CXBanking

OptiVault 9.15

Installation Guide

January 2023

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# Preface

## Document conventions

### Typographical conventions

The following typographical conventions are used:

* + 1. Typographical conventions

|  |  |
| --- | --- |
| Style | Indicating |
| Bold | An option that you can select, for example, Insert > Bookmark |
| BoldItalic | Emphasis, for example, “This partition must not be modified.”  A physical key, for example, Shift+F9 |
| Code | Text displayed on-screen  Commands or data entered by the user  Code text and examples |
| Hyperlink | Links to Internet sites  Internal cross-references |
| Italic | The first reference to a keyword  The title of a publication, for example, Product Overview  A file or folder name, for example, C:\Program Files\NCR |

### Admonition conventions

Notes and cautions alert you to important/critical information. Each is displayed in a different way:

Note: Notes contain information that has special importance, to which the reader should pay close attention, or tips with useful advice for the user on tasks or procedures.

* Caution: Cautions alert you to procedures or conditions that could damage equipment or data.
  + 1. Admonition conventions

| **Notes and cautions in tables** | | |
| --- | --- | --- |
| **Note:** Notes contain information that has special importance. | **Caution:** Cautions alert you to procedures or conditions that could damage equipment or data. |

# Introduction

The purpose of this document is to provide basic instructions for the installation of the OptiVault application. The particular architecture and environment of the installation may require additional configuration.

Although the installation media provides components for both Windows and UNIX, this document will provide samples and syntax based on the Windows operating system. The main modification for UNIX will be the file path, name, syntax.

The recommended process for installing OptiVault:

1. Oracle Database Configuration (It is the responsibility of the client to ensure Oracle 12.2 or 19c is installed and running correctly PRIOR to the on-site product installation.)
2. Application and Web Server Configuration (It is the responsibility of the client to ensure the application & web servers are running correctly and readily accessible PRIOR to the on-site product installation).
3. Creating New User in Oracle
4. Creating New Schema in Oracle (NCR Cash Management provides a database dump file, or schema creation script)
5. Generate OptiVault license file
6. Deploy OptiVault WAR File
7. Define OptiVault System Settings
8. Batch Process Setup

OptiVault requires a base of version 8 JDK. Most Application Servers already come with the required JDK (e.g. IBM WebSphere or Apache Tomcat).

A clear understanding of Oracle and Application Server technology is required on the part of the user performing the installation.

# Application Distribution

## Application Component Checklist

Depending upon the client environment, the Application Server and Oracle Database Server could reside on the same physical machine, or different machines. The exact nature of this configuration should be agreed upon between NCR Cash Management and the client prior to installation. It is required that **JDBC** access is available between the Application Server and Oracle Database Server (as defined by the JDBC URL, which typically runs through port 1521).

In a split-server example, the Application Server would house the Web Components (e.g. OptiVault WAR file) on one machine, and a different machine will house the Oracle components.

The following are the required components for the OptiVault installation:

* **Oracle 12.2 or 19c and the latest patches relevant to the applicable O/S:** It is the responsibility of the client to ensure the Oracle database is running correctly and readily accessible PRIOR to the on-site installation.
* **OptiVault Schema Dump File or Schema DDL:** NCR Cash Management will provide the Oracle schema dump or data-pump file for installation OR the database structure command SQL file for all required tables, views, and constraints.
* **Java Application server, e.g. IBM WebSphere or Apache Tomcat:** It is the responsibility of the client to ensure the Application Server is running correctly and readily accessible PRIOR to the on-site installation.

**Note:** Version 8 JDK is required for OptiVault.

* **OptiVault WAR File:** NCR Cash Management will provide the WAR file for deployment.
* **License File:** NCR Cash Management will provide a license SQL file based on the client's OptiVault.log

# Oracle Setup

**Note:** It is the client’s responsibility to have Oracle installed and running correctly and is readily accessible PRIOR to the on-site installation performed by NCR Cash Management.

Additionally, it is the client’s responsibility to prepare and agree with NCR Cash Management on the Oracle environment prior to the on-site installation. The Technical Overview document (separate) provides relevant information and shall serve as a basis for architectural consideration.

## Configuration

1. Verify the Oracle memory settings are correctly defined and do not fall below the ***minimum memory requirements*** necessary for running OptiVault. Please coordinate with Oracle System Administrator to ensure that memory settings are taken into consideration and any other databases used in this Oracle environment.
2. The OptiVault application's Queries use many joins in the SQL statements. These joins usually exceed the default **sort\_area\_size**. Change the Oracle **sort\_area\_size** from **524288** to **1524288** on both the Running and SPFile pages (check on the radio button within the **“Memory”** tab of the Oracle DB Management Console). The **sort\_area\_size** must be changed in both the Running and SPFile tabs for enough memory to be allocated for some of the bigger SQL queries in OptiVault. When it is only changed in the Running tab, it will reset back to the default whenever Oracle is restarted.

## Tablespaces

The following assumes steps are being performed in the Oracle DB Management Console. Similar actions may of course be performed with the tool and interface per DBA choice.

It is recommended that the OptiVault Tables and Indexes/Constraints be separated into different tablespaces. If you already have your tablespaces available, you may continue to the next section.

1. From the Oracle Enterprise Manager Console, click on the ***Object Menu*** and select ***Create***.
2. Select ***Tablespace*** and click the ***Create*** button.
3. The next window allows you to specify the table space. Recommended table space names are **OPTIVAULT\_DAT** for ***OptiVault data*** and the name **OPTIVAULT\_IDX** for the ***OptiVault indexes***.
4. Type in the desired tablespace name. In the **“Size”** column, enter the anticipated size of your OptiVault data. This will depend on the number of cashpoints, etc., a minimum of 1-2GB is recommended for both the data and index table spaces.

