


UNIFY Harmonize  
your enterprise



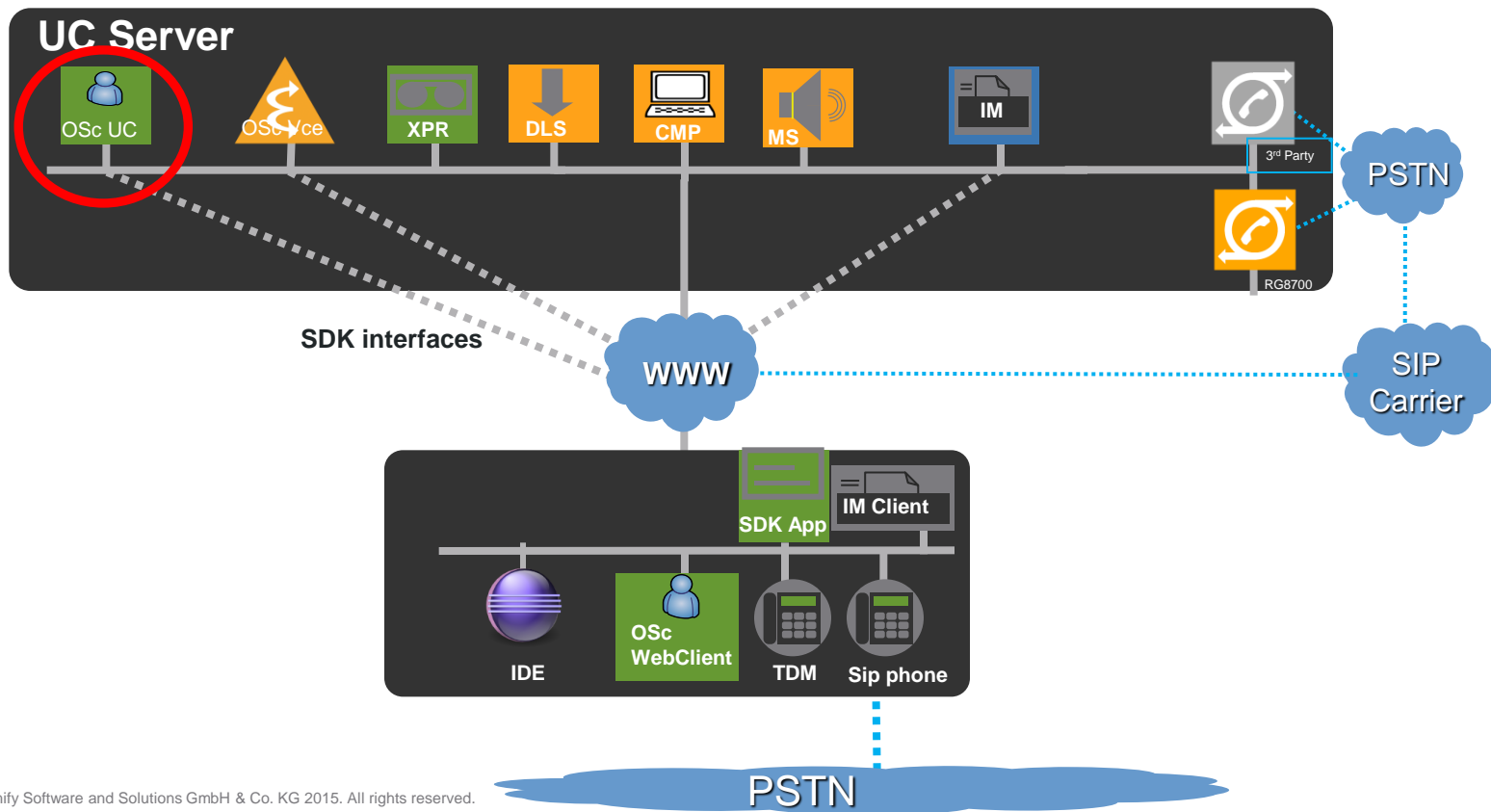


# OpenScape UC App & OpenSOA SDK Technical Overview

Paul Maddison

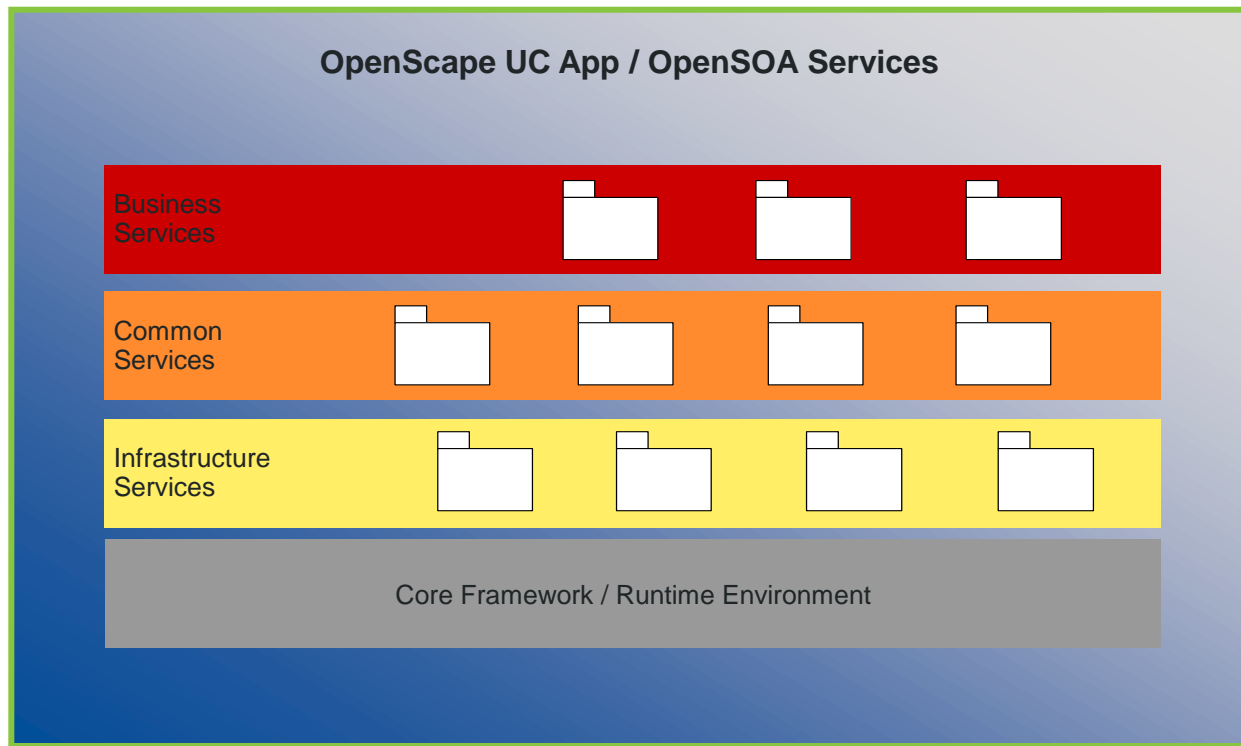


# UC Components





# OpenScape UC Application - Architecture

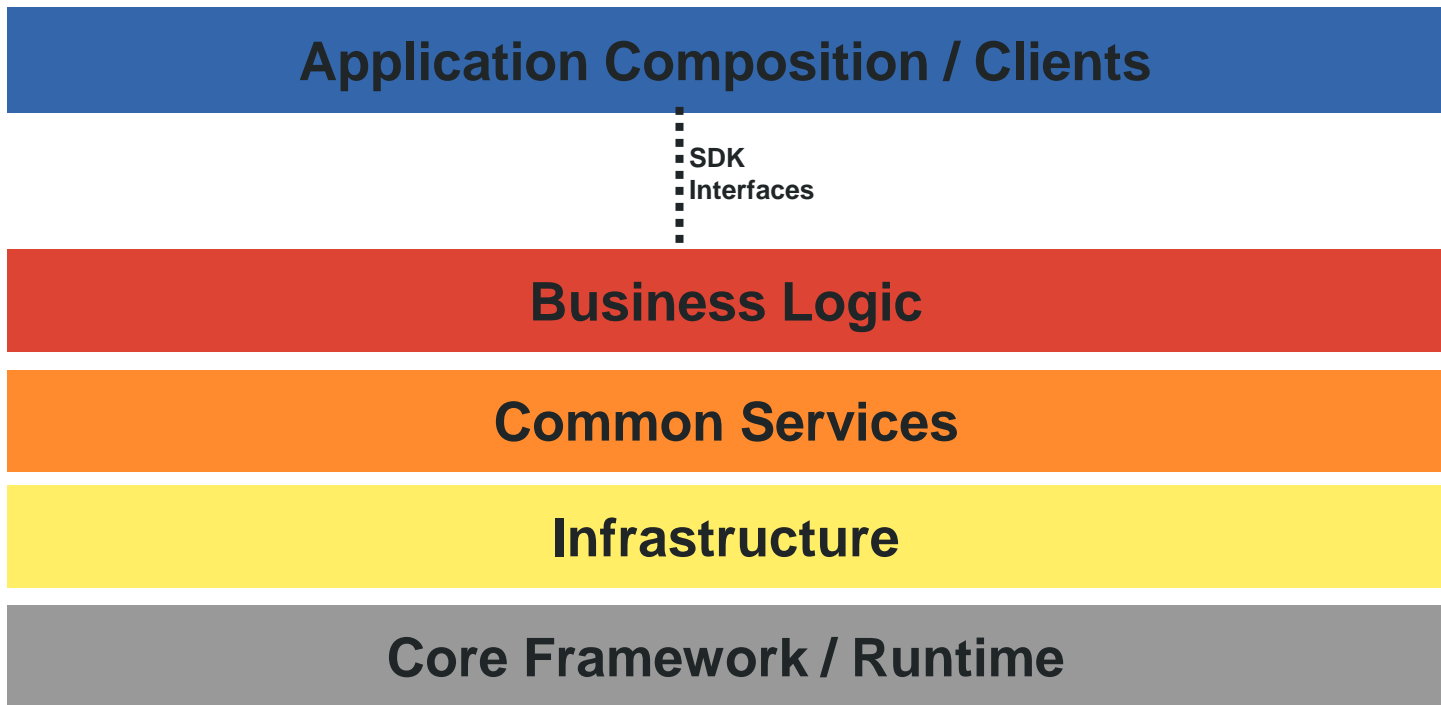


*= Integration point*



# OpenSOA Architecture

Layering for OpenScape Unified Communications App





# OpenSOA Common Functionality

## High-level Description

### Clients

Brandable and extensible set of standard clients with portlet technology and a general client framework for harmonized applications

### Rules, Workflow

Personal dynamic workflow with a multitude of inputs including a rules engine

### Conferencing

Conference planning, control and browsing

### User Notification & Prompting

Services used for different kind of notification mechanisms e.g. notification for Tell-Me-When conditions

### Basic Communication

Communication related services: real time, near real time and non real time including call controls, collaboration, media presence

### Identity and Access Management

Access Management & Security, Domain Management, user and contact management

### Business Systems Integration

Groupware connectors for contact, calendar and mail folder integration. Integration into Groupware clients. Business Application Integration for IBM, SAP, Microsoft.

### Presence

The presence service provides user and media presence status and integration with the presence state of IBM Lotus Sametime or MS OCS 2007

### Media Services

Voice Portal application framework, Media Mixing, Voice Messaging/Recording, Tones & Announcements

### Core Framework

SOA Infrastructure, Container Runtime, Communication Framework, Installation, Integrated Development Environment (IDE) and Engineering Tools

