

What's New in SAP Mobile Platform 3.0

The SAP logo is located in the bottom left corner of the image. It consists of the letters "SAP" in white, bold, sans-serif font, set against a blue square background. The background of the entire slide is a photograph of the New York City skyline at night, viewed from the Manhattan Bridge. The bridge's steel structure and suspension cables are visible in the foreground, and the city lights are reflected in the water below. Light trails from vehicles on the bridge add a sense of motion to the scene.

SAP

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Agenda

- SAP Mobile Platform overview
- SAP Mobile Platform Client Capabilities
- Developer Tooling
- SAP Mobile Platform Server Capabilities and Administration

SAP Mobile Platform Overview



SAP Mobile Platform “Best of Breed”



Business

**Mobile leader
for over 20
years**

Sybase
Unwired
Platform

Syclo
Agency

**Complex
Business
Applications**



**Utilities
Field Service
Contractors**



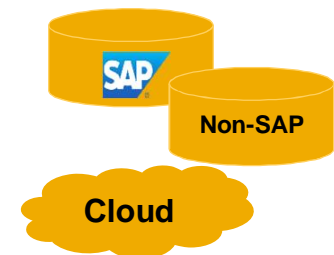
**Customer
Retail**

**Robust
Consumer
Applications**

Sybase
Mobiliser

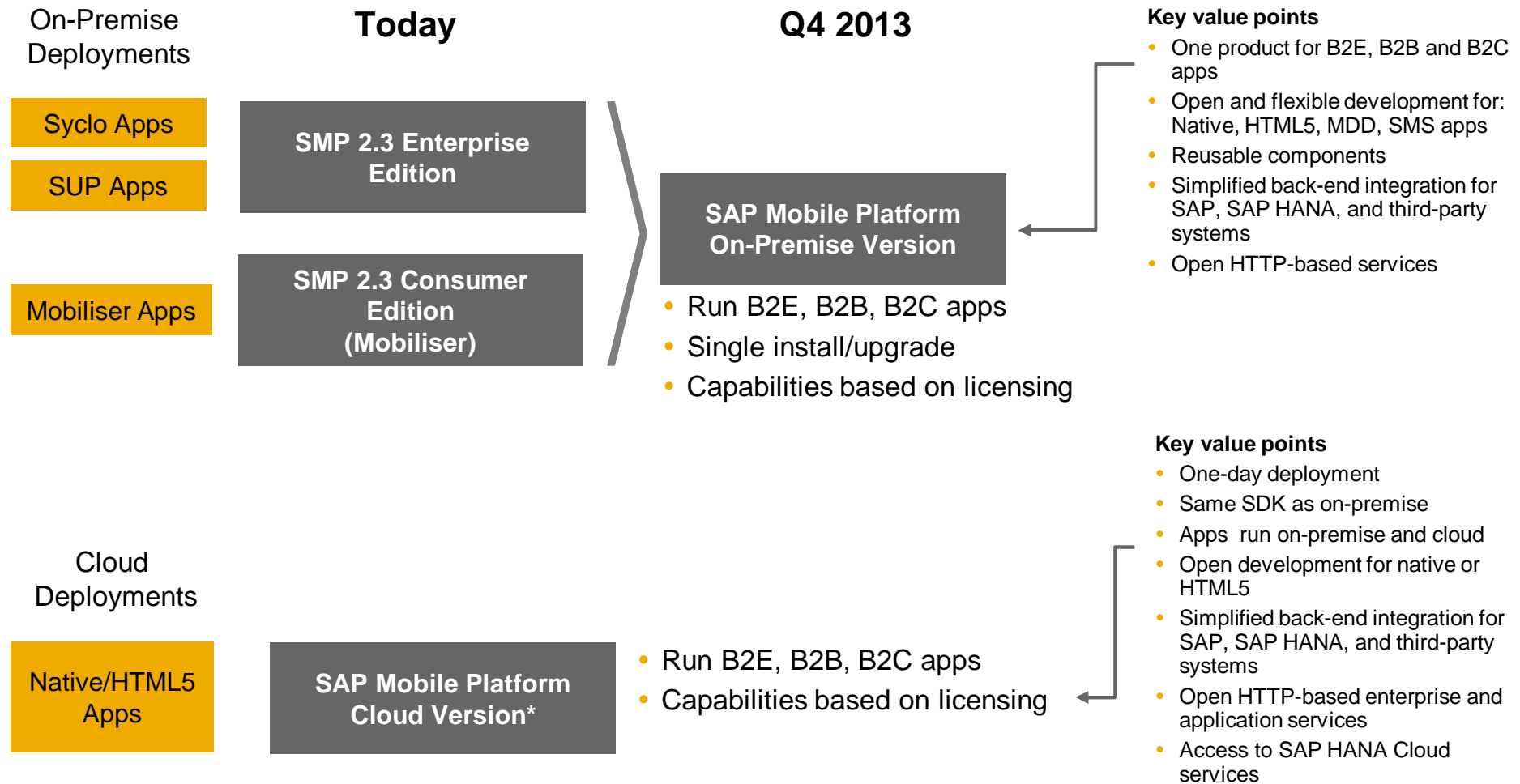
SAP
Integration
Gateway

**Access to
your data**



Convergence of Three Leaders: SAP, Sybase, Syclo
In addition added Integration Gateway

SAP Mobile Platform roadmap



*Only the online REST services from SUP 2.2 were moved into the SMP cloud

Value of SAP Mobile Platform to all mobile stakeholders



Developer

Total Cost of Development

- Pre-built components and services
 - App UI: Mobile App Framework
 - Functionality: App Services
- Stay out of the weeds:
 - Traceability
 - Security
- Effective coding
 - Familiar environment (BYOT)
 - Debugging and Tracing
 - Offline w/sync (OData and Agency)



Admin

Total Cost of Ownership

- Lights stay on:
 - ID and fix problems
 - Usage analytics, bug reporting, logging, traceability
 - Linear scalability
- Protect the Enterprise
 - Single Sign-On, Certificates, username/password authentication
 - Data encryption in motion and at rest
- Leverage existing infrastructure
 - Any back-end
 - new User Experience for older systems



User

Always On – Never Seen

- Easy as buying Angry Birds
 - Download app
 - Provisioned automatically
 - Login and use

SMP server services to build apps

Core Services

- E2E trace
- Onboarding
- Authentication/SSO
- Lifecycle management
- Usage reporting
- Performance metrics



Value Add to Administrator

App Services

- Coupons
- Payments
- Geo-location
- SMS services
- Push
- Sync/offline
- Customer and partner developed