**Note**: The OptiVault Schema Definition Script (DDL) will have tables and constraints defined such that:

1. Tables, Foreign Keys, and Views are defined in the Schema User’s default tablespace. (e.g. OPTIVAULT\_DAT).
2. Primary Keys and Indexes are defined in the **OPTIVAULT\_IDX** tablespace.

You may modify the DDL script prior to execution as needed (e.g. changing the index tablespace, etc.).

## Schema User

1. Choose a name similar to the schema you want to create, e.g. OptiVault, client name, etc. Make sure to select the appropriate Default Tablespace for the user. This would typically be the **OPTIVAULT\_DAT** tablespace.
2. Select **“Connect”** and **“Resource”** from the Role list for the user. The user will need these roles to connect to the database and access database functions.
3. Select **“UNLIMITED\_TABLESPACE”** from the System list for the user.

## Schema Definition

The following files should be used to create a new schema base on the new user created in the previous step:

* **<client name>.dmp** (Oracle Schema Data Dump as provided by NCR Cash Management)
* **Master\_Schema\_Creation\_Script\_build<build\_number>.sql**

NCR Cash Management will provide these files to the client.

1. You will first need to create the schema objects, per the **Master\_Schema\*.sql script**. This script can be modified as needed to reflect the desired tablespaces, etc.
2. Once completed, verify that there were no errors in the process, and the appropriate objects are created within the user schema for the appropriate Tablespaces. (You may do this from the ***Oracle Enterprise Manager Console*** or your DBA tool of choice.)
3. Execute the various par file imports, ensuring there are no errors.
4. Once completed, verify that there were no errors in the process, and the data has been loaded into the user’s tables. (You may do this from the ***Oracle Enterprise Manager Console*** or your DBA tool of choice.)
5. It is strongly recommended to analyze the tables and indexes for the newly imported data immediately after import.

# SQL Server Setup

## Configuration

Verify the SQL Server memory settings are correctly defined and do not fall below the minimum memory requirements i.e., necessary for running **OptiSuite** (refer to SQL Server Installation document for more information on minimum memory requirements). Please coordinate with System Administrator to ensure that memory settings are taken into consideration and any other databases used by the bank in the SQL Server environment.

## Schema User

1. Choose a name similar to the schema you want to create, e.g. OptiVault, client name, etc. and password accordingly in the General tab
2. Select **“public”** and **“dbcreator”** from the ***Role list*** for the user. The user will need these roles to connect to the database and access database functions.
3. Select the respective database in the user mapping tab for that particular user. Select Grant permission to connect to the database engine and login enabled in the Status tab.

## Schema Definition

The following files may be used to create a new schema base on the new user created in the previous step:

* Minimum of 2 DDL scripts to define tables, indexes, and default data records.
  + e.g.: **sqlserver-schema/data.sql**

NCR Cash Management will provide these files to the client. Make sure to save these files in the same directory.

You have two options to create the data schema:

1. Run the provided DDL SQL files.
   1. You will first need to create the schema objects, per the **sqlserver-schema.sql** script. This script can be modified as needed to reflect the desired tables etc.
   2. Once completed, verify that there were no errors in the process, and the appropriate objects are created within the user schema followed by running the **sqlserver-data.sql** script to add default data records to the created tables.

**Note:** It is strongly recommended to analyse the tables and indexes for the newly imported data immediately after import.

# JDK

Most Application Servers (e.g. IBM WebSphere or Apache Tomcat) already come with the JDK required for running the application server. The OptiVault application requires the installation of the **Java Development Toolkit (JDK) version 8**.

This document does not detail the installation of the JDK, since this is identified as a client’s direct responsibility. The following provides a brief overview of specific scenarios that might be used for JDK Installation.

**Note:** The Runtime equivalent (JRE) is not sufficient since runtime compiling is required by the web application.

## Single Application / Database Server Scenario

The critical thing in this scenario (the recommended scenario) is simply to ensure the JDK has been installed on the machine and is in use by the Application Server.

## Split Application / Batch Server Scenario

In some client installations, the Application Server (e.g. WebSphere) and Batch Server reside on two different machines. In this example, WebSphere will house the Web Component (e.g. OptiVault WAR file) on one machine, and another machine would house the batch jobs.

The JDK will still need to be installed on the Batch Server.

**Note:** The entire Application Server need not be installed on the batch machine, only the JDK is required. This can be imported to clients who are exploring to reduce 3rd party Application Server licensing on two servers.

## All Scenarios - Setting the JAVA\_HOME Environment Variable

Once the JDK is installed, create a **WINDOWS ENVIRONMENT VARIABLE** for **JAVA\_HOME** that corresponds to the location of the JDK.

e.g., Open up the ***Control Panel > System*, *“Advanced”*** tab. Choose ***“Environment Variables”***. Add a **“System Variable”** for:

* **Variable Name:** JAVA\_HOME
* **Variable Value:** C:\Java\jdk1.8 (or the appropriate location of the JDK on the hard drive).

This will allow the system execution of the OptiVault Batch job Services, which will be installed later. If you are running on another Operating System, you will need to follow similar steps, but with the **“setenv”** command instead (assuming UNIX).

# Application Server

**Note**: It is the responsibility of the client to ensure the Application Server is running correctly and is readily accessible PRIOR to the on-site installation to be performed by NCR Cash Management.

