

Oracle9iAS Personalization

Release Notes

Release 2 (v9.0.2) for UNIX

April 2002

Part No. A95274-01

These release notes describe Oracle9iAS Personalization, a product with the Oracle9i Application Server (Oracle9iAS). These notes present late-breaking information about the product and information about any new bugs. This document is organized as follows:

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About Oracle9iAS Personalization 9.0.2

Oracle9iAS Personalization (OP) provides real-time personalization for Web sites using an integrated recommendation engine that is embedded in an Oracle database.

OP is based on data mining technology and modeling. It builds a predictive model of customer preferences using Web-based behavioral data collected by a Web site as well as demographic data.

The behavioral data OP collects can include customers' historical and current navigation and preferences, both stated and implied. OP then builds a model from the data collected (and stored in Oracle database tables) and makes real-time personalized recommendations based on the model.

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Oracle9iAS Personalization consists of the following components:

- **Recommendation Engine:** A recommendation engine collects and processes data from the calling Web application and returns personalized recommendations to it.
- **Recommendation Engine Farm:** A collection of related recommendation engines. The recommendation engines in a farm make recommendations based on the currently deployed package and service a particular application.
- **Package:** An object created using the Administrative UI to schedule and configure model builds. Packages define the build settings and other attributes necessary to building data mining models.
- **Mining Object Repository (MOR):** Maintains mining metadata and mining model results as defined by the OP data mining schema; provides core mining algorithms and administrative functions for OP users.
- **Mining Table Repository (MTR):** Contains the fixed schema and data used for building packages.
- **REAPI:** A collection of classes that enable a Web application written in Java to collect and preprocess data used to build OP models and to obtain recommendations from OP (that is, to score using OP models).
- **RE Batch API:** A collection of classes that enable a Web application written in Java to request Oracle9iAS Personalization-style recommendations in bulk mode.

OP includes an Administrative UI that is used to manage Oracle9iAS Personalization functions such as creating and managing recommendation engines and farms, creating and managing packages, scheduling builds and the deployment of packages, and scheduling reports.

The REAPI provides Java classes and methods you use to collect Web-based customer data and obtain recommendations.

What's New with Release 9.0.2

The following are new with Release 9.0.2:

- OP internal changes: OP no longer uses Oracle Workflow to execute code in database background processes or perform email notification when a process completes.
- Improvements and changes to REAPI and RE Batch API:
 - Complete Javadoc for REAPI and RE Batch API are provided with OP 9.0.2
 - REAPI_RT is compatible with Java 2.0 (v1.3.1)
 - REAPI Demo complies with Java Servlet 2.2
 - The following methods are deprecated in class REProxy_RT:
 - the public constructor
Use REProxyManager.createProxy() instead.
 - destroy()
Use REProxyManager.destroyProxy() or REProxyManager.destroyAll Proxies() instead.
 - getProxy()
Use ReProxyManager.getProxy() instead.
- New MOR configuration parameters:
MAXNUMPURCHASINGSESS
MAXNUMRECEFFREP
MAXNUMITEMIZEDRECEFFREP
NUMOFITEMSINITEMIZEDRECEFFREPORT
IAS_HOSTNAME
IAS_SERVLET
IAS_SERVLET_ZONE
IAS_PORT
IAS_SERVLET_MOR_CONN

These are defined in [Table 5-2, "MOR Configuration Parameters"](#), in *Oracle9iAS Personalization Administrator's Guide*.
- Documentation set reorganized and added to the Oracle9i Application Server Documentation Library.
- New installer, including configuration utility.
- Support for migration from OP 9.0.1.
- JSP tags (see [Chapter 6, "JSP Tag Configuration"](#), in *Oracle9iAS Personalization Administrator's Guide*).

Where to Find More Information

The documentation set for Oracle9iAS Personalization at the current release consists of the following documents:

- *Oracle9iAS Personalization Release Notes*, Release 9.0.2 (this document). Contains late-breaking news about the product and platform-specific installation information.
- *Oracle9iAS Personalization Administrator's Guide*, Release 9.0.2 (includes installation information that is common to all platforms).
- *Oracle9iAS Personalization User's Guide*, Release 9.0.2.
- *Oracle9iAS Personalization Recommendation Engine API Programmer's Guide*, Release 9.0.2. A programmer's manual for accessing the recommendation engines in real time and for obtaining bulk recommendations.
- *Oracle9iAS Containers for J2EE JSP Tag Libraries and Utilities Reference*. Chapter 9 discusses OP tags.
- REAPI classes and methods are described in detail in the Javadoc in the OP section of the Oracle9i Application Server Documentation Library, which is on the documentation CD.
- For detailed information about the OP API, see *Oracle9iAS Personalization API Reference* (Javadoc) in the Oracle9i Application Server Documentation Library, which is on the documentation CD. OP documentation is on the Business Intelligence tab of the documentation library.

Related Manuals

Oracle9iAS Personalization documentation is a component of the Oracle9i Application Server Documentation Library. See especially:

- *Oracle9i Administrator's Guide*
- *Oracle9i Application Server Installation Guide* (the appropriate version for your operating system).

Requirements

Documentation is provided in PDF and HTML formats.

