



Unvired Mobile Platform - Whitepaper

Unvired Inc.



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Unvired Mobile Platform - Connecting the world : People, Devices, Things and Enterprises



Overview

Unvired Mobile Platform (UMP) mobilizes business processes and data from various enterprise backend systems to all leading mobile devices (smart phones and tablets).

- **Business Processes:** Mobilize your Business Dashboards, Sales, Distribution, Asset Management, Retail, Production, Customer Relationship Management, Finance, HR and other processes using UNI
- **Mobile Platform:** One mobile platform for B2B, B2C, B2E and M2M scenarios.
- **Smart Phones, Tablets, Wear, Beacons:** Create and manage mobile applications on iPhone, iPad, Android, BlackBerry, Windows, Glass, Wear and Beacons
- **Enterprise Systems:** Connect to SAP, Oracle EBS, IBM Maximo, Sharepoint, SAAS like Salesforce.com, Databases etc., identity management like active directory and many more enterprise systems supporting SOAP and/or REST web services.
- **Highly Secure**
- **Deployment Choice:** Choose from the various deployment models, be it public multi-tenant (shared) cloud, dedicated private cloud or on-premise.
- **Mobile Strategy:** Let your mobile strategy follow your cloud strategy and not vice-versa. Move across cloud and on-premise platforms seamlessly without any change.
- **Standard Mobile Applications:** Standard mobile applications based on SAP ERP, Salesforce.com, etc. that can be used out of the box.

- **Free Trial:** Tired of promises about quick mobile POCs? Eliminate long POCs to try mobility. Try UMP with your enterprise systems in less than a week's time with zero investment.
- **Pay and Scale as you go:** Use the mobile applications from our cloud and eliminate capital expenditure. Pay and scale as you go. Wait! UMP is not a hosted solution masquerading as a cloud platform but is truly cloud enabled. Experience a scalable, redundant, failsafe and self-healing mobile cloud platform and pay only for what you use. Data center hosting only converts capital expenditure into operational expenditure. It does not help you pay only for what you use. With UMP you can scale up or down based on actual need.

Features

- **Platform Usage Modes:**
 - **Cloud:** Platform in a public multi-tenant mode from the cloud similar to SAAS applications. Platform shared with other companies and users.
 - **Private Cloud:** Platform dedicated for a single customer from the cloud. No sharing.
 - Separate trial, development, quality and production landscapes from the cloud to enable development with zero infrastructure on-premise.
 - **On-Premise:** Platform installed in your organization's landscape.
- **Mobile Devices:**
 - Build applications for iPhone, iPad, Android, BlackBerry, Windows (Mobile, Tablet and Phone), Glass, Wear and Beacons
 - Build native apps or HTML5 apps
 - Seamless connectivity supporting both online and offline working
- **Enterprise Systems:**
 - **SAP** – Native integration with SAP. Use all SAP RFCs and BAPIs
 - **Oracle EBS** - Native integration, use all PL SQL routines
 - **IBM Maximo**
 - **Salesforce.com** – Integration with Salesforce.com web services (Enterprise and Partner)
 - **Web Services** – Integration with all open systems via Web Services (both REST and SOAP)
 - **LDAP** – Integrate with LDAP like Microsoft Active Directory
 - **Database:** Connect to any database using our database connector.
 - Enterprise connectivity based on an adapter framework. So it can be extended to support any system in the world.
- **Users, Devices and Applications:**
 - Administer, provision and manage devices, users and applications
 - Associate devices with users and applications controlling user-device-app mapping
- **Data Push:**
 - Mobility is of use when users are reactive and systems are proactive.
 - Push data from enterprise systems to mobile devices and notify users (like e-mail and SMS notifications)

