

## **Upgrading Agentry standalone applications to SMP 3.0 Platform**

Provided by SAP Mobile – Customer Experience Group

Applicable Releases:

Agentry 5.X and 6.X - Including all SAP mobile products running on  
Agentry 6.0 and SMP 2.3.

**Version 1.0**

The purpose of this document is to provide as reference during Agentry application upgrade project. This document provides only guidelines for upgrade process overview not as the official documentation. Please be aware that each customer requirement and product upgrade can be different, depending amount of enhancement done to the base product and other parameters. Each customer requirements, an application specific enhancement needs to be closely reviewed to avoid any risks during upgrade process.

Prior to using this document, it is recommended to familiarize oneself with the product by reviewing the following documents.

- Installation guide (Available as part of the product download)
- Configuration guide (Available as part of the product download)
- User Guides (Available as part of the product download)
- Extended Product Feature list for each product
- Product Demos

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## SECTION 1: UPGRADE FROM AGENCY 5.X, AGENCY 6.X OR SMP 2.3 TO SMP 3.0

SAP Mobile Platform (SMP) is a tool for designing, deploying and managing the lifecycle of mobile projects. Agency previously a standalone platform, it is now integrated into, and is a core part of, SMP 2.3 and SMP 3.0. SMP 3.0 is currently the latest production version of the SAP Mobile Platform and contains the latest version of Agency.

The migration path of Agency is as follows in sequence not necessary the upgrade path **Agency 5 -> Agency 6 -> SMP 2.3 (Agency 6.1) -> SMP 3 (Agency 7.X)**.

This document provides very high level overview for upgrading a mobile application built and deployed on Agency Mobile Platform 5.X or 6.0.x which is also referred as "Agency Standalone" to the SAP Mobile Platform 3.0 with SAP backend.

Please refer previous blog on Agency upgrade. <http://scn.sap.com/docs/DOC-56242>

## SECTION 2: UPGRADE PROCESS OVERVIEW

Lot of times you might wonder how much time it takes to upgrade Agency standalone server to SMP 3.0, answer depends on amount of customization done to base Mobile application and whether those changes needs to migrated to latest version. So depending on scale of enhancements done to base Mobile application, upgrade process can be simple or can take considerable amount of time to migrate existing changes to newer application. During upgrade SAP Add-on are installed on SAP backend, any existing custom mobile application created or any custom code written is not lost as result of new SAP Add-on.

During upgrade of Mobile application from Agency standalone version to SMP 3.0 all the three layers of application needs to adjusted depending on amount of customization and modification done to base mobile application.

Although there are compelling reasons to upgrade to SAP Mobile Platform, version 3.0, and take advantage of the new features, migrating your applications may not always be the correct solution. If you want to migrate, you can choose between three high-level strategies: redeploy, redevelop, or redesign.

<http://infocenter.sybase.com/help/index.jsp?topic=/com.sybase.infocenter.dc01993.0302/doc/html/koh1374685160166.html>

Agency upgrade can be quite different depending from Agency product to product, Customer to Customer and Project to Project. Even though there will some element of commonality, so carefully review all the options.

Clearly understand difference between platform upgrade and product upgrade option.

### **Platform Upgrade**

- Platform Upgrade involves upgrade of SMP Agency Server (platform) and Agency Clients
- Platform Upgrade DO NOT require/involve any Application changes

- There are some changes that need to be made to migrate the apps to run within SMP3.0 - Migration of transmit configuration (to handle change from ANGEL to HTTPS via WebSockets)

**Note:** Platform upgrade is not a supported scenario even though technically it is possible. There is a tight coupling of platform version and App version which are supported. For example WM 5.3 was never officially tested with SMP 3.0; therefore this would not be a supported scenario. From a support perspective, SAP can only support what has been officially tested from a SAP standpoint.