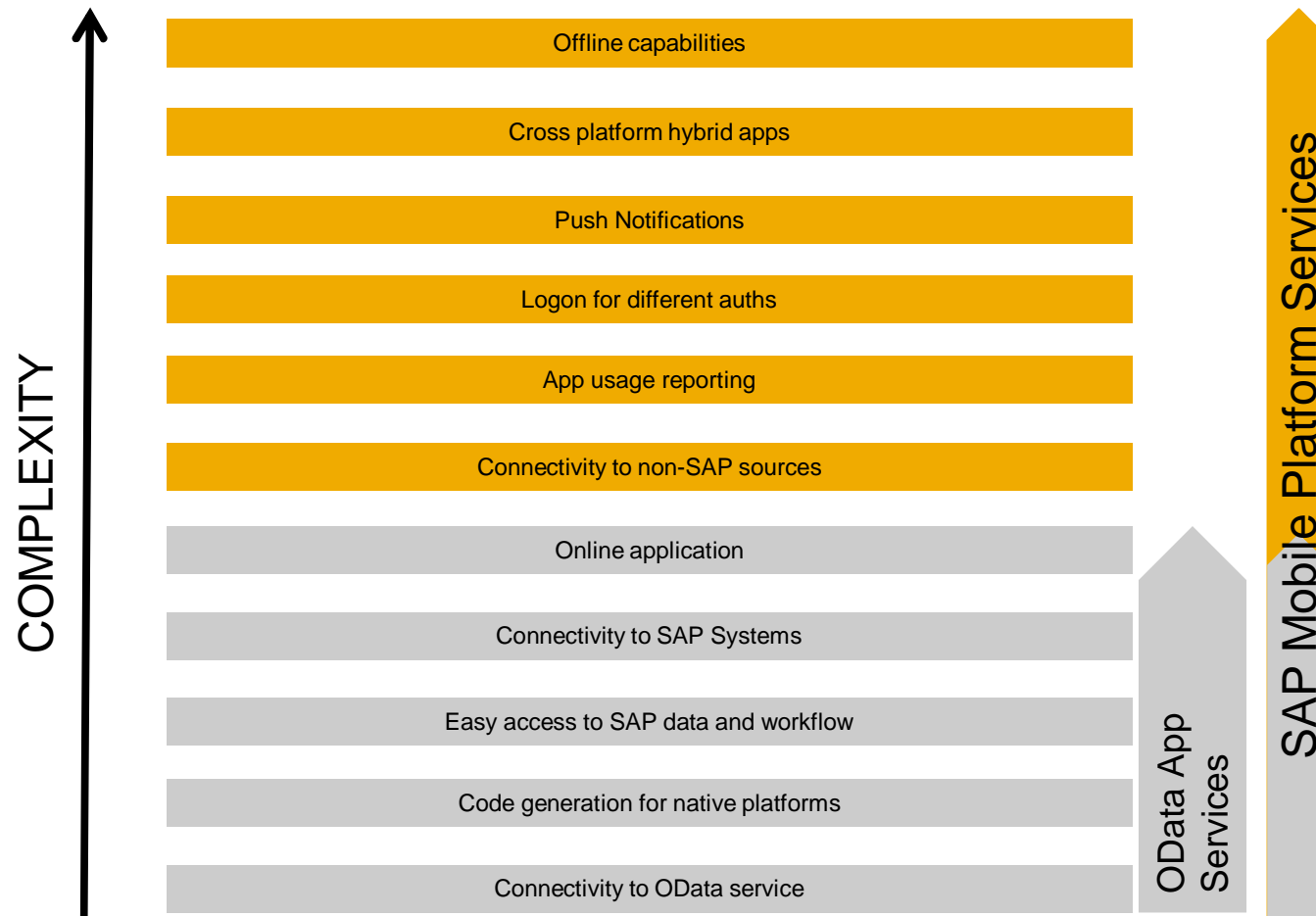


Value Add to Developer

Lean Java Server (LJS)*

*SAP's Tomcat

SMP3 – extending your application's capabilities



Scale the complexity of mobile apps with one architecture, many services

Open source, Open standards-based Mobile Platform

OSGi Spring

reuse dynamic updates,
versioning, and models to
simplify complexity

HTML5

use any web tooling
you want on SMP3

HTTP REST

standard protocol that
decouples the dependency
on SAP released SDKs

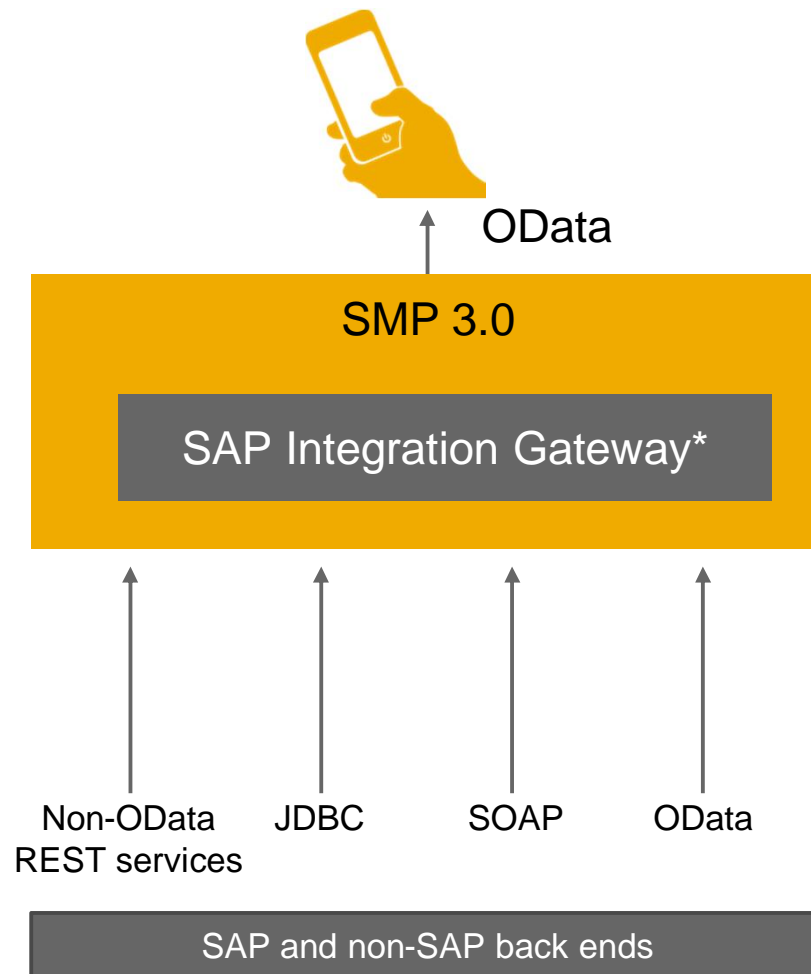
OData

standard model that
decouples backend and
frontend developers

Cordova

combine SAP's enterprise
plugins with any other
plugins from 3rd party

Integrating Different Backends

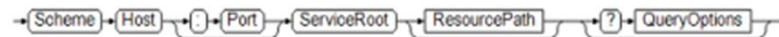


*Integration Gateway provides data integration capabilities and is deployed on the SMP 3.0 server.

Bridging the technology divide with OData

OData – Open Data Protocol

- HTTP-based data services
- Resources (data) identified using URIs
- Operations executed using HTTP verbs



`http://services.odata.org/OData/OData.svc` \ _____ /
| service root URI

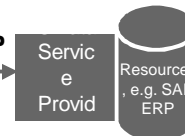
`http://services.odata.org/OData/OData.svc/Category(1)/Products?$top=2&$orderby=name`
| | |
service root URI resource path query options



Tristen from the newly formed Mobility Department. Just graduated from College.

OData specifies CRUD and Query over HTTP

Atom (XML) or JSON Results



OData Run-Time

OData is a bit like mini-ODBC or JDBC for the web

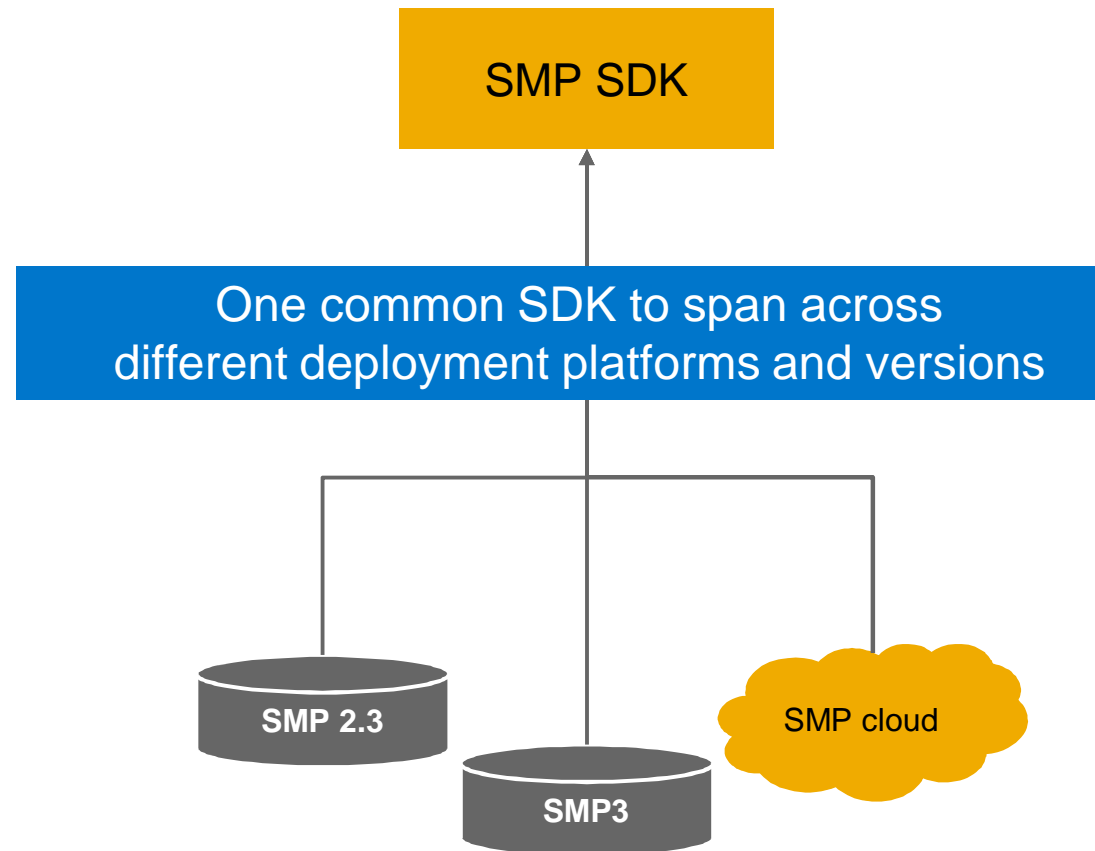


Bob from the SAP Department, been here for 20 years coding ABAP.



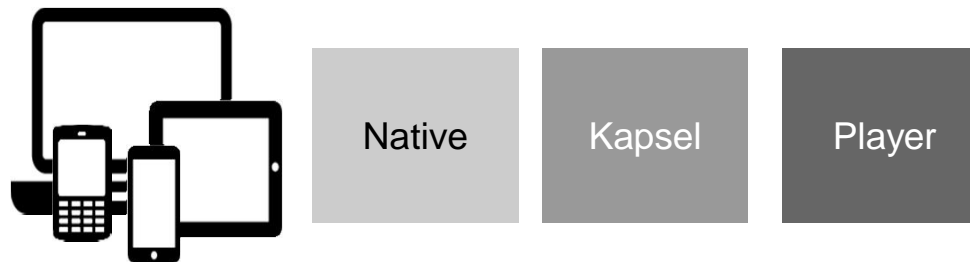
Platform Client Capabilities

One SDK – decoupled from server

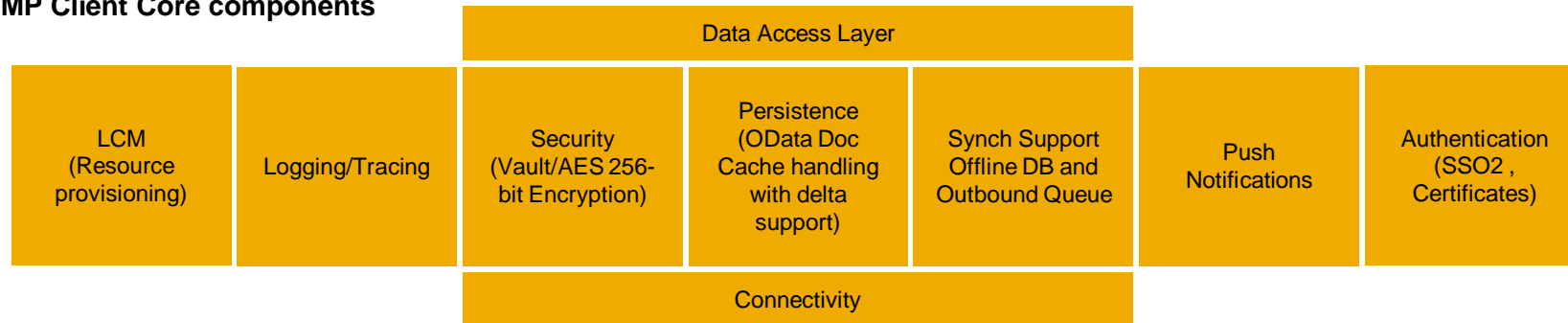


“Rapid Innovation without Disruption”

SAP Mobile Platform Client



SMP Client Core components



Support for all major operating systems*



SDK available

iOS 6.x

Android 4.x

REST API only

Win8

BlackBerry 10



*Mobiliser apps continue to support older versions and feature phones and Agency apps continue to be supported on ruggedized devices. Details will be published in the support matrix on service.sap.com/pam at product release

SAP Windows8 apps running on SMP

SAP Customer Financial Fact Sh...
★★★★★ Business
Free

SAP Interview Assistant
★★★★★ Business
Free

SAP Sales Pipeline Simulator
★★★★★ Business
Free

SAP W...
★★★★★ Business
Free

SAP G...
★★★★★ Business
Free

SAP M...
★★★★★ Business
Free

SAP L...
★★★★★ Business
Free

← SAP Interview Assistant

Overview Details Reviews

Evaluate Sabrina Garden

When you install an app, you agree to the Terms of Use and any additional terms.

Install

This app has permission to use:
Your home or work networks
Your Internet connection

Category: Business
Download size: 175 KB
Age rating: 12+
Publisher: SAP AG
© Copyright 2012 SAP AG. All rights reserved.

With the SAP Interview Assistant mobile app for Windows tablets, you can prepare for and conduct interviews anywhere and anytime. This app accesses the SAP ERP application and allows managers to review candidate information, prepare notes, record interview results, and send detailed feedback to candidates.