- Scheduled Push: UMP can periodically download data from enterprise systems and push data to mobile devices
- Trigger Push: Push data from enterprise systems to mobile devices using UMP REST APIs
- **Security:**
 - Only trusted devices, users and apps allowed to function on the platform
 - Single Sign On for user on SAP
 - Complete auditing and tracing of UMP for administrators
 - All data encrypted (and partitioned on the cloud version)
 - HTTPS communication with authentication
 - Secure agent to enable enterprise connectivity from the cloud. Secure agent is deployed within the firewall enabling an outbound SSL connection to the cloud. Access SAP and other systems with local DNS names and IP addresses without any reconfiguration. Audit and control all data transferred over the secure tunnel.
- **Connectivity:**
 - Support both synchronous (foreground) and asynchronous (background) communication
 - Enterprise systems are designed for certain load. Due to mobile requirements, enterprise systems can get overloaded. UMP automatically throttles connections to enterprise backend systems from mobile devices to manage load.
 - Manage enterprise system maintenance downtime in UMP so that mobile users do not suffer unknowingly during maintenance schedules. UMP will help you manage maintenance downtime without loss of data.
- **Web Based Admin Cockpit:**
 - Web based administration to manage, configure, monitor and trouble shoot.
 - Access from any browser.
- **Transport:**
 - Move the configurations across development-quality-production smoothly using Unvired transport management.
- **Development Tool Sets:**
 - Eclipse based toolset for Rapid Application Development.
 - Design, build and publish applications using the tool set.

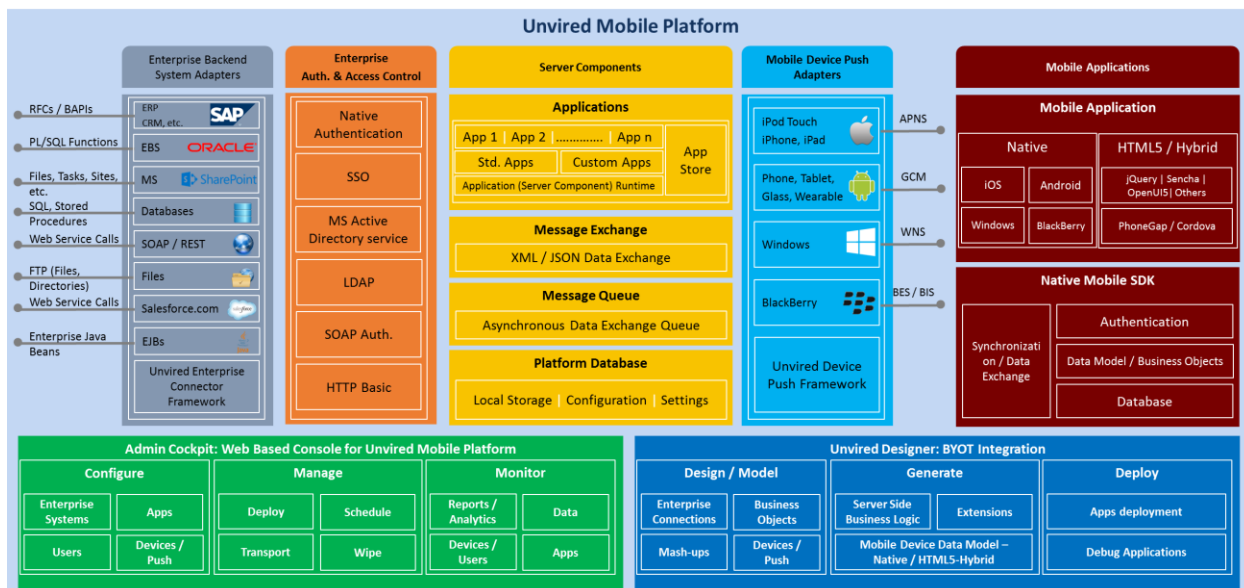
Cloud

UMP can be used from the cloud eliminating the need for bulky on-premise redundant infrastructure. (UMP runs out of Amazon EC2 cloud)

- **Multi-tenant:** Platform in a public multi-tenant mode from the cloud. Platform shared with other companies and users, data partitioned and encrypted.
- **Private / Dedicated:** Platform dedicated for a single customer from the cloud.