Additionally, the Application Server must be installed in a directory structure without spaces, e.g. C:\IBM\WebSphere.

It is also strongly recommended that the application server be deployed in the root directory (or close to the root directory).

# OptiVault Deployment (Application Server)

## WAR File Deployment

1. WAR files are readily deployable web-application containers, complete with supporting jars. Recommendation and forecast engines are also inside the WAR file.
2. The default deployment of OptiVault will be to a web application and URL called **“OptiVault”**. Many Application Servers (WebSphere, etc.) provide an application assembly tool to allow you to change the default context prior to deployment. Refer to the specifics of your Application Server for this. Additionally, you may change this by directly editing the **application.xml** file inside the WAR file.
3. The precise deployment technique for the installation WAR file depends on the Application Server chosen, e.g. IBM WebSphere or Apache Tomcat.
4. If you are deploying on WebSphere, it is strongly recommended to enable the option ***“Show me all installation options and parameters”*** for deployment, unless you are already comfortable using a custom OptiVault deployment script specific to your institution.
5. DO NOT select ***“pre-compile JSPs”*** if that is an option when deploying the WAR file for your given Application Server.
6. OptiVault contains security roles within the WAR file (the **web.xml** file), which permit you to match authenticated users to application access. These roles are:
   1. **NormalRole** (conventional cash analyst who logs into OptiVault)
   2. **MaintenanceRole** (Typically an App Server or IT administrator who configures the application with the JDBC access, input/output directories, log directories, etc.). This user would access the **sub maint/ URL** and associated pages.
7. You may choose to give any user access to these URLs of the application, and if so, simply enable the applicable options in accordance with your application server.
   1. **Example 1**: In the case of WebSphere, this is handled in the ***“Map security roles to users or groups”*** step of WAR deployment, where you can Look Up Users or Groups based on your applicable access directory plug-in. You can also grant these two roles to **“Everyone”.**
   2. **Example 2**: In the case of **Sun Java**, these user-to-URL restrictions must be handled pre-deployment in the XML configuration files. To grant to **“Everyone”** simply remove the **<security-constraint>, <login-config>,** and **<security-role>** sections from the **web.xml** file prior to deployment.
8. If applicable, make sure to save the configuration post-deployment.
9. If applicable, make sure you regenerate the plug-in configuration for proper communication between the **Web Server** and the **Application Server**.

# OptiVault System Configuration

After the WAR file is deployed following the instructions in the previous steps, the following will indicate additional configurations that need to be defined.

1. Update the **<application-path>/WEB-INF/Log4j.properties** file to point to the **optivault.log** to the desired location.  
   **Log4J** is a Java logging utility that logs the usage activity in the application.

**Note:** This should be the full path to the log file.

* Open the <application-path>/WEB-INF/Log4j.properties file and edit line 16

(by default)

* log4j.appender.R.File=C:[\\jrun\\servers\\default\\OptiVault\\WEB-INF\\OptiVault.log](file:///\\jrun\servers\default\OptiVault\WEB-INF\OptiVault.log)
* (new - note the path below is not necessarily correct for your specific installation, rather it is for illustration purposes.)
* log4j.appender.R.File= C:/IBM/WebSphere/AppServer/profiles/default/installedApps/MIRAGENode01Cell/OptiVault.ear/OptiVault.war/WEB-INF/OptiVault.log

**Note**: Each time changes are made to any of the property files you need to restart the Application Server that the WAR file was deployed under so that the changes are applied. (Reconfigure the plug-in, as well, between your App Server and Web Server, if necessary.)