Features
Display your open requisitions
View the candidates' documents, display a summary of the candidate's profile, and take notes
Rate the candidate

Learn more
SAP Interview Assistant website
SAP Interview Assistant support

Additional terms
SAP AG privacy policy

Report app to Microsoft

Native OData SDK

Features

Integrated Logon Manager with Client Hub enables apps to share credentials with co-signed apps in same security group on the device

Platforms Supported: iOS 6.x+, Android 4.x+

Developer APIs

- Offline OData APIs for seamlessly caching data and merging delta update*
- Request API enhanced to support Batch processing
- OData Parser support for JSON format

Benefits

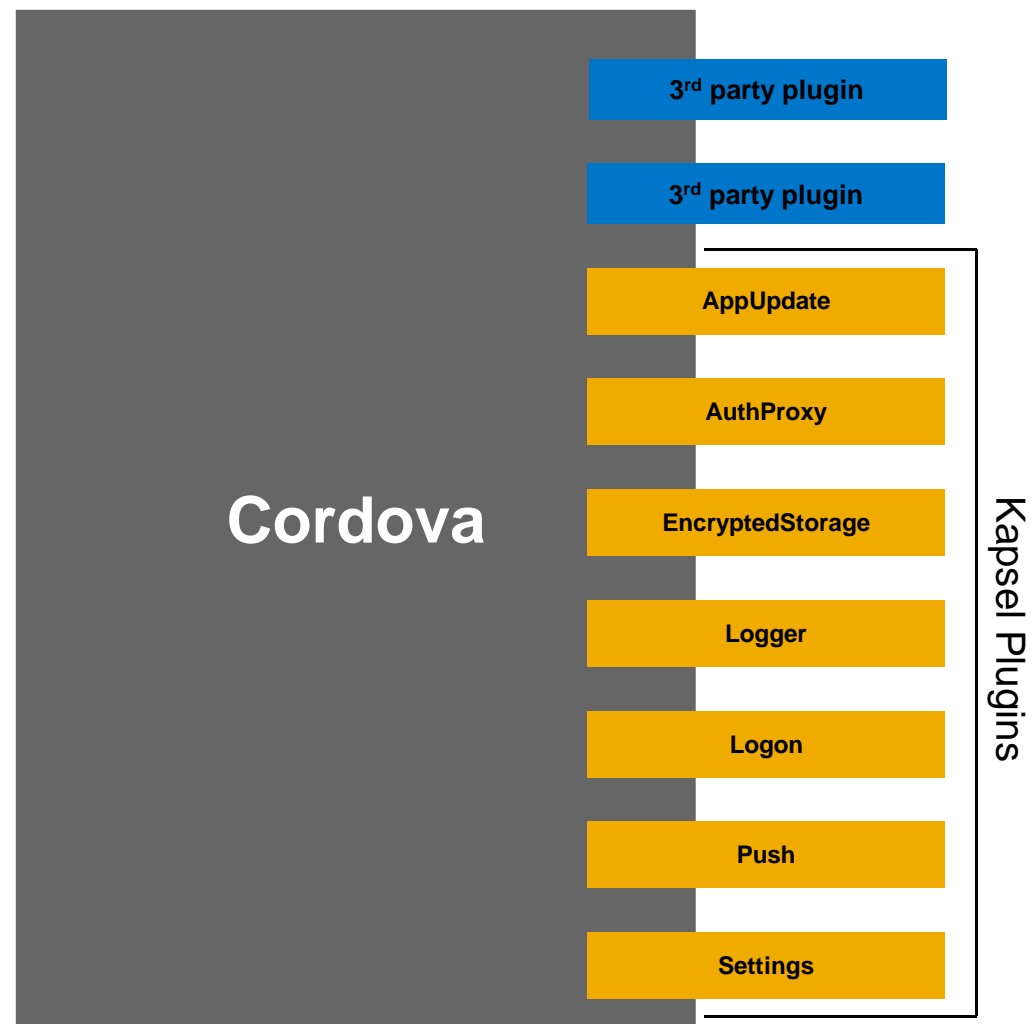
OData makes our gateway much more than just a proxy for other services

- Adds metadata model
- Data paging (a must for "real" apps)
- Data response reshaping
- Both missing from plain-old-REST

* Requires NW Gateway 7.3 SP07

Kapsel Architecture

Cordova Container with 7 SAP Plugins



“Kapsel” – Cordova HTML5 container with SAP plugins

Plugin	Description
AppUpdate	Used to provide server-based updates to the web application content running in the Kapsel application. Replicates some of the lifecycle management capabilities provided by the HWC. Kapsel applications can currently only contain a single web application.
HTTPSProxy	<p>This plugin is used to proxy HTTP and HTTPS requests on behalf of the application. The plugin will automate the process of accepting SSL certificates returned by a call to a web resource (without the user's involvement).</p> <p>HTTPS requests can be done with no authentication, basic authentication, or with certificates. Supported certificate sources are: from file, from system key manager, or from Afaria.</p>
Logging	Provides a Cordova plugin wrapper around the SMP logging API.
Logon	Implements a Cordova plugin wrapper around the Mobile Application Framework (MAF) Logon Manager component. Provides a skinnable UI for an application's login form plus manages the complete process of logging into the SMP server.
Push	Provides a Cordova wrapper around SMP server-based push notifications. The plugin allows an application to register for push notifications, process push notifications and update the local application UI to indicate that push notifications have been received.
Secure Storage	Implements an asynchronous interface for the W3C web storage API plus provides a mechanism for encrypting data written to storage.
Settings Exchange	Provides the ability for an application to trigger a Setting Exchange operation with server. This will allow an application to store device and user settings for later use.

SAP Mobile Platform



Platform SDK – Mobile Application Framework

Production Capabilities

UI components

- Primitives (textbox, labels, checkbox, tables, etc.)
- Advanced (logon & settings screens, tree views, etc.)

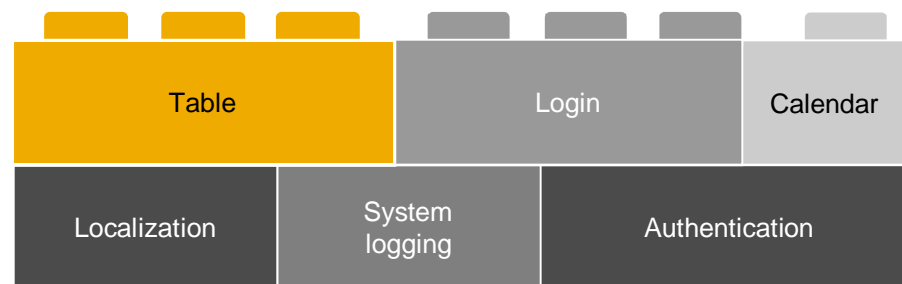
App infrastructure components

- System logger, logon manager
- Localization / globalization converters (e.g. address, phone #, currency, etc.)

Over 50+ components in MAF 1.1

Key Benefits

- Reusable, customizable and extensible building blocks to enable consistent user experience across a set of applications
- Structural extensibility and styling via configuration meta-data (no code changes)
- Uniformly change UI / UX and core functional capabilities across all MAF-enabled applications simultaneously
- Reduce cost of application upgrade, maintenance and change management



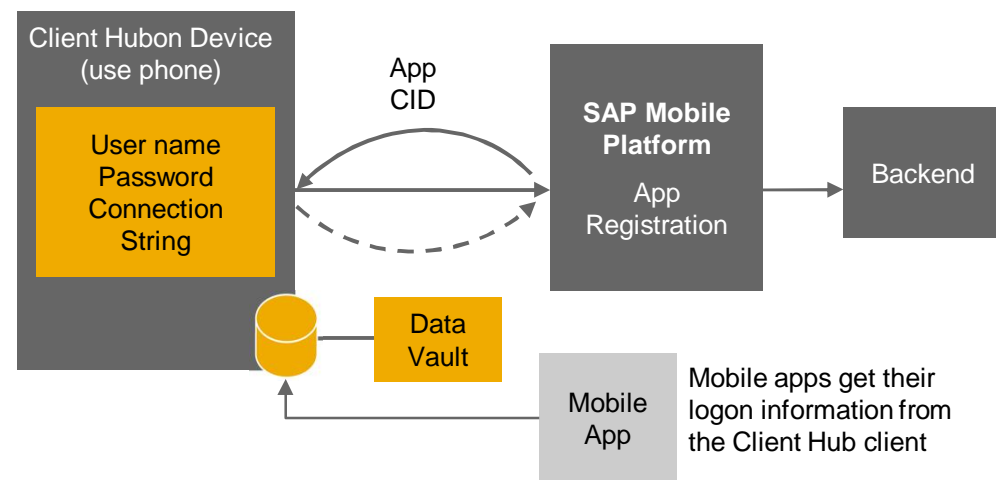
This is the current state of planning and may be changed by SAP at any time

User onboarding for SAP standard apps

Client Hub

**Platforms Supported: iOS 6.x+,
Android 4.x+**

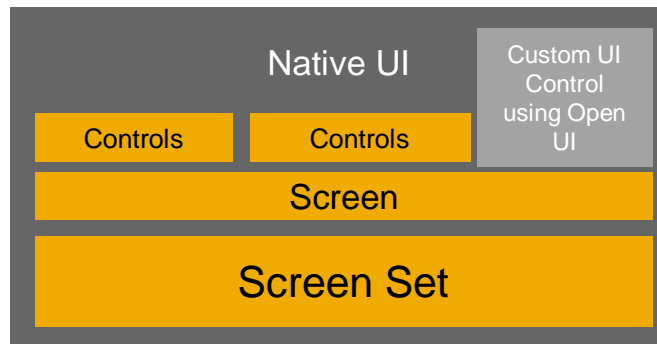
- Client Hub enables apps to securely share credentials on-device, simplifying end-user experience
- Client Hub integration in Logon Manager adds SSO features to apps with zero code change
- Logon Manager in Kapsel provides skinnable HTML5 UI set to match native UI's
- Logon Manager hides connection and configuration details



Agentry: Open UI framework

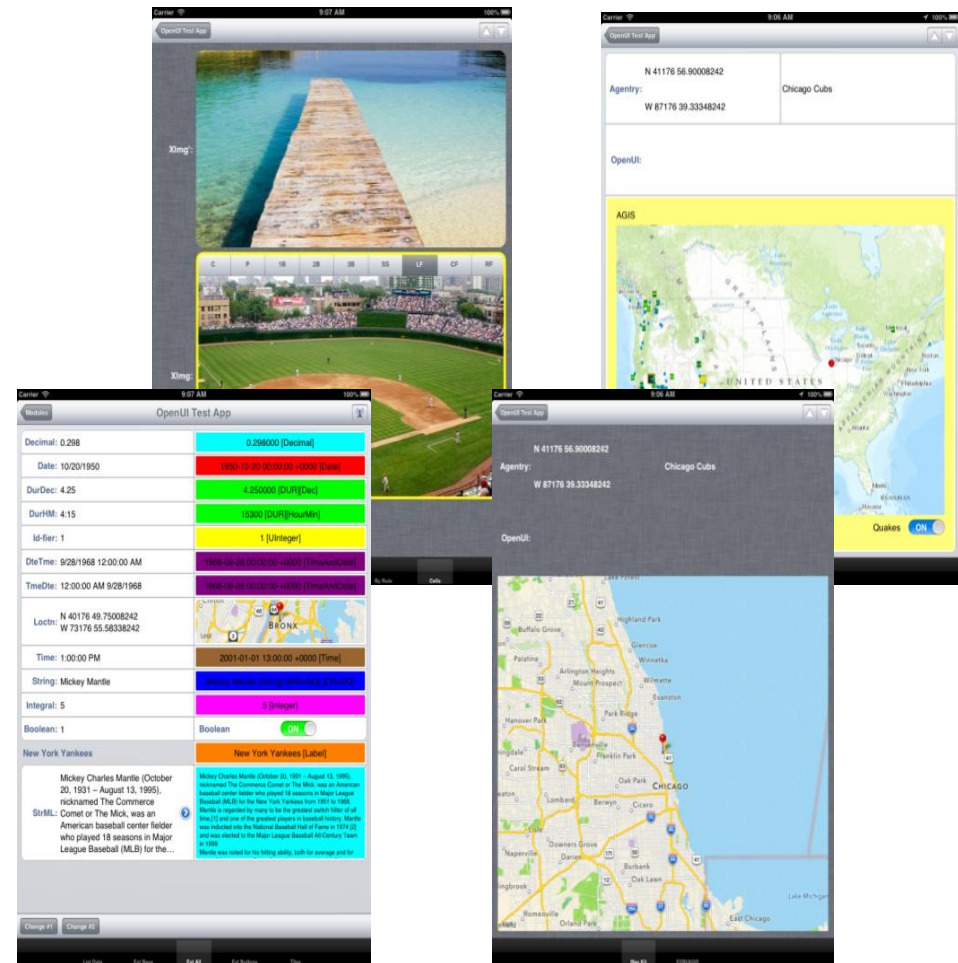
Open UI Framework allows developers to implement their own custom UI representation of an Agentry Screen

