

## The Challenge

Mobile devices are the latest and hottest channel for the delivery of mobile services and mobile marketing campaigns. Today's enterprises are deploying consumer-oriented mobile apps in order to leverage this trend and provide better customer experience, expand their reach to customers, increase customer engagement and create new revenue streams. However, they face considerable costs and technical difficulties in development, deployment and management of consumer mobile apps because traditional tools and systems do not cope with the proliferation of mobile device platforms and the inherent complexity of cross-platform m-service delivery. Additional requests to minimize time-to-market or connect securely with back-end systems make things even more complex.

### The Solution

GO!Enterprise Reach is the perfect choice for development, deployment and management of B2C (business to consumer) and G2C (government to citizen) mobile apps. GO!Enterprise Reach solutions are built rapidly using a development studio which produces cross-platform mobile GO!Apps with a native look & feel. GO!Apps are delivered to mobile devices in a white-labeled secure container which can receive updates or new apps from a dedicated repository powered by GO!Enterprise Reach. GO!Enterprise Reach enables seamless and secure integration with any back-end system such as CMS, ordering, billing, booking or customer loyalty and is ideally suited for the delivery of m-services supporting secure transactions, e.g. m-banking, m-booking, m-shopping, m-parking etc.





GO!Enterprise Reach solutions are based on the GO!Enterprise unified mobility platform which consists of three main components:

- GO!Development Studio, for rapid, drag-and-drop development of mobile GO!Apps:
- GO!Mobile Client, a white-labeled secure container which hosts GO! Apps on mobile devices;
- GO!Enterprise Server, the versatile middleware server which enables secure communication with back-end systems, data synchronization and mobile application management.

## **GO!Development Studio**

GO!Development Studio is a powerful integrated development environment (IDE) for rapid visual development of GO!Apps. It provides rich functionality and advanced features which enable even novice developers to build mobile apps that communicate with back-end systems and run on any mobile device. Key features include the following:

- Drag-and-drop development. GO!Apps are built in a configuration-based environment without the need to write code. Developers drag and drop components on mobile forms, configure their properties and define event-based actions in order to get the required functionality. Mobile app development has never been faster.
- Device agnostic design. Developers do not have to cater for a specific mobile platform or device while designing GO!Apps. Using GO!Development Studio, they can focus on the functionality of their apps and rest assured that the interface will be automatically rendered on any mobile device with a native look & feel. GO!Development Studio enables a build once, run anywhere approach to mobile app development.
- Rich set of form components. GO!App developers can leverage a complete set of form components to build visually appealing apps with charts, pickers, tree views, actionable lists and embedded HTML content while having access to local device resources like the camera and the GPS receiver.
- Flexible UI design. The user interface of GO!Apps can be adjusted during runtime according to specific conditions, data values or user actions. Hence, developers can build engaging GO!Apps which incorporate logic at the mobile presentation layer.
- True IDE. GO!Development Studio allows design, compilation and testing of GO!Apps from a single integrated

### **KEY BENEFITS**

Unified solution for development, deployment and management of B2C and G2C mobile apps

Build once, deploy on any major mobile platform

Rapid application development environment enables fast time-to-market

Instant deployment of new mobile apps and updates

Seamless integration with any back-end system

Support for secure mobile transactions

Web console for centralized management and monitoring of all mobile services

**Future-proof architecture minimizes TCO** 

environment. There is no need for third-party development tools or platforms to build a fully functional GO!App.

- Emulator support. GO!Development Studio integrates with most of the major mobile platform emulators which are available for the Windows OS. Testing of GO!Apps is a one-click process which loads the selected emulator and automatically launches the GO!App.
- Icon editor. GO!Development Studio includes an icon editor which allows the developer to select icons from a library or develop tailored eye-catching icons using a wizard-like interface.



