

# The Challenge

Today's enterprises are increasingly leveraging mobility solutions to improve productivity, decrease response times and streamline operational processes. However, they face considerable costs and technical difficulties in development, deployment and management of enterprise mobile apps because traditional tools and systems do not cope with the proliferation of mobile device platforms and the inherent security and management challenges of mobile devices. Adoption of a Bring Your Own Device strategy makes things even more complex, demanding enterprise control over employees' individual-liable mobile devices in order to allow access to enterprise systems and information.

#### **The Solution**

GO!Enterprise Mobilizer is the perfect choice for development, deployment and management of enterprise mobile apps. GO!Enterprise Mobilizer solutions are built rapidly using a development studio which produces cross-platform mobile GO!Apps with a native look & feel. GO!Enterprise Mobilizer enables centralized distribution of GO!Apps on any mobile device and provides enterprise-grade functionality for end-to-end management of enterprise mobility solutions. The use of GO!Enterprise Mobilizer ensures secure and centrally controlled mobile access to any enterprise system such as ERP, CRM, ordering, billing, ticketing etc. and is ideally suited for the implementation of Bring Your Own Device (BYOD) mobility strategies.





GO!Enterprise Mobilizer 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 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 secure mobile business apps which 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.
- Out-of-the-box connectors. Developers can seamlessly integrate their GO!Apps with 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 which a GO!App cannot access.
- 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.
- 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 developerdefined time intervals. Developers can also use the embedded store & forward mechanism of GO!Mobile **Clients** to implement GO!Apps which are occasionally connected to enterprise systems.

#### **KEY BENEFITS**

Unified solution for development, deployment and management of B2E & B2B mobile apps

Build once, deploy on any major mobile platform

Seamless integration with any back-end system

Secure container separates personal and enterprise data on mobile devices

Ideally suited for BYOD initiatives

**End-to-end encryption** 

Centralized management of users, apps, mobile clients, security policies

Advanced access control and security policies

Future-proof architecture minimizes TCO

- True IDE. GO!Development Studio allows design, compilation and testing of GO!Apps from a single integrated environment. There is no need for third-party development tools or platforms to build a fully functional GO!App.
- Flexible UI design. The user interface of GO!Apps can be adjusted during runtime according to specific business conditions, data values or user actions. Hence, developers can build engaging GO!Apps which incorporate business rules at the mobile presentation layer.



A powerful IDE for mobile app development



- Workflow support. Apart from typical menu-driven applications, GO!Apps can also support complex workflows based on business rules or user actions. Mobile apps for approval and audit processes, surveys and case management are easy to build using GO! Development Studio.
- 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.
- Security design. GO!Development Studio enables the design of mobile apps with fine-grained security features. Developers can select which forms or components of a GO!App should be securityenabled so that administrators can grant appropriate access rights before distribution. Separate authorization mechanisms can be enforced per GO!App and validation tokens can be used to further secure mobile transactions.
- 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.
- 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.
- **GO!Mobile Client**

GO!Enterprise Mobilizer solutions are deployed to mobile devices via GO!Mobile Client, a secure native container which provides controlled access to GO!Apps and separates enterprise and personal data. For the user, GO!Mobile Client is just another mobile app with encrypted data whereas for system administrators, it is a fully controlled environment that enables secure authentication, centralized application distribution and configuration management.

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.

GO!Mobile Client is ideal for the implementation of BYOD (Bring Your Own Device) strategies, since it allows employee owned devices to access enterprise systems in a secure and centrally controlled manner, without imposing limitations on personal applications and device configurations or on the use of personal data.

#### Supported platforms include:



## **GO!Enterprise Server**

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

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

- Integration engine. GO!Enterprise Server handles all the complexity of communication with enterprise 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.



• User authentication. User authentication can be performed against LDAP, Active Directory or GO!Enterprise Server's internal directory. GO!Enterprise Server also supports client certificates and can be extended to use third-party authentication services.

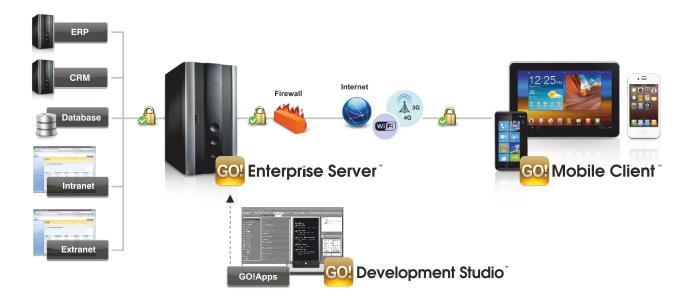


**GO!Enterprise Administration** environment

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

- Application management. Uploading, publishing, configuration and distribution of GO!Apps.
- User & client management. User and device provisioning, remote lock & wipe for GO!Mobile Clients.
- Security management. Assignment of access rights per GO!App to users and groups. Definition of security policies based on IP addresses, connection types, device types, mobile OSs, apps, users and groups.
- Monitoring. Access to system performance metrics, detailed logs of user actions, geo-tracking information, and server-side event messages.

