

This document highlights the major changes for Release 14.1.3.1 of the Oracle Retail Point of Service Suite.

This document highlights the instructions for installation and usability of the Platform Data Privacy Command line tool and also provides information on the changes made to the POS Suite of applications.

The fix is located at the following Patch number on My Oracle Support:

- 27360187

Data Privacy Overview

Data Privacy 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 Application.

The retailer is responsible for fulfilling this requirement. However, to do so, the retailer requires the capability to request this data from our 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 examples of the personal information can be

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

Enhancement

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

- **Right to Access:** 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:** Based on the end-user's right to request to forget and/or update their personal information, this enables the retailer to delete/update (mask) end-user's personal data during the services period. Some of the data critical for the business or part of the 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 enables the retailer to validate the end-user's requests.
- **Data Portability:** The end-users have the right to receive their own personal data stored in retail applications. The feature will be handled as part of the 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.

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

Installation

The services that are part of the platform data privacy command line tool are executable through a command line using the Platform Data Privacy API.

Setting up the Java Development Kit (JDK)

Java 1.8 is a prerequisite to install and test the command line tool. This chapter contains instructions on how to properly setup the right version of the Java Development Kit (JDK).

Download and Install Java 8

For Windows:

1. Download the latest 64-bit version of the Java SE Development Kit 8.
2. Install in a location on your local 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= <Absolute Path where Java is installed>

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

For Windows:

1. Start a new command line window by selecting Start → Run → Open → 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`.
4. The command should return with the Java version information. Make sure it matches with the JDK version you just installed.

For Example:

```
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
```

For UNIX:

1. Start a new UNIX session (For example: A Putty Session)
2. Go-To HOME directory
3. `export JAVA_HOME=<Absolute path where JAVA is installed>`
`export PATH=$JAVA_HOME/bin:$PATH`

The command should return with the Java version information.

Make sure it matches with the JDK version you just installed. For example:

```
/vol.rtk/java/oracle_linux/jdk1.8.0_112.64bit>java -version
java version "1.8.0_112"
Java(TM) SE Runtime Environment (build 1.8.0_112-b15)
Java HotSpot(TM) 64-Bit Server VM (build 25.112-b15, mixed mode)
/vol.rtk/java/oracle_linux/jdk1.8.0_112.64bit>
```

Configuring the Configuration Files

For the DATAPRIV command line tool to work, there are several configuration files that need to be configured.

- The DATAPRIV-Global.xml contains DB connection details as well as details of the customer-id-format. This needs to be modified to enter database information.
 - The ContextOverride.properties contains details of the connection string to be used in case of using Oracle Wallet. This needs to be modified to enter the correct database information.
 - The DATAPRIV-Get.xml Contains the SQL query or function to perform the Right to Access and Validate Forgotten. Changes have already been completed, no changes necessary by the User.
 - The DATAPRIV-Forget.xml contains the SQL query or function to perform the Right to Forget. Changes have already been completed, so there are no changes needed by the user.
 - DATAPRIV-ValidateForget.xml contains the SQL query or function to perform whether Right to Forget can be executed on a particular customer or employee. Changes are already completed, so there are no changes needed by the user.
1. Create a folder called DataPrivacy.
 2. Unzip POSSuite.zip

3. Find the file "RTA-RTF\<Oracle/DB2>\ ContextOverride.properties", update the datasource string to the environment where this needs to be tested.

Syntax :

```
datasource-url=jdbc:oracle:thin:@hostname:port/service name
```

For example: -

```
datasource-url=jdbc:oracle:thin:@localhost:1521/orcl.us.oracle.com
```

Common Instructions for both RTA and RTF for UNIX Environment

Export the environment variable with the following:

1. export DATAPRIV_DIR=<Full Path of 'DataPrivacy' directory created in above step>
2. Run the following command on <DataPrivacy_directory> chmod 777 -R <DataPrivacy_directory>

Common Instructions for both RTA and RTF for UNIX Environment

1. Export the following environment variable:
export DATAPRIV_DIR=<Full Path of 'DataPrivacy' directory created in above step>
2. Run the following command on
<DataPrivacy_directory> chmod 777 -R <DataPrivacy_directory>

Common Instruction for Windows Environment:

Set the following environment variable:

set DATAPRIV_DIR=<Full Path of 'DataPrivacy' directory created in above step>

Creating and Configuring Oracle Wallet

Oracle Wallet is used to store database credentials instead of encoding these details in the configuration file (ContextOverride.properties).