Agentry Client Extensions



Agentry Core

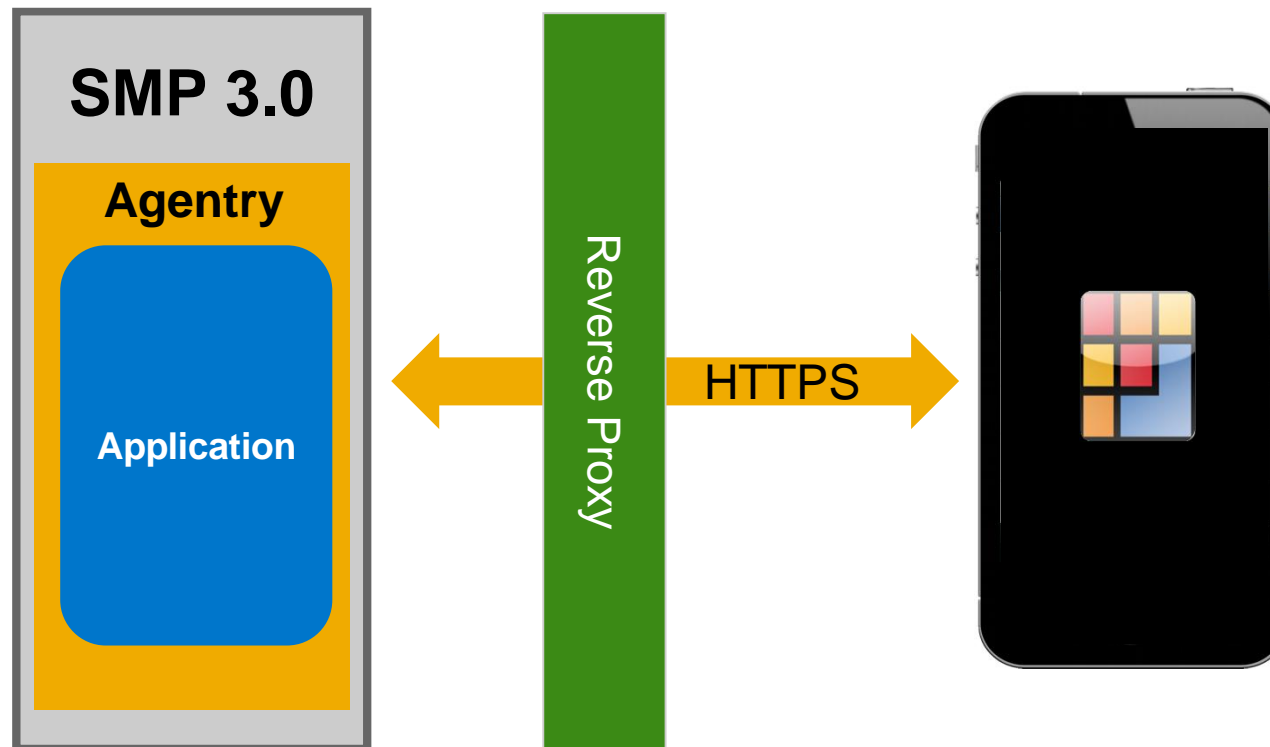
Device OS Interaction Layer



Agentry: Web Sockets

Agentry now communicates to the client via HTTPS/Web Sockets.

- Use Standard HTTP Ports, Reverse Proxy, etc.

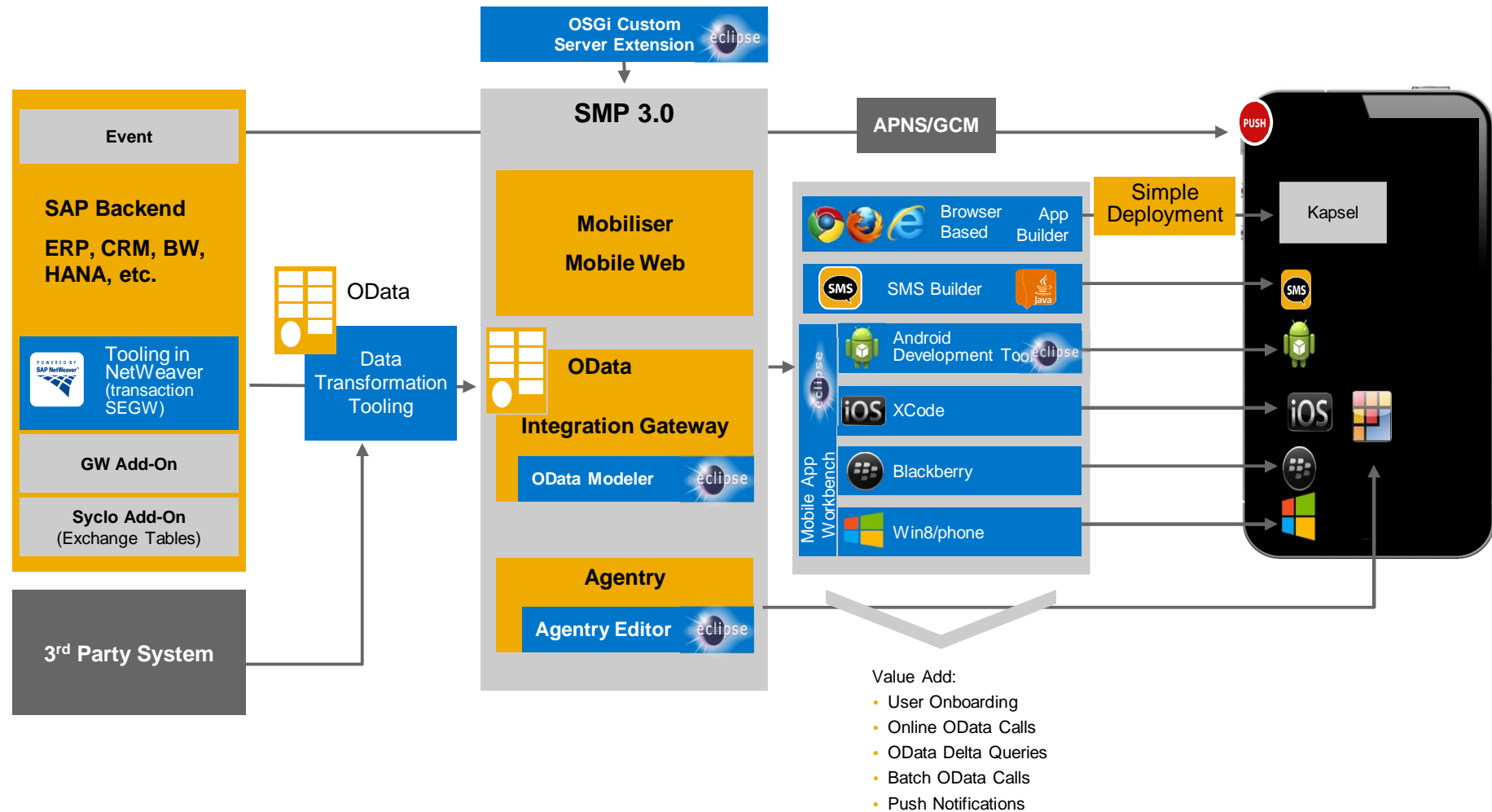




Developer Tooling



SAP Mobile Platform 3.0 Tooling



AppBuilder – designing your UI5 app

Drag and drop
designer

1 Click to deploy to
“Kapsel”

Click together
app in mins

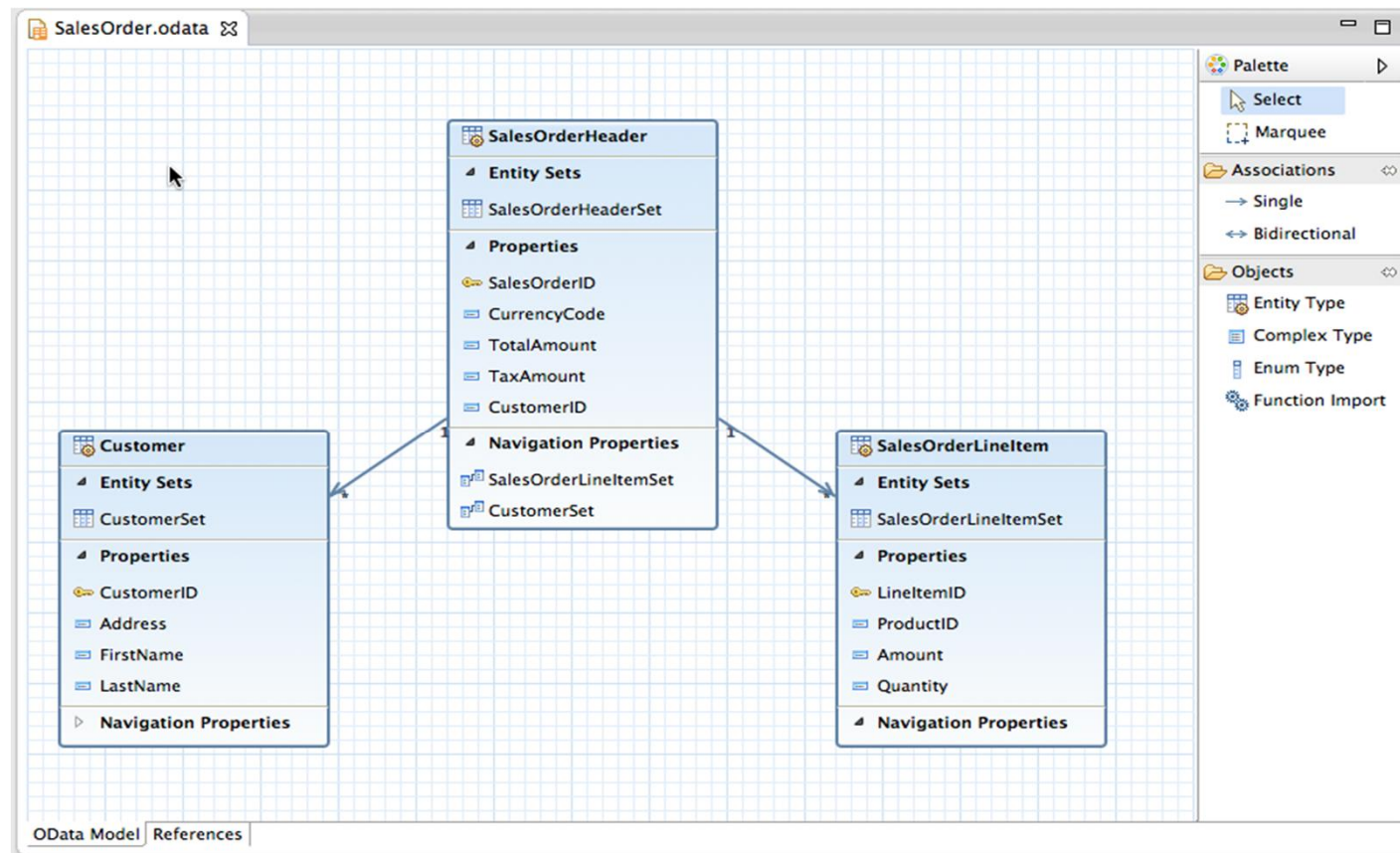
Predefined
application
templates

Leverages
UI5 control

The screenshot displays the SAP AppBuilder web interface in a browser window. The address bar shows the URL <http://www.SAPEPM.com>. The interface includes a top navigation bar with menus for FILE, DESIGNERS, EXECUTE, and SETTINGS. Below this is a sub-navigation bar with tabs for PROJECT, TOOLBOX, DESIGNER, and SOURCE. The main workspace is divided into three sections: a PALETTE on the left containing various UI5 controls like Button, Checkbox, Image, Input, Label, RadioButton, SegmentedButton, Slider, Switch, and Text; a central area showing a mobile phone mockup with the text "Mock up"; and a right-hand panel with tabs for OUTLINE, PROPERTIES, and EVENTS. The PROPERTIES tab is active, showing a tree view of the app's structure and a list of properties for the selected control, including CONTROL, TYPE, GENERAL, APPEARANCE, BEHAVIOIR, and MISC. A blue banner at the bottom of the interface reads "Open HTML5 Tool that Interoperates with Popular Web Design Tools".