- **Eliminate redundancy:** Separate trial, development, quality and production landscapes from the cloud to enable development with zero infrastructure on-premise.
- **Unvired Secure Agent:** No need to reconfigure firewalls, DMZ to enable the cloud platform to connect to your on premise enterprise systems Unvired Secure Agent is installed on-premise within the firewall to open an outbound connection to the cloud. All enterprise communication happens via the secure agent is on SSL and can be audited and monitored.

Architecture:



1. **Unvired Mobile Platform:** UMP is a Mobile Application Development Platform (MADP) that can connect any enterprise system to any mobile device. UMP is a J2EE component.
 - a. **J2EE Server:** UMP is a J2EE component that can be deployed either on SAP NetWeaver J2EE server (7.1+) or on JBOSS. UMP is certified by SAP - Powered by NetWeaver.
 - b. **Database:** With SAP NetWeaver the database used by SAP NetWeaver is used by UMP too. JBOSS deployment is with MySQL, Oracle or MS SQL.
 - c. **Admin Cockpit:** Web based application to configure, manage and trouble shoot.
 - d. **Enterprise Channels** Enterprise channels help applications connect to different enterprise backend systems.
 - e. **Device Channels:** Device channels are used to push data to the mobile devices. Data push is supported for iOS, Android, BlackBerry, Windows, Glass and Wear
 - f. **Process Agents:**
 - i. Process agents are the business logic counterparts to the application on the mobile device.
 - ii. Process agents are functions.
 - iii. Process agents are coded in pure Java (J2SE).

- iv. Process agents can call functions / interfaces from multiple enterprise systems allowing mash-up functionality for the mobile application.
- g. **Message Exchange:**
 - i. Message exchange layer brokers content between the mobile device and enterprise backend system.
 - ii. Message exchange layer stores and forwards the messages (data) as required.
 - iii. Data push to devices can be achieved either by pushing data from enterprise systems to UMP (using UMP web services) or downloading data from UMP at scheduled intervals.
- 2. **Enterprise Backend Systems:**
 - a. **SAP** – Native integration with SAP. Use all SAP RFCs and BAPIs
 - b. **Oracle EBS** - Native integration, use all PL SQL routines
 - c. **IBM Maximo**
 - d. **Salesforce.com** – Integration with Salesforce.com web services (Enterprise and Partner)
 - e. **Web Services** – Integration with all open systems via Web Services (both REST and SOAP)
 - f. **LDAP** – Integrate with LDAP like Microsoft Active Directory
 - g. **Database:** Connect to any database using our database connector.
 - h. Enterprise connectivity based on an adapter framework. So it can be extended to support any system in the world.
- 3. **Mobile:** The mobile applications can be developed as native applications or HTML5. All leading smart phones, tablets, glass and wear are supported – iOS, Android, BlackBerry, Windows, Glass and Wear.
 - a. **Database:** UMP uses a database to store all the data on the device.
 - b. **UMP client framework:** UMP framework provides the data model and synchronization (data communication / exchange) layers and additional user interface controls (for some platforms).
 - c. **Application:** Application consists of the business process flow and the user interface.

Technical Info

Component	Sub-Component	Information
UMP On-Premise	JBOSS	5.1
	SAP NetWeaver	7.1 and above
Developer Skillset	Server	Java / Eclipse
	iOS	Objective C or HTML5 / XCode
	Android	Java or HTML5 / Eclipse
	BlackBerry	Java or HTML5 / BlackBerry Eclipse JDE
	Windows Mobile and Phone	C# or HTML5 / Visual Studio

RAD Tools

Design and build your mobile applications rapidly using the Rapid Application Development tools from Unvired.

Unvired toolset is based on Eclipse IDE (Integrated Development Environment).

- **Design:** Design your mobile application visually using the Unvired Designer.
- **Build:** Generate your application code from the Unvired Designer.
- **Debug:** Debug the server components both on the cloud and on-premise easily using the Unvired debugger
- **Test:** Test the server application by simulating device conditions
- **Publish:** Publish the application.
- **Run:** Run the application on the target device.
- **Transport:** Transport the configurations across development-quality-production servers easily.