1. Create an empty wallet file in a DataPrivacy/Wallet directory by running the following command in a CMD prompt in Windows and in a Unix Session in a Unix Box in the DataPrivacy directory.

```
java -classpath %DATAPRIV_DIR%/DATAPRIV_JAR/RetailAppsDataPrivTool.jar oracle.security.pki.OracleSecretStoreTextUI -wrl %DATAPRIV_DIR%/Wallet -create
```

OR

```
java -classpath $DATAPRIV_DIR/DATAPRIV_JAR/RetailAppsDataPrivTool.jar oracle.security.pki.OracleSecretStoreTextUI -wrl $DATAPRIV_DIR/Wallet -create
```

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

Note: Remember this password because it will be needed in following commands against the wallet files.

2. Add the database credentials into the wallet by running the command listed below from the cmd prompt or UNIX session in the DataPrivacy folder. This will prompt you to enter the password you created in step 1.

```
java -classpath %DATAPRIV_DIR%/DATAPRIV_JAR/RetailAppsDataPrivTool.jar oracle.security.pki.OracleSecretStoreTextUI -wrl %DATAPRIV_DIR%/Wallet -createCredential <hostname:port/service name> <username> <password>
```

OR

```
java -classpath $DATAPRIV_DIR/DATAPRIV_JAR/RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI -wrl
$DATAPRIV_DIR/Wallet -createCredential <hostname:port/service name> <username>
<password>
```

<hostname:port/service name> <username> <password> is the DB connect string.
This should be same as the one defined in the ContextOverride.properties

<username> is the DB user to connect to DB

<password> is the password to connect to the DB

3. Verify the database credentials in the wallet by running the following command in the CMD prompt or in a Unix Session

```
java -classpath %DATAPRIV_DIR%/DATAPRIV_JAR/RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI -wrl %DATAPRIV_DIR%/Wallet -
listCredential
```

OR

```
java -classpath $DATAPRIV_DIR/DATAPRIV_JAR/RetailAppsDataPrivTool.jar
oracle.security.pki.OracleSecretStoreTextUI -wrl
$DATAPRIV_DIR/Wallet -listCredential
```

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

```
D:\gdpr>java -classpath ./RetailAppsDataPrivServices-7.0.1-RetailAppsDataPrivTool.jar oracle.security.pki.OracleSecretStoreTextUI -wrl ./tmp_wallet -listCredential
Oracle Secret Store Tool : Version 12.2.1.2.0
Copyright (c) 2004, 2016, Oracle and/or its affiliates. All rights reserved.

Enter wallet password:
list credential (index: connect_string username)
1: msp00bpz.us.oracle.com:1521/dolsp20app rms01app
```

Using the Platform Data Privacy Command Line Tool

The tool can be tested in the command line mode using the scripts. The user with admin privileges should run these scripts because the RTF script will delete/update (mask) the data from the tables which are not recoverable.

1. RTA is used to get the personal data from the POS Suite database in an html and xml output format. It has different id types to fetch personal data of customer and employee. Below is the list of id types which can be used for RTA.
 - findCustomerById
 - findEmployeeById
 - findByOtherDetails

The following tabular column has the syntax and examples of executing the scripts.

Id Type	findCustomerById
Input	[id]
Syntax	<pre> java -DContextOverride.properties=<i>[location of ContextOverride properties]</i> -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=<i>[location of wallet folder]</i> -Dconfig.xml.dir=<i>[location of xml files]</i> -Ddatapriv.action=access -Did.type=findCustomerById -Dcustomer.id=<i>[input]</i> -Dinvoked.by=<i>[user who is executing the script]</i> -Doutput.file.dir=<i>[output file directory]</i> -Daccess.output.file.name.no.ext=customerDataById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=<i>ContextOverride.properties</i> -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=access -Did.type=findCustomerById -Dcustomer.id=04241129000006 -Dinvoked.by=xyz -Doutput.file.dir=<i>output</i> -Daccess.output.file.name.no.ext=customerDataById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	findEmployeeById
Input	[id]
Syntax	<pre> java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=access -Did.type=findEmployeeById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext= employeeDataById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=access -Did.type=findEmployeeById -Dcustomer.id=pos -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=employeeDataById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	findByOtherDetails
Input	[firstName]::[lastName]::[phoneNumber]::[postalCode]::[storeId]:: [registerId]
Syntax	java -DContextOverride.properties=[<i>location of ContextOverride properties</i>] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[<i>location of wallet folder</i>] -Dconfig.xml.dir=[<i>location of xml files</i>] -Ddatapriv.action=access -Did.type=findByOtherDetails -Dcustomer.id=[<i>input</i>] -Dinvoked.by=[<i>user who is executing the script</i>] -Doutput.file.dir=[<i>output file directory</i>] -Daccess.output.file.name.no.ext=dataByInfo -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar
Example	java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=access -Did.type=findByOtherDetails -Dcustomer.id= <i>lastname::firstname::12345678::54321::04241::129</i> -Dinvoked.by= <i>xyz</i> -Doutput.file.dir= <i>output</i> -Daccess.output.file.name.no.ext=dataByInfo -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar

Note: RTA can fetch maximum 5 records. If there are more records the, below line will be displayed in the XML output file.