To view the PDF files, you will need

- Adobe Acrobat Reader 3.0 or later, which you can download from www.adobe.com.

To view the HTML files, you will need

- Netscape 4.x or later, or
- Internet Explorer 4.x or later

Online Help

The Oracle9iAS Personalization Administrative UI includes online help, available by clicking the Help button in the upper right corner of each page of the Administrative UI.

For System Administrators

For technical support services, contact Customer Support at

<http://www.oracle.com/support/>

Customer Database

Oracle9i Personalization requires a customer database in addition to the database included with Oracle9iAS. The customer database must be Oracle9i release 1.

Performance and Data Sizing

The table below shows the performance results on three datasets. The build time is linear in the number of customers and quadratic in the average profile size. We obtained the results shown here on a Sun Enterprise 450 (4 x UltraSPARC-II 400MHz) with 4096 megabytes of memory. Based on these numbers, it is possible to estimate the build time for any arbitrary dataset; see the subsection on Data Sizing, below. Definitions of the column headings follow the table.

Dataset	# of Cust	# of Items	Avg. Profile Size	Avg. Rating Profile	Avg. Purch. Profile	Avg. Nav. Profile	Build Time	# of Rules Agg. Model	# of Rules Cross-Sell Model
1	1000	50K	50	8	17	25	1 min	9152	155
2	5000	50K	50	8	27	36	3 min	166588	37
3	1000	50K	100	16	34	50	5 min	313154	2997

The column headings have the following meanings:

- **Dataset:** This is simply an identifier for the dataset.
- **# of Cust:** The number of registered customers, which is the number of records in the MTR_CUSTOMER table.
- **# of Items:** The number of items, which is the number of records in the MTR_ITEM table.
- **Avg. Profile Size:** The number of items in each customer's profile; this is the sum of average rating profile, average purchasing profile, and average navigation profile.
- **Avg. Rating Profile:** The average number of rating items in each customer's profile. Can be computed by dividing the number of records in MTR_RATING_DETAIL by the number of distinct CUSTOMER_ID's in MTR_RATING_DETAIL.

- **Avg. Purch. Profile:** The average number of purchasing items in each customer's profile. Can be computed by dividing the number of records in MTR_PURCHASING_DETAIL by the number of distinct CUSTOMER_ID's in MTR_PURCHASING_DETAIL.
- **Avg. Nav. Profile:** The average number of navigation items in each customer's profile. Can be computed by dividing the number of records in MTR_NAVIGATION_DETAIL by the number of distinct CUSTOMER_IDs in MTR_NAVIGATION_DETAIL.
- **Build Time:** The total time taken to build the aggregated model and the cross-sell model.

MOR Temp Space Use the following formula to calculate a rough estimate for the number of bytes of MOR temp space required:

$$(54 * P^2 * C) / 2$$

where P is the average profile size and C is the number of customers. Each item pair generated during a build takes 54 bytes, which is the space needed to store a record with two item columns and a count column. For the model build to run, the available temp space should be more than the estimated temp space requirement for the P and C values of the dataset.

Bugs and Limitations

This section describes known bugs and limitations in Oracle9iAS Personalization release 9.0.2 as well as corrections to the documentation.

Correct Name of Product: The correct name of the product is "Oracle9iAS Personalization." In some instances the product may be incorrectly referred to as "Oracle9i Personalization."

Restrictions on Passwords: Because of password encryption and decryption, there are two restrictions on passwords for OP users:

- OP users must not enter passwords with trailing blanks.
- User passwords are limited to 30 or fewer characters, the standard Oracle limit.

RE Demo: Inconsistent Results: The results of Recommend Top Item and Recommend Bottom item are inconsistent. For example, if you request Recommend Top Item with a particular data set and get a particular result, and then repeat the process with the same data set, you may get a different result.

Sorting by ID and Sorting by Type Do Not Work: For both sessionful and sessionless REAPIs, for recommendation content, sorting by ID and sorting by Type do not work, whether "Ascend" or "Descend" is selected.

Native Character Sets Limitation: OP is certified against UTF8 only.

Bad Proxy Object Remains: When bad input data is entered in the `REProxyManager.createProxy()` method, an invalid proxy object can be created and remain in the pool. This can cause errors in later operations if you use the proxy. **Workaround:** Create a new proxy object using a different name. The bad proxy is harmless as long as you don't use it.

Advanced Button Brings Up "404 File Not Found" Message: This can happen with some versions of some browsers if user clicks Advanced button (at the bottom of the Log page) to bring up Message Viewer window if that window is still open (because user clicked Advanced button earlier and the window is still open).

REAPI Demo Bugs

REAPI Demo: Invalid JDBC URL Is Not Detected: REAPI Demo does not throw an exception when a bogus value is entered for JDBC URL.

REAPI Demo: Session ID Not Listed in Close Session Message: If, for example, you create a customer session with ID 13 and then close this session, the following message is displayed: "REAPI session of the user null closed successfully."

Documentation Correction

In the *Oracle9iAS Administrator's Guide*, chapter 7, page 7-2, step 4 should be followed by a new step 5, as follows:

5. Run `insertMTRSeedRecords.sql`

and subsequent steps should be renumbered accordingly.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation

JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.