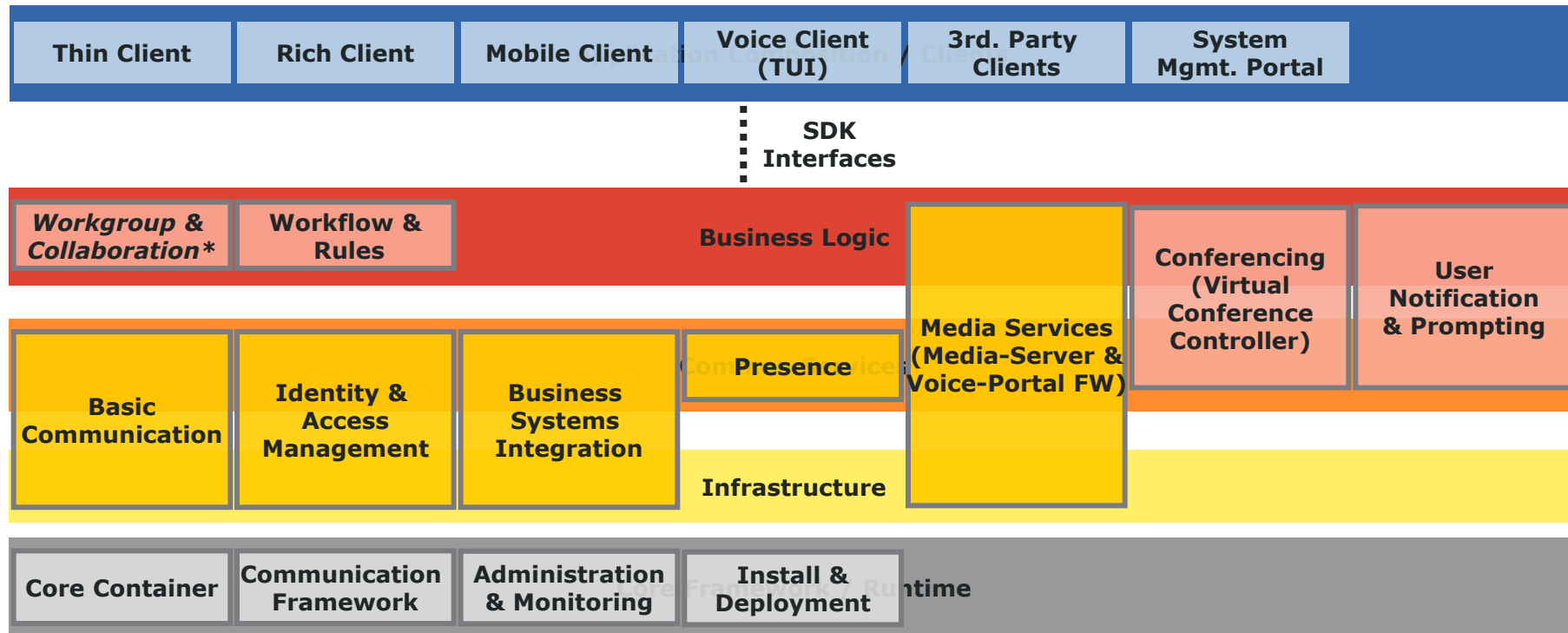
### Administration & Monitoring

Diagnostics and System Analyses, System Operation & Maintenance; Common Management Portal. License Management.




# Common Functionality Overview

## OpenScape Unified Communications Application



\* Targeted for a later release





# OpenScape UC App & OpenSOA SDK Technical Overview

Paul Maddison



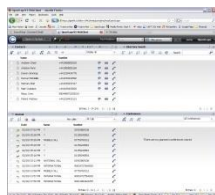
An aerial photograph showing a multi-lane highway interchange with several vehicles, including a large white truck. The highway runs diagonally across the upper right portion of the frame. Below the highway is a vast, green, grassy field. A single, large, dark green tree stands on the left side of the field, casting a long shadow towards the bottom left. The overall scene suggests a landscape where infrastructure and nature coexist.

# Integration Landscape



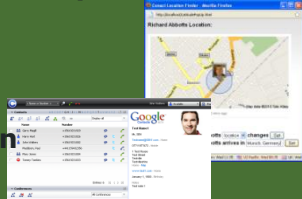
# OpenScape UC Application Interfaces

## Web Client




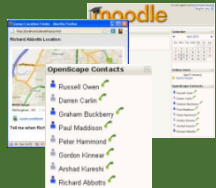
**Examples**

**Google Latitude Integration**



**Web Client SDK**

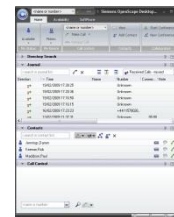
**Examples**



**OpenSOA SOAP/XML SDK**

**Provisioning SDK (SPML)**

## Desktop Client



## Mobile Client



## Mobile Façade Server

## Web Server

## SOAP XML

## OpenScape UC App / OpenSOA Services

### Business Services

### Common Services

### Infrastructure Services

## Core Framework / Runtime Environment



# The OpenScape UC Application SOAP/XML SDK

The OpenScape UC Application consists of a number of distinct SOA services each encapsulating a UC feature area (such as presence and contact management). These services are hosted within the Unify OpenSOA framework.

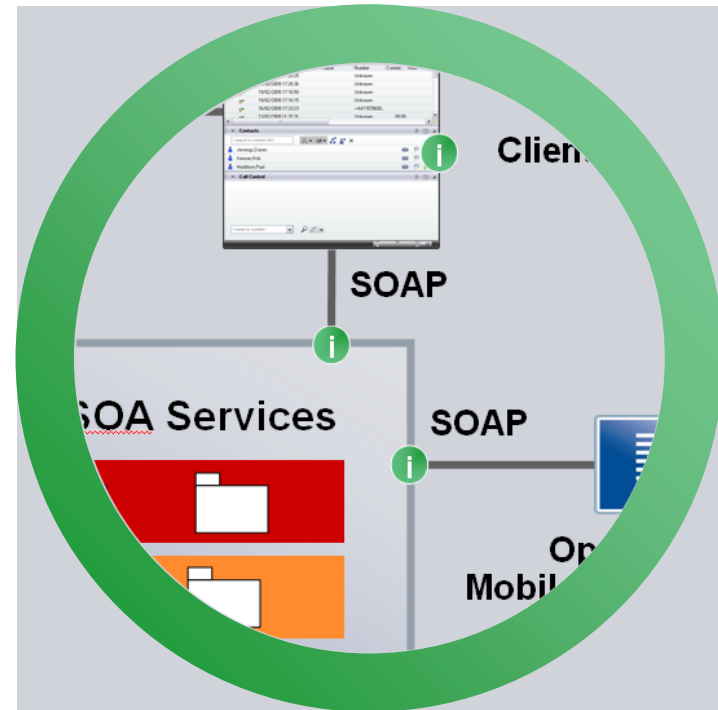
Each service in the OpenSOA framework has its own defined interface and is accessible via SOAP/XML. This collection of OpenSOA service interfaces forms the OpenSOA SOAP/XML SDK.

**Prerequisite for enhanced business application integration and CEBP:**

*SOAP XML based interfaces*

*Direct access to OpenSOA services– no SDK facade*

*Standard for all development environment*





OpenScale WebClient +44(115)943-2356 - Mozilla Firefox

File Edit View History Bookmarks Tools Help

siemens.net https://gbntht1x008srv.gb002.siemens.net:8443/tweb/portal/req?loadOpenScale

Insite Cascade ALS TrainLive-Bee TrailLive-Not OpenScale Google eBay Twitter UKFT Osc Web IRS Osc Web Amazon Osc Web Amazon 1 3r2 MyOpenfire Google Maps Last.fm Financial SEN Webmail

gCalendar Evernote Google Wave RTM StarsUC OpenSOA Javadocs

Willkommen bei Infopark CMS Fiona - Remember The Milk - Paul's Tasks Dimdim Meeting Portal : Dimdim Meeting... OpenScale WebClient +44(115)9...

