

Oracle TimesTen In-Memory Database Inside Location-Based Services

Challenge

Government mandates for life-saving services such as E911/E112 and the need for new revenue-generating applications are driving service providers and operators to deploy flexible location-based services.

Solving the Challenge

Oracle TimesTen In-Memory Database enables instantaneous processing of location updates, dynamic proximity information, and corresponding billing records. Oracle TimesTen enables LBS to capture, store, use, and distribute information in real time, while preserving transactional integrity and ensuring continuous availability.

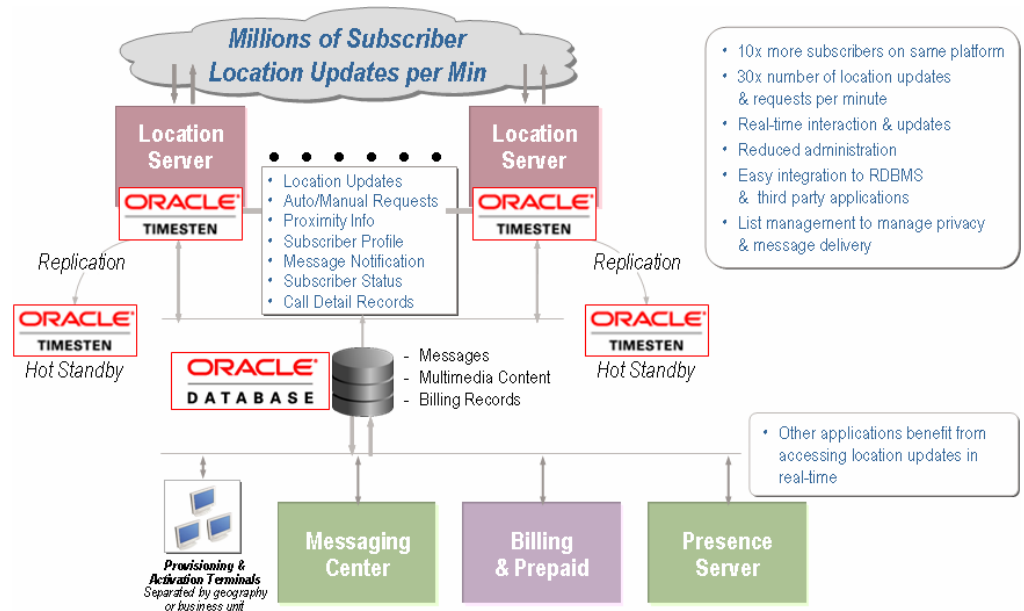
Benefit

Oracle TimesTen inside LBS applications provides the infrastructure software to cost-effectively manage a growing number of location updates and requests. Applications with Oracle TimesTen offer real-time responsiveness and the ability to safeguard location requests for life-saving services.

Location-Based Services Deliver New Revenues and Challenges

The need to overcome diminishing voice revenue and increasing regulatory mandates for such life-saving services as E911 and E112 are driving service providers and operators to invest in location-based services (LBS)—enabling new revenue streams through personalized wireless data services. This requires the ability to handle dynamic subscriber parameters in real time to capitalize on the information's value. In addition, the highly personalized nature of LBS necessitates the deployment of solutions capable of quickly adapting to changing subscriber requirements and integrating third-party applications.

With the growing deployments of wireless networks, LBS solutions need to deliver the throughput to process millions of location updates and dynamic proximity information per minute as well as an increasing amount of location requests. In addition to the growing volume of location related data, the delivery of services including dispatch, fleet management, E911/E112, and localized information requires real-time response for maximum impact. It is necessary to facilitate the interaction with other time-sensitive applications such as messaging and content delivery platforms to deliver up-to-date information. As a result, a new breed of infrastructure software is required inside LBS applications.



Oracle TimesTen Powers LBS

Oracle TimesTen at the core of an LBS application enables:

- Distributable and scalable architecture
- Persistent storing of location updates for E911/E112 services
- Real-time throughput to process location and proximity updates
- Easy integration with other applications
- Reduced maintenance and administration

Oracle TimesTen Manages Time-Critical Data

Oracle TimesTen manages all performance and time-sensitive information used in LBS:

- Real-time location updates and dynamic proximity
- Automated & manual location requests
- Subscriber and device profiles
- List management and privacy settings
- Up-to-date messaging notifications
- Real-time event charging

Real-Time Infrastructure Software for LBS

Oracle TimesTen is designed for applications, like those in LBS, which must be:

- Instantly responsive
- Highly scalable
- Continuously available

Oracle TimesTen is a key infrastructure software component within a number of LBS applications, including:

- Gateway Mobile Location Center (GMLC)
- Serving Mobile Location Center (SMLC)
- Mobile Positioning Center (MPC)
- Location Enabling Server (LES)
- Positioning Determining Entity (PDE)

Oracle TimesTen enables massive volumes of location updates, dynamic proximity information, and location requests to be captured and processed. Oracle TimesTen's real-time responsiveness and scalability is key to enabling fast access to subscriber location, profiles, and status, as well as processing charging parameters in real time to feed billing and prepaid applications. In addition, Oracle TimesTen's industry-standard interfaces provide the flexibility to evolve and to easily share data with other applications. With Oracle TimesTen, LBS can deliver meaningful and valuable services that benefit from up-to-date location information.

Oracle TimesTen Ensures Continuous Availability

Persisting location updates is vital for life-saving applications such as E911/E112 but can also be invaluable in helping to extend continuous service for subscribers. Oracle TimesTen provides built-in features for replication and data recovery, necessary to deliver the reliability service providers and operators demand.

Oracle TimesTen Inside LBS Applications

Oracle TimesTen's scalability and low maintenance features contribute to delivering LBS on cost-effective hardware platforms without sacrificing reliability or the ability to handle peak work loads. Also, Oracle TimesTen provides standard interfaces to ease the development of new services or integration of third-party applications, which in turn boost customer retention and increase average revenue per user (ARPU).

LBS solutions built with Oracle TimesTen enjoy the capacity to handle and safeguard location requests for E911/E112 services, and support revenue generating services cost-effectively. As a result, location-based services can gracefully scale to meet growing demands and minimize investments, delivering a greater return on investment (ROI) for service providers and operators.

CONTACT US

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