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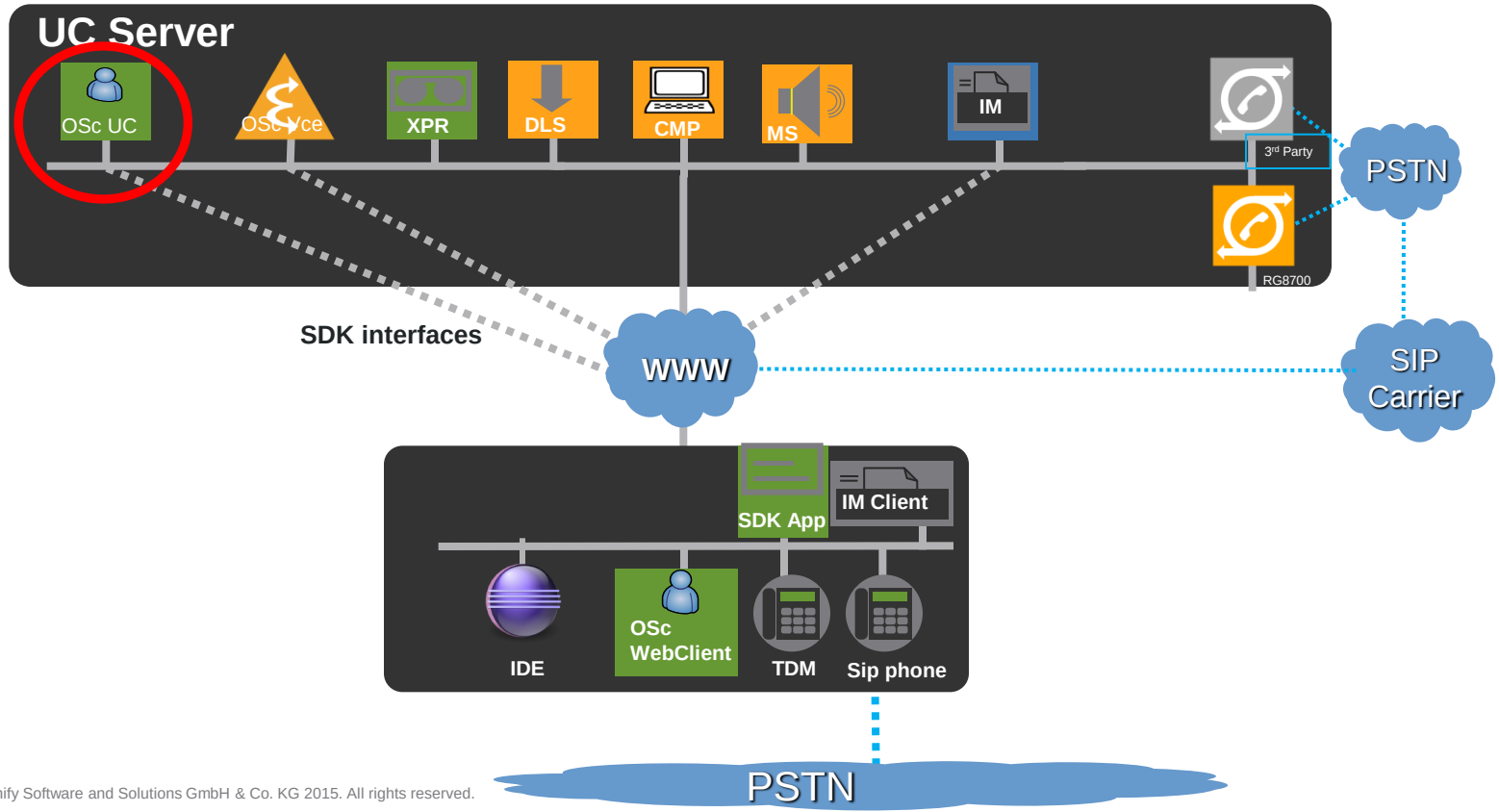
Harmonize
your enterprise

OpenScape UC App & OpenSOA SDK Technical Overview

Paul Maddison

UNIFY

UC Components



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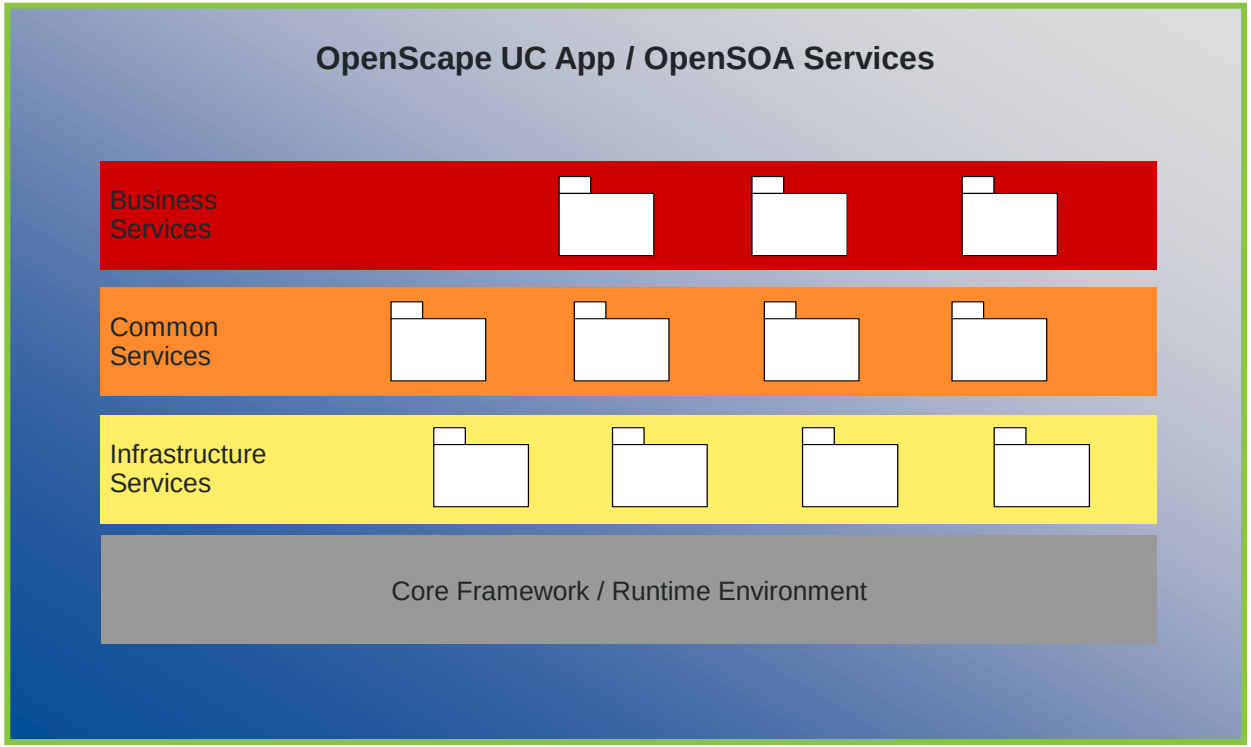
OpenScape UC Application - Architecture