< Name or Number > Paul Maddison Available Mobex menu OpenScale

Contacts

Display all

Name	Number
<input type="checkbox"/> Abbotts, Richard	+441159422519
<input type="checkbox"/> Abbotts Richard	+441159432519
<input type="checkbox"/> Adam Maddison	07868286384
<input type="checkbox"/> Andrew Cheel	+441908855253

Entries: 1 - 4 (26)

Conferences

All Conferences

Title	Creator
Conference	Paul Maddison
Holly	-
Paul Maddison	-
SC	-
Osc Twitter	Paul Maddison
Osc Twitter Demo	Paul Maddison
SDK Doc sync	Paul Maddison

Entries: 4

Find: fast Next Previous Highlight all Match case

Germany: Thu 12:03 US Eastern: Thu 06:03 US Pacific: Thu 03:03 UK: Thu 11:03 Transf Germany: Thu 12:03 US Eastern: Thu 06:03 US Pacific: Thu 03:03 UK: Thu 11:03 Done

OpenScale WebClient Settings - Mozilla Firefox

siemens.net https://gbntht1x008srv.gb002.siemens.net:8443/tweb/settings/showSettings;jsessionid=DE3A2440F62DEF5D060C866BB384D6F?exclusive=c

Conferences

Modify conference

Name: Conference

Creator: Paul Maddison

Participants:

<input type="checkbox"/> Paul Maddison	+441159432356	<input type="checkbox"/>
<input type="checkbox"/> Holly	+18013737888	<input type="checkbox"/>
<input type="checkbox"/> SC	+17813662475	<input type="checkbox"/>

Add participant < Name or Number >

E-Mail to all participants:

PIN: 389053 Regenerate

Join Option:  
☒ Open Conference  
☐ Record Name

Bridge number: +441159432050

Toll-free: 2050

Other number:

Web conference: -none-

Related information:

Start Delete OK Cancel Apply

start

9 Microsoft Office O... SEN Intranet - Home... MobileXpress client O:\General\Software OpenScale WebClient... Skype™ - maddisonp untitled - Paint FastViewerUserManu... Microsoft PowerPoint ...

11:03 Thursday 28/01/2010



# Common Functionality - Detailed View

## Presence

### Presence

This web service allows users to manage user status and aggregated media status.



### Features supported

- Subscribe/unsubscribe for a user's presence
- Subscribe to presence of multiple users at once
- Accept/reject/block presence subscriber request
- Get the aggregated media presence of a user (a user whose presence information is published for other users)
- Get the presence status of a user
- Get list of presence subscriptions by a user
- Get list of presence subscription for a user
- Get/set/overwrite user's free form note, location and time zone

### Features implemented but not yet released with SDK

- Set the maximum number of active calls until a user appears BUSY
- Get and manage a user's Access Control List



# Common Functionality - Detailed View

## Identity & Access Management I

### Identity & Access Management

- User Service & Device Mgmt.  
Provides a collection of features to find users and manage the user's devices
- Contact Configuration  
This service is used to manage users contact lists in the scope of the entire system. Providing the ability to return and modify private contact lists.
- Contact Services  
Allows a user to create, find and manage contacts.
- Domain SOAP wrapper  
Provides the list of features supported for a user (dictated by licensing).

### Features supported

- User Service & Device Management
  - Add, delete and modify device or device list
  - Set preferred device for incoming call
  - Provide user's device lists
- Contact Configuration
  - Retrieves the system default settings for private contact directory connectors.
- Contact Service
  - Add/delete a contact in the user's contact list
  - Find a contact by unique ID
  - Find a contact by name
  - Find a contact by phone number
  - Retrieves the list of contact groups the user has in their contact list

### Features implemented but not yet released with SDK

- Contact Service
  - Retrieve a complete group including it's contacts
  - Modify a contact or group
  - Update the given private contact by retrieving the related global contact and copying the contents of the global contact to the private contact.
  - Share/un-share a contact group with an other user
- Domain SOAP wrapper
  - Get the list of features (the 'profile') that a user has access to.



# Common Functionality - Detailed View

## Identity & Access Management II

### Identity & Access Management

- **Passphrase Login Service**  
This web service allows users to log on to/Authenticate and use OpenSOA web services.
- **Authentication Authority**  
This web service provides a mechanism to allow users to renew authentication within the OpenSOA framework.
- *Directory Services*  
*Leverages directory connectors for accessing various "real" private or public contact data sources.*

### Features supported

- **Passphrase Login Service**
  - Logon user to user management and get an authentication statements
  - Changes the password for the currently logged-on user
  - Changes the password for a given user (e.g. in the process of logging on)
- **Authentication**
  - *Renew a still valid authentication statement*

### Features implemented but not yet released with SDK

- **Directory Connectors (customizable)**
  - LDAP
  - MS Active Directory LDAP
  - IBM Lotus Domino/Notes



# Common Functionality - Detailed View

## Business Systems Integration

### Business Systems Integration

- Groupware Service
- *Messaging Services*
- *Calendar Services*
- *Journal Services*

#### Features supported

- Groupware Service
- MS Exchange Server
- MS Domino/Lotus Notes

#### Features implemented but not yet released with SDK

- Messaging Service (Groupware)
  - Read/write access to groupware inbox
- Calendar Service (Groupware)
  - Read access to groupware based calendar information
- Journal Service
  - Enable/disable creation of journal records for the current user
  - Delete one or all journal records of a user
  - Provide conference journal (users joining/leaving)



# Common Functionality - Detailed View

## Media Services

### Media Services

- *Application Builder*
- *Voice Portal TUI*
- *Media Server*

### Features implemented but not yet released with SDK

- Application Builder
  - Voice Application Builder User Interface used in conjunction with OpenScape Xpressions only
- Voice Portal VXML TUI
- Media Server



# Common Functionality - Detailed View

## Basic Communication

### Basic Communication

- BCom API  
This DLL provides an abstraction layer from the BCom Web service, allowing a user to create and control calls without the complexity of using the web service directly
- *Address Translator*  
*Translates a non-normalized local or international phone number into a normalized phone number format*

### Features supported

- Make a new call
- Drop a call
- Deflect an incoming call in state ALERTING
- Get attached data from a Voice Communication → Call status information
- Stores attached data to a Voice Communication → Store CDR?
- Sets/remove a preferred Device for a communication