More Rows found for the query but was limited to 5.

2. RTF is used to delete/ update (mask) the personal data from the POS Suite database. Below is the list of id types which can be used for RTF.
 - forgetIRSCustomerById
 - forgetCustomerById
 - forgetSupplierDetailsById
 - forgetManufacturerDetailsById
 - forgetEmployeeDetailsById
 - forgetByCaptureCustomerDetails

The following tabular column has the syntax and examples of executing the scripts.

Id Type	forgetIRSCustomerById
Input	[customerId]
Syntax	<pre> java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=forget -Did.type=forgetIRSCustomerById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=deleteIRSCustomerByCustomerId -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=forget -Did.type=forgetIRSCustomerById -Dcustomer.id=04241129000006 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=deleteIRSCustomerByCustomerId -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	forgetCustomerById
Input	[customerId]
Syntax	<pre> java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=forget -Did.type=forgetCustomerById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=deleteCustomerByCustomerId -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=forget -Did.type=forgetCustomerById -Dcustomer.id=04241129000006 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=deleteCustomerByCustomerId -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	forgetSupplierDetailsById
Input	[supplierId]
Syntax	<pre> java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=forget -Did.type=forgetSupplierDetailsById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=deleteSupplierById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=forget -Did.type=forgetSupplierDetailsById -Dcustomer.id=12345 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=deleteSupplierById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	forgetManufacturerDetailsById
Input	[manufacturerId]
Syntax	<pre> java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=forget -Did.type=forgetManufacturerDetailsById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=deleteManufacturerById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=forget -Did.type=forgetManufacturerDetailsById -Dcustomer.id=12345 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=deleteManufacturerById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	forgetEmployeeDetailsById
Input	[employeeId]
Syntax	<pre> java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=forget -Did.type=forgetEmployeeDetailsById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=deleteEmployeeById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=forget -Did.type=forgetEmployeeDetailsById -Dcustomer.id=10021 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=deleteEmployeeById -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	forgetByCaptureCustomerDetails
Input	[firstName]::[lastName]::[phoneNumber]::[postalCode]::[storeId] ::[registerId]::[transId]::[businessDate]
Syntax	java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=forget -Did.type=forgetByCaptureCustomerDetails -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=deleteCustomerDetailsByDetails -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar
Example	java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=forget -Did.type=forgetByCaptureCustomerDetails -Dcustomer.id=firstname::lastname::12345678::54321::04241 ::129::56::2017-08-22 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=deleteCustomerDetailsByDetails -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar

3. Validate is used to verify if the user's personal data can be forgotten.

Below is the list of id types which can be used for RTF.

- findCustomerStatusById
- findCustomerStatusByDetails
- findEmployeeStatusById
- findEmployeeStatusByDetails

The following tabular column has the syntax and examples of executing the scripts.

Id Type	findCustomerStatusById
Input	[customerId]
Syntax	<pre>java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=validateForget -Did.type=findCustomerStatusById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=validateCustomer -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar</pre>
Example	<pre>java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=validateForget -Did.type=findCustomerStatusById -Dcustomer.id=04241129000015 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=validateCustomer -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar</pre>
Id Type	findCustomerStatusByDetails
Input	[firstName]::[lastName]::[phoneNumber]::[postalCode]
Syntax	<pre>java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=validateForget -Did.type=findCustomerStatusByDetails -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=validateCustomer -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar</pre>

Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=validateForget -Ddid.type=findCustomerStatusByDetails -Dcustomer.id=test::test::12345678::54321 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=validateCustomer -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
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Id Type	findEmployeeStatusById
Input	[employeeLoginId]
Syntax	<pre> java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=validateForget -Ddid.type=findEmployeeStatusById -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=validateEmployee -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>
Example	<pre> java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=validateForget -Ddid.type=findEmployeeStatusById -Dcustomer.id=pos -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=validateEmployee -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar </pre>

Id Type	findEmployeeStatusByDetails
Input	[firstName]::[lastName]::[storeId]
Syntax	<pre>java -DContextOverride.properties=[location of ContextOverride properties] -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=[location of wallet folder] -Dconfig.xml.dir=[location of xml files] -Ddatapriv.action=validateForget -Did.type=findEmployeeStatusByDetails -Dcustomer.id=[input] -Dinvoked.by=[user who is executing the script] -Doutput.file.dir=[output file directory] -Daccess.output.file.name.no.ext=validateEmployee -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar</pre>
Example	<pre>java -DContextOverride.properties=ContextOverride.properties -Duse.jdbc.oracle.wallet=true -Doracle.net.wallet_location=. -Dconfig.xml.dir=. -Ddatapriv.action=validateForget -Did.type=findEmployeeStatusByDetails -Dcustomer.id=Appli::Admini::04241 -Dinvoked.by=xyz -Doutput.file.dir=output -Daccess.output.file.name.no.ext=validateEmployee -Daccess.output.format=html -jar RetailAppsDataPrivTool.jar</pre>