**NOTE**: The following lines are to suppress excessive DEBUG logging coming from Jasper Reports:

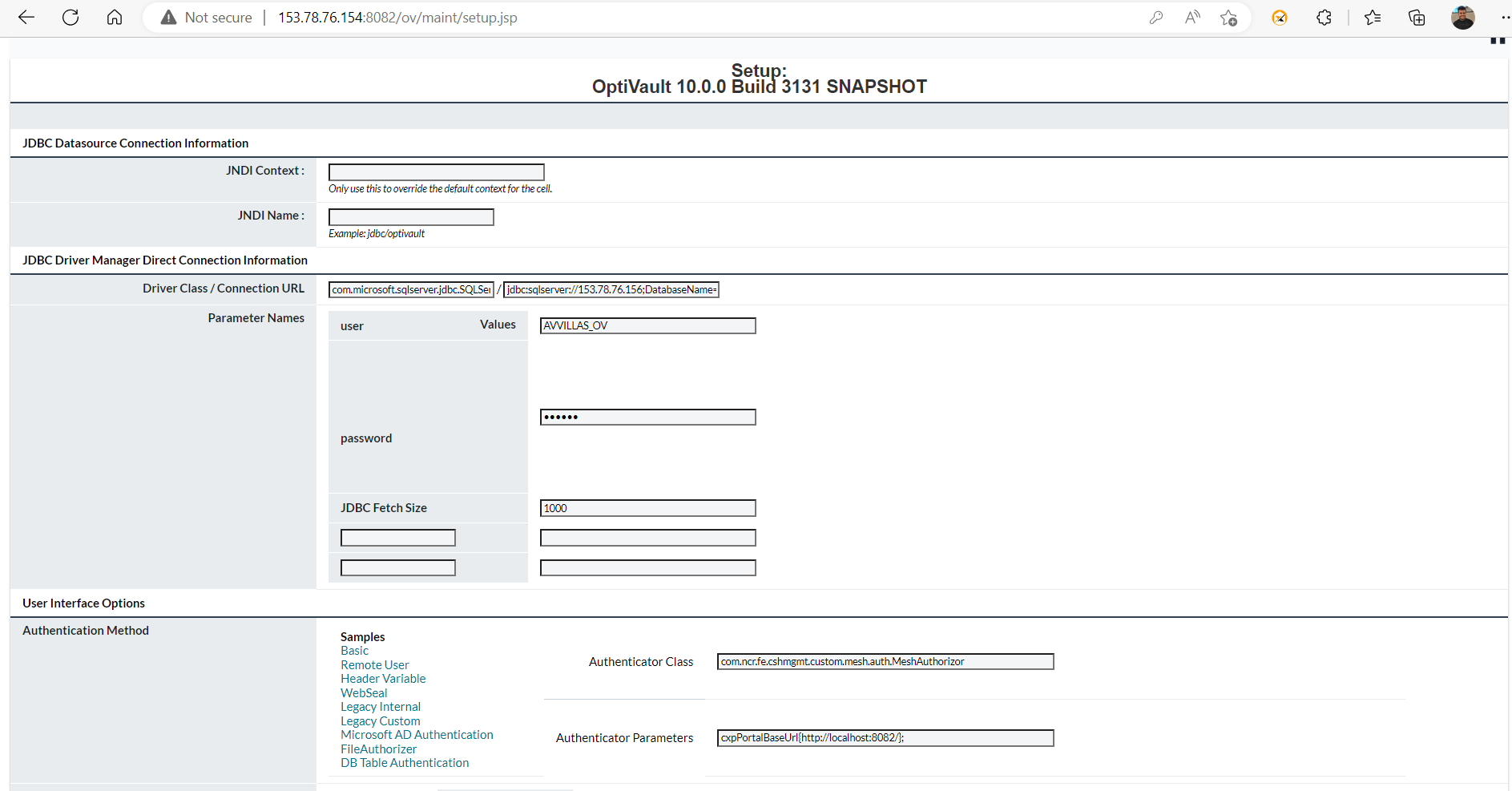
**# Suppress Jasper Reports Debug data**

**log4j.logger.net.sf.jasperreports=INFO, R**

**log4j.logger.org.apache.commons.digester=INFO, R**

**log4j.logger.org.apache.commons.beanutils.MethodUtils=INFO,** R

1. Browse to http://<server\_address>:<port>/optivault/maint/index.jsp (assuming the default application context of **“optivault”** was not changed in the **application.xml** file. Select the ***“System Setup”*** link, which takes you to  
   http://<server\_address>:<port>/optivault/maint/setup.jsp



1. The **JNDI Context** and **Name** should be filled in with the applicable JNDI information. If you are NOT using JNDI, then make sure these fields are blank.
2. The ‘**Driver Class’** field should be left as it is. The connection URL should indicate the following:  
   **jdbc:oracle:thin@<server\_name>:1521:<oracle\_db\_name>**  
   The example above is: jdbc:oracle:thin:@demo:1521:orcl
3. Indicate the user name and password as in the schema created for the OptiVault database. In the example above – it is **‘DEMO\_OV’** and **‘\*\*\*\*\*\*’**.
4. You may leave the Authentication Method as **“Legacy Internal”** until the installation is complete and verified. After that time, switch to the authentication method of choice. Remote User authentication is recommended to utilize the inherent authentication method of the Web server.

|  |  |
| --- | --- |
| Authentication Method | Description |
| **Basic** | This is a simple authentication method where the password is the user name. This method should never be used in production. |
| **Remote User** | This authentication method accepts the **"remote\_user"** header variable from the HTTP request. This works identically to the **“External”** authentication method in the previous OV versions and is the preferred production method. |
| **WebSeal** | This authentication method accepts the **"iv\_user"** header variable from the HTTP request. |
| **Legacy Internal** | This authentication method, provided for compatibility with earlier releases, accepts a username and password from an HTML form and verifies them against the database. **Note** that, if the **“exuser”** column is blank or null for an authenticated user, this class will copy the **“username”** column into it. Otherwise, it works exactly like the **“Internal”** authentication in the previous OV versions. Also, because it uses the OptiVault database and database classes, it is not part of OptiCore. Instead, it is part of OptiVault itself. Variations of it must be produced for the other products.  It is not recommended to use this authentication method in production. |
| **Legacy Custom** | This authentication method is provided for compatibility with earlier releases and expects a legacy **CustomAuthenticator** subclass as its parameter. Once configured that way, it works exactly like the **“Custom”** authentication in previous versions. Also, because it uses OptiVault classes, it is not part of OptiCore. Instead, it is part of OptiVault itself. Variations of it must be produced for the other products. It is not recommended to use this method for new installations. |
| **Microsoft AD Authentication** | Microsoft **ActiveDirectory** Authentication. This method requires Authenticator Parameters in the following format:  FACTORY{LDAPfactory};PROVIDER{myURL};METHOD{value};DOMAIN{myDomain};DN{value}  **Example:**  FACTORY{com.sun.jndi.ldap.LdapCtxFactory};PROVIDER{ldap://server1:389};METHOD{simple};DOMAIN{home.myinstitution.com};DN{DC=home,DC=myinstitution,DC=com}  This method uses LDAP to authenticate with an existing Microsoft **ActiveDirectory** installation. It is assumed that that installation will accept credentials in the form **"username@domain"** where the username is supplied by the user, and the domain is the parameter configured here. The other Authenticator Parameters are used to create the context.  **Note:** When using Microsoft AD Authentication, users will likely have to be created with the External Auth. User field in this format:  //LDAP/username@domain |
| **File Authorizer** | **FileAuthorizer** is a simple external authentication method where the **“external”** part is a file. The sample file can be found in <OptiVault directory>\WEB-INF\classes. This can be used for demo or test environments, or as an example for those developing a customized external authentication method but is not suitable for production environments. |
| **Database Table Authentication** | This authentication references a database to authenticate users. Often this is its own database but can be a separate authentication database if desired. If choosing the Database Table Authentication option, you will also need to configure additional parameters in **<OptiCash directory>\WEB-INF\DBAuthorizer-OV.properties** file as follows.  **Note**: You will see some options in the file not listed here (query definition, etc). Those should not be changed from the default.  **dbAuthorizer.database.dsn**: JNDI database connection name. Similar to section 3 above, this is connection to the database. If desiring to use JDBC connection instead, then this field should be empty.  **dbAuthorizer.database.url**: URL to authorization database, example: jdbc:oracle:thin:@server:1521:serverdb  **dbAuthorizer.database.username**, **dbAuthorizer.database.password**: Schema username and password if using JDBC connection. Can be blank if using JNDI connection.  **dbAuthorizer.digest.length**: Length of password after encryption. Longer is more secure but cannot exceed the maximum size of your target database’s password field.  **dbAuthorizer.digest.algorithm**: Algorithm to be used when encrypting the password.  **dbAuthorizer.digest.seed**: Character string used to seed the encryption algorithm. It is recommended to change this away from the default.  **dbAuthorizer.option.quiet**: “true” or “false”. Quiet mode allows a password that was unencrypted to be encrypted without the user having to change that password. If false, then users are forced to change the password in that situation. This can be relevant when migrating from another auth method or in a case where the administrator previously reset a user’s password.  **Note**: If you plan to use Database Table Authentication, also known as **DBAuthorizer**, from multiple OptiSuite applications and point to the same single database for user management, then the digest **“length”, “algorithm”,** and **“seed”** settings above must be the same between all applications. |