= Integration point

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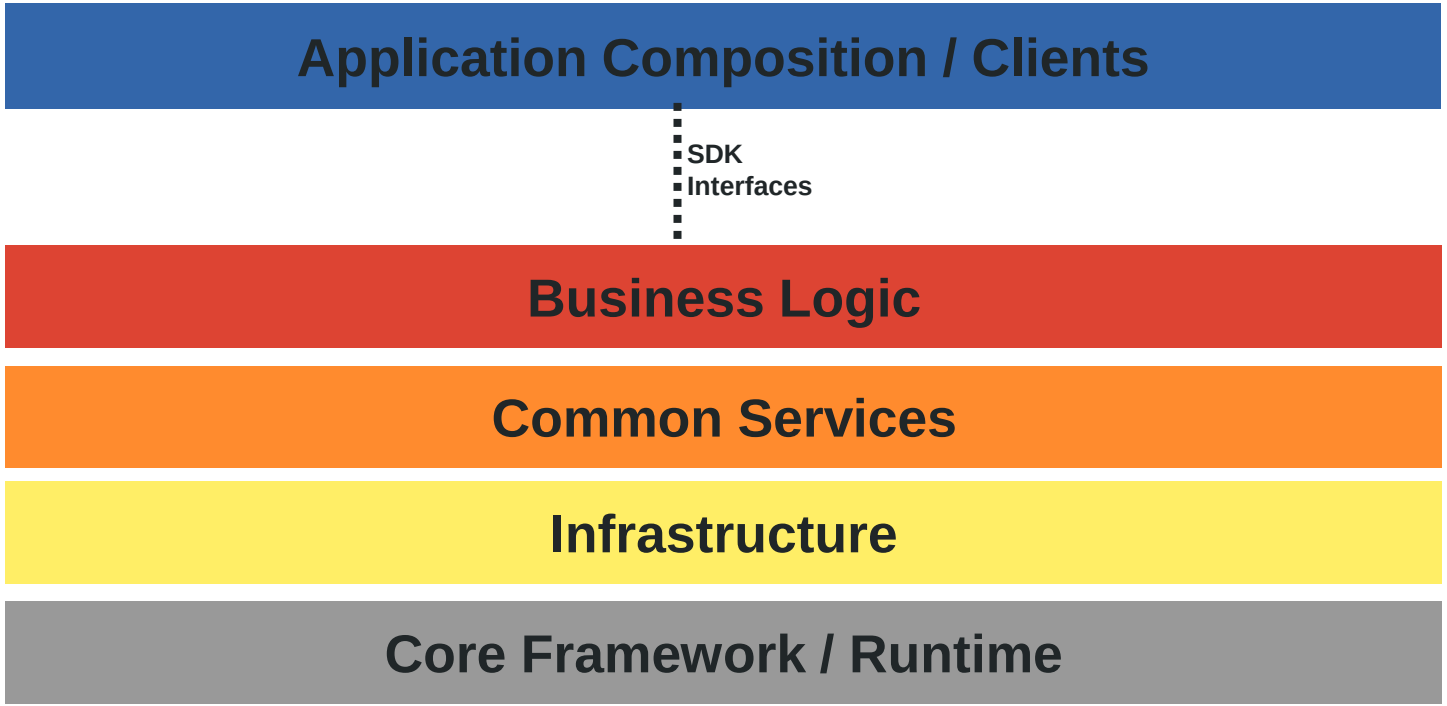
OpenSOA Architecture

Layering for OpenScape Unified Communications App



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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.

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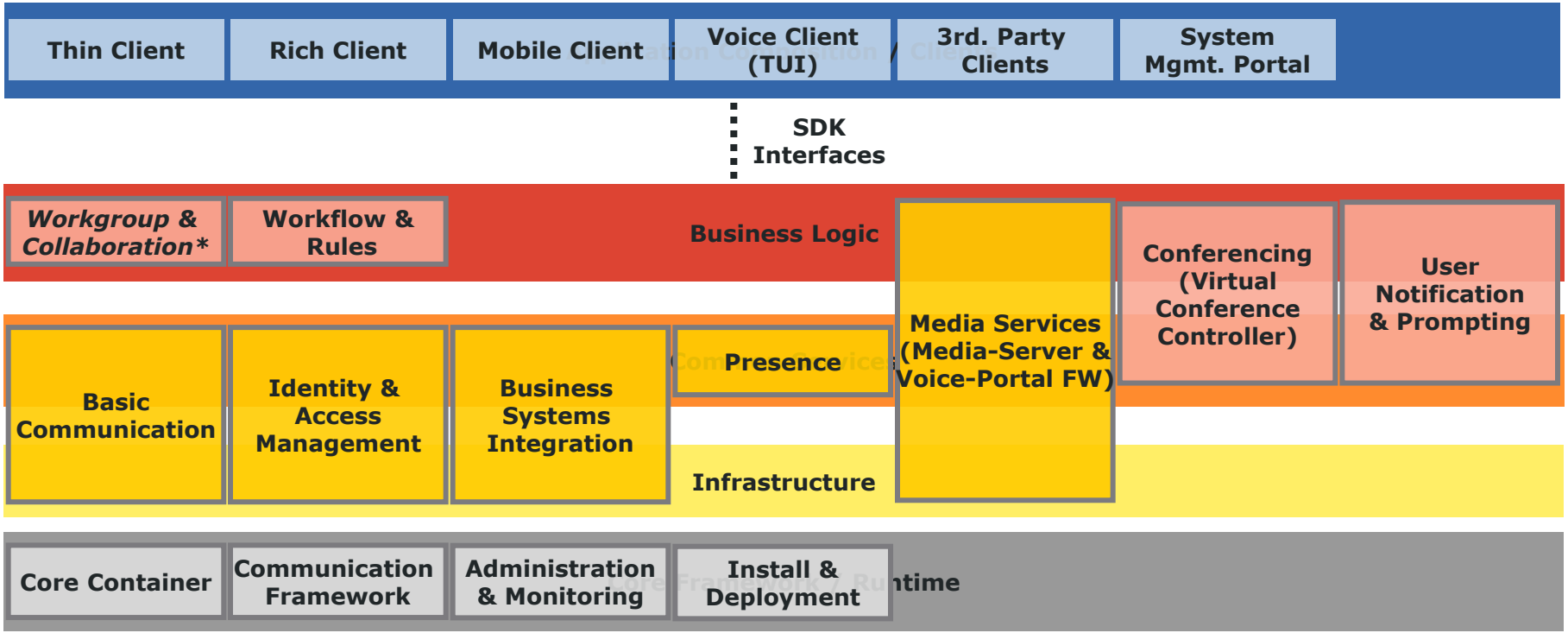
Common Functionality Overview

OpenScape Unified Communications Application



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OpenScape UC App & OpenSOA SDK Technical Overview