Try & Buy

- Use our free trials at zero investment to assess the platform fit very quickly.
- Eliminate time spent on trying to find the right sales person for the product from the mobility provider, time spent in getting access to the software and lengthy POCs.
- Mobilize now, it should not take a few months for users to access enterprise systems from their mobile, do it in weeks now..
- Use the cloud infrastructure along with fully functional template mobile applications to experience mobility with your enterprise systems and your devices in **a day or two**.
- Deploy the on-premise infrastructure along with fully functional template mobile applications in your organization and experience mobility in **less than a week**.

Applications

Unvired Standard Applications

Unvired Standard Applications are standard, fully functional mobile applications that can be used with SAP, Salesforce.com and other enterprise systems out of the box from UMP. Unvired Standard Applications can be used as is or can be enhanced to add functionality.

Unvired Sales for SAP

Unvired Sales for SAP is based on SAP Sales & Distribution in SAP ERP / ECC. Unvired Sales for SAP allows your sales force to work with their customers, products and sales orders from mobile devices.

- **Features:**
 - **Customers:** Get customers from SAP. Search for customers online
 - **Products:** Get products from SAP. Search for products online
 - **Sales Area:** Choose your sales area and work with multiple sales areas

- **Sales Orders:**
 - Create sales orders using customer and products on the device
 - Get the pricing for the sales order before creating the sales order
 - Create sales orders seamlessly without bothering about you are offline or online
- **Supported Mobile Devices:**
 - iPhone
 - iPad
 - Android
 - BlackBerry
 - Windows
- **Supported SAP version:**
 - SAP ERP 4.7+

Unvired Workflow for SAP

Unvired Workflow for SAP is based on SAP ERP / ECC. Unvired Workflow for SAP allows you to receive workflow documents like Purchase Orders, Purchase Requisitions, Leave Requests, Travel Requests, Travel Expenses, Claims, etc. on the mobile device for user action. Users can take action on these documents from their mobile devices.

- **Features:**
 - Any SAP Workflow Document:
 - Purchase Orders
 - Purchase Requisitions
 - Leave Requests
 - Travel Requests
 - Travel Expenses
 - And more
 - Workflow documents get pushed to the device so that the user can be reactive.
 - Take action (approve / reject / etc.) on these documents from your mobile device.
- **Supported Mobile Devices:**
 - iPhone
 - iPad
 - Android
 - BlackBerry
 - Windows
- **Supported SAP version:**
 - SAP ERP 4.7+

Unvired Sales for Salesforce.com

Unvired CRM for Salesforce.com mobilizes business processes from Salesforce.com CRM. Access your Salesforce.com from your mobile device when you are offline or online. Work offline and later the application will reconcile with Salesforce.com when there is connectivity.

- **Features:**
 - Search, Download, Create and Update:
 - Accounts
 - Contacts
 - Opportunities
 - Leads
 - Cases
 - Campaigns
 - Contact Roles
 - Partners
 - Work both offline and online seamlessly
- **Supported Mobile Devices**
 - Android
 - iPhone and iPad (Coming shortly)

Unvired Inventory Manager

Unvired Inventory Manager for SAP helps warehouse workers to get the stock overview, move goods, issue & return materials, count physical inventory, receive goods, create purchase requisitions and deliver goods efficiently from mobile devices.

- **Features:**
 - **Stock Overview:** Get material stock quantities across plants, storage locations and batches. Stock quantities are available across various categories like unrestricted stock, restricted stock, consignment stock, stock blocked for quality check, etc. Accurate and timely stock information helps warehouse workers locate and identify stock quickly. View the goods movement documents associated with the material to know the previous goods movements for the material.
 - **Storage Location Movement:** Move goods from one storage location to another across plants or in the same plant immediately creating a goods movement document in SAP.
 - **Goods Receipt:** Receive goods against a purchase order and record that information in SAP immediately.
 - **Goods Issue:** Issue materials to technicians or goods to other parties based on a cost center or work order.
 - **Goods Return:** Accept goods returns from technicians and other parties based on a cost center or a work order.