1. Location of file path can be absolute (for example: "C:\DataPrivacy\RTA-RTF\Oracle") or it can be relative (".") depends on from where this Command line tool is being executed.
2. All above said "RTA/RTF/ValidateForget" functions can be executed without using wallet option. For that, the content of the file "DATAPRIV-Global.xml" should be like below.

```
<global-context-parameters>
  <context-parm name="datasource" value="jdbc/backofficeDS"/>
  <context-parm name="datasource-url"
value="jdbc:oracle:thin:@localhost:1521/POSDB"/>
  <context-parm name="datasource-user" value="pos141"/>
  <context-parm name="datasource-pwd" value="Passw0rd"/>
  <context-parm name="datasource-driver"
value="oracle.jdbc.driver.OracleDriver"/>
  <context-parm name="customer-id-format" value="{%customerId%}"/>
</global-context-parameters>
```

Update the values of "datasource", "datasource-url", "datasource-user", "datasource-pwd" as required to point to your database schema. Using of this option is not recommended. Find the execution scripts in the file "RTA-RTF\<Oracle/DB2>\scripts.html"

- Audit log "datapriv_audit.log" of all "RTA/RTF/ValidateForget" script gets populated inside the folder "C:\Users\- For DB2 database, use "RTA-RTF\DB2"

Output Files

The generated report files are located inside the configured directory. Here it is "output".

RTA File

Customer/Supplier/Manufacturer Details - By Id

Customer Basic Information

Customer ID	Party ID	Employee Id	Status	Customer Type
04241129000001	130		Deleted	REGULAR

Business info

Contact

First Name	Last Name	Middle Name	Full Name	Salutation	Suffix	Contact Birth Date	Gender	Contact Company Name
test	tet		test tet			XXXXXXXX	Unspecified	

Phone Numbers

Phone type	Contact Area	Telephone Code	Contact Local Telephone Number	Contact Telephone Country Code	Contact Extension	Phone Status
Home			3242343242	US		Active

Addresses

Address Type	Contact Address Line1	Contact Address Line2	Contact Address Line3	Contact Address City	Contact Address State	Contact Address Postal Code	Contact Address Territory	Contact Address Country	Contact Telephone Country Code	Contact Telephone Area Code	Contact Telephone Local Number
Home	test	test		test	TX	54321		US			

RTF File:

Output in the command prompt

```
Administrator: C:\WINDOWS\system32\cmd.exe
</parameter>
<parameter>
  <name>output.file.dir</name>
  <value>output</value>
</parameter>
<parameter>
  <name>access.output.format</name>
  <value>html</value>
</parameter>
<parameter>
  <name>customer.id</name>
  <value>04241129000006</value>
</parameter>
<parameter>
  <name>id.type</name>
  <value>forgetCustomerById</value>
</parameter>
<parameter>
  <name>datapriv.action</name>
  <value>forget</value>
</parameter>
<parameter>
  <name>invoked.by</name>
  <value>eappadur</value>
</parameter>
<result>
  <name>forgetSuccessful</name>
  <value>true</value>
</result>
</dataPrivCommandLineResult>
```

