

# Oracle® Retail Merchandising System

Release Notes

Release 16.0.1.1

E92818-02

May 2018

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This document highlights a patch available on My Oracle Support to address Data Privacy.

**Note:** This application's base code is not changing for this numbered version unless the fix referenced below is applied.

The Patch is located at the following Patch ID numbers on My Oracle Support:

- 27092308
- 27339212

## Data Privacy Overview

This enhancement enables customers to accept and respond to end-user requests for data access, correction, and deletion for individual end-user data records they store in the Oracle Retail Merchandising System application.

The retailer is responsible for fulfilling this requirement. However, to do so, the retailer requires the capability to request this data from the Oracle application as needed.

As a Data Privacy enhancement, Oracle has created a Platform Data Privacy command line tool to provide retailers with services for requesting access to personal information for review and forget/update the personal information if requested.

Some of the examples of the personal information can be:

- First Name
- Last Name
- Address
- Email address
- Fax Number
- Contact numbers

The following features are handled in the Platform Data Privacy command line tool:

- End User Access/Right to Access (RTA): Enables retailers to accept and respond to end-user requests for data access, correction, and deletion for individual end-user data records they store in the Oracle service.
- Right to be Forgotten (RTF): Based on the end-user's right to request to forget and/or update their personal information, this feature enables the retailer to delete and/or update (mask) the end-user's personal data during the services period. Some of the data critical for the business or is part of a legal requirement might not be deleted.
- Validate Forgotten: Based on the end-user's right to request to forget and/or update their personal information, this feature enables the retailer to validate end-user requests.
- Data Portability: End-users have the right to receive the personal data concerning their own information stored in retail applications. The feature will be handled as part of the Platform Data Privacy command line tool's Right to Access functionality.

**Note:** With regard to Purging functionality, output files created by the Platform Data Privacy command line tool may be purged.

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**Note:** With regard to Logging functionality, server logs created by the Platform Data Privacy command line tool may be purged.

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## Installation

The services that are part of the Platform Data Privacy command line tool are executable through a command line executable JAR file: RetailAppsDataPrivTool.jar

## Setting up the Java Development Kit (JDK)

Java 1.8 is a prerequisite to install and test the Platform Data Privacy command line tool. This section contains instructions on how to set up the Java Development Kit (JDK).

### Download and Install Java 8

Download the latest 64-bit version of the Java Development Kit 8.

Install in a location on your machine. Ensure that the installation folder name does not contain any whitespaces (for example: Program Files).

### Define Environment Variables for JDK

To effectively use the JDK on your workstation you will need to define environment variables on your system.

#### Define the JAVA\_Home Variable

Define a new environment system variable named JAVA\_HOME with a value referring to the path where your JDK is installed.

For example:

```
JAVA_HOME=D:\Java\jdk1.8_66
```

#### Modify the PATH Variable

Modify your system's existing PATH variable to include the executable program location on your JDK installation. These executables are located under:

```
%JAVA_HOME%\bin.  
PATH=%JAVA_HOME%\bin;%PATH%
```

### Testing your JDK Installation

1. Start a new command line window by selecting Start>Run>Open> and then type cmd.exe.
2. Go to the root directory by typing: cd c:\ <enter>
3. Run the Java compiler and query its version by typing: javac -version  
The command should return with the Java version information. Make sure it matches the JDK version you just installed.

```
D:\gdpr>java -version
java version "1.8.0_66"
Java(TM) SE Runtime Environment (build 1.8.0_66-b18)
Java HotSpot(TM) 64-Bit Server VM (build 25.66-b18, mixed mode)

D:\gdpr>javac -version
javac 1.8.0_66
```

## RMS Application

### Compile RMS Objects

As part of the data privacy enhancement, a new package and a table type has been created that has to be compiled in the RMS database.

1. For the RMS 16.0x version, download the RMS patch 27092308 and apply the hotfix in the RMS database using the Orpatch utility. The hotfix contains create\_datapriv.sql, rtk errors.sql, dataprivsvcs.pls and dataprivsvcb.pls
2. The hotfix will create new type  
RAF\_DATAPRIV\_CTX\_PARAM\_REC, RAF\_DATAPRIV\_CTX\_PARAM\_TBL,  
And a new error message in the RTK\_ERRORS table and a new package  
DATAPRIV\_SVC.

For RMS versions 12.0, 12.1, 13.0, 13.1, 13.2, 14.0, 14.1, 15.0, customers can retrofit by referring to the solution included in RMS patch 27092308. The changes done for the 16.0 version will be applicable for the older versions as well.

