
- The Sh interface connects HSS with an IMS Application Server. A “farm” of service applications can be created by having Application Servers share data content and execution scripts in the HSS database, and by accessing these data and scripts through the IMS standards-based Sh interface.
- HSS can store and access transparent data from the AS. The AS can download or receive data updates and notification of changes in data from HSS.

HP OpenCall HSS Cx and Sh interfaces comply with these standards: 3GPP 29.228, 29.229 v5.10 and v5.90; 3GPP2 TSG-X X.S0013-006-0 v 1.0, and TISpan, ETSI TS183 033 v0.0.8.

### Rapid, efficient, adaptable provisioning

Some new features of the HP OpenCall HSS Dynamic Provisioning Architecture (DPA) create a robust interface for business systems.

HP OpenCall HSS uses the proven DPA system to create and implement a rapid, efficient and adaptable HSS Provisioning interface through

- An easy-to-use web-based graphical user interface (GUI)
- An efficient command line interface for bulk processing

DPA is the common provisioning system when both HP OpenCall HLR and HP OpenCall HSS are present in the same network.

## HP OpenCall portfolio

HP OpenCall software is an integral part of HP's portfolio of wireline, wireless, IP and media solutions. It enables service providers to transition to IMS-based networks and effectively manage the triple play of voice, data and multimedia services. Deployed in 40 of the world's top 50 service provider networks, HP OpenCall is the market leader in many industry categories, facilitating the convergence of the Internet with the world of voice communications.

For further information on HP OpenCall products, visit:  
[www.hp.com/go/opencall](http://www.hp.com/go/opencall)

## HP Services and Support—delivering a complete solution

Get a first-to-market advantage, complete end-to-end integration, and ease migration pains with HP Services and Support. HP offers you an array of best-in-class services and support with global solution support including third-party, worldwide, 24x7—anywhere, anytime, with local teams.

HP's highly experienced telecom experts work with you side-by-side to evaluate, develop, deploy and operate your HP OpenCall solution with confidence.

Because business continuity and security are critical to our network customers' revenue generation, HP Professional Services are designed to support 100 percent availability and maximum security.

HP telecom service experts have migrated up to 1.3 million subscribers at a time on over 70 HP OpenCall Home Location Register systems—successfully. Experience counts.

For more information on HP software services, visit:  
[www.hp.com/go/opencall/services](http://www.hp.com/go/opencall/services)

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For more information, visit [www.hp.com/go/opencall](http://www.hp.com/go/opencall).

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