- Physical Inventory Counting: Get open physical inventory documents for cycle or yearly counting. Count and save the material counts in SAP immediately. Check differences immediately and recount to eliminate errors. Check physical inventory documents summary to get an overview of open, counted and posted documents.
- Delivery: Access delivery documents from SAP on the mobile device. Pick and load materials accurately with barcode scanning eliminating incorrect material deliveries
- **Supported Mobile Devices:**
 - iPhone, iPad
 - Android
 - BlackBerry
 - Windows
 - Google Glass

Custom Applications

- Mobilize any business process from any enterprise system using Unvired Mobile Platform
- [Contact us](#) for a custom application or use Rapid Application Development tool set to build your own apps quickly

Comparison

Feature	Unvired	Others
Cloud and On-premise	<p>Unvired platform is architected to work both on the cloud and on-premise.</p> <p>Unvired usage modes:</p> <ul style="list-style-type: none"> • Public Cloud: In a public multi-tenant mode. Shared with other companies. • Dedicated / Private Cloud: Dedicated for a single customer. No sharing. • On-Premise: Installed inside the organization's landscape behind the firewall. <p>Unvired cloud platform is truly a distributed architecture which scales horizontally and is available via the Amazon EC2 infrastructure. Unvired cloud provides a failsafe, redundant, scalable and self-healing infrastructure.</p>	<ul style="list-style-type: none"> • Most other platforms are either on-premise versions or on-premise version hosted in a data center. • On-premise version hosted in a data center does not give the true benefits of the cloud. • Hosted version converts capital expenditure to operational expenditure. Total cost is same or more.
Deployment Options	<ul style="list-style-type: none"> • Unvired customers can transition between the cloud and on-premise platform very easily without any redevelopment. • Customers mobile strategy can follow their cloud strategy – start on-premise go cloud anytime 	-
Native Integration with SAP	<ul style="list-style-type: none"> • Unvired provides native integration with SAP i.e. Unvired connects to SAP via SAP BAPIs and RFCs. • Unvired can consume any SAP RFC / BAPI (including Z modules). • Unvired allows field level mapping in SAP RFC / BAPI. • No remodeling or redevelopment of RFCs required in SAP to use 	<ul style="list-style-type: none"> • Very few platforms provide SAP native integration. Dependency on web services for SAP connectivity which is not the best way to connect to SAP systems. • Multi-layered RFCs are a challenge and not handled well. • For SAP integration SAP RFCs / BAPIs have to be designed in a specific manner. This often requires redevelopment in SAP even to consume standard SAP

	<p>Unvired.</p> <ul style="list-style-type: none"> • Unvired can consume multiple RFCs / BAPIs to create a single logical business entity. • Non-intrusive, no change required in SAP, no re-investment. 	<p>functionality.</p> <ul style="list-style-type: none"> • Call multiple SAP RFCs in a single logical object is not possible. • Highly intrusive and requires development on SAP (ABAP or web-services), reinvestment.
Support best of breed enterprise solutions	<ul style="list-style-type: none"> • Build mobile “mash-up” applications that can connect to multiple enterprise systems. • Ex: Build a mobile application creating leads, opportunities, customers, etc. on Salesforce.com and confirmed sales orders and pricing on SAP. 	<ul style="list-style-type: none"> • Cannot connect to multiple enterprise systems in the same application. • Cannot mobilize best of breed enterprise systems in a single mobile application.
Business Logic	<ul style="list-style-type: none"> • Business logic can be on the backend, on the middleware platform or on the client. • Business logic in middleware is very powerful and can achieve complex business scenarios like SAP Pricing, linking Lego blocks, etc. 	<ul style="list-style-type: none"> • Business logic can be either in the backend or the mobile device. • Business logic in the middleware governed by strict rules and has to be modeled in a particular manner. Cannot achieve complex business logic in the middleware platform.
Leverage Existing SAP Infrastructure	<ul style="list-style-type: none"> • SAP customers using the platform on-premise can deploy the platform on SAP NetWeaver (7.x) Java stack. • Unvired platform is certified for SAP NetWeaver deployment by SAP. • Reuse existing infrastructure for mobility rather than setting up more servers. • Huge cost saving. 	<ul style="list-style-type: none"> • New servers are required to install the mobile platform. Add redundancy, power, maintenance, etc. to the cost. • Additional hardware/software cost. • Additional maintenance
Security from the cloud	<ul style="list-style-type: none"> • All data encrypted and separated. • Unvired provides a secure agent to enable enterprise connectivity from the cloud in a secure manner. 	<ul style="list-style-type: none"> • Usually based on VPN technology and requires additional investment in hardware and reconfiguration of firewall / DMZ