## Product Upgrade

- Primarily to realize/take advantage of new functionality offered by Product. This involves Application Changes.
- Product Upgrade usually involves upgrade SAP AddOn, Java and Agentry UI (code) along with SMP Agentry Server (Platform Upgrade)

**Note:** The person or team performing upgrade procedure must have detailed, development-level knowledge concerning the application to be upgraded from Agentry Mobile Platform 6.0.x. This includes the following items, though this list may not be comprehensive and the requirements will vary from one application to the next:

- Java resources, such as application specific .jar files
- Application-specific configuration files like localization etc.
- Application-specific resource files such as dynamic link libraries (DLL's)
- Active X or Web service development used as part of custom development

## SECTION 3: PREREQUISITES

- Download and Install SAP Mobile Platform SDK and SAP Mobile Platform Server (Platform, Editor, Clients and Application Definitions)
- Ensure you have access to the previous Agentry Editor version and Eclipse workspace in which the Agentry application project exists.
- Install the Agentry Editor plug-in as provided in the SAP Mobile Platform SDK to Eclipse.
- Download and upgrade SAP Add-on for the SAP Mobile application

## SECTION 4: PREPARATION STEPS

No built-in upgrade support exists to migrate applications from version 2.x or *Agentry standalone version* to SMP 3.0 platform, so you must set up parallel infrastructure for a production environment, with a scheduled switchover. This may require you to redeploy application clients.

- 1) Get familiar with latest Mobile products, its new features and functionalities
- 2) Make a compelling case for Mobile product upgrade.
- 3) List down all the enhancements done to base product including both UI & backend changes.

- 4) Form a project team which includes technical, functional, business, IT and infrastructure team members.
- 5) Come-up with an project plan for the upgrade project
- 6) Define time lines and testing plan for the upgrade project
- 7) Identify all the risk factors and back-up plans
- 8) Finalize all the hardware requirements – which could include reusing existing server or adding additional hardware for running multiple Agency based application.
- 9) Any load balancers or clustering needs for Agency applications
- 10) Any SUP based application used? If so are you planning to consolidate all SUP and Agency based application on SMP 3.0?
- 11) Do you use multiple Agency based application? (On SMP 3.0 SP04 onwards, multiple application can be hosted).
- 12) The SMP 3.0 production server will also require a lite database.
- 13) Any branding requirement for Agency clients
- 14) Review any native development done for each platform like Active x for windows etc. Check options of doing similar development using Open UI.
- 15) Review licensee requirement for ESRI integration if you're planning to use GIS for Work Manager 6.1.

## **SECTION 5: UPGRADE PROCESS NEXT STEPS**

- 1) Install latest upgrade SAP Add-on for SAP Mobile application on SAP development or Sand box ( preferable to have parallel system set-up)
- 2) Install SMP 3.0 Server with latest support pack and deploy Agency Mobile application that you want to upgrade
- 3) Install Eclipse Juno IDE and install Agency 7 plugin from SMP 3.0 SDK
- 4) Import latest Agency Mobile application into the Agency 7 editor
- 5) Identify all the changes done to older Mobile application and compare those functionalities or features with latest Agency Mobile applications. If some of the enhancements are delivered as part of latest Mobile application, decide whether to retain older enhancement or to go with newer Mobile application. This step is applicable for both Java and editor changes.
- 6) There is lot of re-factoring done in the Java layer with the latest version of Agency mobile application.
- 7) Import older Agency changes to latest Mobile application using compare option in the editor.
- 8) Migrate your existing configurations forward to the new application - Review all the enhancements done in the SAP backend; try to re-implement those enhancements into newer application code.
- 9) Create new Z application by copying from standard Mobile application or use standard mobile application by creating new MDO's or BAPI wrappers.
- 10) Use program '/SYCLO/CORE\_MAPP\_COMPARE\_PROG' to compare older Mobile application configuration settings and newer one.

**Note:** - Java codes for latest Mobile applications are not provided to customers. Customer needs to seek permission from SAP through Account executive to own the source code for respective Mobile products.

**Note:**-Java has been completely refactored for some of the Agency Mobile application into component packages. Most of the class names remain the same, but some might have been merged or renamed. The method names are mostly identical from older version to newer version. Some of the Java classes have further enhanced to support using factory create methods for objects, step handler and BAPI classes.

