

# ORACLE PERSONALIZATION

## KEY FEATURES

### KEY FEATURES OF ORACLE PERSONALIZATION INCLUDE

- Real-time recommendations
- Automated customer profiling and modeling
- Administrative and application APIs
- Single Administrative Interface
- Comprehensive Reports

*Oracle Application Server (OracleAS) Personalization helps companies provide real-time recommendations over the internet — supplying customers with personalized product recommendations, ratings of the likelihood that the customer will “like” the recommendations, and improved site navigation based on visitor interests and profiles.*

## DELIVERING PERSONALIZED WEB VISITOR RECOMMENDATIONS

OracleAS Personalization is part of the Oracle Application Server (OracleAS)—the industry's most complete and integrated application server—providing real-time personalization for e-business sales channels, such as Web Stores, application hosting environments, and call centers. OracleAS Personalization provides an integrated real-time recommendation engine that is deployed via the Oracle Application Server.

By delivering real-time personalization via OracleAS and the Oracle Database, OracleAS Personalization delivers powerful, scalable real-time personalization for customer "touch points." This enables e-businesses to deliver tailored, 1:1 customer experiences that will turn browsers into buyers.

OracleAS Personalization is designed to meet the challenges of vast amounts of Web data and yet enable the personal, 1:1 relationships that e-businesses require in order to compete today.

Because it benefits from the scalability of the Oracle Database, OracleAS Personalization can analyze large volumes of customer data while preserving the uniqueness of individual customer relationships.

OracleAS Personalization uses data mining technology to sift through the mountains of e-business data generated from customers' clicks, transactions, demographics, and ratings data gathered from Web sites.

OracleAS Personalization provides real-time recommendations and answers to questions such as:

- Which items is this person most likely to buy or like?
- People that bought or like this item are likely to buy or like which other item(s)?
- How likely is this person to buy or like this item?
- Which items is this person most likely to buy or like given he likes or is buying another item?

E-commerce sites and Web portals can provide their e-business customers with

personalized product recommendations, ratings of the likelihood that they will “like” the recommendations, and improved site navigation based on their interests and profiles.

### **REAL-TIME RECOMMENDATION ENGINE ARCHITECTURE**

OracleAS Personalization allows e-businesses to personalize Web sites to each individual visitor, resulting in increased revenue and customer satisfaction.

OracleAS Personalization uses SQL queries for obtaining scores, which can be executed in real-time or batch mode.

Recommendation engines serve OracleAS Personalization’s real-time recommendations to Web sites across the enterprise.

OracleAS Personalization’s predictive models may be rebuilt on a periodic basis — e.g. daily, weekly, monthly — and deployed to the recommendation engines when they have completed.

OracleAS Personalization allows users to create “recommendation engine farms” that are comprised of many recommendation engines serving customized recommendations to the Web site. This architecture is extremely scalable for high-traffic sites.

OracleAS Personalization manages its predictive models in memory to handle the high traffic and speed requirements associated with e-commerce sites. Naïve Bayes and Predictive Association Rules data mining algorithms find hidden patterns and customer profiles that drive personalized recommendations.

### **AUTOMATIC CUSTOMER PROFILING AND MODELING**

OracleAS Personalization minimizes the effort needed to create highly accurate personalized recommendations.

Using data from multiple sources, including customer databases, navigational or “click” data, and transaction systems, OracleAS Personalization builds a real-time profile for each customer.

OracleAS Personalization selects the best offer for each point of contact based on what it knows about a particular customer. As individuals accept or decline offers, Oracle Personalization adjusts and incorporates that information into future offers.

### **ORACLE PERSONALIZATION API**

The Oracle Personalization Application Programming Interface (API) allows e-businesses to offer real-time personalization to their registered customers and Web visitors for any Java Web site running on OracleAS.

The Oracle Personalization API allows customers to instrument their Web sites to collect customer “click” data. This API eliminates the need to sift through mountains of noisy click-stream data.