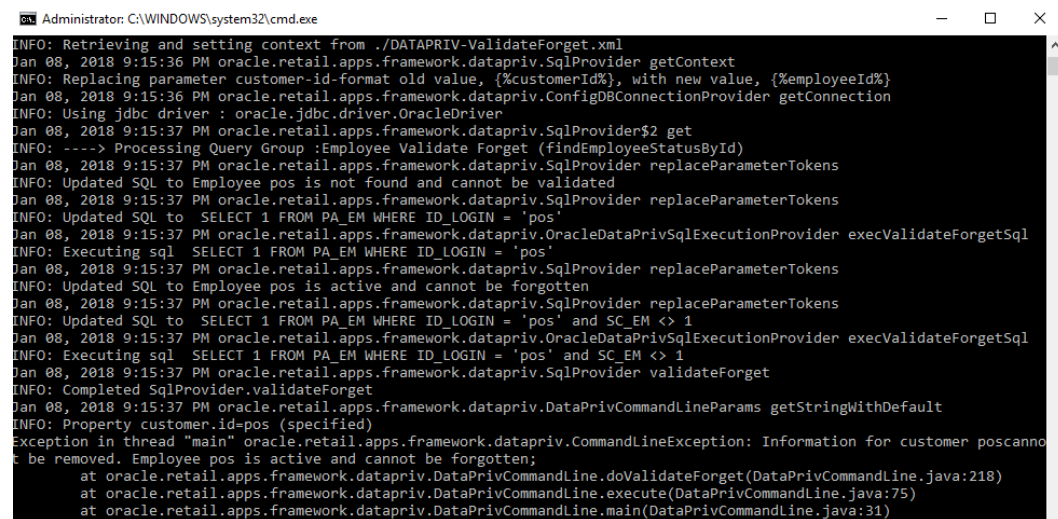
XML output

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<dataPrivCommandLineResult>
  <parameter>
    <name>access.output.file.name.no.ext</name>
    <value>deleteCustomerByCustomerId</value>
  </parameter>
  <parameter>
    <name>output.file.dir</name>
    <value>output</value>
  </parameter>
  <parameter>
    <name>access.output.format</name>
    <value>html</value>
  </parameter>
  <parameter>
    <name>customer.id</name>
    <value>04241129000006</value>
  </parameter>
  <parameter>
    <name>id.type</name>
    <value>forgetCustomerById</value>
  </parameter>
  <parameter>
    <name>datapriv.action</name>
    <value>forget</value>
  </parameter>
  <parameter>
    <name>invoked.by</name>
    <value>eappadur</value>
  </parameter>
  <result>
    <name>forgetSuccessful</name>
    <value>true</value>
  </result>
</dataPrivCommandLineResult>
```

ValidateForget File

Execution result is shown in the command prompt. Though it seems to be an exception, actually it is not. It shows a message whether the customer/employee is active or not and whether his/ Personal Data can be forgotten. As an user, avail this feature to verify if the customer/employee record is active/inactive before performing RTF.

Output in the command prompt.