1. Select ***“User Interface Language”*** as **“English\_US”**.
2. Leave ***“Calendar length”*** as provided by default. Do not change this field.
3. The Import Path typically reflects the existing **<application-path>/import** directory as it exists under the deployment on the Application Server. However, this could be a location outside of the deployed application path. OptiVault load processes that use an input file will assume that file is found in this location. If you point this to a location other than the typical **<application-path>/import** directory, then you will also need to create 2 subdirectories within that directory with the same names as subdirectories found in **<application-path>/import**.

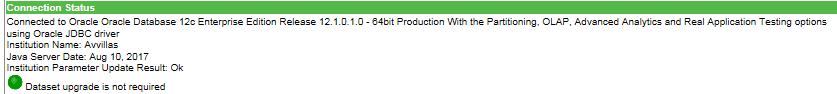
* **Caution**: The import directory is used to copy files that are being loaded to OptiVault (daily load files, order files, etc). When loading such files via interface it is recommended that the original path of the load files is other than the import directory. This is to avoid potential issues when the loaded files are replaced by the previously copied files in the import directory. Also, there may be issues associated with loading files of bigger size when the load files are reduced in size while executing the load process via the interface directly from the import directory. 

1. The Output Path typically reflects the existing **<application-path>/output** directory as it exists under the deployment on the Application Server. However, this could be a location outside of the deployed application path. OptiVault processes that produce an output file will put it in this location.
2. The Logs Path typically reflects the existing **<application-path>/logs** directory as it exists under the deployment on the Application Server. However, this could be a location outside of the deployed application path.

**Note**: It is recommended for this path to be the same path as that defined in **log4j.properties** for easy locating of the various job and application logs. Log files produced by OptiVault during normal operation will be put into this location.

1. **CarrierWeb Service URL** is a connection used to retrieve some data from the OptiVLM-CarrierWeb application. Leave blank if you are not connecting to CarrierWeb. Example: <http://host.com:9080/CarrierWeb/>
2. Define the **“Mail Host Name”**, which is the SMTP mail host server IP address or server name. This is used to email the daily load log files to an appropriate business analyst for review.
3. Click Update to save the changes. At the bottom of the screen in the ***“Connection Status”*** table, you should see the message indicating that a connection to Oracle is established.

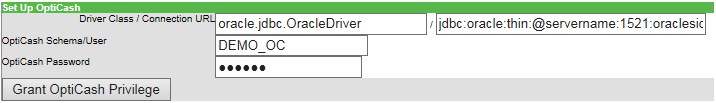
**Example**:



1. Once you are sure you have a working connection with Oracle for the OptiVault database, next point OptiVault to the OptiCash database. OptiVault uses information from OptiCash, so it is necessary to grant select privileges on various OptiCash tables to OptiVault.

**Note:** These items are only applicable if you are sharing data between OptiCash and OptiVault. Stand-alone OptiVault installations can skip this section.

* In the **“Set Up OptiCash”** table, enter the Driver Class and Connection URL for OptiCash. Example:



* Enter the **OptiCash Schema/User** and the **OptiCash schema** password.
* Click the ***Grant OptiCash Privilege*** button.