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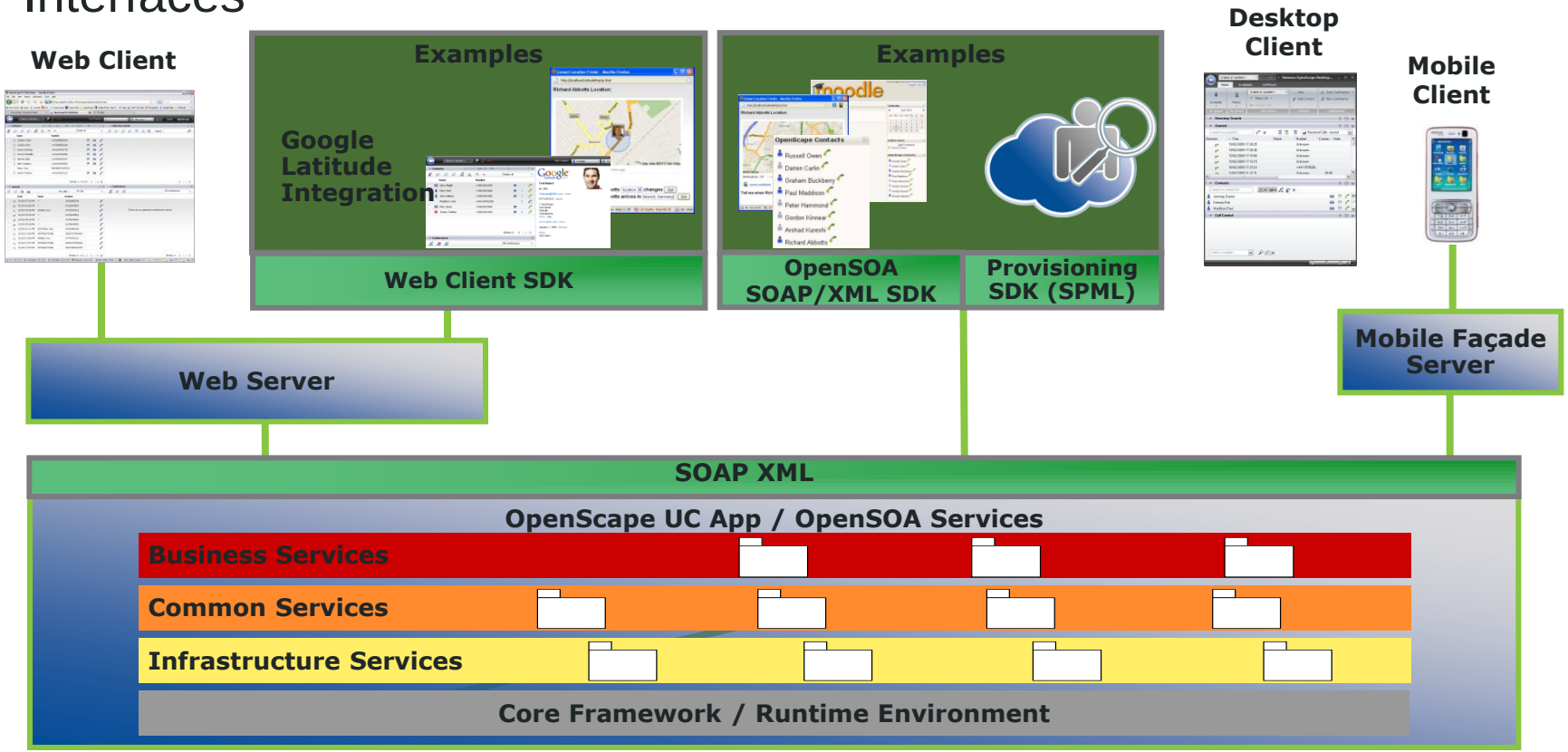
Integration Landscape

OpenScape UC Application

Interfaces



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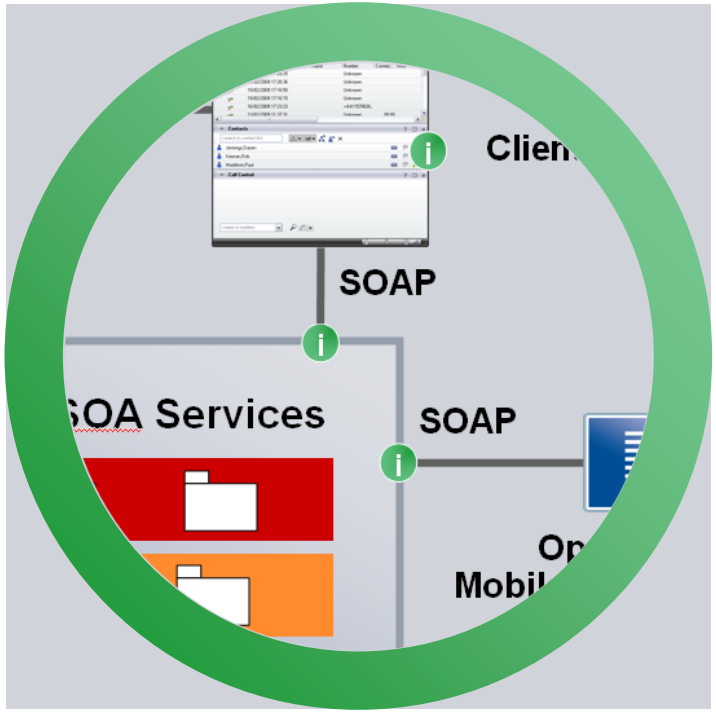
The OpenScape UC Application SOAP/XML SDK

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 it's 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



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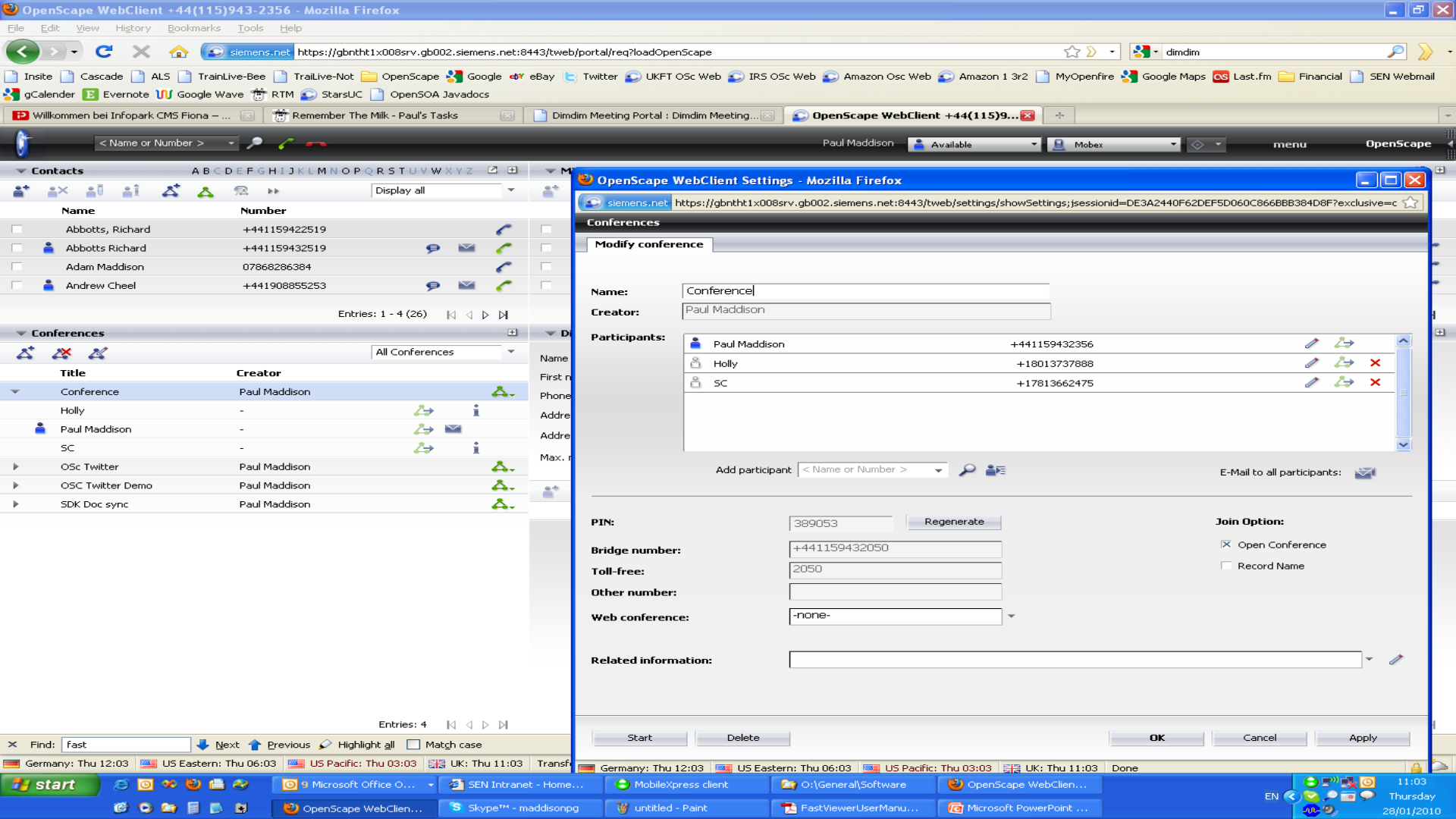
OpenScape WebClient +44(115)943-2356 - Mozilla Firefox
https://gbntht1x008srv.gb002.siemens.net:8443/tweb/portal/req?loadOpenScape
Contacts
Name
Number
Abbotts, Richard +441159422519
Abbotts Richard +441159432519
Adam Maddison 07868286384
Andrew Cheel +441908855253
Entries: 1 - 4 (26)
Conferences
Title
Creator
Conference Paul Maddison
Holly -
Paul Maddison -
SC -
OSc Twitter Paul Maddison
OSC Twitter Demo Paul Maddison
SDK Doc sync Paul Maddison
Entries: 4
OpenScape WebClient Settings - Mozilla Firefox
Conferences
Modify conference
Name: Conference
Creator: Paul Maddison
Participants:
Paul Maddison +441159432356
Holly +18013737888
SC +17813662475
Add participant
E-Mail to all participants:
PIN: 389053
Regenerate
Bridge number: +441159432050
Toll-free: 2050
Other number:
Web conference: -none-
Related information:
Join Option:
Open Conference
Record Name
Start
Delete
OK
Cancel
Apply
Germany: Thu 12:03
US Eastern: Thu 06:03
US Pacific: Thu 03:03
UK: Thu 11:03
start