```
Administrator: C:\WINDOWS\system32\cmd.exe
INFO: Retrieving and setting context from ./DATAPRIV-ValidateForget.xml
Jan 08, 2018 9:15:36 PM oracle.retail.apps.framework.datapriv.SqlProvider getContext
INFO: Replacing parameter customer-id-format old value, {%customerId%}, with new value, {%employeeId%}
Jan 08, 2018 9:15:36 PM oracle.retail.apps.framework.datapriv.ConfigDBConnectionProvider getConnection
INFO: Using jdbc driver : oracle.jdbc.driver.OracleDriver
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.SqlProvider$2 get
INFO: ----> Processing Query Group :Employee Validate Forget (findEmployeeStatusById)
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.SqlProvider replaceParameterTokens
INFO: Updated SQL to Employee pos is not found and cannot be validated
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.SqlProvider replaceParameterTokens
INFO: Updated SQL to SELECT 1 FROM PA_EM WHERE ID_LOGIN = 'pos'
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.OracleDataPrivSqlExecutionProvider execValidateForgetSql
INFO: Executing sql SELECT 1 FROM PA_EM WHERE ID_LOGIN = 'pos'
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.SqlProvider replaceParameterTokens
INFO: Updated SQL to Employee pos is active and cannot be forgotten
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.SqlProvider replaceParameterTokens
INFO: Updated SQL to SELECT 1 FROM PA_EM WHERE ID_LOGIN = 'pos' and SC_EM <> 1
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.OracleDataPrivSqlExecutionProvider execValidateForgetSql
INFO: Executing sql SELECT 1 FROM PA_EM WHERE ID_LOGIN = 'pos' and SC_EM <> 1
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.SqlProvider validateForget
INFO: Completed SqlProvider.validateForget
Jan 08, 2018 9:15:37 PM oracle.retail.apps.framework.datapriv.DataPrivCommandLineParams getStringWithDefault
INFO: Property customer.id=pos (specified)
Exception in thread "main" oracle.retail.apps.framework.datapriv.CommandLineException: Information for customer pos cannot be removed. Employee pos is active and cannot be forgotten;
    at oracle.retail.apps.framework.datapriv.DataPrivCommandLine.doValidateForget(DataPrivCommandLine.java:218)
    at oracle.retail.apps.framework.datapriv.DataPrivCommandLine.execute(DataPrivCommandLine.java:75)
    at oracle.retail.apps.framework.datapriv.DataPrivCommandLine.main(DataPrivCommandLine.java:31)
```

DB Tables are impacted due to RTA/RTF Operation in POS Suite

Table Synopsis	Table	RTF	RTA
BiometricData	CO_DTA_BMC	x	
StoreCredit	DO_CR_STR	x	
Emessage	DO_MSG	x	x
EmessageI18N	DO_MSG_I8	x	
Address	LO_ADS	x	x
EmailAddress	LO_EML_ADS	x	x
EmployeePasswordHistory	MA_HST_PW_EM	x	
OrderDeliveryDetail	OR_DEL_DTL	x	x
IRSOrder	OR_IRS_ORD	x	
OrderLineItem	OR_LTM	x	x
Order	OR_ORD	x	x
BusinessCustomer	ORGN_CT	x	x
Contact	PA_CNCT	x	x
Customer	PA_CT	x	x
CaptureCustomer	PA_CT_CAPT	x	x
Employee	PA_EM	x	x
IRSCustomer	PA_IRS_CT	x	x
Manufacturer	PA_MF	x	x
ManufacturerI18N	PA_MF_I8	x	x
Telephone	PA_PHN	x	x
Supplier	PA_SPR	x	x
SupplierI18N	PA_SPR_I8	x	x
RMCustomer	RM_CT	x	x
RMCustomerToCustomerMapping	RM_CT_ID		x
SaleReturnShippingRecords	SHP_RDS_SLS_RTN	x	x
CheckTenderLineItem	TR_LTM_CHK_TND	x	x
StoreCreditTenderLineItem	TR_LTM_CR_STR_TND	x	x
CreditDebitCardTenderLineItem	TR_LTM_CRDB_CRD_TN	x	x
OrderLineItemStatus	TR_LTM_SLS_RTN_ORD	x	
SendCheckTenderLineItem	TR_LTM_SND_CHK_TND	x	x
RedeemTransaction	TR_RDM	x	x
Layaway	AS_LY	x	x

Table Synopsis	Table	RTF	RTA
OrderRecipientDetail	OR_RCPNT_DTL	x	
FundsReceiptTransaction	TR_RCV_FND	x	x
RetailTransaction	TR_RTL	x	x
RetailTransactionBillPayment	TR_RTL_BPAY	x	x
Transaction	TR_TRN	x	
GiftRegisteredItem	AS_ITM_GF_RGST	x	x
RMCustomerScore	RM_CT_SCR	x	x

POS Suite Data Privacy Overview

The area in which changes are made for POS Suite of products to achieve Data Privacy is tabulated below.

Right to Access (RTA)	The ability for the retailer to retrieve the personal information relating to an individual
Right to be Forgotten (RTF)	The ability for the retailer to 'obfuscate' the personal information relating to an individual
Validate RTF	The ability for the retailer to validate the customer / employee if they are eligible for RTF
Data Identification	The ability for the retailer to identify the sensitive data fields
Logging	The ability for the retailer to purge logs having Personally identifiable information. Also a mechanism to export them. This is achieved via an export script and a purge script.

RTA/RTF/Validate RTF

The retailer can "read/validate/obfuscate" customer/employee data with the help of the command line tool "Data Privacy".

Data Identification

A new feature to define sensitive data fields is added in both POS & web-apps (BO/CO/RM). In POS following two parameters are added to the parameter file "Client\pos\config\parameter\application\application.xml"

- "EmployeeSensitiveFields" is added under the group "Employee"
- "CustomerSensitiveFields" is added under the group "Customer"

Example of employee sensitive data implementation.

```
<PARAMETER name="EmployeeSensitiveFields"
  type="LIST"
  final="N"
  hidden="N">
<VALIDATOR class="EnumeratedListValidator"
  package="oracle.retail.stores.foundation.manager.parameter">
  <PROPERTY propname="member" propvalue="firstNameField" />
  <PROPERTY propname="member" propvalue="lastNameField" />
```