For versions 14.0 and before, the customer order data is stored in ORDCUST and CUSTOMER tables. For versions 15.0 onwards, the customer order data is merged into single table ORDCUST. Due to this, changes are required in dataprivsvcb.pls (DATAPRIV\_SVC package) for versions 14.0 and earlier. Customers can refer to the diff report - dataprivsvcb.html present in the RMS patch 27092308 to retrofit the changes to older versions.

### Platform Data Privacy Command Line Tool

Download the RMS patch 27339212. The hotfix contains:

- RetailAppsDataPrivTool.jar
  - DATAPRIV-Global.xml
  - ContextOverride.properties
  - DATAPRIV-ValidateForget.xml
  - DATAPRIV-Get.xml
  - DATAPRIV-Forget.xml
1. Create a folder called DataPrivacy and copy the RetailAppsDataPrivTool.jar into this folder.
  2. Create a folder called RmsDataPrivConfig under the DataPrivacy folder and copy DATAPRIV-Global.xml, ContextOverride.properties, DATAPRIV-ValidateForget.xml, DATAPRIV-Get.xml and DATAPRIV-Forget.xml into this folder.

## Configure the Configuration Files

There are a few changes necessary to some of the configuration files.

- DATAPRIV-Global.xml
    - No changes necessary to this file.
  - ContextOverride.properties.xml
    - Contains details of the connection string to be used in Oracle Wallet.
    - Customer has to update the datasource string with the environment database details.
    - The JDBC URL must comply with the following format to reference Oracle Wallet credentials at runtime:
      - A forward slash “/” must be specified BEFORE the “@” character. This instructs the Oracle database driver to be aware of Oracle Wallet aliases.
      - The identifiers following the “@” character must be registered as an alias in the Oracle Wallet. The wallet creation and configuration steps is explained in the next section.
- Datasource string format - datasource-url=jdbc:oracle:thin:@hostname:port/SID
- For example. - datasource-url=jdbc:oracle:thin:@myhost:1521/mydb
- DATAPRIV-Get.xml
    - Contains the query or function to perform the right to access.
    - No changes necessary for this file.
  - DATAPRIV-Forget.xml
    - Contains the query or function to perform the right to forget.
    - No changes necessary for this file.
  - DATAPRIV-ValidateForget.xml
    - Contains validations to perform prior to right to forget.
    - No changes necessary for this file.

## Creating and Configuring Oracle Wallet

The Platform Data Privacy command line tool uses Oracle Wallet to securely store the database credentials. The wallet can be created using the RetailAppsDataPrivTool.jar present in RMS patch 27339212.

Here are the steps to be performed to create and configure the Oracle Wallet for the Platform Data Privacy command line tool.

1. Create an empty wallet file in a DataPrivacy directory by running the below command in a command prompt (cmd) in the DataPrivacy folder.

```
java -classpath RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI
-wrl <wallet directory>
-create
```

For example:

```
java -classpath ./RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI -wrl ./tmp_wallet -create
```

You will be prompted for a password. This will be the password to manage the contents of the wallet files.

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**Note:** Remember this password as it will be needed in succeeding commands against the wallet files.

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2. Add the database credentials into the wallet by running the following command in the command prompt (cmd) in the DataPrivacy folder. This will prompt to enter the password you created in step 1.

```
java -classpath RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI
-wrl <wallet directory>
-createCredential <db connect string> <db user> <db password>
```

The <db connect string> is the database connection string included in a JDBC connection URL in the ContextOverride.properties.xml. It is the part of the JDBC URL after the "@" character.

It is specified using the format: <hostname>:<port>/<SID>

For example: myhost:1521/mydb

<db user> - DB user to connect to the RMS database.

<db password> - password to connect to the RMS database.

For example:

```
java -classpath ./RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI -wrl ./tmp_wallet -
createCredential myhost:1521/mydb rmsuser password
```

3. Verify the database credentials in the wallet by running the following command in the command prompt (cmd).

```
java -classpath RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI
-wrl <wallet directory>
-listCredential
```

For example:

```
java -classpath ./RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI -wrl ./tmp_wallet -listCredential
```

Make sure the credential information shown by the command is as expected.

## Using the Platform Data Privacy Command Line Tool

The Platform Data Privacy command line tool is an executable JAR file that uses the "java -jar" option:

```
java -Ddatapriv.action=<action>
-Dinvoked.by=<user ID>
-DContextOverride.properties=<Context Override Properties file>
-Duse.jdbc.oracle.wallet=true
-Doracle.net.wallet_location=<Oracle wallet directory>
-Dconfig.xml.dir=<configuration files directory>
-Dcustomer.id=<query parameters for the tool>
-Did.type=<getPersonalInfo or updatePersonalInfo>
-Doutput.file.dir=<output file directory>
<other parameters>
-jar RetailAppsDataPrivTool.jar
```

The parameters are given to the command line via system property JVM arguments (-D options).