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

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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.

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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

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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)

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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

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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*

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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

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Common Functionality - Detailed View

Voice Conferencing and Tell-me-when

Conferencing

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

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 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
  - …

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

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

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

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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

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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

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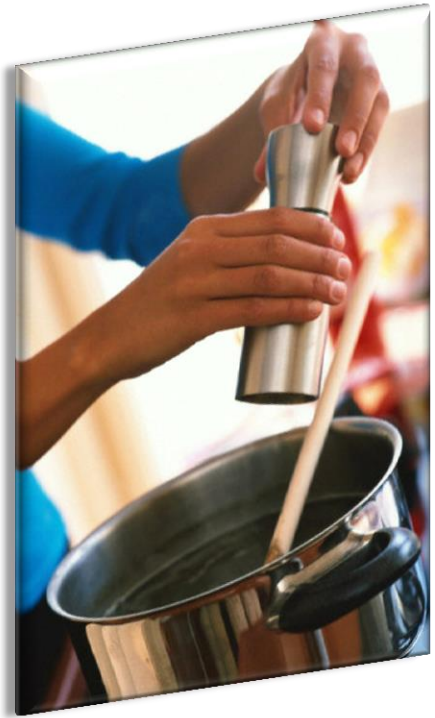
Getting started: SOAP/XML SDK



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 √

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Pront

You can start right now!

http://wiki.unify.com/wiki/Developer_Program

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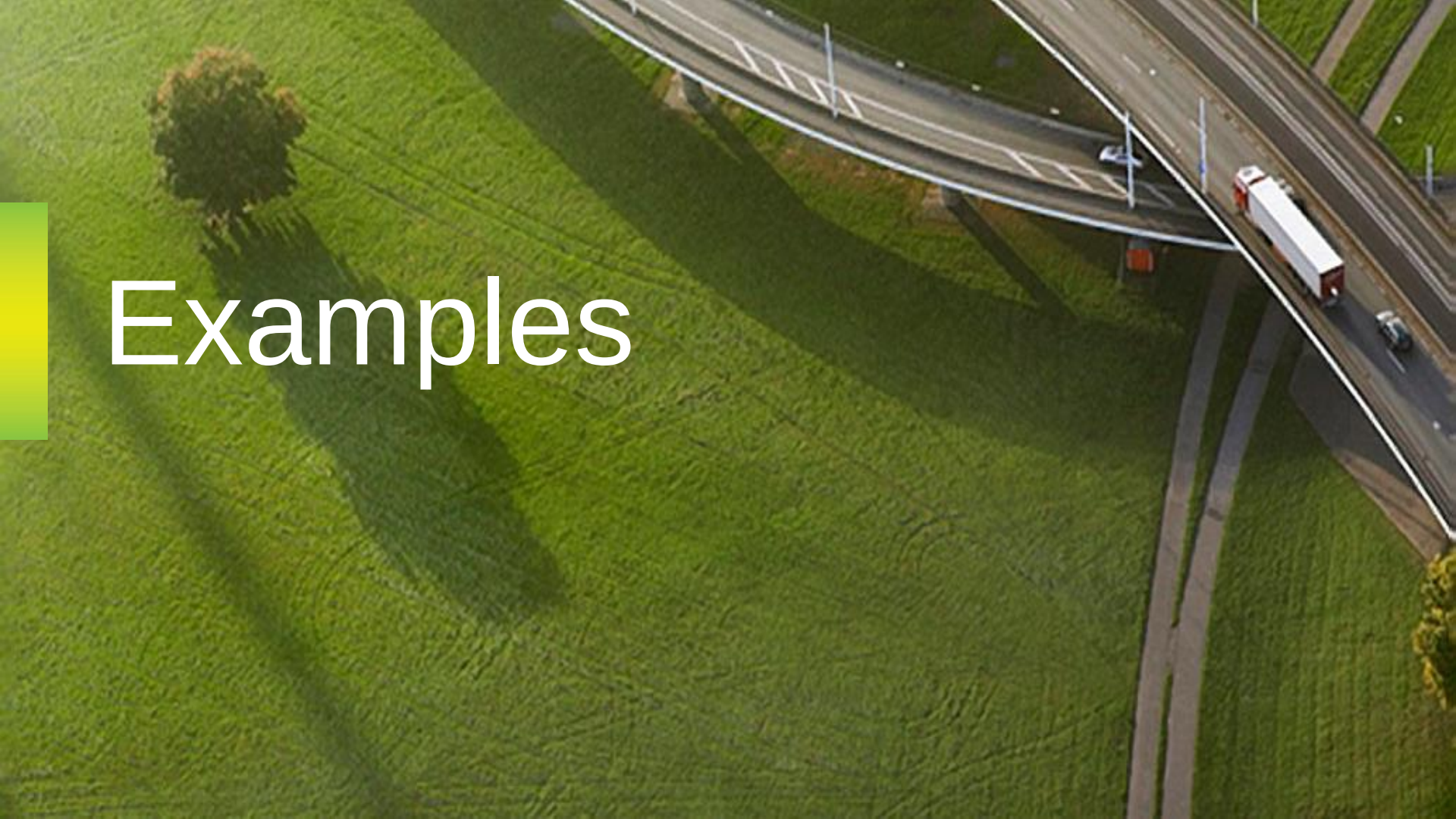
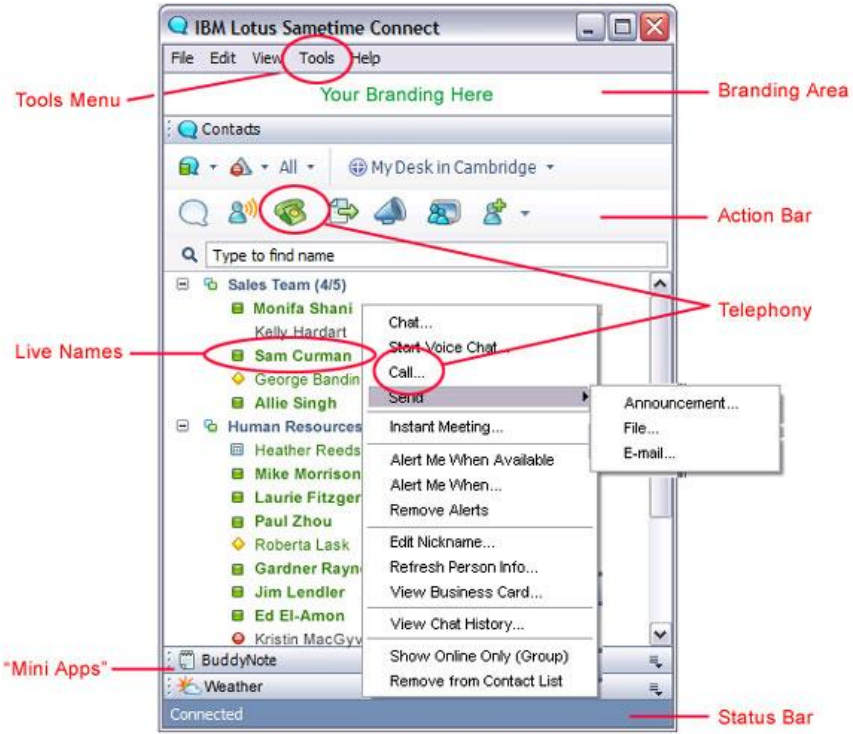