```

        <PROPERTY propname="member" propvalue="languageField" />
    </VALIDATOR>
    <VALUE value="languageField"/>
</PARAMETER>

```

Example of customer sensitive data implementation.

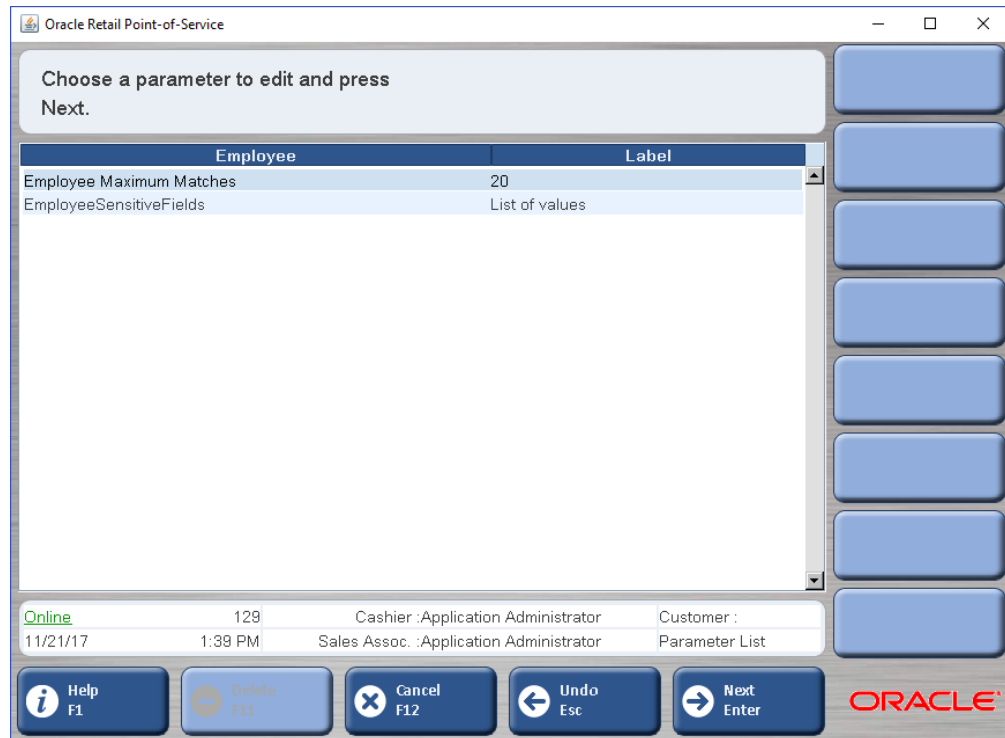
```