### Typical GO!Enterprise Mobilizer Solution Architecture



## **GO!Enterprise Reach for Consumer Mobile Apps**

For development, deployment and management of consumer mobile apps, GO!Enterprise Reach is the perfect choice. It is based on the same platform like GO!Enterprise Mobilizer and provides the same advantages with regard to development and deployment of mobile apps. However, consumer mobile apps have slightly different requirements in terms of management and provisioning when compared to enterprise mobile apps. GO!Enterprise Reach provides consumer-oriented functionality like automated license provisioning and mobile analytics. GO! Enterprise Reach solutions are fully white-labeled by default.

# **End-to-end Security**

**GO!Enterprise Mobilizer** solutions are based on the **GO!Enterprise** unified mobility platform which was designed from the ground up with security in mind. Thus, **GO!Enterprise Mobilizer** 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 Mobilizer</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 ERP, CRM, ordering, billing, ticketing etc. This architecture eliminates the need for costly mobile VPN solutions.
Encryption	<b>GO!Enterprise</b> provides end-to-end FIPS compliant encryption for corporate 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 encrypt connections to remote enterprise systems using SSH tunneling.
Authentication	Each user has to provide a username and a password in order to log in to <b>GO!Enterprise Mobilizer</b> solutions. Authentication can be performed against LDAP, Active Directory or <b>GO!Enterprise Server</b> 's internal directory. <b>GO!Enterprise</b> can be extended to support third-party authentication services.
Client Certificates	<ul> <li>GO!Enterprise provides built-in support for the creation, safe distribution and use of client certificates on mobile devices. Deployment of client certificates offers significant security advantages:         <ul> <li>Advanced two-factor authentication which requires a password and a certificate that is specific to the device used.</li> <li>Fully secure enrollment of mobile devices which includes the use of a one-time registration code before the secure transmission and installation of a client certificate.</li> <li>Extra security layer for access to GO!Enterprise Server which will additionally require a valid client certificate before accepting a properly formatted and encrypted request from an authenticated user.</li> </ul> </li> </ul>
Access Control Management	<ul> <li>Access can be controlled from the GO!Enterprise Administration web console on the basis of user roles, connection types, IP addresses and devices:</li> <li>System administrators can assign access rights and permissions to user groups (managers, staff, etc.) and apply custom permissions to specific users.</li> <li>Access to specific applications can be granted according to the type of connection (Wi-Fi or cellular) or the network used.</li> <li>Access to specific applications can be granted to approved devices only or to specific device types.</li> <li>Access to the administration and GO!App deployment functionality of GO!Enterprise Server can be restricted to specific IP addresses.</li> </ul>
Containerization	GO!Apps powered by <b>GO!Enterprise Mobilizer</b> are accessible via <b>GO!Mobile Client</b> , the secure native container which ensures separation of enterprise and personal data.
Mobile Data Leakage Prevention	<ul> <li>GO!Mobile Client provides advanced protection against data leakage threats:</li> <li>Remote lock of the mobile client.</li> <li>Remote wipe of data and apps in the mobile client.</li> <li>Control of copy-paste from GO!Apps to third-party apps outside the secure container.</li> <li>Centrally-enforced client passcode.</li> <li>Automatic wipe after a period of inactivity or a number of false passcode entries.</li> </ul>
Geo-tracking	<ul> <li>GO!Enterprise supports automated location tracking of GO!Mobile Clients. Geo-tracking can be enforced as a security policy to specific users or groups and provide:         <ul> <li>The current location of lost or stolen devices.</li> <li>Geo-tagging information for user transactions against back-end systems.</li> <li>Visual trail of the locations where a GO!Mobile Client was used for a specific number of days in the past.</li> </ul> </li> <li>GO!Enterprise will also provide geo-fencing functionality which will allow an administrator to limit the availability or the functionality of mobile clients and apps within specific geographical areas.</li> </ul>
Mobile Client Management	System administrators have full control over every <b>GO!Mobile Client</b> in order to:  Wipe data remotely for lost devices.  Lock-down access from specific devices.  Update security policies and user access rights.  Manage application security configuration.  Enforce new application settings.
Logging	<b>GO!Enterprise Server</b> provides extensive logs and log management functionality for tracking and monitoring unauthorized access in a secure and tamper proof environment.



Mobilize Any Business Application Rapidly, Securely, Cost-efficiently

# **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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