Examples

Lotus Sametime Unified Telephony



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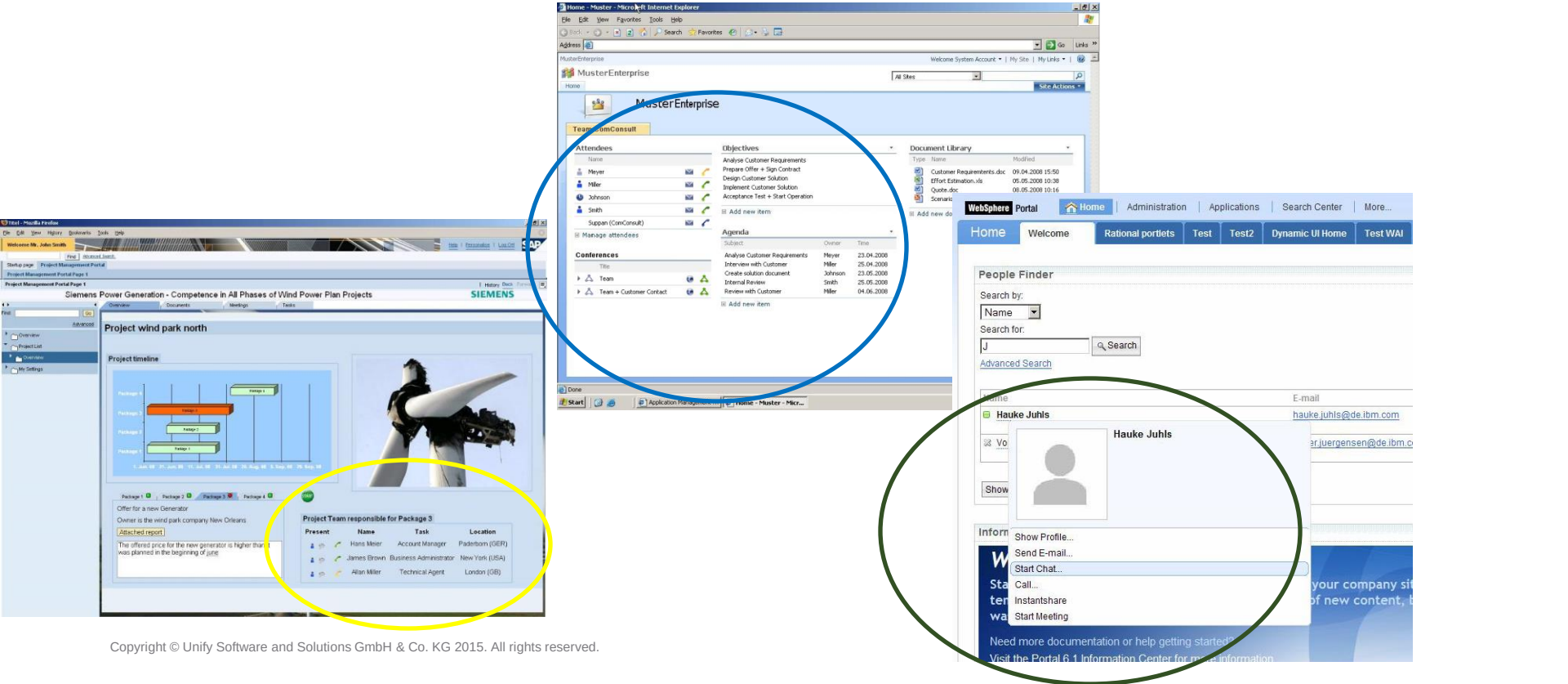
OpenScape UC Integration Examples