<PARAMETER name="CustomerSensitiveFields"
  type="LIST"
  final="N"
  hidden="N">
  <VALIDATOR class="EnumeratedListValidator"
    package="oracle.retail.stores.foundation.manager.parameter">
    <PROPERTY propname="member" propvalue="emailField" />
    <PROPERTY propname="member" propvalue="telephoneField" />
    <PROPERTY propname="member" propvalue="custTaxIDField" />
    <PROPERTY propname="member" propvalue="taxCertificateField" />
  </VALIDATOR>
  <VALUE value="emailField"/>
  <VALUE value="telephoneField"/>
  <VALUE value="custTaxIDField"/>
  <VALUE value="taxCertificateField"/>
</PARAMETER>

```

POS Client Mock-ups

Screen Name	Parameter List
Parameter Group	Employee



Screen Name	Edit Parameter
Parameter Group	Employee

Oracle Retail Point-of-Service

Add or Delete values from the list of valid values. Press Next to save the changes.

Parameter Group: Employee
Parameter Name: EmployeeSensitiveFields

Select From List:

New Value List:

- firstNameField
- lastNameField
- languageField

Online 129 Cashier :Application Administrator Customer :
11/21/17 1:48 PM Sales Assoc. :Application Administrator Edit Parameter

i Help
F1

- Delete
F11

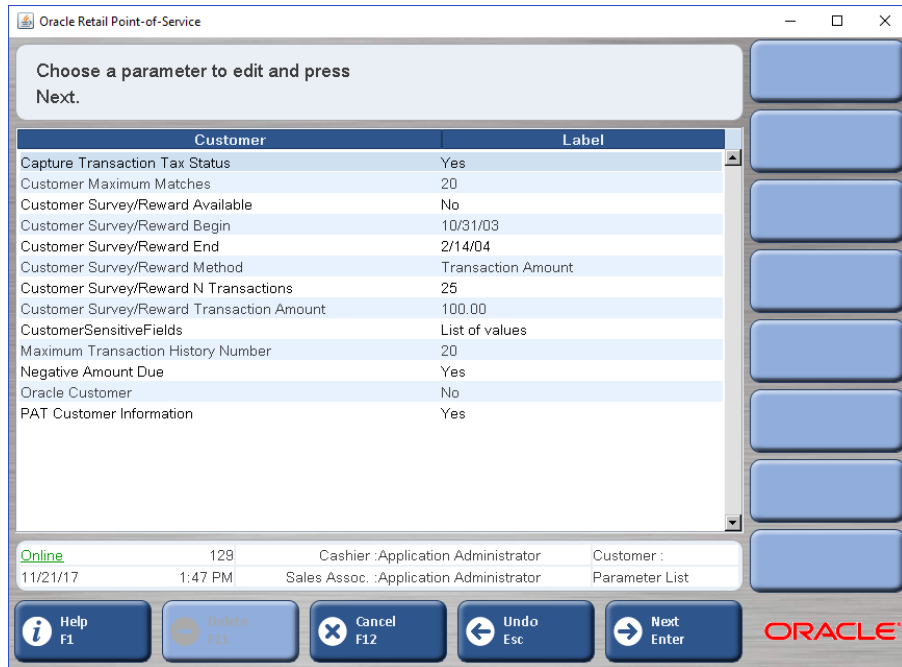
X Cancel
F12

← Undo
Esc

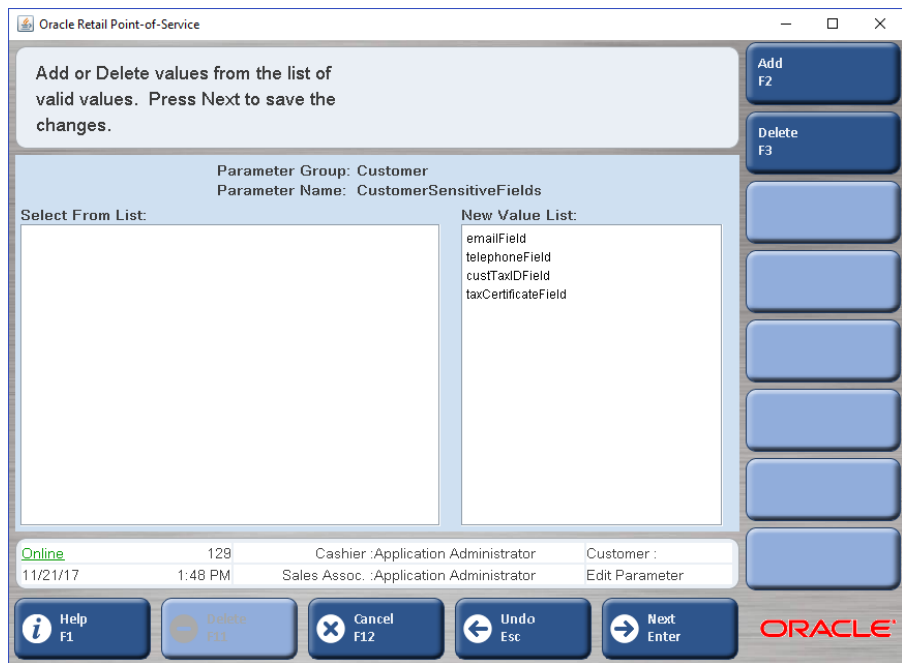
→ Next
Enter

ORACLE

Screen Name	Parameter List
Parameter Group	Customer



Screen Name	Edit Parameter
Parameter Group	Customer



For web apps (BO/CO/RM) two hidden fields, namely “sensitiveEmployeeFields” and “sensitiveCustomerFields” are added to provide sensitive data fields for employee and customer respectively. These new fields are added in the related JSP files and corresponding Java Form files are added with getter/setter methods. Thus the Action file can have access to the set values.

Code changes are provided in the defect document.

Logging

POS Suite of products has different types of logs.

- Audit Log
- Application Log
- Electronic Journal

Audit Log: It is a flat file log. It was introduced to the application to fulfill PCI compliance. Based on the PCI requirements, application is coded; therefore no sensitive data is written to this file.

Application Log: Each application of the suite has its own logs to record the flow of file executions, SQL statements and so on, using Log4j. The application also provides configuration options (through log4j.xml) to the user to define the type of log statement which needs to be written to the log file. It is the responsibility of the user to enable/disable the required logging options. Purging of the log files also can be configured through log4j properties.

Electronic Journal (EJ): In Electronic Journal, every activity of a transaction is captured. Electronic Journal is configurable to send the data to a database or to a flat file. Based on a role and privileges option, E-Journals can be accessed in the User Interface but not in the case of flat file. Since the application is coming with the option of writing EJ in to DB/file, the recommended option to achieve Data Privacy is to use the DB option.

Since EJ can have personal data, use the provided “Purge/Export” scripts to purge the data periodically and also to export DB data if required.

- Purge Script is available under the folder “PurgeScript”. Refer to the application’s Operations Guide for more detail.
- Export Script is available under the folder “ExportScript”
- To export table data, refer the file “command.txt” present inside the folder “Export\Oracle”
- To purge E-Journal data, find the purge script present inside the folder “PurgeScript\Oracle”.

Data Identification Patch Details

- Changes made to the application files for Data Identification can be downloaded from the source hot fix patch. Bug# 27359816.
- Binary files of the above mentioned source files can be downloaded from the binary hot fix patch. Bug# 27359823.

Recommendation

- Enable Secure JDBC, Secure RMI, SSL Communication, Secure communication over HTTPS while installing the applications.
- Do not choose the option to export POSLogs to a file.

- Choose the option “Data Replication Export”.
- Choose the option to write journal (EJ) entries to a database.
- To secure data in rest (data files), use the technology such as Transparent Data Encryption (TDE) / Native Encryption.

Scope

All the above provided solutions can be used in all the products of POS Suite as applicable.

- Point Of Service 14.1.3
- Back Office 14.1.3
- Central Office 14.1.3
- Returns Management 14.1.3

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