	<ul style="list-style-type: none"> Secure agent is deployed within the firewall enabling an outbound SSL connection to the cloud. Access SAP and other systems with local DNS names and IP addresses without any reconfiguration. Audit and control all data transferred over the secure tunnel. 	
Scalability	<ul style="list-style-type: none"> Scale to 10000s of users from the public or dedicated cloud. Scale as you go without any major pre-planning. 	-
Enterprise Connection Management	<ul style="list-style-type: none"> Manage enterprise connectivity and load on enterprise systems intelligently from the mobile platform. Enterprise systems are scaled to a certain load. Rapid mobility can stress enterprise systems. Unvired helps customers manage the load from mobile devices smoothly. 	<ul style="list-style-type: none"> No such documented feature. Enterprise systems have to be scaled to manage the load from mobile devices or connections have to be denied to the mobile devices.
Manage Enterprise System Downtime	<ul style="list-style-type: none"> Manage enterprise system down time smartly. No loss of data due to enterprise system downtime. Let mobile users work seamlessly through the downtime. 	<ul style="list-style-type: none"> No such listed feature.
Data Push	<ul style="list-style-type: none"> Data push from enterprise systems to all mobile devices. Trigger push data from enterprise system so that data push is near real time. Schedule a push from the mobile platform to push data periodically to mobile devices (No polling from 	-

	device)	
Sync	<ul style="list-style-type: none"> • Unvired does business transactions during synchronization and NOT database synchronization. • Ex: Synchronize a Customer Account creation and a Sales Order creation for that customer as a single business transaction. • Database synchronization from mobile to the middleware platform does not provide business control. • Seamless exchange of data both synchronously and asynchronously between mobile devices and enterprise systems via the Unvired platform. • Do not bother your users about online and offline access. • Do not bother users with SYNC button in the application to exchange data. 	<ul style="list-style-type: none"> • Limited business transaction functionality • Mostly database synchronization from mobile device to middleware platform. • Mostly synchronous communication.
Transport	<ul style="list-style-type: none"> • Transport mobile platform configurations from development to test to production systems easily without manual reconfiguration. 	No such listed feature.
Development and Debugging on the Cloud	<ul style="list-style-type: none"> • Enable development and debugging of the mobile applications from the cloud platform without any on-premise infrastructure. • Powerful integrated debug environment that enables directly debugging on the cloud with real time data from SAP and other systems 	No such listed feature.
Applications	<ul style="list-style-type: none"> • Many Unvired standard 	<ul style="list-style-type: none"> • In most cases applications need

	<p>applications are free for customers and others are priced competitively..</p> <ul style="list-style-type: none"> • Get the source code for standard applications (Device and Middleware) and extend for your own functionality rapidly. 	<p>to be custom developed or purchased at huge additional cost</p>
Free Trial	<ul style="list-style-type: none"> • Free trial of standard SAP and Salesforce.com application from the Unvired cloud. • Trial with your / customer SAP systems. • Simple steps to get a trial working with customer SAP systems in a couple of days. 	<ul style="list-style-type: none"> • No such listed feature with SAP systems. • In many cases access to the software itself takes longer than a month
Pricing	<ul style="list-style-type: none"> • Simple and transparent pricing. • Pay based on users/devices. • Pay as you go on the cloud. Do not pay for what you do not use! 	<ul style="list-style-type: none"> • Opaque pricing.