Typical Business Portal integration scenarios



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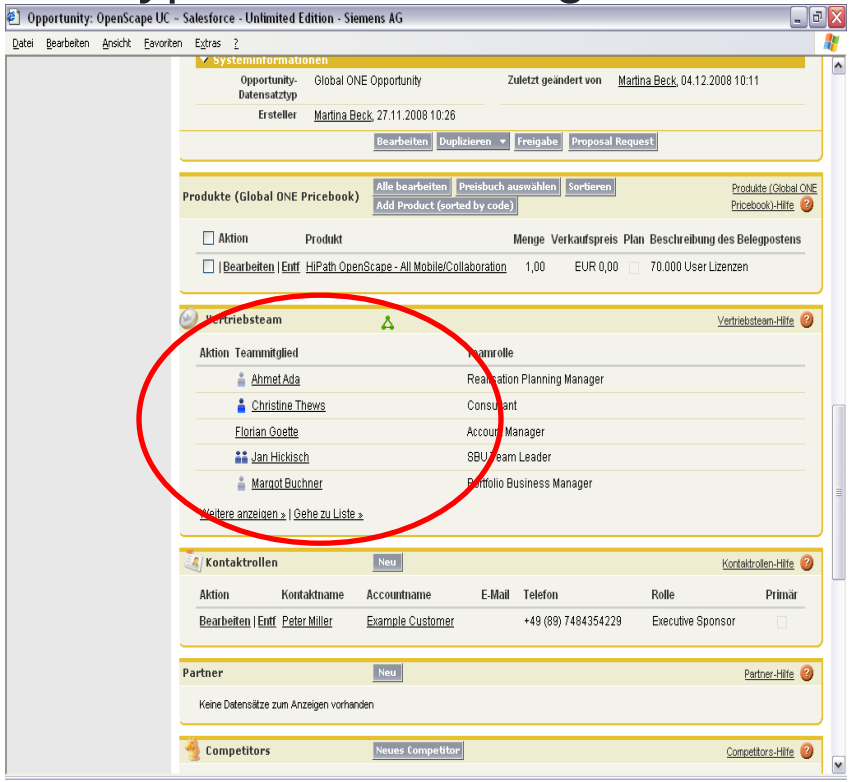
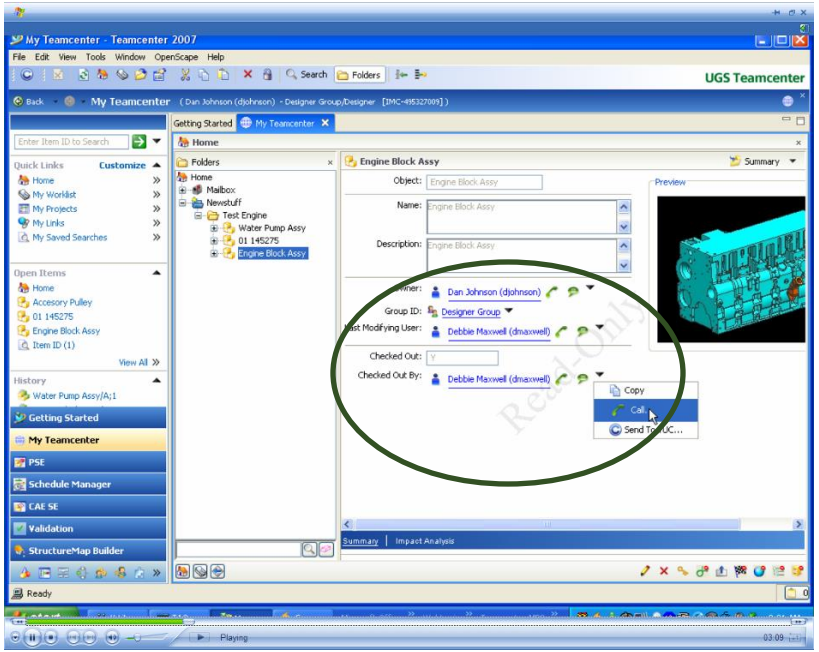
OpenScape UC Integration Examples

Typical CEBP integration solutions





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+

twitter

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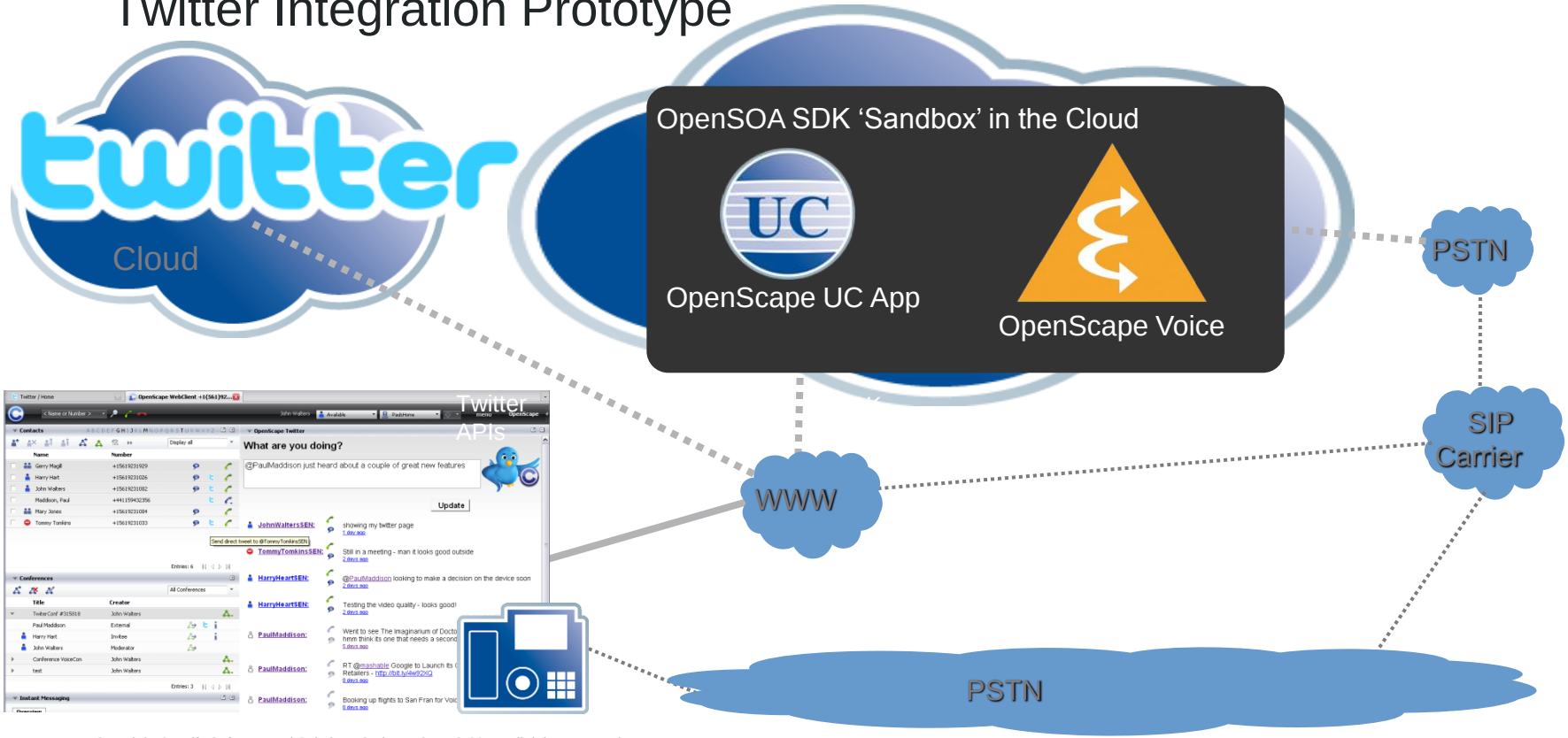
Reference Architecture –