**Note:** It is necessary to review the **OptiVault.log** to verify this process was completed successfully. You should see log entries similar to the following:

INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CASHPNT TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CAL\_LIST TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.EVENTS TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.EVNTDATE TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CALENDAR TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.DENOMDEF TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.SRVDEPOT TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.ORDERS TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.ORDERDEN TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CP\_DENOM TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.ATORDRTR TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.ATMHIST TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.RECOMTOT TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.RECOMDEN TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.RECOMSTATE TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.VABRECDN TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.ATMFREC TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CP\_RPROC TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CRNCYDEF TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CP\_LINK TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.QUALITIES TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CRNCY\_EXCHANGE TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.CRNCY\_INTEREST TO MYBANK\_OV  
INFO -- Running Query : GRANT SELECT ON MYBANK\_OC.ORDERS\_MASTER TO MYBANK\_OV  
INFO -- Grant OptiCash select to OptiVault finished!

* Informing you the process was successful. The tables mentioned above are the OptiCash tables read by OptiVault.

1. Browse back to the **/maint/index.jsp**, by clicking the blue house icon at the top of the page. (taking you back to **<OptiVault URL>/maint/index.jsp** )
2. For Brazilian users, you may wish to turn on the CDI interest calculations (for holding cost). This is an alternative method to calculate compound interest rather than simple interest and no interest on Saturdays, Sundays, or Holidays.

**Note**: This applies only during Recommendations generation and will be inconsistent with other features (like Cost reports). To turn this on, find file **<application-path>/WEB-INF/optivault.properties** and modify the values of the following parameters:

**cdi\_interest\_calculation=on  
cdi\_interest\_calculation\_calendar\_id=CDI\_CALENDAR**

**CDI\_CALENDAR** here may be replaced with a different calendar ID if desired. A Calendar with the same ID must be created within OptiCash and Events associated with that calendar that represent the holidays during which interest will not accrue.

1. Optionally, the email ***“From” address for notifications sent by OptiVault may be altered in file {OptiVault directory}/WEB-INF/optivault.properties by changing the “JobSender”*** variable. For example: **JobSender=optivault@mybank.com**
2. After the OptiVault setup is completed, it may be necessary to update your local java security to grant permissions, which will allow OptiVault to directly execute various OptiVault Java classes. If so, the following line should be added to the **java.policy** file:

grant {

permission java.security.AllPermission;

};

# OptiVault Licensing

1. To receive an OptiVault license, you will need to provide the **OptiVault.log** file to NCR Cash Management after an attempted login, which captures the needed information to generate a license. We have defined the location of the **OptiVault.log** file earlier in your **<application-path>/WEB-INF/Log4j.properties** file.
2. NCR Cash Management will create a license SQL script and relay that back to you.
3. To apply the SQL script, Go to http://<hostname>/optivault/maint/testsql.jsp
4. Copy and paste the new license script to the ***SQL editor*** and click ***Run SQL***.
5. You should now be able to login to OptiVault successfully.

* **Warning**: This should only be carried out by a system administrator or database administrator as incorrect use of the SQL editor could cause corruption of the data.

# OptiVault Customization

The most common customization you will perform is the look of the user interface or language file edits.

## Making Changes to the Language File

1. For instance, if you want to change the word ***"recommendation"*** to the word ***"suggestion"***, open the following file with a text editor (assuming English):

* <application-path>WEB-INF\classes\transoft\_optivault\_LanguageSet\_English.properties

1. Search for the string **'=recommendation'**. Edit to **'=suggestion"**. Make sure to search for all occurrences of this word or string. Save the file.
2. Restart the Application Server where the WAR file was deployed under.

**Note**: OptiVault contains individualized properties files for text elements used in Reports. These files are found in the following location: <application-path>WEB-INF\lib\optivault<version-number>.jar\transoft\optivault\reports\. Files will be named like **AuditReport\_es.properties** where **“AuditReport”** is the report name and **“\_es”** indicates Spanish language. Other languages can be substituted instead of **“es”** – just use the same language abbreviation as found in **“locale.language”** in <application-path>WEB-INF\classes\transoft\_optivault\_LanguageSet\_<yourlanguage>.properties

Customized language files are the client’s responsibility to maintain. Before editing, save the original file (i.e., **transoft\_optivault\_LanguageSet\_English.orig.properties**). In the future, with each OptiVault upgrade, the edited version will need to be saved PRIOR to installing a new WAR file. Once the WAR file has been deployed, then restore the edited version.

## Making Changes to the Styles and Logos

1. All images are stored in the <application-path>/WEB-INF/images directory.
2. The main OptiVault style sheet is found at <application-path>/styles/main.css

Customized styles and logos are the client’s responsibility to maintain. Before editing, save the original style sheet and image files. In the future, with each OptiVault upgrade, the edited version will need to be saved PRIOR to installing a new WAR file. Once the WAR file has been deployed, then restore the edited version.

## Making Changes to the Report Styles and Text

Changes to the styles and text within OptiVault PDF and CSV reports are maintained separately per report.

1. Style definitions are maintained within each report **JRXML** file. e.g. The Vault Horizon report style can be found in **VaultHorizonReport.jrxml**. All styles are contained within the <style> and <style name> tags.
2. Textual elements are contained within the **OptiVault.jar** file under the transoft/optivault/reports/ path, with an extension of **“properties”**. e.g. The Vault Horizon text can be found in **VaultHorizonReport.properties**

## Setting Custom Order Fields

OptiVault allows the addition of up to 10 customizable fields to the ordering interface. These fields are configured in OptiVault under ***System > Order Settings > Custom Field Definitions***.

The option called “**SQL Query”** allows to add a menu to ordering screens with a dynamic list of options. If you intend to use this type of field, then the queries must be predefined during the OptiVault setup.