Oracle Personalization’s flexible and tunable recommendation API enables applications to deploy a variety of recommendation strategies. The API allows the application developer to specify various model-tuning parameters. Hence, the real-

time recommendations can be tuned to support the needs of a variety of “customer touch-points.”

### **SINGLE ADMINISTRATIVE INTERFACE**

Oracle Personalization reduces routine maintenance efforts by allowing Web administrators to build, tailor, manage, and deploy many recommendation engines enterprise-wide from a single administrative interface.

Web administrators can also set up schedules for primary events — such as model building, model deployment, and reporting — to occur automatically. Additionally, they can schedule the deployment of multiple recommendation strategies for different campaigns or time periods (such as holiday), or to capture and model behavior for specific events.

### **KEY DIFFERENTIATORS**

#### **Real-Time Recommendation Engine Deployed on OracleAS**

Oracle Personalization dynamically serves personalized recommendations (such as products, content, and navigational links) in real-time based on a registered customer’s or anonymous visitor’s explicit (transactions, purchases, ratings, and demographic data) and implicit (mouse clicks, pages visited, and banners viewed) information.

#### **Handles Anonymous Visitors, “Sessions,” and Navigational Data**

Oracle Personalization can make informed recommendations based upon implicit customer information (mouse clicks, pages visited, and banners viewed).

Oracle Personalization can deal with anonymous visitors because it tracks “sessions” and navigational data. It can take as input Web pages and banners visited and use that information to suggest recommendations or to improve site navigation.

Oracle Personalization can also integrate with applications that do not have session management by creating its own session IDs to track visitor activity.

- “Anonymous visitor” example:  
Recommend books about national parks and outdoor cooking to anonymous visitors who are currently viewing cycling and skiing Web pages
- “Registered customer” example:  
Recommend home exercise equipment to people who bought sneakers and winter jackets

#### **Single Administrative GUI**

Oracle Personalization allows you to build, tailor, manage, and deploy many recommendation engines enterprise-wide from a single administrative interface.

Additionally, it supports scheduling the deployment of multiple recommendation strategies for different campaigns or time (such as holiday) periods, or to capture and model behavior for specific events, via an events scheduler.

**MODEL BUILDING EMBEDDED IN ORACLE 10g DATABASE**

Oracle Personalization is completely embedded within the Oracle Database, for power, scalability, and minimization of data redundancy.

**Scalability**

Because it benefits from the scalability of the Oracle Database--the world's most powerful database for e-business, Oracle Personalization analyzes large volumes of customer data while preserving the uniqueness of individual customer relationships — delivering personalized recommendations in real-time.

**Complete, Integrated Solution**

Oracle Personalization combines customer information from a variety of sources, reduces data movement and redundancy, and provides a 360-degree customer view to better understand and satisfy customer needs. Because this information is in the Oracle Database, it is available for all other Oracle Applications and users.

**KEY BENEFITS****KEY BENEFITS:**

Oracle Personalization provides recommendations using state of the art Naïve Bayes and Predictive Association Rules. Recommendations are provided in real time and consider both current and past activities of candidate customers.

**RELATED PRODUCTS:**

Oracle Personalization is particularly attractive with OracleAS Portal and OracleAS OC4j.

**RELATED SERVICES**

The following services are available from Oracle Support Services:

- Update Subscription Services
- Product Support Services
- OnlineDBA
- OnlineDBA for Applications

**ADDITIONAL FEATURES****Data Access**

Any Web site that supports Apache Web servers for Web data collection and real-time personalization

**Multiple Algorithms**

Transactional Naïve Bayes

Predictive Association Rules

**Reports**

Visitor-to-customer conversion

Personalization success

Most recommended items

**Platform Requirements**

Oracle Personalization runs on any supported Oracle Application Server

Oracle Database (required)

Oracle Partitioning (recommended)