Open HTML5 Tool that Interoperates with Popular Web Design Tools

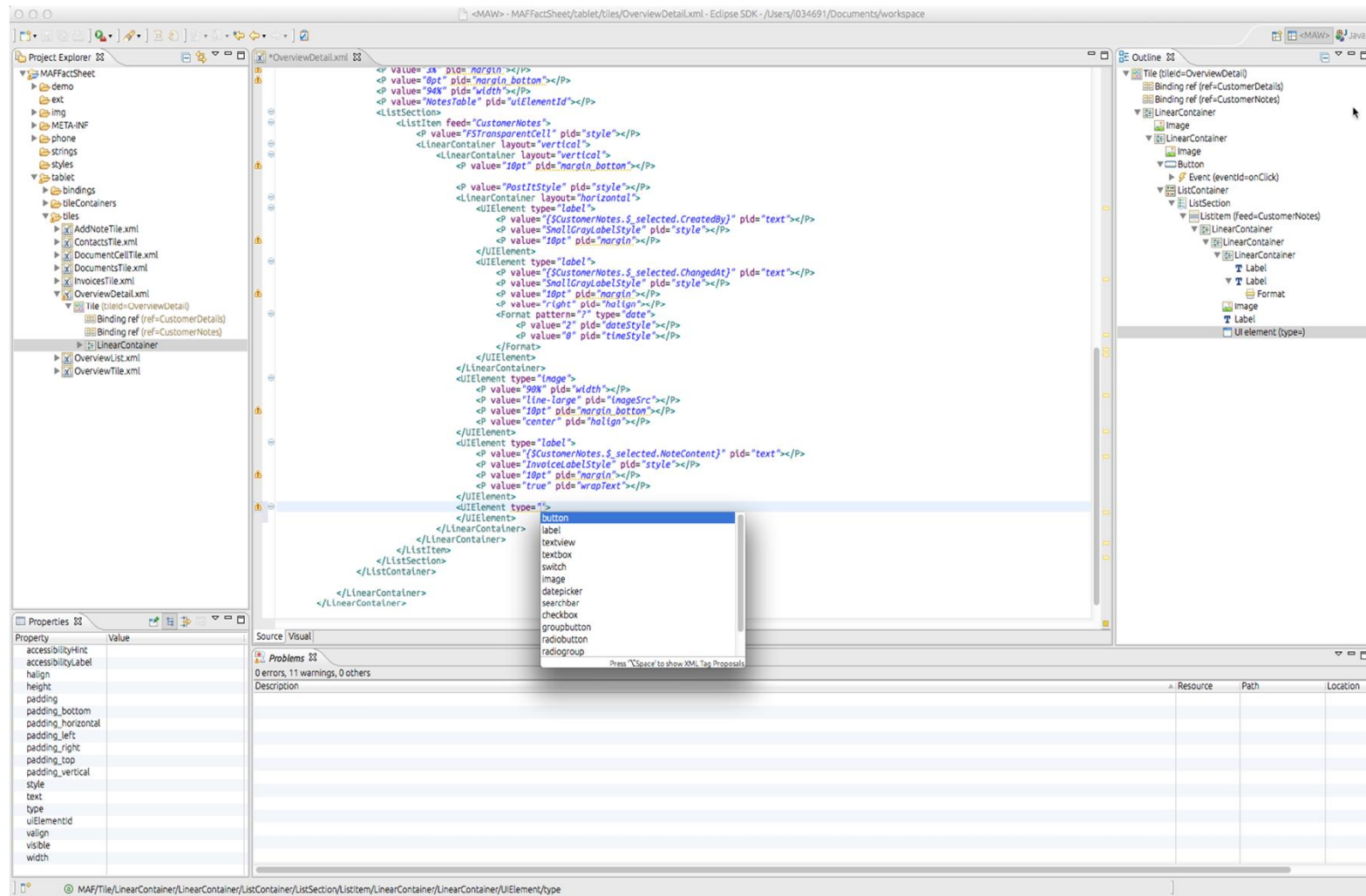
OData Modeler – building your data model



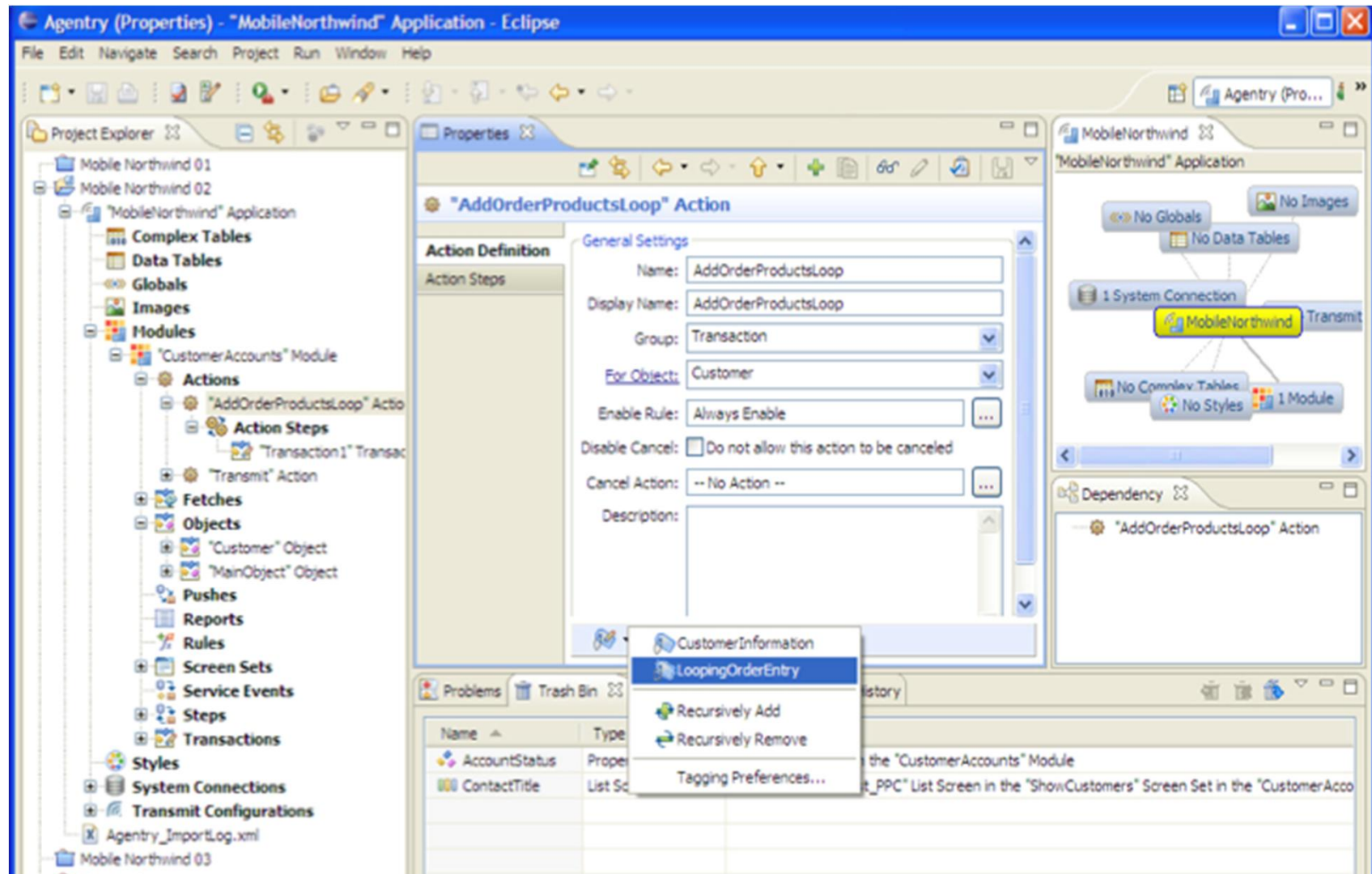
Available with Gateway Productivity Accelerator (GWPA)

- Update site: <https://tools.hana.ondemand.com/#gateway>

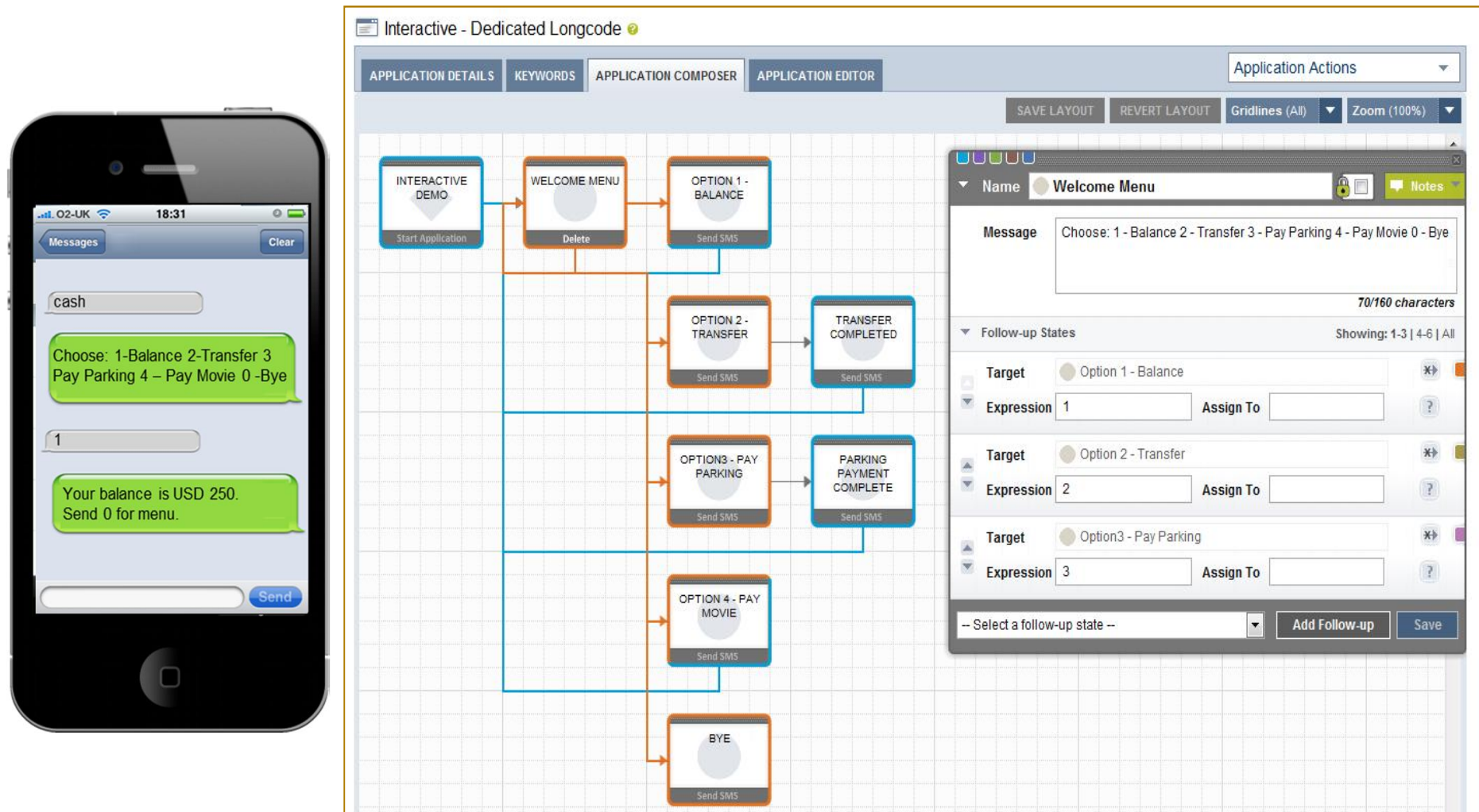
Mobile Application Workbench – customizing standard apps



