

Oracle Process Accelerators for Telecommunications Mobile Data Offloading

Oracle Process Accelerators help achieve process excellence faster with end-to-end implementations of common business processes. Ready-to-use and extensible, Oracle Process Accelerators embody industry specific best practices and are available for download today.

Telecommunications providers look for ways to improve customer experience in highly congested areas when the networks get overloaded resulting in poor service. In addition, service providers look to capitalize on location-based, value-add services, which have higher contextual relevance in large gatherings for special events. For example, in a stadium, wi-fi can be configured to handle increased loads during times of high congestion such as at sporting events or concerts. In addition when mobile users come to the stadium, value-added services related to the event can improve customer experience and increased monetization for the service provider. For example send messages automatically to customers, “Welcome to Ball Park! Come to the display on the upper deck for complimentary 6 month service upgrade.”

Oracle Process Accelerator for Mobile Data Offloading

Mobile data offloading provides policy-based offloading of mobile data to alternate wi-fi networks. It enables telecommunications providers to reduce congestion on cellular networks and lower cost of operations. It helps handle extremely high volumes of events and determines if a mobile device has entered an area covered by lower cost networking.

KEY COMPONENTS

- Oracle Event Processing
- Oracle Business Activity Monitoring
- Oracle Spatial & MapViewer
- Oracle Coherence
- Documentation
- UPK Training

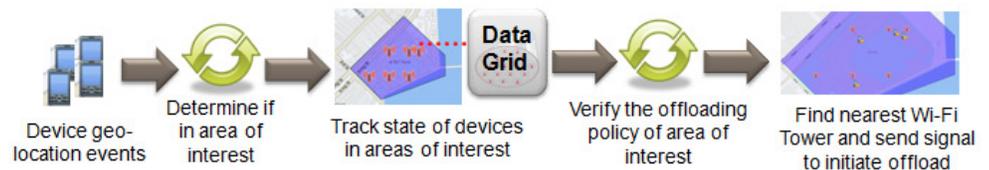


Figure 1: Mobile Data Offloading Process

It helps automatically balancing across alternate wi-fi networks in the vicinity. This helps better customer experience by improving performance and realize cost savings by using networks that have a lower cost to operate. It also helps in providing location-based, value-added services. Policies based offloading of customers, managed by individual zones, helps in providing better wireless service overall.

This Oracle Process Accelerator for Mobile Data Offloading leverages Oracle Event Processing under the covers. The process is configured to receive device location events from the Telco gateway systems. Areas of interest are pre-defined and recorded in a database, but fed into Oracle Event Processing via industry leading in-memory database, Oracle Coherence where the zones are indexed in memory.

The Oracle Event Processing process efficiently matches the geo-location event against the pre-defined areas. The result is fed into Coherence to update the state related to that device. When there is a state



change related to a device entering an area, the Oracle Event Processing process determines if the policy related to the area has been met to qualify for offloading. If so, the process determines the nearest wi-fi tower and determines if device is within the range, if so, a signal is sent to initiate an offload of the device to the wi-fi network (of the Telco or partner company).

Solution Details

Event Analysis with Spatial data

- Oracle Event Processing receives continuous stream of device locations from upstream systems.
- Oracle Spatial is used within Oracle Event Processing to determine if device coordinates are within any areas of interest. Extremely efficient processing since areas are indexed and held in memory and locations are processed in memory without network latency involved in using a database.
- Areas of interest are graphically defined by drawing polygons, and policies specified.

Coherence Integration

- Coherence holds relevant reference data from the database in cache and helps manage state of devices that have entered an area of interest.

Oracle Business Activity Monitoring

- Dashboards show current activity, devices in a particular zone, etc.

Benefits Analysis

Telecommunications Service Provider

- Realize cost savings by using networks that have a lower cost to operate.
- Can provide value-add services. Possibly charge for greater bandwidth at special events.
- Policies for when to offload customers are manageable by individual zone.

Mobile Device User

- Better wireless service overall. Network improves for people outside areas of interest.
- More features. Ability to purchase higher bandwidth or value add services.
- Coverage in congested areas. Coverage where it would have not been available otherwise.

CONTACT US

For more information about Oracle Process Accelerators, visit oracle.com/goto/bpm or call +1.800.ORACLE1 to speak to an Oracle representative.

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