## Understanding the Command Line Parameters

System Property/Parameter	Required	Description
<code>datapriv.action</code>	Always	The data privacy action to be performed: Valid values: <ul style="list-style-type: none"> <li>▪ <b>access</b> Retrieve Personal Data in the system. Required properties to set: <code>customer.id</code>, <code>id.type</code></li> <li>▪ <b>forget</b> Remove Personal Data in the system. Required properties to set: <code>customer.id</code>, <code>id.type</code></li> </ul>
<code>invoked.by</code>	Always	The ID of the user calling the command line tool (for audit purposes)
<code>ContextOverride.properties</code>	Always	The path to a Java properties file that will contain the connection details of the database the Platform Data Privacy command line tool will connect to. Refer to 'Configure the configuration files' for more details.
<code>config.xml.dir</code>	Always	The directory that contains the DATAPRIV configuration XML files
<code>use.jdbc.oracle.wallet</code>	Always	Set to true to use Oracle Wallet files as a source for database credentials. Refer to 'Creating and configuring Oracle Wallet' for more details.
<code>oracle.net.wallet_location</code>	Always	The path to the Oracle Wallet directory. Refer to 'Creating and configuring Oracle Wallet' for more details.
<code>customer.id</code>	Always	The input parameters to the query/update the personal data.
<code>id.type</code>	Always	The query group type for which the data privacy action will be performed. Id.type should be <code>getPersonalInfo</code> for <code>datapriv.action=access</code> Id.type should be <code>updatePersonalInfo</code> for <code>action=forget</code>
<code>output.file.dir</code>	No	The output files directory. Default is the user's home directory.
<code>datapriv.summary.file.name</code>	No	The output summary file of the action. Defaulted to "ActionSummary- {%datapriv.action%}.xml"
<code>access.output.file.name.no.ext</code>	No	The output file name for access requests. Defaulted to "AccessResults". File extension depends on <code>access.output.fromat</code>

System Property/Parameter	Required	Description
access.output.format	No	The output file format for access requests Valid values: html (default) txt
datapriv.audit.log.dir	No	The directory where the audit log file will be located. The Default is the user's home directory.
datapriv.audit.log.name	No	The file name of the audit log file. The Default is "datapriv_audit.log"

## Understanding the customer.id

Customer.id is the place holder to pass the input parameters to query/update the personal data.

### Customer.id format for datapriv.action=access (Right to Access)

```
Dcustomer.id="{%entityName%}::{%entityType%}::{%entityId%}::{%fullName%}::{%phone%}::{%email%}"/>
```

- The customer-id-format is separated by ::
- All the input fields in the customer-id are not mandatory. User can just pass entityName and leave the rest of the fields as blank.
- The user has to pass the input field separator even if only one input is passed. For example, if the user wants to pass only entityName, then the value would be "buyer::::::::::"
- Enclose the customer-id string in quotes in case the input string has spaces. For example: "ORDER CUSTOMER::::::::::"
- The search results are restricted to 5 records at a time.

### EntityName

The type of personal data requested from the Platform Data Privacy command line tool. For example, if the user is a supplier and requests to get their personal information, then the EntityName will be passed as SUPPLIER.

When the data requested for entity SUPPLIER, PARTNER, WAREHOUSE or STORE, the results will also include the address information.

Valid values are - BUYER, MERCHANT, STORE, WAREHOUSE, SUPPLIER, PARTNER, OUTLOC, EMPLOYEE, CUSTOMER, ORDER CUSTOMER, COMP SHOPPER, USER ATTRIB

### EntityType

For EntityName PARTNER, OUTLOC, or CUSTOMER, the search can be further narrowed based on the EntityType value. For example, for PARTNER, the user can pass the partner\_type in the EntityType. Similarly for OUTLOC, the user can pass the outloc\_type type and for CUSTOMER, the user can pass cust\_id\_type.

### EntityId

The entity ID is a unique id to identify the individual record such as buyer or supplier.

- fullName: The user can search by passing the name along with EntityName

- Phone: The user can search by passing the phone number along with EntityName
- Email: The user can search by passing the email along with EntityName
- For example: datapriv.action=forget query and result.