### Supporting methods

- *Creates a communication session*
- *Creates a voice communication session*
- *Returns the list of connections*

### Features implemented but not yet released with SDK

- Initiate a conference, i.e. connect an additional party to an existing active call
- Make a consultation
- Initiate a transfer, i.e. connect an additional party (via consultation) to an existing active call and withdraw myself from both calls
- Transfer a call in state CONNECTED (without consultation).
- Deflect an incoming call to the preferred device of the callee
- Forward a Connection
- Alternate a Connection ('toggle' between 2 connections)
- Answer a Connection → Click to answer
- Hold/retrieve a Connection

### Supporting methods

- *Request a list of communication endpoints for a given number*
- *Request information about active calls for a given user*
- *Register/Remove a device for monitor*



# Common Functionality - Detailed View

## Workflow & Rules

### Workflow & Rules

- *Rules Engine*

*Allows a user to create and manage a set of static rules comprised of conditions and actions.*

- *Personal Workflow*

*Directs other services e.g. tells BCom to route incoming voice calls to an user based on a multitude of criteria like a user's pre-configured rules or the user's preferred device.*

### Features implemented but not yet released with SDK

- Rules Engine

- Create/modify/delete a rule
- Conditions: time/date, presence status, call from user/group
- Actions: forward call to the preferred device or list of devices

- Personal Workflow

- Deflects a call to a given destination
- Get the called Party's presence status
- Process actions returned from Rules Engine
- Gets the time zone (mobile and home) for the user
- Accesses the device list service to obtain the list of devices to route the call to



# Common Functionality - Detailed View

## Voice Conferencing and Tell-me-when

### Conferencing

- Virtual Conference Controller  
This web service is used to create and manage conferences.

### User Notification & Prompting

- Allows a user set and manage a 'tell-me-when' on a contact or group. When the 'tell-me-when' condition becomes true e.g. if a contact's phone presence changes to 'available' the user will be informed.

#### Features supported

- Conferencing Controller
  - Create a conference 'template' in advance
  - Get the list of conferences for a user
  - Get the list of conferences of a user
  - Start and terminate a conference
  - Add a participant to an active conference
  - Remove a user from a conference

#### Features supported

- Tell-me-when
  - Set an observation to the observed user

#### Features implemented but not yet released with SDK

- Conference Controller
  - Drop a participant from an active conference
  - Mute/un-mute a participant
  - Set invitees to be called at the start of the conference
  - Get active (loudest) speaker information
  - ...

#### Features implemented but not yet released with SDK

- Notification & Prompting
  - Notify one or more recipients by email or pop-up
- Tell-me-when
  - Modify/delete an active observation
  - Requests all observations of the observing user



# Common Functionality - Detailed View

## Communication Framework I (internal service)

### Communication Framework

- Event Broker

This service provides the eventing mechanisms allowing applications to subscribe to and be supplied with events that are provided by the various services e.g. subscribe to receive present events for all changes of a user's contacts or a tell-me-when expiring

- Remote Discovery

This web service is usually referred to as the discovery web service. It provides a way for a client to discover the location of every web service hosted within the OpenSOA framework regardless of which physical node the web service resides on

### Features supported

- Event Broker

- Subscribe/unsubscribe for a specific event e.g. a tell-me-when condition happens or a presence status changes

- Remote Discovery

- Used to discover service instances implementing a given interface



# Common Functionality - Detailed View

## Communication Framework II (internal service)

### Communication Framework

- *Backup & Restore*

*Backup and Restore is an OpenSOA service that provides centralized Backup and Restore functionality to all OpenSOA services and OpenSOA based applications reducing maintenance effort to a minimum.*

- *Persistence FW*

*Stores (persists) user specific data incl. Access Control List, free form text, location, time zone and the user's presence state.*

- *Systems Management*

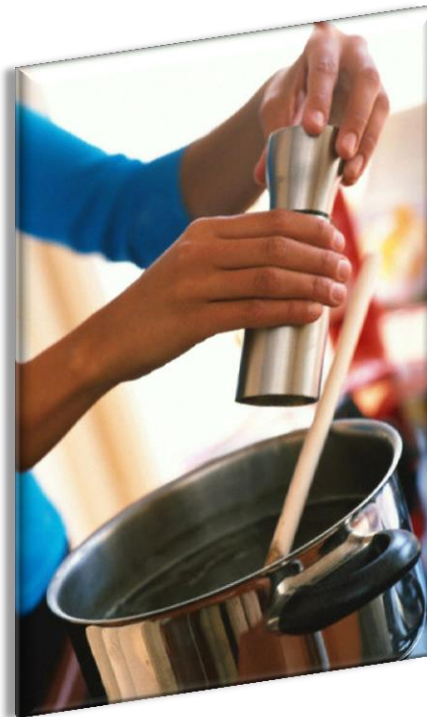
*Configuration, lifecycle management and monitoring*

### Features implemented but not yet released with SDK

- Backup & Restore
- Persistence Framework
- Systems Management



# Getting started: SOAP/XML SDK



## Ingredients:

WSDL files ✓

C# or Java ✓

Any development environment ✓

Bcom API client library (Java or C# flavoured) ✓

OpenSOA SDK Developers Guide (+ samples) ✓

SOAP/XML experience ✓

Development System ✓





# Pront

You can start right now!

[http://wiki.unify.com/wiki/Developer\\_Program](http://wiki.unify.com/wiki/Developer_Program)