Agency Eclipse Tooling – Customize Your Syclo Apps

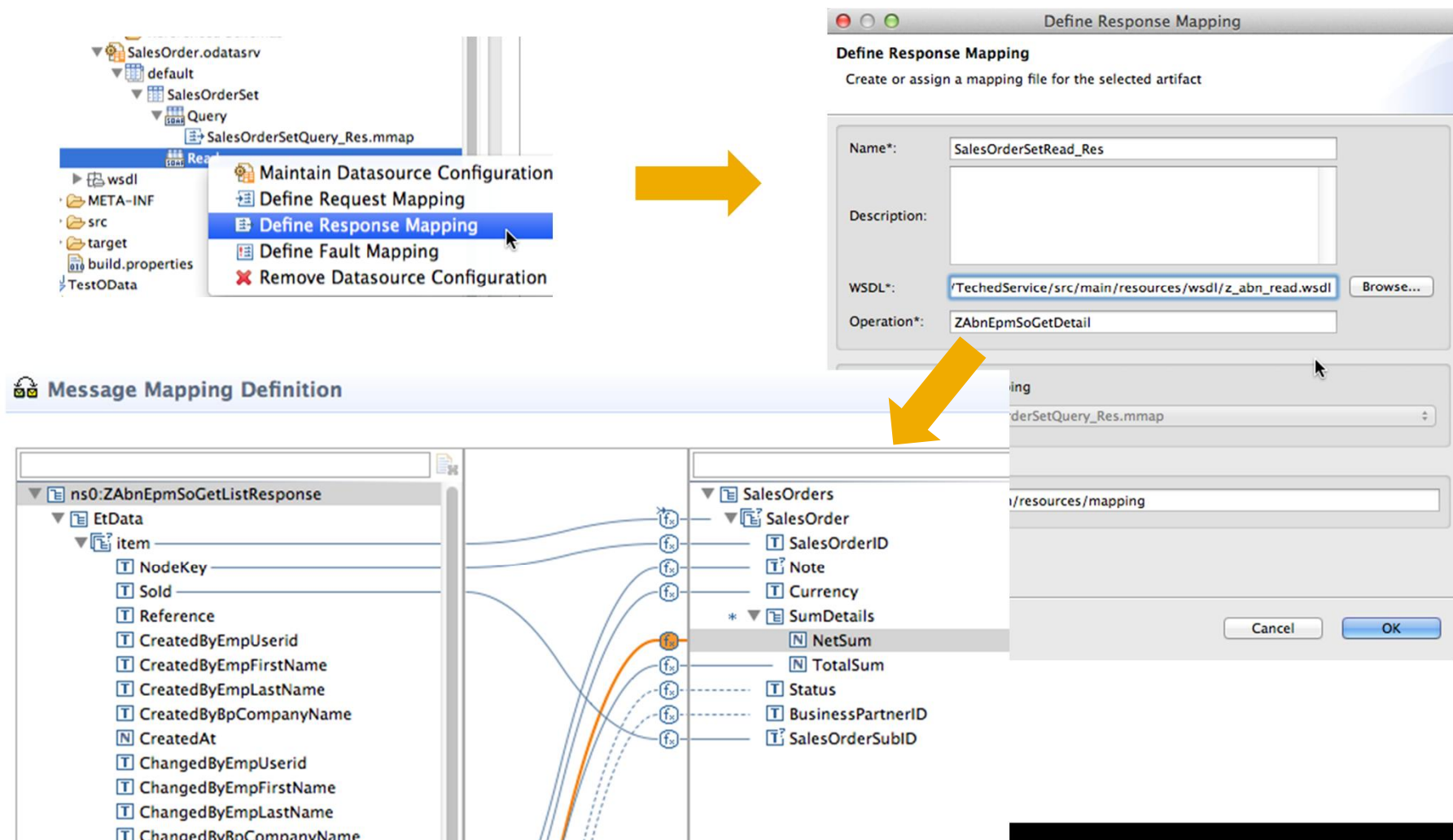


SMS builder – building SMS based apps



Integration Gateway – Map Backend Interfaces to OData

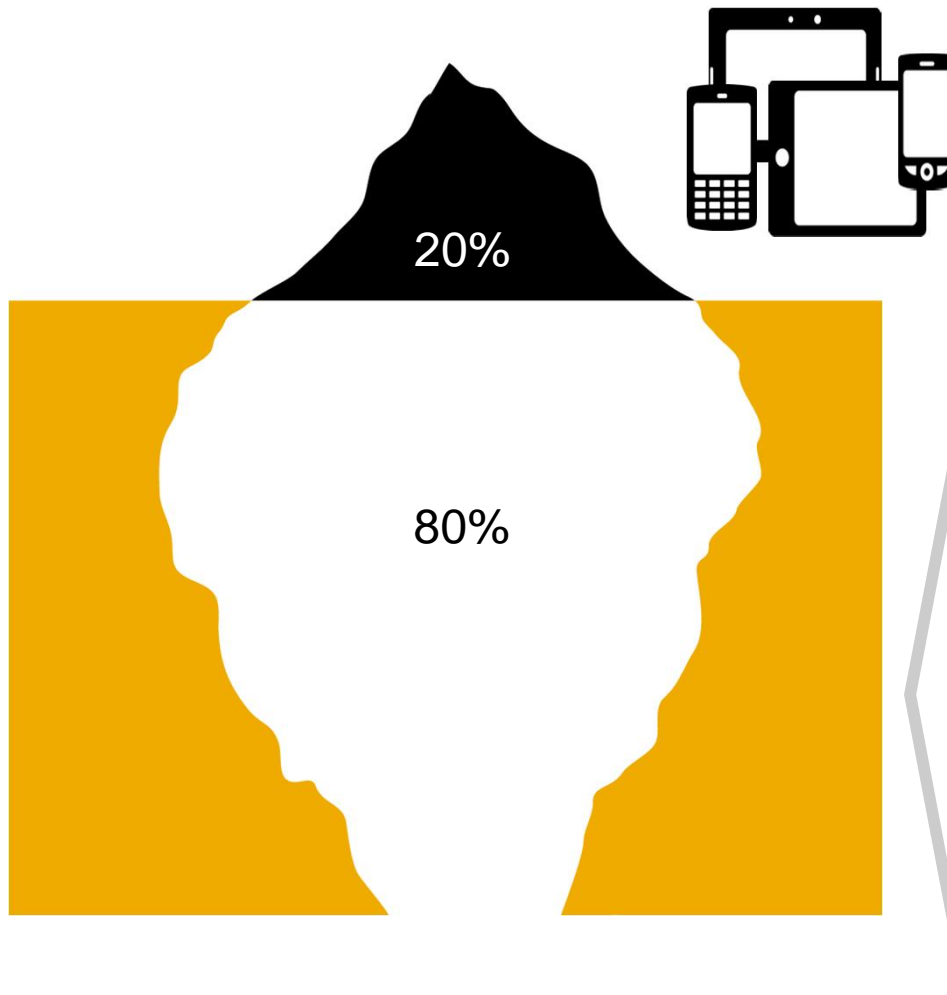
Eclipse Based Tooling Included in Gateway Productivity Accelerator (GWPA)



Platform Server Capabilities and Administration



Mobile application management

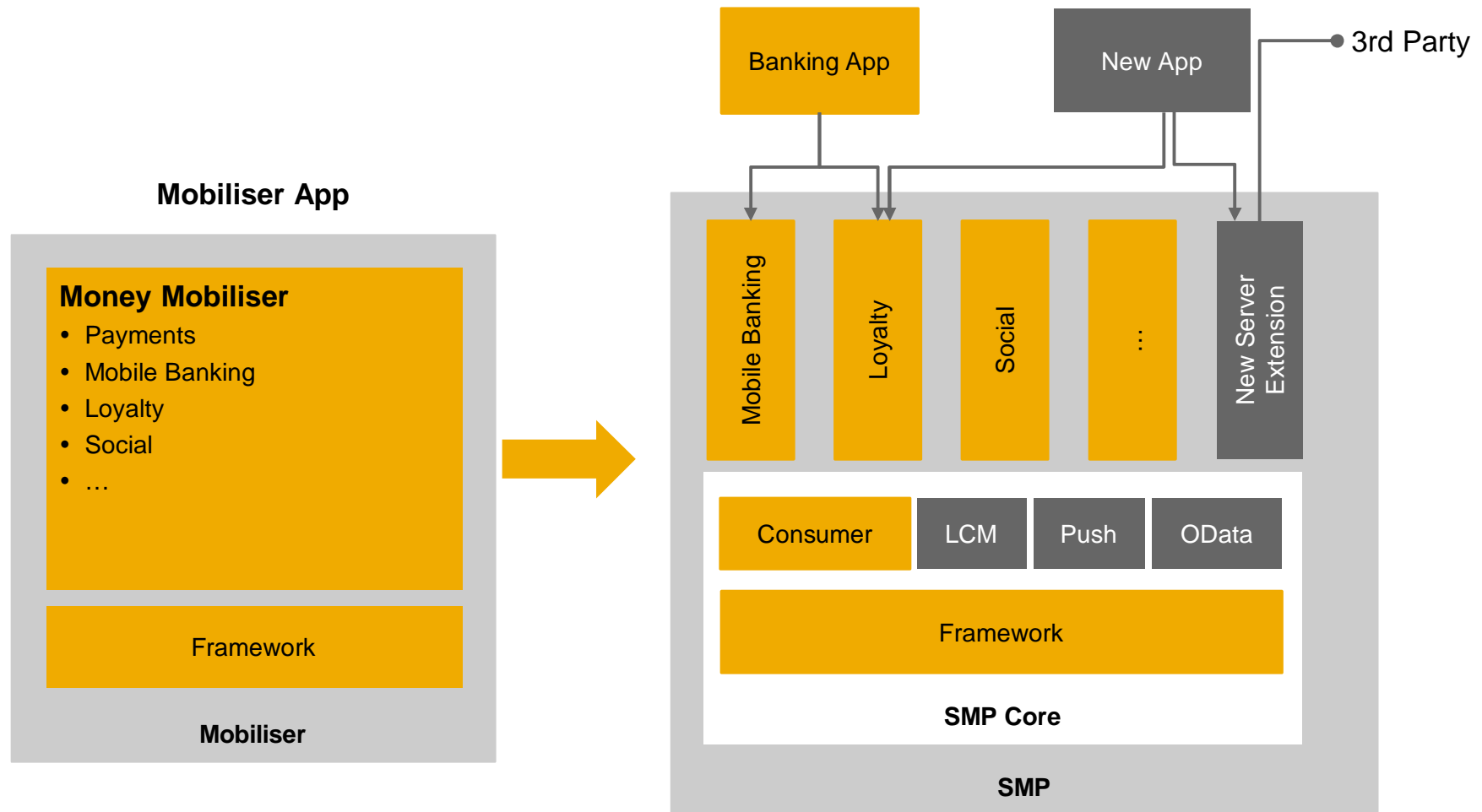


- Business and Consumer Apps
- Devices Platforms (iOS, Android, Windows and Windows Phone, BlackBerry, others ...)
- Native/HTML5/UI Frameworks