### Query

```
-Duse.jdbc.oracle.wallet=true
-Doracle.net.wallet_location=./tmp_wallet
-Dconfig.xml.dir=D:\DataPrivacy\RmsDataPrivConfig
-Ddatapriv.action=access
-Dcustomer.id="BUYER::::1003:::::"
-Ddid.type=getPersonalInfo
-Dinvoked.by=user
-Doutput.file.dir=D:\DataPrivacy\Results -jar RetailAppsDataPrivTool.jar
```

### Result

#### Personal Information

ENTITY_NAME	ENTITY_TYPE	ENTITY_ID	FULL_NAME	PHONE	EMAIL
BUYER		1003	Ann Woodley	6125252864	awoodly@oracle.com

#### Customer.id format for datapriv.action= forget (Right to Forget)

```
Dcustomer.id
="{%entityName%}::{%entityType%}::{%entityId%}::{%fullName%}::{%phone%}::{%fax%}::{%telex%}::{%pager%}::{%email%}::{%addr1%}::{%addr2%}::{%addr3%}::{%county%}::{%city%}::{%state%}::{%countryId%}::{%postalCode%}"
```

- The customer-id-format is separated by ::
- The entityName and entityId is mandatory. In case of entityName is PARTNER, OUTLOC or CUSTOMER, then entityType is mandatory. All the other input fields in the customer-id are optional.
- When a user performs forget action, then the corresponding record in RMS will get updated with masked characters. The user will have the option to pass the masking character.
- If user does not pass the masking character, then the mandatory fields will get updated with XXXX characters and non-mandatory fields will get updated to NULL.
- The user has to pass the input field separator even if only one input is passed. For example, if the user wants to pass only entityName, then the value would be "buyer::::::::::"
- Enclose the customer-id string in quotes in case the input string has spaces. For example, "ORDER CUSTOMER::::::::::"
- Once the personal data is updated with NULL or masked using the Platform Data Privacy command line tool, the data cannot be reverted back.
- EntityName: Type of personal data requested by user to update using the Platform Data Privacy command line tool. For example, if the user is a supplier and requests to update their personal information, then the EntityName will be passed as SUPPLIER.
- Valid values are : BUYER, MERCHANT, STORE, WAREHOUSE, SUPPLIER, PARTNER, OUTLOC, ADDRESS, EMPLOYEE, CUSTOMER, ORDER CUSTOMER, COMP SHOPPER, USER ATTRIB



- **EntityType:** For EntityName PARTNER, OUTLOC, or CUSTOMER, the update will happen based on the EntityType value. For example, for PARTNER, the user can pass the partner\_type in the EntityType. Similarly for OUTLOC, user can pass outloc\_type type and for CUSTOMER, user can pass cust\_id\_type.
- **EntityId:** The entity ID is a unique id to identify the individual record such as buyer or supplier.
- The other input fields in the customer-id (Fullname, phone, fax, telex, pager, email, addr1, addr2, addr3, county, city, state, countryId, postalCode) can be used by the user to pass the masking character. If left blank, they will either be masked with XXXX or updated to NULL based on if the columns are mandatory or optional.

For example datapriv.action=forget query and result.

### Query

```
java -
DContextOverride.properties=D:\DataPrivacy\RmsDataPrivConfig\ContextOverride.prope
rties
-Duse.jdbc.oracle.wallet=true
-Doracle.net.wallet_location=./tmp_wallet
-Dconfig.xml.dir=D:\DataPrivacy\RmsDataPrivConfig
-Ddatapriv.action=forget
-Dcustomer.id="buyer:::1002::*****:*****:*****:*****:"
-Did.type=updatePersonalInfo
-Dinvoked.by=user
-Doutput.file.dir=D:\DataPrivacy\Results -jar RetailAppsDataPrivTool.jar
```

### Result

	BUYER	BUYER_NAME	BUYER_PHONE	BUYER_FAX	CREATE_ID	CREATE_DATETIME
1	2	sdfa	(null)	(null)	RMS01_USER1	05-MAR-15
2	6	gl	00000	00000	RMS01_SHACHAUH	15-APR-15
3	1000	Henry Quinton Gary Maeron Roden Xavier Elijah Stubbs III	6125259845	6125259800	RMS01DEMO	17-DEC-14
4	1001	Charles Bott	6125252612	6125259800	RMS01DEMO	17-DEC-14
5	1002	*****	*****	*****	RMS01DEMO	17-DEC-14
6	1003	Ann Woodley	6125252864	6125259800	RMS01DEMO	17-DEC-14

## Understanding the Command Output Files

The command line tool produces the output files after execution.

All files are generated by default in the user's home directory. Parameters are available to configure the directory.

### Action Summary XML

Each successful call to the tool produces an action summary XML file written in the directory specified in the output.file.dir parameter.

### Access Result File

For customer information access results (datapriv.action=access), a readable report file is generated in the format indicated in the access.output.format parameter.

Out-of-the box format options include HTML or Text formats.

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