1. In the **<application-path>/WEB-INF/classes** directory, find the file **“transoft\_optivault\_custom\_QueryString.properties”**. If it does not already exist, create it as a blank text file. This will be known as the **“custom query file”.**
2. Open the custom query file with a text editor. Enter the queries on separate rows in the following format: <reference>=<SQL query> where **'reference'** is what the user will type on ***System > Order Settings > Custom Field*** Definitions page and **'SQL query'** determines what options will be displayed when placing an order.
   1. **Example**: CustomField.active\_date=?select actvdate from cashpnt where cashp\_id \= '\:cashp\_id\:';
3. Notice the segment **'\:cashp\_id\:**' in the above example. This is a dynamic parameter being passed into the query at the time of opening an order creation screen. You may use the following parameters:

|  |  |
| --- | --- |
| **CASHP\_ID** | The cashpoint for which this order is being placed. |
| **CPTYP\_ID** | The cashpoint type for which this order is being placed. Possible values are VAULT. |
| **ACTN\_ID** | The type of order being placed.  01=Delivery, 02=Return |
| **SCHED\_ID** | Indicates if this order is an emergency (unplanned) or not.  01=Normal, 02=Unplanned |
| **ORD\_DATE** | The date on which the order is being placed (current date usually). |

Customized query files are the client's responsibility to maintain. Typically, this means saving an outside copy of the existing custom query file prior to an OptiCash upgrade and then replacing that copy in the **<application-path>/WEB-INF/classes** directory after the upgrade is complete. Additionally, writing queries requires some knowledge of ***SQL*** (***Structured Query Language***) and the OptiCash database structure. NCR Cash Management support personnel are available to help with specific inquiries regarding this.

## Audit Settings

The Auditing feature creates and stores a record of users' actions. Settings allow the system administrator to determine which actions to record and to what level of detail.

1. Open settings file: **<application-path>WEB-INF\classes\transoft\_optivault\_audit.properties**
2. Set auditing to **'none', 'partial',** or **'full'** for each function. See the table below for the meaning of each function ID number.
   * + **None**: No recording occurs when this function is used.
     + **Partial**: Basic record is saved (statement parameters omitted).
     + **Full**: All available info is recorded when this function is used.
3. After making changes, save the file, and start (or restart) the OptiVault application.

