Business Reasons For Mobilizing Oracle Databases Using SQL Anywhere

A whitepaper from Sybase iAnywhere
CONTENTS

Contents 2
Introduction 3
Why Develop Mobile Database Applications? 3
Anatomy of a Mobile Database Application 4
The SQL Anywhere Advantage 5
Summary 5
INTRODUCTION

Year after year, the database market continues to grow as more corporations implement relational database management systems (RDBMS). They do so to gain competitive advantage by consolidating their information in order to streamline operations. The Oracle database is the leading RDBMS in many industries. As companies prepare to extend data to remote workforces, many of them need a way to efficiently mobilize the information stored inside their Oracle servers. Using SQL Anywhere technology, corporations can quickly implement robust and secure mobile database solutions that deliver enterprise data to field workers equipped with laptops, tablet PCs, handhelds, or smartphones.

With SQL Anywhere, companies can develop powerful mobile applications that take advantage of enterprise-caliber features, as well as provide reliability and flexibility through advanced synchronization functionality. It can enhance and improve the end-user or customer experience by offering unmatched resource efficiency and out-of-the-box performance. Additionally, SQL Anywhere provides end-to-end security, so you can be reassured that your data will not be compromised. SQL Anywhere can truly mobilize the mission-critical information stored inside your Oracle server and allow your company to successfully conduct transactions at the frontline of your business.

WHY DEVELOP MOBILE DATABASE APPLICATIONS?

A significant advantage of a mobile database application is that it allows end users to always have access to corporate information, whether or not they are connected to the enterprise. In many instances, a constant reliable network connection may not be available or may not be cost effective. In those cases, data availability right on the mobile device will allow remote users to continue working without any disruptions that can hinder their productivity.

You only need to mobilize the Oracle data specific to the mobile application. You do not have to duplicate entire schemas for the remote workers. Only the information that applies to them is deployed to the mobile application. This method greatly improves efficiency when performing data synchronization, as only the changes applied to the database are transmitted, thus reducing your network bandwidth cost.

By developing a mobile database application, you can reduce errors and provide consistency throughout your entire solution, from the existing data stored inside the Oracle server all the way to the new data that is entered by the remote worker. Some examples of mobile database applications that benefit from always available information include:

- **Salesperson equipped with a laptop** - having the most up-to-date information about customers and new products allows placing of new orders right at the customer site.
- **Hospital staff equipped with tablet PCs** - having a patient’s medical history readily available allows doctors and nurses to have a patient’s medical history right at the point-of-care.
- **Building inspectors equipped with tablet PCs** - having structural data, building plans and regulations on hand allows for immediate transmission of results upon completion of the inspection.
- **Restaurant chain** - restaurant operations can track all food orders and assess inventory levels at the restaurant’s location before synchronizing this data to the headquarters’ database.
ANATOMY OF A MOBILE DATABASE APPLICATION

The following diagram describes the components required to mobilize your mission-critical Oracle data using SQL Anywhere.

Your Oracle server resides at the corporate headquarters. This database stores all the information required to run your business, such as employee, customer, and product data.

The MobiLink server, part of SQL Anywhere, provides bi-directional synchronization between your Oracle server and all mobile database applications. MobiLink automatically detects conflicts and handles concurrency issues.

Secure connection to the enterprise via Internet or cellular network

Communication is wired or wireless

SQL Anywhere database technology deployed to mobile applications running on desktops, laptops, tablet PCs, handhelds and smartphones. This database is synchronized with the Oracle enterprise backend.
THE SQL ANYWHERE ADVANTAGE

Mobilizing Oracle databases using SQL Anywhere offers several key benefits, allowing your enterprise to develop and maintain an edge over the competition.

1. **Enterprise-caliber features.** With SQL Anywhere, you can develop powerful mobile database applications that take advantage of the full SQL language standard. Features such as stored procedures, triggers, user-defined functions, materialized views, and much more will allow you to implement mobile applications with rich functionality, increasing your frontline workers’ productivity.

2. **Advanced synchronization.** The MobiLink server provides bi-directional synchronization from mobile databases to your Oracle backend. With features such as automatic conflict detection, priority sync, and server-initiated sync, MobiLink can add various levels of flexibility to your applications. With the capability to support thousands of remote clients, your mobile solution will remain exceptionally robust as it grows alongside your business.

3. **High Out-of-the-Box Performance.** SQL Anywhere technology is designed to operate in environments where memory requirements and processor power may be scarce. As such, it delivers outstanding performance right out of the box by making use of features such as indexes, dynamic cache sizing, and intelligent query optimization. SQL Anywhere provides extremely fast access to the mobile database, resulting in prompt application response times and enhancing the end-user’s experience.

4. **End-to-End Security.** Companies must safeguard against security threats, such as device theft or loss, and interception of network traffic. SQL Anywhere uses 128-bit strong encryption for the mobile database and the communication streams to and from the Oracle server. With this level of end-to-end security, you can be assured that your corporate data will not be compromised.

SUMMARY

There are many scenarios where mobilizing Oracle data can be valuable to a company. Some examples include salesforce automation, mobile healthcare units, and remote branch offices. By using SQL Anywhere as the mobile database, companies can bring their corporate data into the hands of their frontline workers, enabling them to conduct business at the point of interaction with their customers. Mobile applications implemented with SQL Anywhere have the advantage of benefiting from enterprise-caliber functionality, robust synchronization directly to the Oracle backend, high out-of-the-box performance, and end-to-end security. SQL Anywhere will allow your company to easily mobilize your Oracle databases and extend the success of your business from headquarters all the way to your field workers.