## SECTION 6: THREE LAYER DEVELOPMENT CYCLE

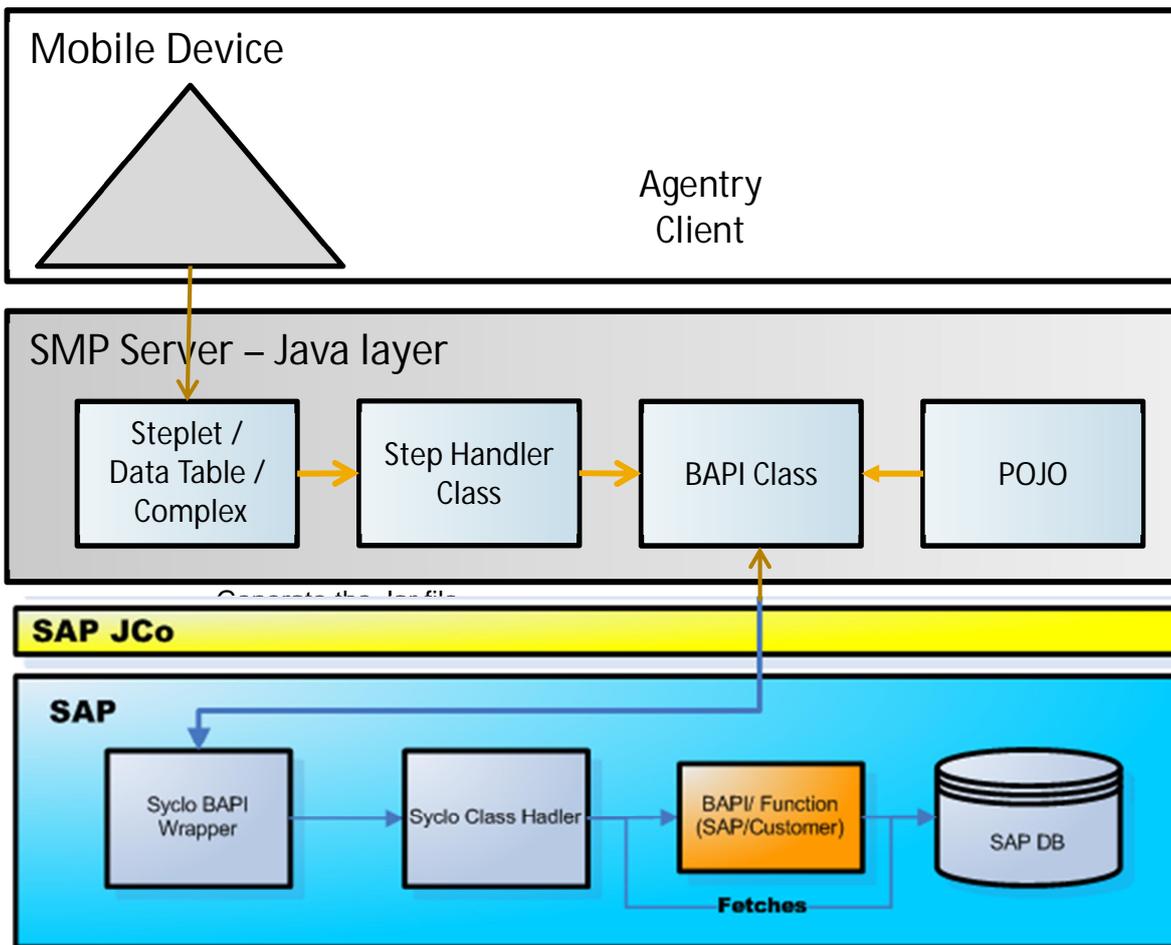


FIGURE 1

The above diagram depicts various layers of Agency application and how they are integrated along with the flow. This data flow should be helpful in understanding changes required at various layers of the Mobile application.