A powerful IDE for mobile app development



- Security design. GO!Development Studio enables the design of mobile apps with fine-grained security features. Separate authorization mechanisms can be enforced per GO!App and validation tokens can be used to further secure mobile transactions.
- Out-of-the-box connectors. Developers can seamlessly integrate their GO!Apps with cloud-based applications or enterprise systems using the ready-made connectors of the GO!Enterprise platform. It is possible to send data, receive data or issue commands to back-end systems using web services, native database connections, ODBC or RSS. There is virtually no system that a GO!App cannot access.
- Advanced data synchronization.

GO!Development Studio provides a number of data synchronization options which can cover any online or offline use case scenario. Data can be delivered to GO!Apps upon request or pushed from the server, and data updates can be sent on developer-defined time intervals. Developers can also use the embedded store & forward mechanism of GO!Mobile Clients to implement GO!Apps which are occasionally connected to back-end systems.

### **GO!Mobile Client**

GO!Enterprise Reach solutions are delivered to mobile devices within the GO!Mobile Client, a secure native container which hosts GO!Apps. GO!Mobile Client can be fully white-labeled with custom logo, splash screen and colors and uploaded to mobile app stores as a new mobile app. The newly-branded container will transparently download the GO!Apps of a specific GO!Enterprise Reach solution and will also receive updates whenever they are made available by the administrator. The use of GO!Mobile Client practically eliminates the need to go through mobile app stores for every solution update, minimizes time-to-market for mobile marketing initiatives and bypasses the need to adjust or rewrite mobile apps for new versions of mobile operating systems.

From a technical point of view, GO!Mobile Client is the runtime environment for GO!Apps, providing platform functionality like:

 Dynamic application rendering. GO!Apps are dynamically rendered by GO!Mobile Client, using native components and functionality of the mobile OS.

- Data caching. GO!Apps boast quick response times, low bandwidth usage and can work offline because of their ability to store data in the local database of GO! Mobile Client.
- Queue-based communication, GO!Mobile Client includes a store & forward mechanism which can be used to queue requests from a GO!App to back-end systems when the device is offline.

### Supported platforms include:









Windows 8

## **GO!Enterprise Server**

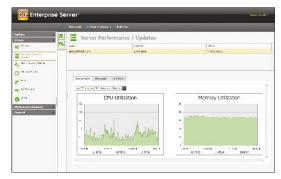
GO!Enterprise Server is a versatile middleware server which enables secure communication with back-end systems, data synchronization and mobile application management.

**GO!Enterprise Server** acts as a proxy for all communication between GO!Apps and back-end systems, providing advanced functionality like:

- Integration engine. GO!Enterprise Server handles all the complexity of communication with back-end systems using web services, native database connections, ODBC and RSS. GO!Apps send and receive data from GO!Enterprise Server in a unified and transparent manner.
- Data synchronization. GO!Enterprise Server supports a number of data synchronization options which can cover any online or offline use case scenario. Data can be delivered to GO!Apps upon request or pushed from the server, and data updates can be sent on developer-defined time intervals.
- Push notifications. GO!Enterprise Server can monitor specific data sources for changes and alert the end-user by sending customizable push notifications and applying notification badges on the icons of the respective GO!Apps.
- Mobile client authentication. GO!Enterprise **Server** can ensure that only a specific white-labeled version of GO!Mobile Client is allowed to access the hosted GO!Enterprise Reach solution.



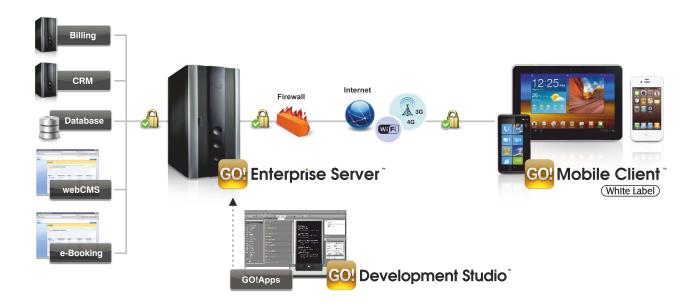
GO!Enterprise Server also provides the GO!Enterprise Administration web console for configuration and management of GO!Enterprise Reach solutions. Key functionality of the GO!Enterprise Administration console includes:



**GO!Enterprise Administration** environment

- Application management. Uploading, publishing, configuration and distribution of GO!Apps.
- Mobile analytics. Access to useful aggregated information in graphical or table form about the usage of a GO!Enterprise Reach solution.
- Automated license provisioning. Automated assignment of a license upon the first connection of a mobile device to GO!Enterprise Server. Automated decommissioning of a license after a certain period of inactivity.
- Security management. Definition of security policies based on IP addresses, connection types, device types, mobile OSs and apps.
- Monitoring. Access to system performance metrics, detailed logs of user actions, and server-side event messages.

## Typical GO!Enterprise Reach Solution Architecture



# **GO!Enterprise Mobilizer for Enterprise Mobile Apps**

For development, deployment and management of enterprise mobile apps, GO!Enterprise Mobilizer is the perfect choice. It is based on the same platform like GO!Enterprise Reach and provides the same advantages with regard to development and deployment of mobile apps. However, enterprise mobile apps have considerably different requirements in terms of management and provisioning when compared to consumer mobile apps. GO!Enterprise Mobilizer provides enterprise-oriented functionality like user authentication, user management, remote lock & wipe and powerful access control management. GO!Enterprise **Mobilizer** is ideally suited for the implementation of Bring Your Own Device (BYOD) mobility strategies.



# **End-to-end Security**

GO!Enterprise Reach solutions are based on the GO!Enterprise unified mobility platform which was designed from the ground up with security in mind. Thus, GO!Enterprise Reach solutions inherit a wealth of security features that minimize the risk of unauthorized access, data leakage and other security breaches.

Security Feature	Description
Gateway-based communication	GO!Apps powered by <b>GO!Enterprise Reach</b> do not communicate directly with back-end systems. Instead, all communication goes through <b>GO!Enterprise Server</b> which usually resides in the corporate DMZ and acts as a proxy for all communications requiring access to systems in the corporate LAN like ordering, billing, booking or CMS.
Encryption	<b>GO!Enterprise</b> provides end-to-end FIPS compliant encryption for all data. Data on the server component of the platform is protected using 3DES 192-bit encryption. Data sent over the air or at rest on the device is protected using AES 256-bit encryption. Data transmission can be further secured with the use of SSL encryption. <b>GO!Enterprise Server</b> can also encrypt connections to remote back-end systems using SSH tunneling.
Access Control Management	Access can be controlled from the GO!Enterprise Administration web console on the basis of connection types, IP addresses and devices:  Access to specific applications can be granted according to the type of connection (Wi-Fi or cellular) or the network used  Access to specific applications can be granted to approved devices only or to specific device types  Access to the administration and GO!App deployment functionality of GO!Enterprise Server can be restricted to specific IP addresses
Containerization	GO!Apps powered by <b>GO!Enterprise Reach</b> are accessible via <b>GO!Mobile Client</b> , the secure native container which ensures separation of GO!App data and personal data.
Mobile client authentication	Only a specific white-labeled version of <b>GO!Mobile Client</b> is allowed to access the <b>GO!Enterprise Reach</b> solution
Logging	<b>GO!Enterprise Server</b> provides extensive logs and log management functionality for tracking and monitoring unauthorized access in a secure and tamperproof environment



Mobilize Your Services - Reach Anybody, Anywhere, Anytime

# **System Requirements**

Platform Component	Requirements
Server	<ul> <li>Intel® Pentium® IV, at least 2 GHz</li> <li>At least 4GB RAM</li> <li>MS Windows Server 2003, 2008 or 2012</li> <li>Microsoft .NET framework 3.5</li> <li>IIS 6.0 or later</li> </ul>
Repository	MS SQL Server 2005, 2008 or 2012 (Standard, Enterprise or Express editions)
Mobile Client	Android, BlackBerry, iOS, Windows Phone, Windows 8/RT

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Visit our site globoplc.com to learn more about GO!Enterprise and GLOBO's mobility solutions.

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