SAP Mobile Platform value-add

- Authentication
- Business application integration
- Security – devices, data, content
- Offline access and synchronization
- Administration
- Application versioning and lifecycle management
- Push notifications
- Proxy
- Reporting and analytics
- Multi-platform support

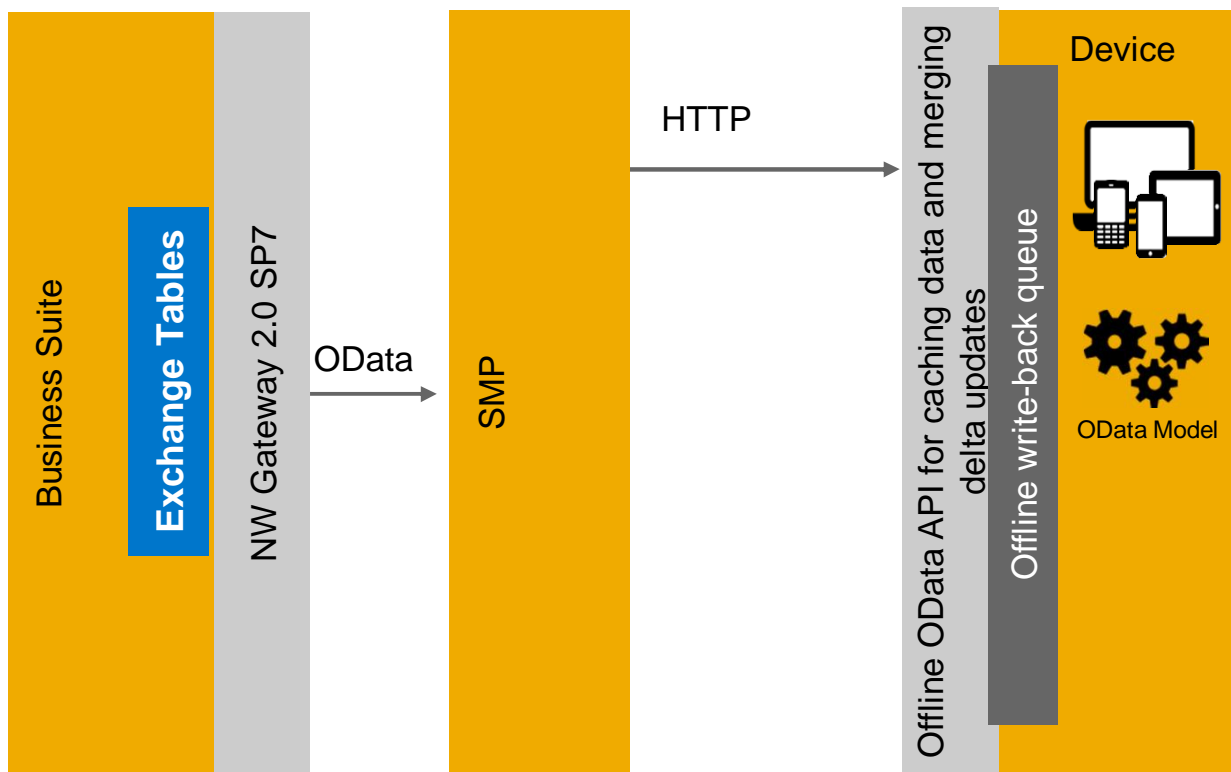
SAP Mobile Platform Business-2-Consumer Module



SAP Mobile Platform Business-2-Consumer Module

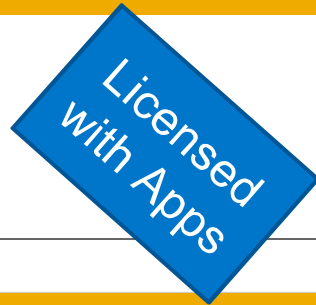
Core Consumer Model	Core Consumer Services	<u>Optional</u> Application Services Related to Customers
<ul style="list-style-type: none">• Customer ID, name, type• Addresses• Identifications (username, email)• Identities (passport id, driver license)• Free-text attributes• Binary attachments• Entitlements	<ul style="list-style-type: none">• Registration/self-care• Account lifecycle management• Login/Session management• Temporary password/password reset• Security based on privileges/roles• Social integration• Notifications	<ul style="list-style-type: none">• Payments• Banking• LBS• Alerts• Coupons
		Third parties can provide additional Application Services

Offline OData



- No state in middle tier
- Request/response based
- OData is the programming model
- OData delta query supported
- Client libraries provide a secure document cache

SAP Business Suite delta exchange tables



ERP System

- Class Characteristics Assignment
- Cost Center / Activity Type
- Customer Master
- Equipment Master
- Exchange Object Description
- Fleet
- Functional Location
- Maintenance notification
- Material Batch
- Material Documents
- Material Master
- Material Serial number
- Material Stock
- Material Unit of Measure
- Measurement Document
- Measurement Reading Entry Lists
- Measuring Point
- Notification
- Object Characteristic Values
- Physical Inventory Document
- PM Work order
- Production Orders
- Purchase Orders
- Reservations
- Sales Order
- Sales Quote
- Service Order
- Service Order Object List
- Service Order Operation
- SSLM 2.5 - SALES QUOTE EXCHANGE TABLE
- Vendor master
- Work Center
- Work order Object list
- Workflow Task

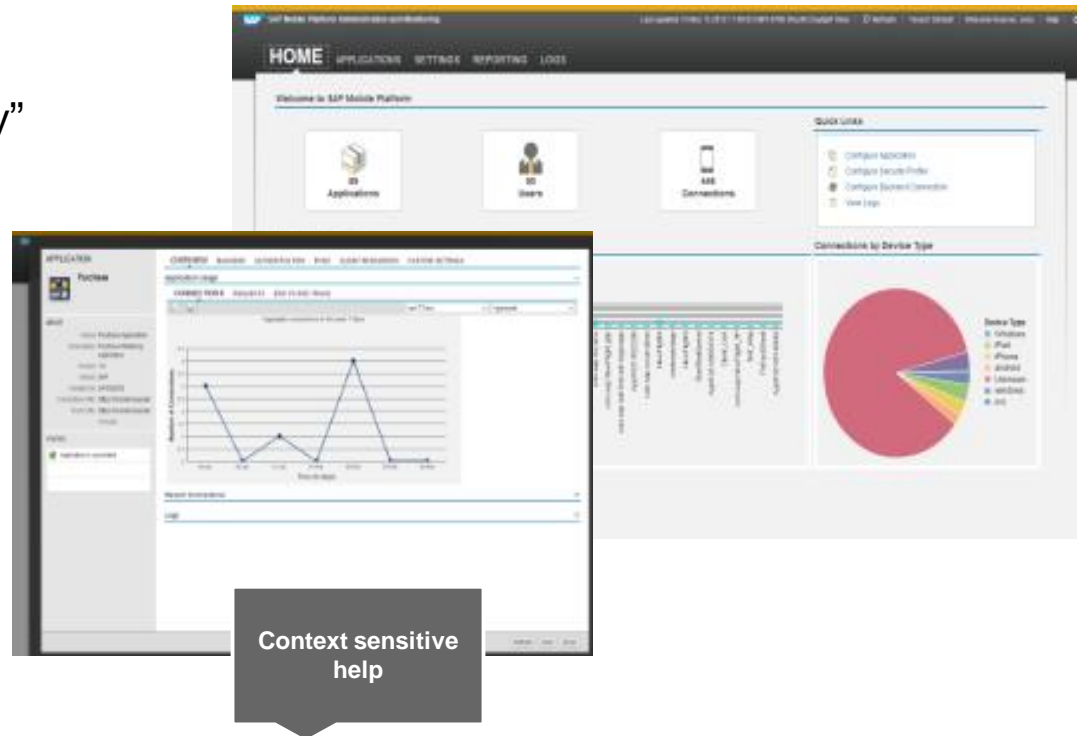
CRM System

- CRM Account
- CRM Activity
- CRM Contact
- CRM Employee
- CRM Lead
- CRM Marketing Attribute
- CRM Marketing Attribute Sets
- CRM Marketing Attribute Value
- CRM Opportunity
- CRM Sales Order
- CRM Sales Quotation
- CRM Service Confirmation
- CRM Service Order
- CRM Survey Template Definition
- CRM Task
- LRP Assignment
- Product Master

Manage apps: Simplified Admin UI



- HTML5 based
- Radically simplified - "Apple-Easy"
- Combining Agentry and SUP
- Application centric UX design
- Context sensitive help



Authentication Type

Authentication Type **Basic Authentication**

Authentication URL * <http://ldcigiq.wdf.sap.corp:50015/sap/opu/odata/IWBE> ?

Connect to ☒ OnPremise ☐ Internet

HTTP(S) URL that authenticates the user during onboarding or request-response

PUSH notification



Configure push notifications for:

- iOS
- Android
- BlackBerry
- Windows 8, Windows Phone

Apple

APNS endpoint ☐ None
☒ Sandbox
☐ Production

Certificate * <new_APNS_server_certificate.p12 Browse...

Password *

Android

Application key

Sender ID

Blackberry

Push type ☒ None
☐ BES
☐ BIS

Windows

Push type ☐ None
☒ WNS

Package SID * ms-app://s-1-15-2-1980746895-164471161-213935495;

Client Secret * g3u2v9xlUyT1gXWZ1WPFJk27Cp/am

Authentication and SSO



Authentication and Single Sign On

- Configure end-to-end authentication from the client to the backend without a VPN

- Supported Authentication

- Anonymous
- Basic Auth
- Siteminder
- SSO Token
- X.509 Mutual Auth
- X.509 Mutual Auth through intermediary

Client Settings > Network Edge Settings > Identity Provider Settings > Backend Identity Mapping

APPLICATION

MyODataApp

ABOUT

Name: MY OData APP
Description:
Version: 1.0
Type: OData
Vendor:
Created on: 19/6/2013
Endpoint: http://localhost:8080/
Push URL: http://localhost:8080/In
[Change](#)

STATUS

Endpoint is empty or invalid

BACKEND AUTHENTICATION PUSH CLIENT RESOURCES CUSTOM SETTINGS

NEW PROFILE EXISTING PROFILE

Name: My Security Configuration 1
My Security Configuration 1
My Security Configuration 2

CONFIGURATION PROPERTIES

* Name: My Security Configuration 1 [Help](#)
Description: Description of security configurationMy Security Configuration 1 gc

COMMON

* String1: This is the first string
* String2: This is the second string
☒ Boolean1
Integer1: 0 40 80 120 160 200
* Integer2:
* Choice1: BBBB
* Password1:
* URL1: http://www.google.com
* CronJob1: 10 * * * *