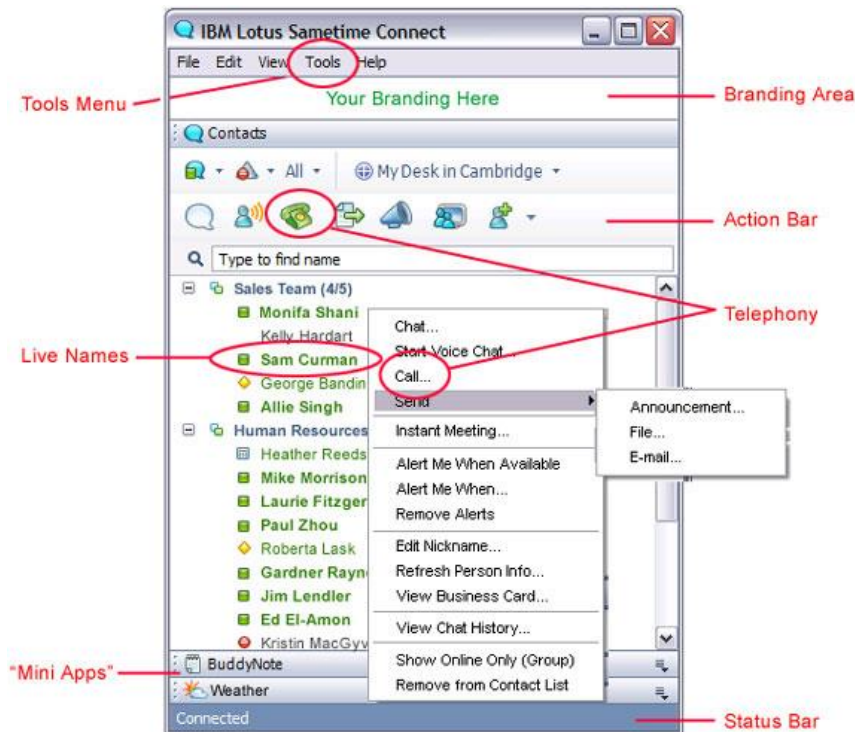


An aerial photograph of a multi-lane highway interchange crossing a lush green field. A large, dark shadow of a tree is cast onto the grass from the left. A white semi-truck is traveling on the highway, and a small car is visible further ahead. The word "Examples" is written in white text on the left side of the image, next to a green rectangular background.

# Examples



# Lotus Sametime Unified Telephony





# OpenScape UC Integration Examples

## Typical Business Portal integration scenarios

The top screenshot displays the 'MasterEnterprise' portal interface. A blue circle highlights the 'Team Consult' section, which includes a table of attendees (Meyer, Miller, Johnson, Smith), a list of objectives (Analyse Customer Requirements, Prepare Offer + Sign Contract, Design Customer Solution, Implement Customer Solution, Acceptance Test + Start Operation), a document library, and an agenda.

The bottom-left screenshot shows the 'Siemens Power Generation' portal. A yellow circle highlights the 'Project wind park north' section, which includes a project timeline, a photo of a wind turbine, and a table of project team members responsible for Package 3.

The bottom-right screenshot shows the 'People Finder' portal. A green circle highlights the user profile for Hauke Juhs, which includes a photo, name, and contact information.



# OpenScape UC Integration Examples

## Typical CEBP integration solutions

Opportunity: OpenScape UC - Salesforce - Unlimited Edition - Siemens AG

Systeminformationen

Opportunity: Global ONE Opportunity  
Datensatztyp: Global ONE Opportunity  
Ersteller: Martina Beck  
Zuletzt geändert von: Martina Beck  
04.12.2008 10:11

Produkte (Global ONE Pricebook)

Alle bearbeiten | Preisbuch auswählen | Sortieren | Add Product (sorted by code)

Aktion	Produkt	Menge	Verkaufspreis	Plan	Beschreibung des Belegpostens
<input type="checkbox"/> Bearbeiten   <input type="checkbox"/> Entfernen	HiPath OpenScape - All Mobile/Collaboration	1,00	EUR 0,00		70.000 User Lizenzen

Vertriebsteam

Aktion	Teammitglied	Rolle
<input type="checkbox"/> Bearbeiten   <input type="checkbox"/> Entfernen	Ahmet Ada	Realization Planning Manager
<input type="checkbox"/> Bearbeiten   <input type="checkbox"/> Entfernen	Christine Thews	Consultant
<input type="checkbox"/> Bearbeiten   <input type="checkbox"/> Entfernen	Florian Goette	Account Manager
<input type="checkbox"/> Bearbeiten   <input type="checkbox"/> Entfernen	Jan Hickisch	SBU Team Leader
<input type="checkbox"/> Bearbeiten   <input type="checkbox"/> Entfernen	Margot Buchner	Portfolio Business Manager

Kontrolltrollen

Aktion	Kontaktname	Accountname	E-Mail	Telefon	Rolle	Primär
<input type="checkbox"/> Bearbeiten   <input type="checkbox"/> Entfernen	Peter Miller	Example Customer		+49 (89) 7484254229	Executive Sponsor	<input type="checkbox"/>

Partner

Keine Datensätze zum Anzeigen vorhanden

Competitors

Neues Competitor

My Teamcenter 2007

UGS Teamcenter

Engine Block Assy

Object: Engine Block Assy

Name: Engine Block Assy

Description: Engine Block Assy

Owner: Dan Johnson (djohnson)

Group ID: Designer Group

Last Modifying User: Debbie Maxwell (dmaxwell)

Checked Out: Y

Checked Out By: Debbie Maxwell (dmaxwell)

Copy | Call | Send To UC...