Twitter Integration Prototype



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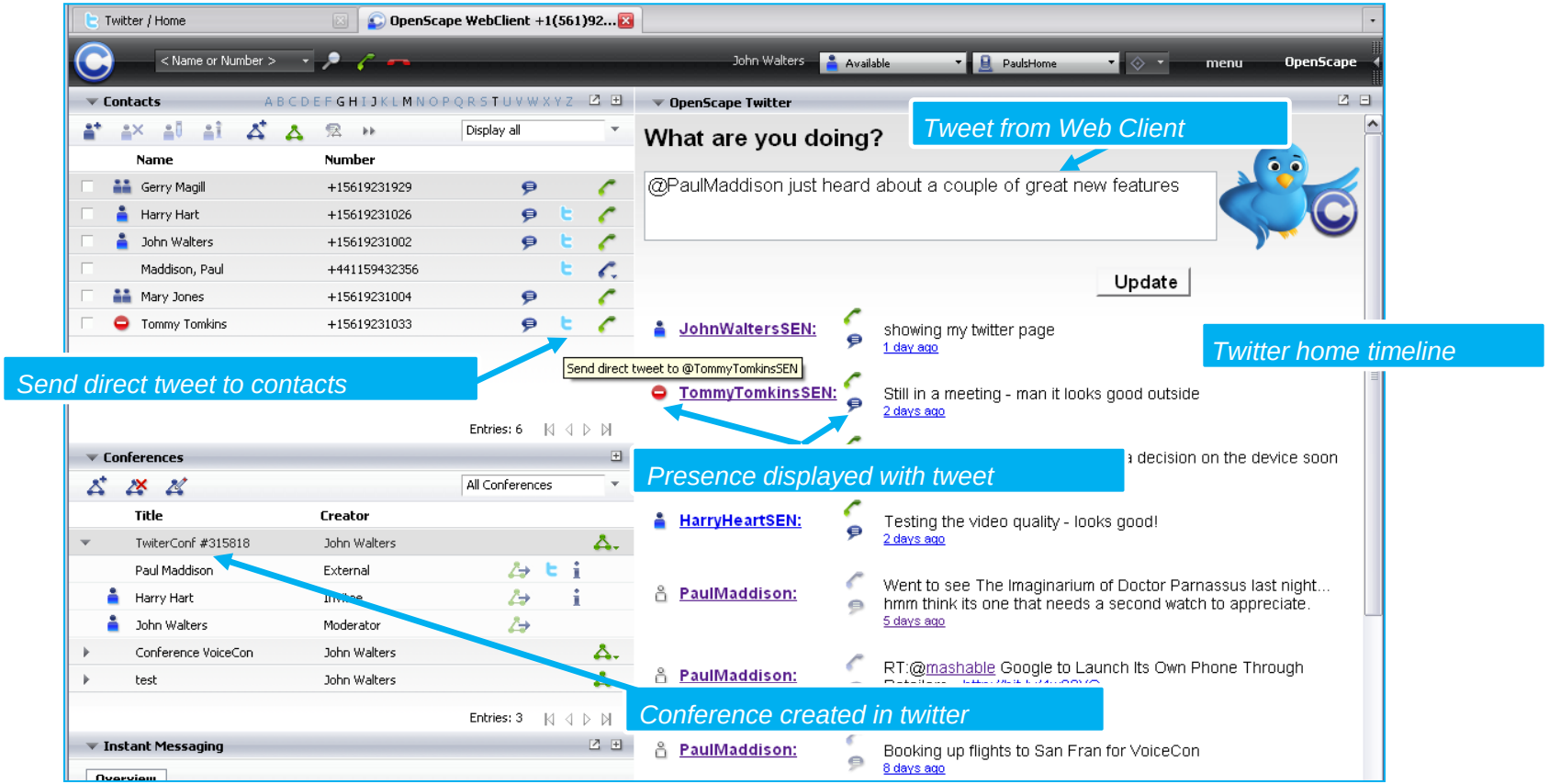
OpenScape Twitter Mash-up - Overview



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.

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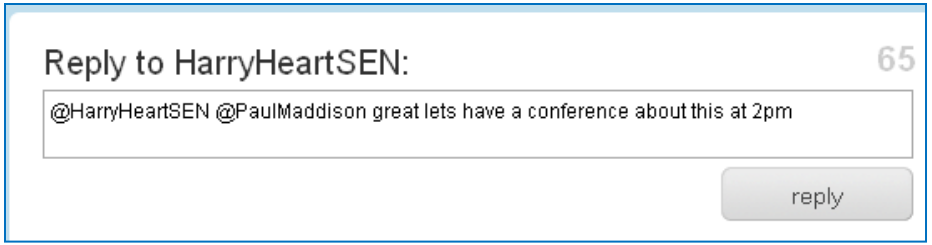
Contextual Automation Based on Twitter

Content Example 2



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…

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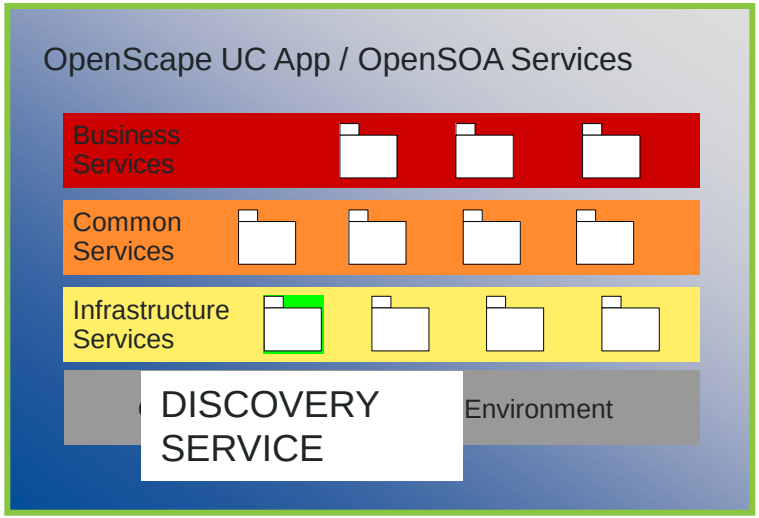
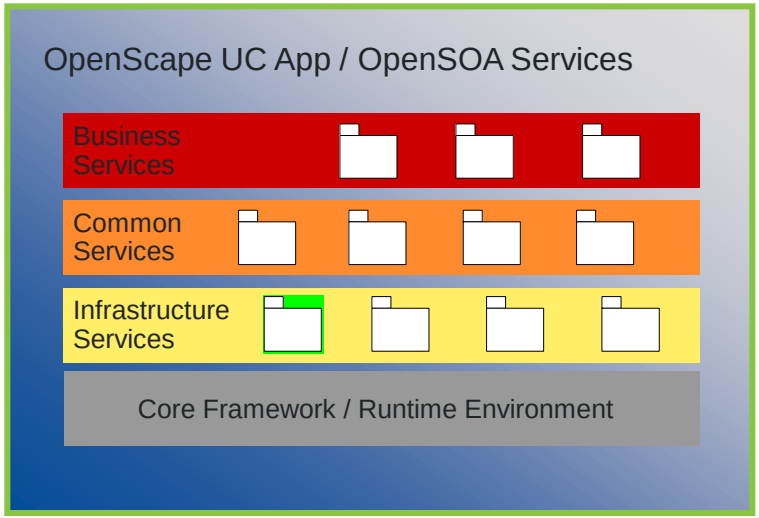
Backup