## SMP (Agency) Platform - For Developing SAP/ Syclo Mobile Solutions

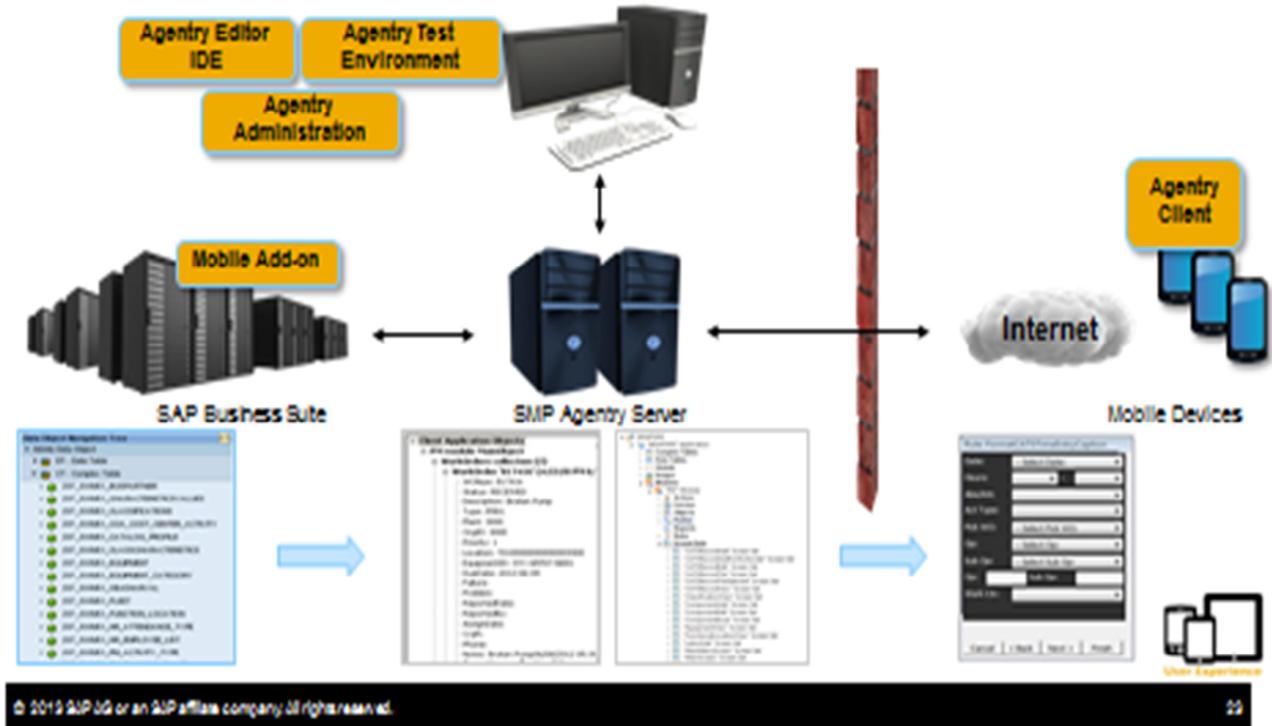


FIGURE 2

This diagram depicts system landscape with SAP backend.

### SECTION 7: ADJUSTING AGENCY SIDE CHANGES

- 1) Import all enhancements done to older version of Agency application to new Mobile application.
- 2) WIN32 screens are not supported in latest Agency Mobile application – if you plan to use WIN 32 screens instead of WPF client. Import older Win 32 screens and re-create missing win 32 screens in the application. Carefully review option of using WIN 32 which could take considerable amount of effort.
- 3) For the Agency changes, you will need to modify all screen platforms you plan to deploy on. Use the "Compare With" option after right clicking the open Agency project to import your older Agency application changes. Some of the modifications needed to be manually handled, but use the import tool where possible. Make sure you aren't overwriting any new essential definitions that have been modified. Spot

check the differences first visually between the newer Agentry application and older Agentry Mobile application to make sure nothing has been added that your modifications would damage.

- 4) Once the changes are merged to newer application, do development or production publish depending on the server type that you want to deploy Mobile application.
- 5) Create zip of the published folder
- 6) Check if branding was done for earlier version of Agentry application, if required review branding requirement for latest version of Mobile application.
- 7) One additional thing to note between Agentry 6.0.3X to SMP 3.0, back in Agentry 5~6.0.2X most of the screen design in Agentry iOS screen was developed for iOS 6. Since iOS 6 and iOS 7 vary in OS screen style (color of header, buttons and others), the customer will need to change a lot of style when upgrading a previously designed product (ex: WM 5.2) released in a pre-Agentry 6.0.4X to a higher Agentry version. Please refer this blog for further details.