AUTHORIZATION PROVIDERS

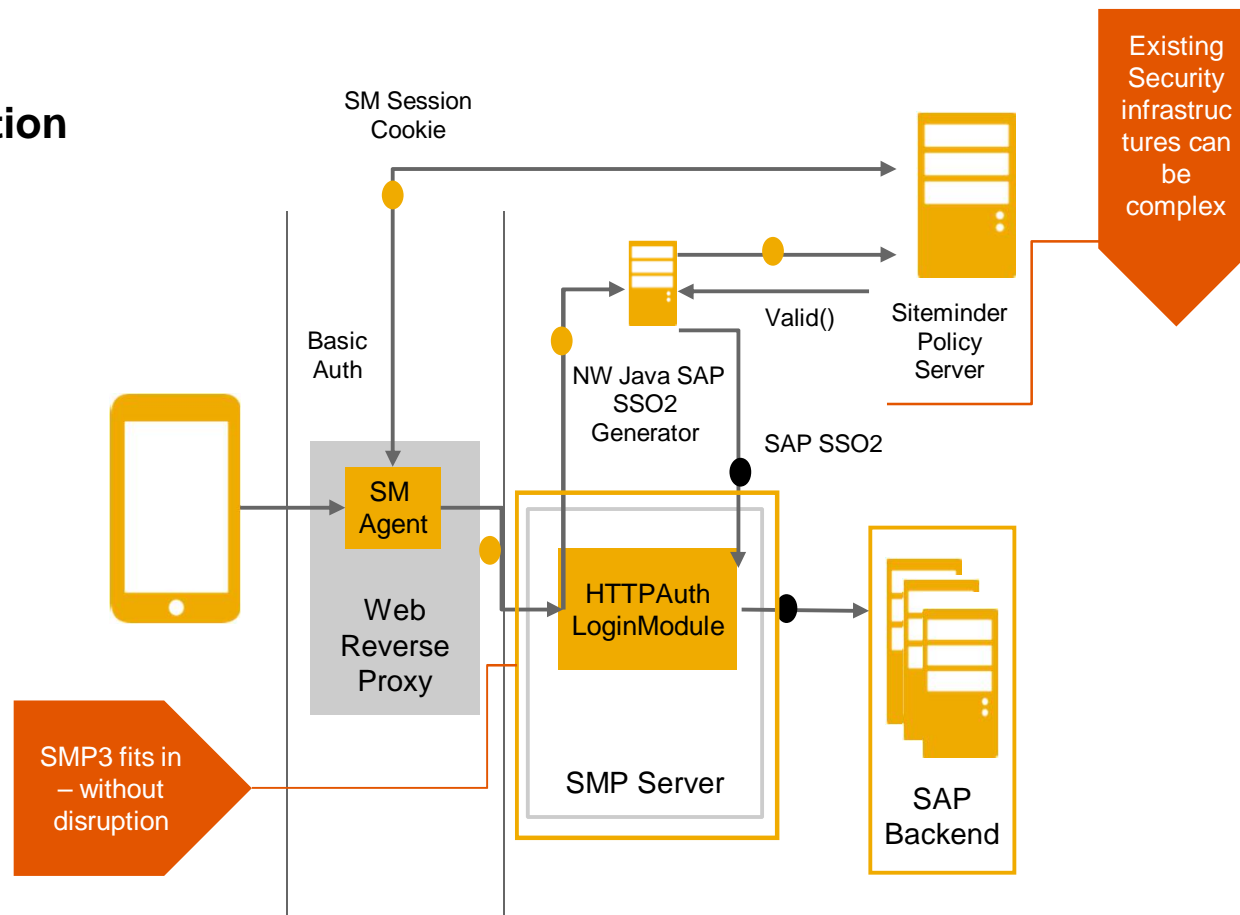
Type	Description
com.sybase.csi.login.module.LdapProvider	com.sybase.csi.login.module.LdapProvider
com.sybase.csi.login.module.SiteMinderProvider	com.sybase.csi.login.module.SiteMinderProv...

Integrating with your security policies



Supported authentication mechanisms

- CA Siteminder
- SSO
- Basic Auth
- Certificates



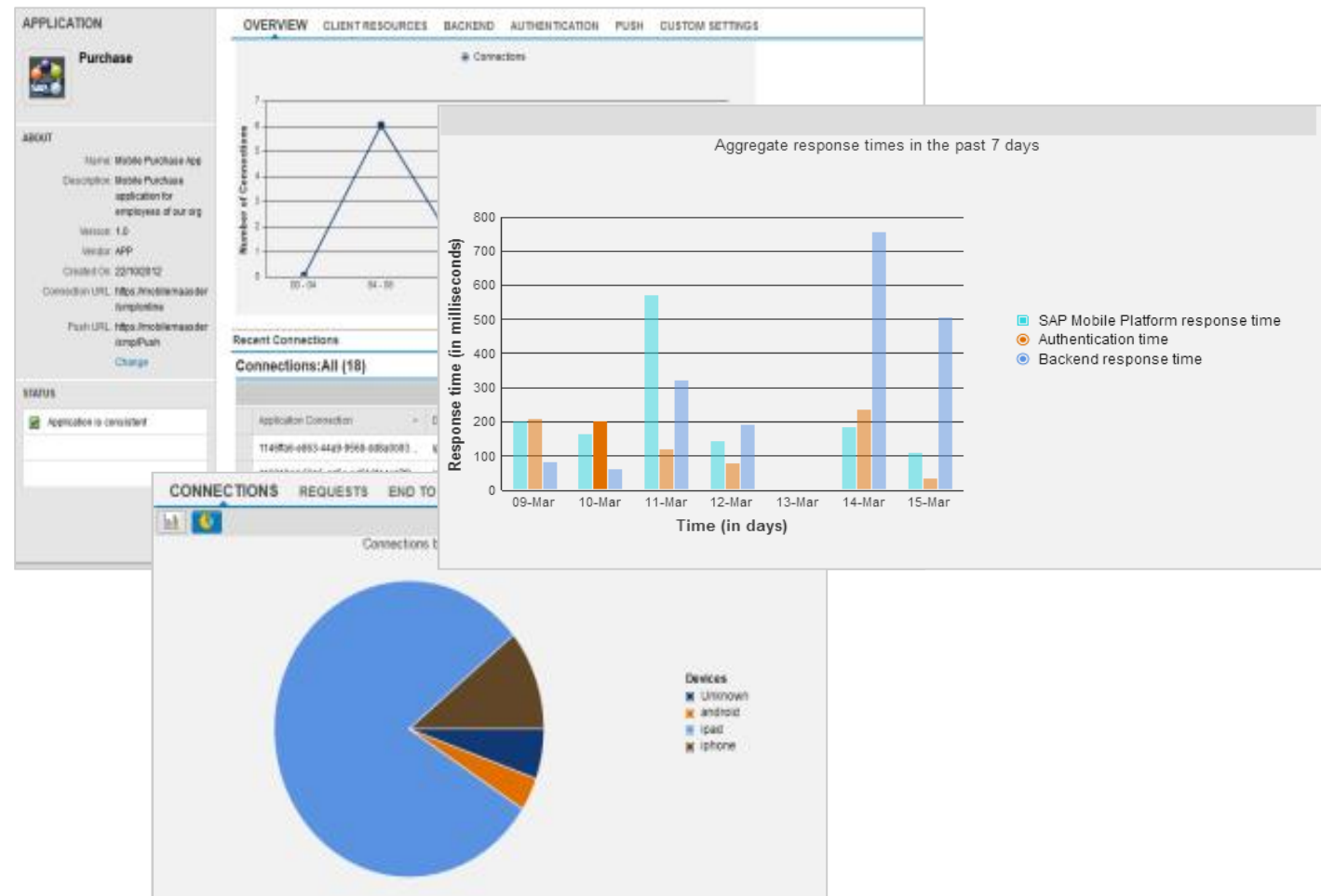
SAP Mobile Platform uses standard HTTPS protocol to integrate into your existing security landscape!

App analytics



Usage reporting by:

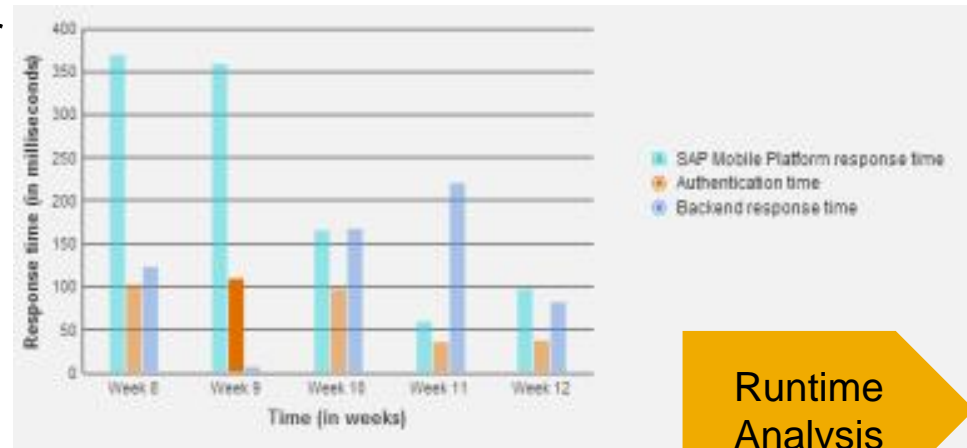
- User
- Device type
- Application
- Vendor
- Version
- Timeframe



Trace and runtime analysis



- Graphical display of runtimes - per app or across all apps
- Detailed Logging and Tracing



Runtime Analysis

Index	App ID	User Name	Device Type	Request ID	Response ID	Log Type	Log Text	Log Date
1	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
2	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
3	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
4	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
5	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
6	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
7	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
8	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
9	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15
10	com.sap.mobile.platform	user@bluewin.ch	iPhone	112013-03-15	112013-03-15	Error	com.sap.mobile.platform	2013-03-15

Error Logs

Trace Logs Details

```

2013-03-15 00:01:38.275#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Retrieve appHandler=[proxy], application=[StanRealSpend] and backendURL=
/SpendingDataByHierarchyNodesAndPeriod?
IsAggregated=true&StartPeriod=%27001%27&NumberOfLevels=5&EndPeriod=%27012%27&HierarchyNodeID=%27%27&FiscalYear=%272012%27&ByHierarchyNodeID=%27CEGSPEND%
2013-03-15 00:01:38.275#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "host"=[smpmaasdemo.netweaver.ondemand.com:443]
2013-03-15 00:01:38.275#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "x-sup-appid"=[jabe94287-40c3-4532-a91a-07087ad589f9]
2013-03-15 00:01:38.275#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request header Authorization passed
2013-03-15 00:01:38.275#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "accept-encoding"=[gzip]
2013-03-15 00:01:38.275#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "proxy-connection"=[keep-alive]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "accept-language"=[en]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "x-sup-domain"=[SWAT]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "dataserviceversion"=[2.0]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "connection"=[keep-alive]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "user-agent"=[SAP RealSpend 2.1.0 (iPad Simulator; iPhone OS 6.1; en_US)]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.DispatcherServlet#null#Request Header "x-forwarded-for"=[192.138.150.9]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.ApplicationCIDProcessor#null#Process application connection id.
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.ApplicationCIDProcessor#null#Request Header "X-SUP-APPID"=[jabe94287-40c3-4532-a91a-07087ad589f9]
2013-03-15 00:01:38.276#DEBUG#com.sybase.sup.server.http.ApplicationCIDProcessor#null#Add Cookie: javax.servlet.http.Cookie@6ce85
2013-03-15 00:01:38.302#DEBUG#com.sybase.sup.server.http.ODPSecurityFactory#null#Retrieved securityConfiguration=[StanRealSpend]
2013-03-15 00:01:38.303#DEBUG#com.sybase.sup.server.http.AuthenticationProcessor#null#Process authentication information.
    
```

Detailed Trace



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