OpenScape UC Discovery: Overview





= Integration point

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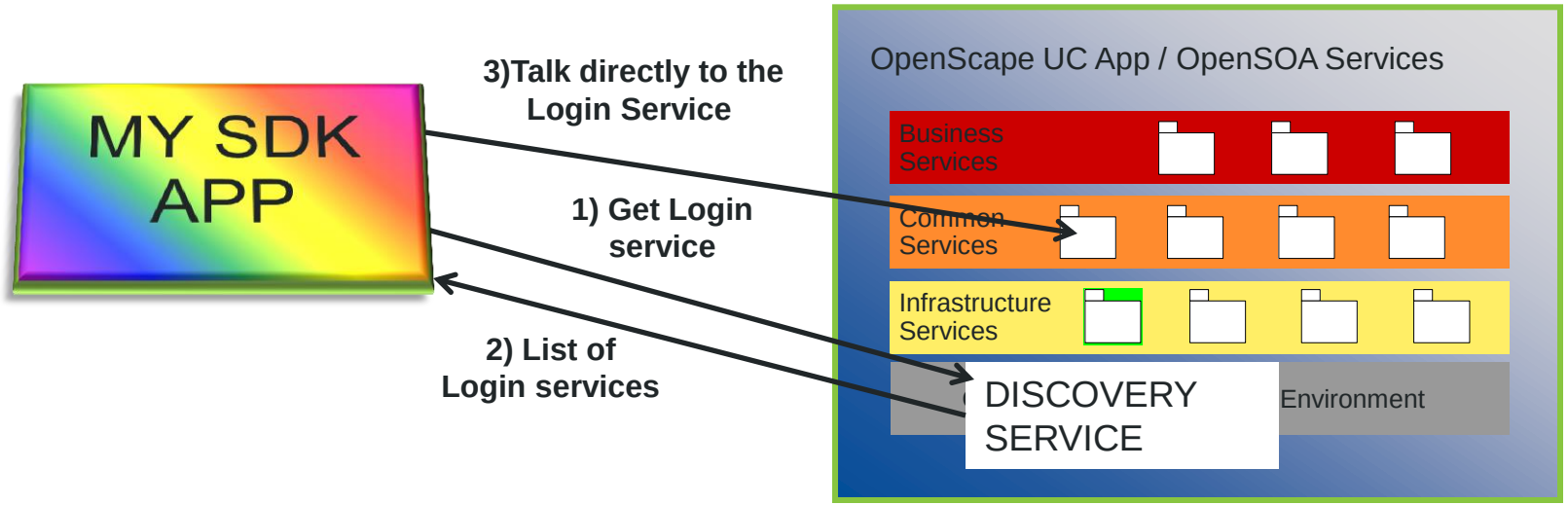
OpenScape UC Discovery: Overview



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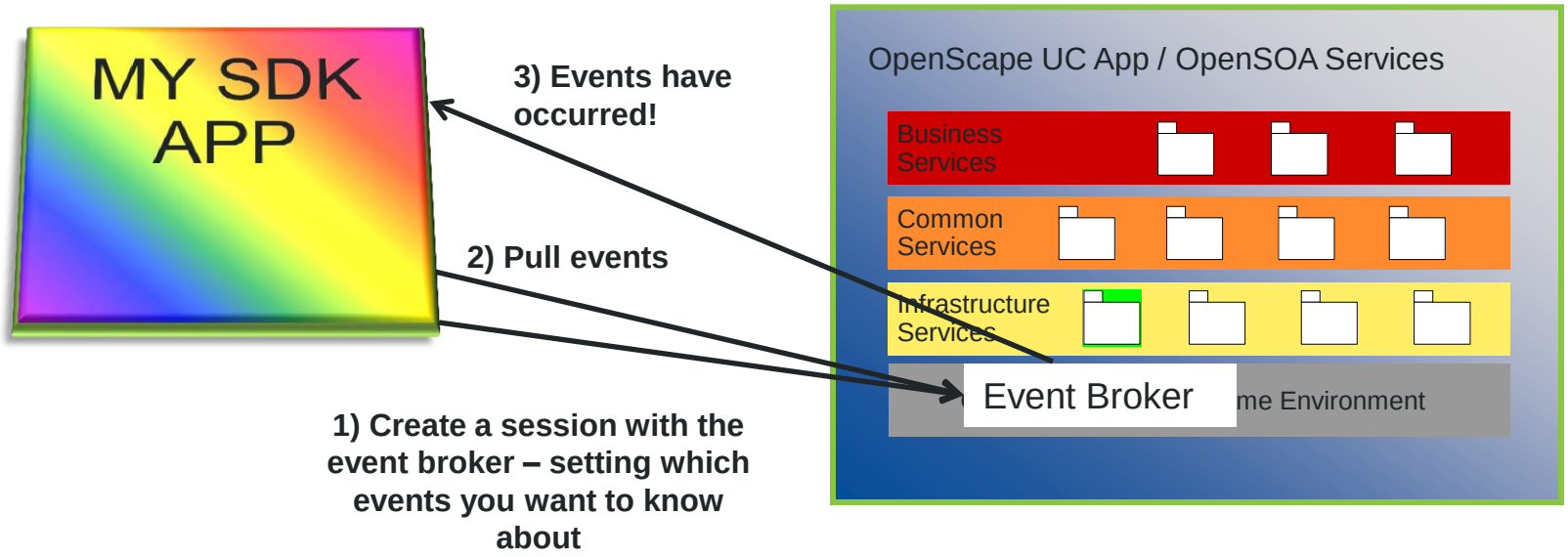
OpenScape UC Eventing: Overview



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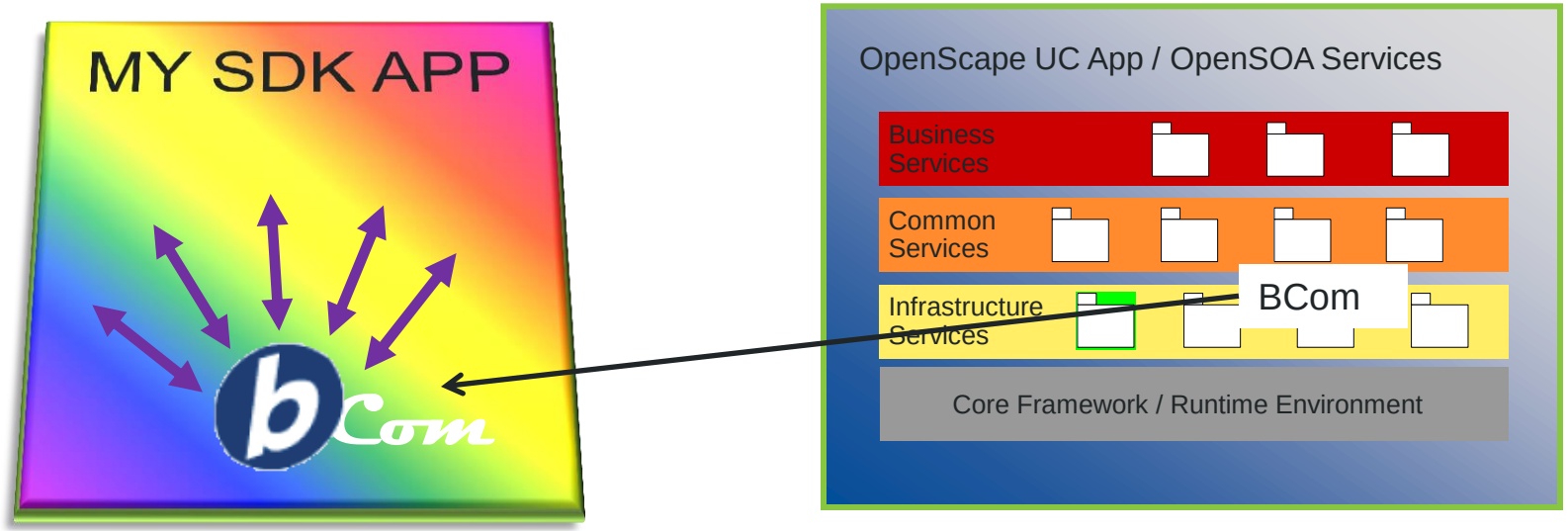
OpenScape UC BCom: Overview



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