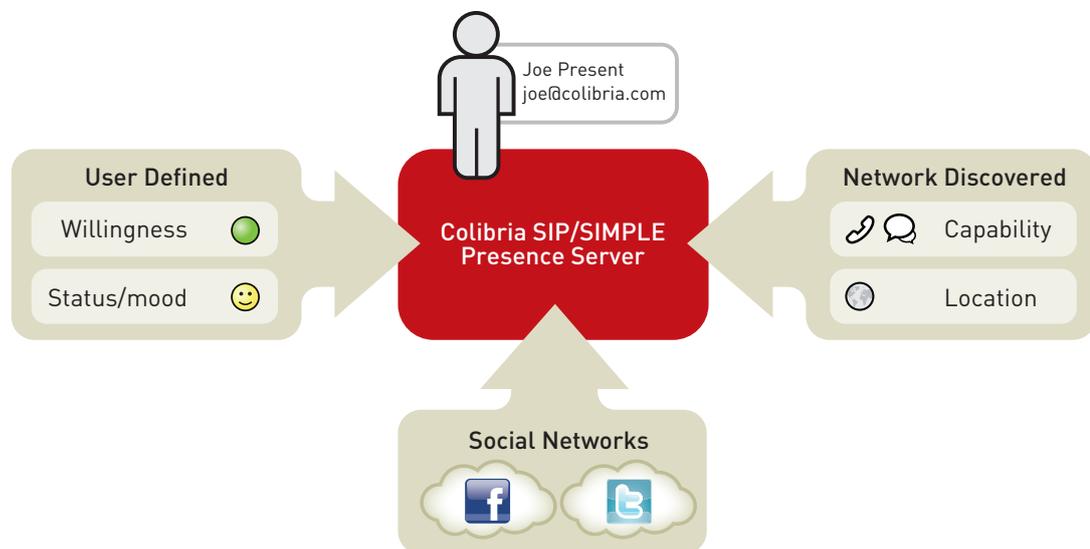


# EMPOWERING CONVERGENCE: COLIBRIA SIP PRESENCE SOLUTIONS

Presence is becoming increasingly useful in our daily lives as our communication patterns have evolved. Colibria's SIP SIMPLE Presence Server ensures that presence information can be published, shared, subscribed to and propagated while ensuring privacy and a reasonable network load.



Presence provides real-time information about any user, allowing other users or the network to make the right communication decisions. Presence information can be about which devices and services the user can be reached on, as well as information about the user's location, mood, willingness to communicate and status expressed through text and picture.

Presence underpins the GSMA's Rich Communication Suite (RCS) and allows Push to Talk over Cellular (PoC) users to see who is online. It enriches a VoIP service by allowing users to see who is available and who is on the phone. In multi-device solutions it even allows routing engines to route communications to the location where a user is most likely to respond.

Presence operates anywhere IP access is available, and with the use of Presence Network Adaptors is even able to pick up the presence state of

traditional devices like standard mobile phones. All of the above simplifies and enlivens the user experience and promotes communication, driving operator revenues.

The Colibria Presence Server is a carrier grade, fully standard OMA compliant SIP server that controls and manages every aspect of presence. Its flexibility allows it to be deployed in any SIP and IMS environment. A selection of the solutions in which the Colibria Presence Server has been used include:

- As an IMS core enabler, presence-enabling services as they are deployed on IMS through a variety of access technologies, from Broadband and Cable to GPRS/3G/LTE and WiFi/WiMAX
- Presence enabling Push to Talk over Cellular (PoC) networks
- Enriching VoIP solutions both in the residential and corporate environment
- Multiple RCS market trials and pre-RCS deployments

## A fully compliant solution

The Colibria SIP/SIMPLE Presence Server is fully compliant with Open Mobile Alliance (OMA), IMS standards, and the requirements of the GSMA Rich Communication Suite (RCS).



## Rich Communication Suite

Colibria is a member of the GSMA Rich Communication Suite (RCS) initiative. RCS aims to speed up the evolution of interoperable rich communications services between mobile devices. The Colibria SIP/SIMPLE Presence Server plays a pivotal role in ensuring that the concept of 'rich communication', as defined in RCS, becomes a reality for operators, service providers and end users alike.

The Colibria SIP/SIMPLE Presence Server is fully compliant with the requirements of RCS Release 2 and 3, and when combined with Colibria's SIP/SIMPLE IM, XDMs and address book products, can be used to provide a complete RCS solution which runs on top of the IMS infrastructure. Colibria is involved in multiple RCS market trials and commercial deployments today, many of which will be deployed in 2011.

## Colibria XDM Server

Colibria's Presence Server is typically deployed with the Colibria XDM Server, although 3rd party XDM products can be used in some cases. The Colibria XDMS provides the storage and management of the user's presence authorization rules, presence content, and subscription to presence lists. A common XDMS is used across both Colibria SIP/SIMPLE Presence and IM products.

## Key Features

### Presence information management

The Colibria Presence Server manages and delivers presence information based on OMA specifications. Presence information has three main categories:

- User information (availability, status text, mood, presence icon etc.)
- Service Capabilities (available services for that user: IM, voice, video etc.)
- Device capabilities (available services on the device)

Presence info is collected from multiple devices associated with one user (presentity), aggregated into one presence document, and distributed to 'watchers' of that presentity.

Permanent presence state, allowing users to control how their status is shown even when off-line is supported. Presence content, such as a presence icon, is also supported. Through event state composition, the presence server is able to compose multiple presence inputs into one result for the watchers of that user. This is key in Converged networks with mobile and fixed access.

## Resource List Server

The resource List Server (RLS) allows users to subscribe to a list of contacts instead of subscribing to the users individually. The RLS will also aggregate presence information and notifications for all the users in the list. This simplifies the logic for the client and drastically reduces the needed bandwidth for presence.

## Presence Authorization

To protect the user's personal presence information, Colibria implements OMA presence authorization rules in full, not only for the user's presence document but also for the presence content. This includes options allowing users to vet requests to watch their presence and allow or reject requests.

## Optimized Presence

Presence filtering is implemented to allow a watcher to watch a subset of the presence info available, for example only status text. In addition partial notifications allow a watcher to be updated with changes in presence information rather than the complete presence record. Notification throttling also allows the operator to determine the rate of presence notifications to users. These features minimize traffic and load whilst delivering exactly the information that users have requested.

## Carrier Grade Design

A load balanced and highly scalable design ensures that the Colibria Presence Server scales as your service grows. Full event state duplication means that nodal failure does not impact service, while multiple domains can also be served from one installation, saving on power, equipment and building costs.

## Product Specifications

The Colibria Presence Server complies with the requirements of OMA SIP/SIMPLE Presence version 1.1. and 2.0. Features include:

- Management of user status and presence content, service capability and device capability
- OMA presence authorization rules
- Presence filtering
- Partial presence notifications
- Notification throttling
- MSISDN normalization
- Winfo event package
- Resource List Server (RLS)
- RLS XDMs
- Presence content XDMs
- Maximum subscription limits to any presentity
- Serves multiple domains from one installation

Additional support:

- GSMA RCS R1.0, R2.0 and R3.0
- 3GPP ISC interface

## Proven Integration

The Colibria SIP/SIMPLE Presence Server complies with requirements as defined by the IETF, 3GPP, and OMA standards. It will seamlessly connect with any third party client which is SIP and XCAP compliant. This has been proven in deployments and interop tests across the industry, using access technologies from Broadband and Cable to GPRS/3G/LTE and WiFi/WiMAX. It can be deployed as an IMS application server using its 3GPP ISC interface and has proven interoperability with all major IMS solutions today.