<http://scn.sap.com/community/mobile/blog/2014/06/09/troubleshooting-agentry-styles-for-ios-7-support>

Any application design in later versions will not need to be modified.

**Additional help:** Refer online SMP 3.0 documentation link below

<http://infocenter.sybase.com/help/index.jsp?topic=/com.sybase.infocenter.dc01993.0302/doc/html/san1386121193051.html>

## SECTION 8: ADJUSTING JAVA LAYER CHANGES

- 1) There is lot of re-factoring done to Java changes, so while merging java code, Identify where the java code needs to go in the new structure by searching the new components for the same class name, or do a file search in Eclipse to look for the method names if the class name has changed. You will probably need to modify your original changes to make them fit into the new coding and factory class style of the Java code.
- 2) You have to carefully replicate java changes by creating custom java code into the newer application.
- 3) Create jar file for custom java code
- 4) Make sure that Agentry.ini file is updated with custom jar file.
- 5) Review Java.BE file for SAP server connection details
- 6) Make required changes in configuration panel on SAP side for the java changes

Notes: - Latest Mobile Products uses SAP JCO 3. Older java code is still compatible.

## SECTION 9: SAP BACKEND CHANGES

- 1) Identify all the SAP changes made to older version of Mobile application.

- 2) Review configuration Panel changes for any Java changes or the newer objects created.
- 3) There are two options to migrate SAP changes 1) Leverage existing enhancements spots provided in latest Agency Mobile application to implement your enhancements. 2) Copy standard class handlers into Z class handlers and implement your SAP changes in the respective methods.
- 4) Create new any MDO objects and BAPI wrappers under Mobile application.
- 5) Any older version MDO objects, BAPI wrappers, configuration panel entries needs to be re-created under new Mobile application
- 6) If you have created new MDO objects and BAPI wrappers.
- 7) Download 'SYCLO/CORE\_MAPP\_COMPARE\_PROG' program from Service market place to compare configuration settings of app/app, app/BC Set, BC Set/BC Set.

## **SECTION 10: DEPLOYING AGENCY APPLICATION TO SMP 3.0 PLATFORM**

Refer blog in SCN to deploy Agency application on SMP 3.0 platform.

<http://scn.sap.com/community/mobile/blog/2014/08/30/quick-start-guide-sap-work-manager-6x-with-smp-agentry>

2060561 - Quick Start Guide to install SAP Work Manager 6.1.X with SMP 3.0 (Agency)