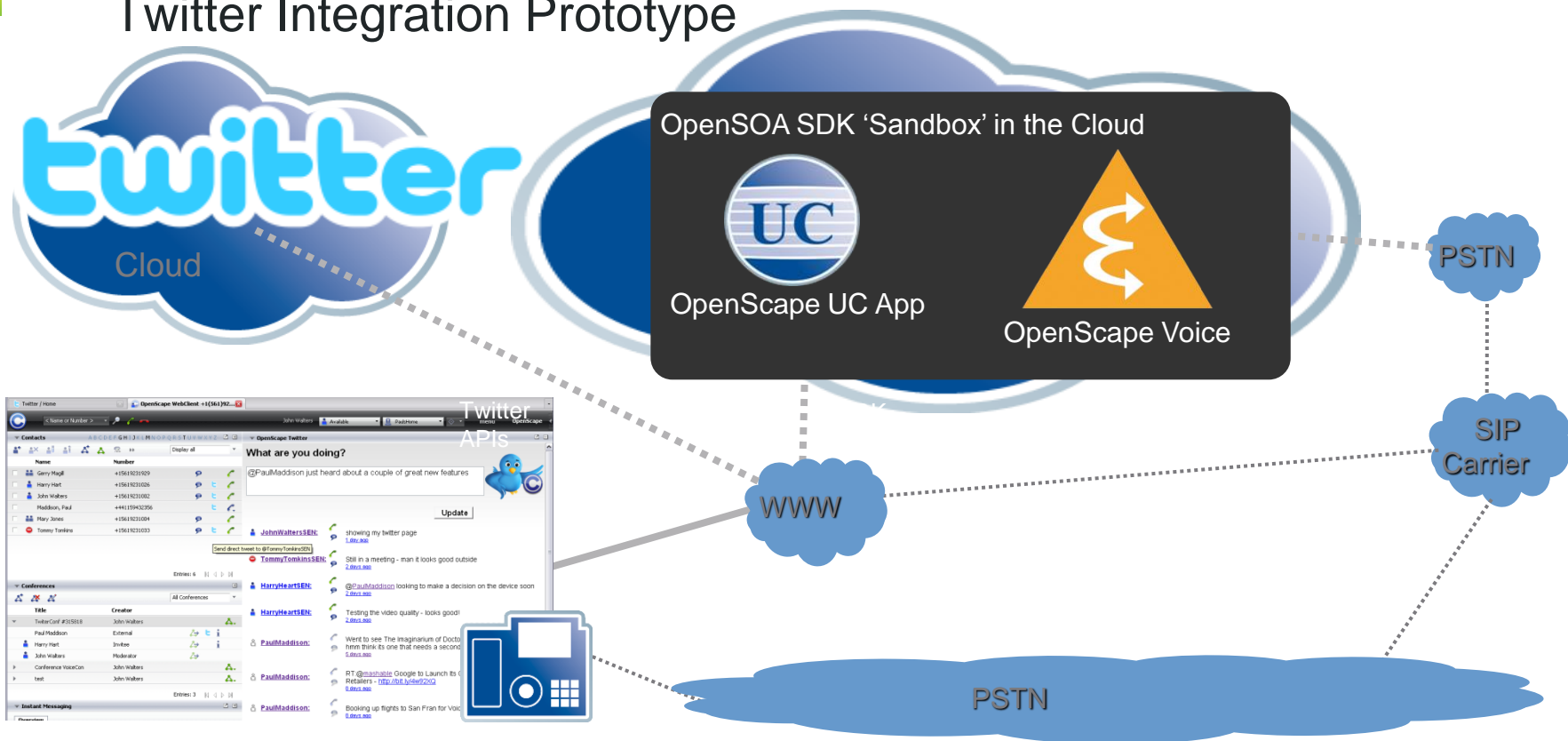


+

twitter



# Reference Architecture – Twitter Integration Prototype





# OpenScape Twitter Mash-up - Overview

**Twitter / Home** | **OpenScape WebClient +1(561)92...**

John Walters | Available | Paul-Home | menu | OpenScape

**Contacts** | ABCDEFGHIJKLMNOPQRSTUVWXYZ | Display all

Name	Number
Gerry Magill	+15619231929
Harry Hart	+15619231026
John Walters	+15619231002
Maddison, Paul	+441159432356
Mary Jones	+15619231004
Tommy Tomkins	+15619231033

**OpenScape Twitter**

What are you doing? *Tweet from Web Client*

@PaulMaddison just heard about a couple of great new features

**Update**

**Twitter home timeline**

**Send direct tweet to contacts**

Send direct tweet to @TommyTomkinsSEN

**Conferences** | Entries: 6 | All Conferences

Title	Creator
TwitterConf #315818	John Walters
Paul Maddison	External
Harry Hart	Invite
John Walters	Moderator
Conference VoiceCon	John Walters
test	John Walters

**Instant Messaging** | Entries: 3

**Conference created in twitter**

**Presence displayed with tweet**

**JohnWaltersSEN:** showing my twitter page *1 day ago*

**TommyTomkinsSEN:** Still in a meeting - man it looks good outside *2 days ago*

**HarryHeartsSEN:** Testing the video quality - looks good! *2 days ago*

**PaulMaddison:** Went to see The Imaginarium of Doctor Parnassus last night... hmmm think its one that needs a second watch to appreciate. *5 days ago*

**PaulMaddison:** RT:@mashable Google to Launch Its Own Phone Through... *8 days ago*

**PaulMaddison:** Booking up flights to San Fran for VoiceCon *8 days ago*



# Contextual Automation Based on Twitter

## Content Example 1



*Socially aware OpenScape UC App detect the context of your tweets, in this case it automatically changes your presence state to 'Busy' and routes all incoming calls to voicemail.*





# Contextual Automation Based on Twitter

## Content Example 2

Reply to HarryHeartSEN: 65

@HarryHeartSEN @PaulMaddison great lets have a conference about this at 2pm

reply



*OpenScape UC App  
knows from your tweet you want to create  
a conference with Paul and Harry at 2pm,  
so it does it for you,  
without you having to do a thing...*



Conferences		
Title	Creator	
TwitterConf #315818	John Walters	
Paul Maddison	External	
Harry Hart	Invitee	
John Walters	Moderator	

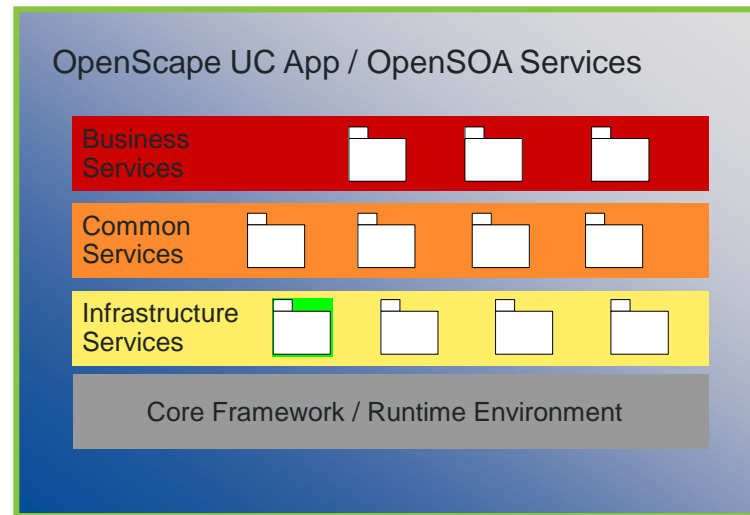
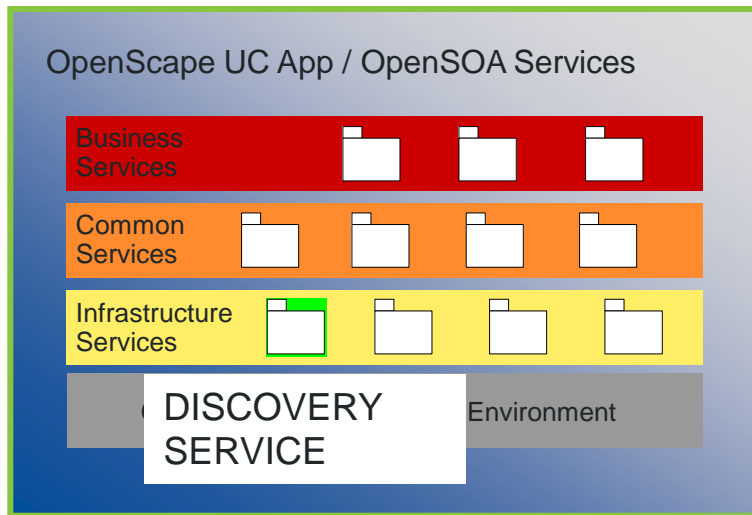


An aerial photograph of a highway interchange. A multi-lane highway runs diagonally from the top right towards the bottom right. A smaller road branches off to the left, crossing under the main highway. A large white semi-truck is traveling on the main highway towards the bottom right. A small white car is visible further ahead on the same lane. On the left side of the highway, there is a green field with a single tree. The word "Backup" is written in large white letters on the left side of the image, partially overlapping the green field. A small yellow and green rectangular graphic is located on the far left edge of the image.