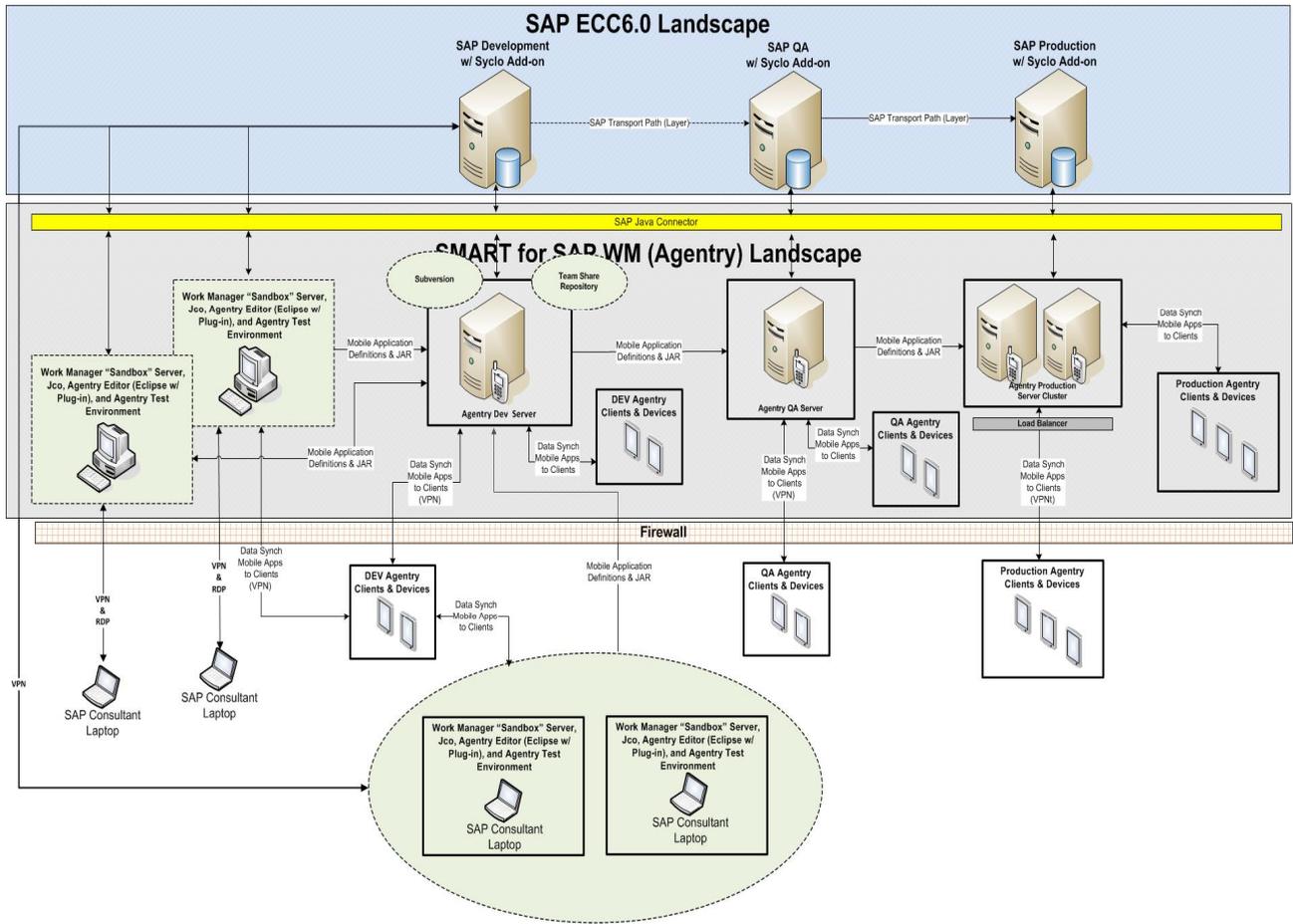
# You may need to access your SAP account to properly view the KBA link above.

## **SECTION 11: PERFORM FULL END-TO-END TESTING**

Upgrade the Agency Client installations within the implementation environment to migrate all mobile users to the new environment.

- a. Have all users perform a final transmit to verify all information stored on the device has been updated to the back end system.
- b. All users should shut down their clients prior to upgrading them.
- c. Install the Agency Client provide with the SAP Mobile Platform for the client device type.
- d. Deploy SMP certificate on Agency client device
- e. Each user should start the new Agency Client, login, and perform an initial transmit.

## SECTION 12: SMP SERVER TECHNICAL LANDSCAPE (LOGICAL)



**FIGURE 3**

Typical customer landscape with various systems to just show how changes are propagated from one system to another system.

## SECTION 13: THINGS TO CONSIDER

- 1) With newer version of SMP platform, Agentry certificates needs to be deployed on Agentry client devices.
- 2) Angel protocol is not used any more. Any angel protocol specific configuration needs to be reviewed e.g. load balancers or clustering etc.

## SECTION 14: REFERENCES

- 1) Download SAP-WM-6.0-EnhancementsGuide.pdf from service market place.
- 2) Planning and Implementing your SMP Agentry Upgrades Documentation in SCN  
<http://scn.sap.com/docs/DOC-56242>
- 3) SMP 3.0 and Agentry Integration Overview - <https://scn.sap.com/docs/DOC-57642>
- 4) Implementation Methodology for Agentry Based Mobile Applications-  
<https://scn.sap.com/docs/DOC-57642>
- 5) Respective product configuration and implementation guide documentation.
- 6) SMP 3.0 Documentation -> Related to migration  
<http://infocenter.sybase.com/help/index.jsp?topic=/com.sybase.infocenter.dc01993.0302/doc/html/san1386121193051.html>

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