# Backup



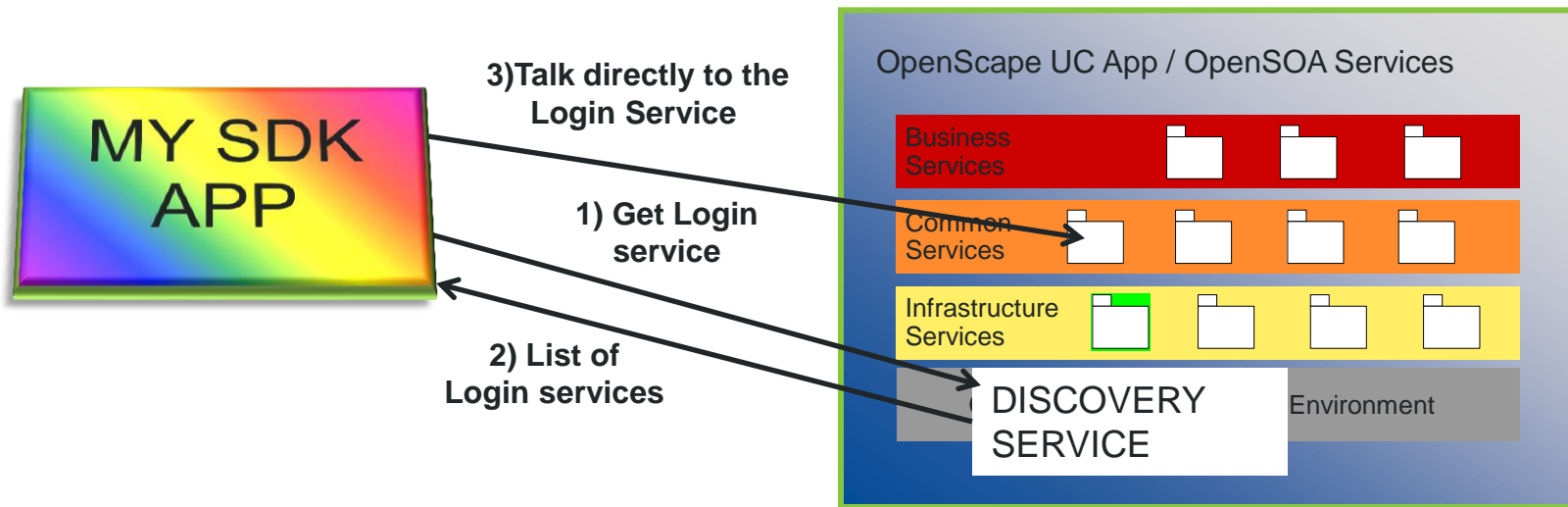
# OpenScape UC Discovery: Overview



= *Integration point*

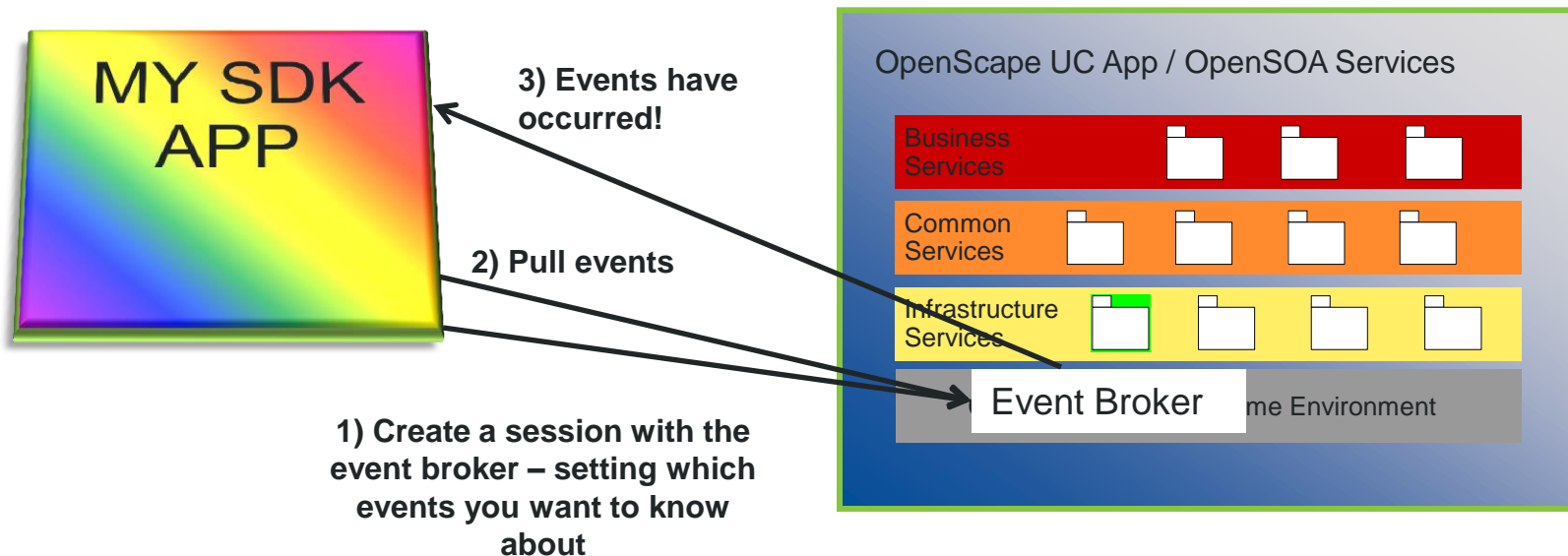


# OpenScape UC Discovery: Overview





# OpenScope UC Eventing: Overview





# OpenScape UC BCom: Overview