| Function ID | Description |
| --- | --- |
| **0** | Unknown  **Note**: The Unknown category includes many secondary records (things that take place invisibly when the action noted in the main record occurs). It is the most common record type. It may be advantageous to set Unknown to **'partial'** logging to reduce the total amount of data logged by auditing. |
| **1001** | Updated Cashpoint Details |
| **1002** | Updated Vault Parameters |
| **1003** | Updated Vault Denomination |
| **1004** | Inserted Vault Requirements |
| **1005** | Import Vault Balance |
| **1006** | Saved Provisional Credit |
| **1007** | Linked Cashpoint to Vault |
| **1008** | Inserted Transit Time Setting |
| **1009** | Updated Vault Service Days |
| **1010** | Deleted Service Costs |
| **1011** | Updated Teller Verification |
| **1012** | Updated Vault Denomination Split |
| **1013** | Deleted Vault Sorter |
| **1014** | Updated Sort Capacity Utilization |
| **1015** | Created Denomination Definition |
| **1016** | Updated Denomination Definition |
| **1017** | Deleted Denomination Definition |
| **1018** | Updated Order |
| **1019** | Deleted Order |
| **1020** | Added Forecast Adjustment |
| **1021** | Inserted Forecast Horizon |
| **1022** | Updated Forecast Adjustment |
| **1023** | Deleted Job Message |
| **1024** | Inserted Job Message |
| **1025** | Updated Vault History |
| **1026** | Updated Vault Forecast Toggle Values |
| **1027** | Updated Horizon |
| **1028** | Import Vault Balance |
| **1029** | Deleted Cashpoint |
| **1030** | Updated Vault Denomination Quality Yield Split |
| **1031** | Updated Cross Shipping Yield |
| **1032** | Inserted Order |
| **1033** | Updated Commercial Service Days |
| **1034** | Updated Transit Time Setting |
| **1035** | Added Denomination to Cashpoint |
| **1036** | Removed Denomination from Cashpoint |
| **1037** | Updated Vault Requirement |
| **1038** | Deleted Vault Requirement |
| **1039** | Removed CP from Vault |
| **1040** | Add Sorter to Vault |
| **1041** | Update Vault Sorter |
| **1042** | Accept Recommendation |
| **1043** | Inserted Service Cost |
| **1044** | Removed Service Cost |
| **1045** | Removed Forecast Adjustment |
| **1046** | Exclude Commercial History |
| **1047** | Update CI Service Days |
| **1048** | Update CI History |
| **1049** | Delete CI |
| **1050** | Remove External Funding Source |
| **2001** | Inserted Commercial History |
| **2002** | Deleted Job |
| **2003** | Inserted Job |
| **2004** | Deleted Job Message |
| **2005** | Inserted Job Message |
| **2006** | Deleted User Job Message |
| **2007** | Deleted Horizon |
| **2008** | Deleted Setting |
| **2009** | Saved Setting |
| **2010** | Updated Constraint Calculation Set |
| **2011** | Created Constraint Calculation Set |
| **2012** | Deleted Constraint Calculation Set |
| **2013** | Deleted Cost Table |
| **2014** | Inserted Horizon for Projected Cost |
| **2015** | Updated Cost Options |
| **2016** | Inserted Cost Options |
| **2017** | Inserted Orders Sum and Details From Load File |
| **2018** | Inserted Orders Denomination Details From Load File |
| **2019** | Updated Orders Sum and Details From Load File |
| **2020** | Updated Orders Denomination Details From Load File |
| **3001** | Created Cashpoint |
| **3002** | Created Depot |
| **3003** | Updated Depot |
| **3004** | Deleted Depot |
| **3005** | Created Group |
| **3006** | Updated Group |
| **3007** | Removed Group Cashpoints |
| **3008** | Deleted Group |
| **3009** | Created Order Constraint |
| **3010** | Deleted Order Constraint |
| **3011** | Updated Sorters |
| **3012** | Deleted Sorters |
| **3013** | Mass Assign Funding Source |
| **3014** | Mass Assign Overnight Earn. Rate |
| **3015** | Mass Assign Insurance Rate |
| **3016** | Mass Assign Max Hold |
| **3017** | Mass Assign Max Pallets |
| **3018** | Mass Assign Bulk Order |
| **3019** | Mass Assign Aggregate Emergencies |
| **3020** | Mass Assign Clearance Time |
| **3021** | Mass Assign Packaging Time |
| **3022** | Mass Assign Minimum Delivery |
| **3023** | Mass Assign Minimum Return |
| **3024** | Mass Assign Minimum Unplanned |
| **3025** | Mass Assign Delivery Handling Cost |
| **3026** | Mass Assign Return Handling Cost |
| **3027** | Mass Assign Delivery Days |
| **3028** | Mass Assign Return Days |
| **3029** | Mass Assign Unplanned Days |
| **3030** | Mass Assign Delete Service Cost |
| **3031** | Mass Assign Insert Service Cost Amount |
| **3032** | Mass Assign Insert Service Cost Range |
| **3033** | Mass Assign Insert Service Unit Size |
| **3034** | Mass Assign Update Service Cost |
| **3035** | Created Sorter |
| **3036** | Updated Cross Shipping Zone |
| **3037** | Created Cross Shipping Zone |
| **3038** | Deleted Cross Shipping Zone |
| **4001** | Created Calendars |
| **4002** | Deleted Calendars |
| **4003** | Created Event List |
| **4004** | Added Event to Event List |
| **4005** | Associated Calendar with Event |
| **4006** | Dissociated Calendar with Event |
| **4007** | Deleted Cashpoint from Calendar |
| **4008** | Updated Calendar |
| **4009** | Deleted Event Definition |
| **4010** | Updated Event |
| **4011** | Updated Event Date |
| **4012** | Updated Event List |
| **4013** | Add Cashpoint to the calendar |
| **4014** | Removed Event from Event List |
| **4015** | Updated Event List |
| **4016** | Deleted Event List |
| **4017** | Created an Event |
| **5001** | Updated Institution Parameters |
| **5002** | Updated Override Reason |
| **5003** | Deleted Override Reason |
| **5004** | Created User |
| **5005** | Updated User Info |
| **5006** | Inserted into Access Control List |
| **5007** | Deleted from Access Control List |
| **5008** | [Currently not used] |
| **5009** | Cloned Commercial |
| **5010** | Cloned Vault |
| **5011** | Renamed Vault ID |
| **5012** | Delete Vault History |
| **5013** | Replaced Vault Last Load Information |
| **5014** | Delete Commercial History |
| **5015** | Delete CI History |
| **5016** | Replaced CI Last Load Information |
| **5017** | Deleted Forecast Queue |
| **5018** | Deleted Unused Calendars |
| **5019** | Deleted Recommendations |
| **5020** | Deleted Orders |
| **5021** | Created Override Reason |
| **5022** | Deleted User |
| **5023** | Deleted Business Unit |
| **5024** | Rename CI ID |
| **5025** | Rename Commercial ID |
| **5026** | Update All Used Calendars |
| **5027** | Insert All New Calendars |

# Batch Processes

The purpose of batch process execution is to provide more time efficient execution of regular OptiVault processes. The jobs can be scheduled to run overnight.

All the batch process files will be located under the deployment directory of the OptiVault Web Application in the **‘batch’** directory. The batch files will be available after the OptiVault WAR File is deployed.

**Example**:

C:\IBM\WebSphere\AppServer\profiles\default\installedApps\MIRAGENode01Cell\OptiVault.ear\OptiVault.war\Batch

|  |  |
| --- | --- |
|  | **Note**: Each time a WAR file is deployed or upgraded to a newer version, batch files will need to be backed up to save the environment settings.  For that reason, the batch directory should be moved to a different location during installation, from where the processes will be run on an ongoing basis. |

The batch files:

1. Are intended to be used by the customer to implement their own production quality batch processing schedule.
2. Can be executed in their current form to carry out the basic processing steps, however, the expectation is that the customer will either modify/wrap or rewrite the scripts to meet the banks internal batch standards and to closely integrate with the bank environment, considering issues such as file transfers, on-call alerts, standard scheduling packages and/or programming languages etc.

NCR Cash Management recommends the customer to first run the process in its basic form using the batch process and then, as necessary, make the changes to meet the local institution requirements.

|  |  |
| --- | --- |
|  | **Note**: NCR Cash Management does not provide on-going support for the batch files due to integration requirements to existing customer systems, specific customer procedures in relation to data file interfaces, variety of scheduling capabilities and security concerns.  Therefore, it is the responsibility of the client to review, understand and support these batch files. |

## Ant Based Execution of Batch

Commencing with OptiSuite version 8, it is recommended to execute our batch processes via ANT, although other methods may be possible. The Java standard Apache ANT package is used to execute the custom export framework, and it is available for free for any operating system. **ANT** is available at http://ant.apache.org. The custom export requires **ANT** **version 1.7** at minimum.

ANT will need to be downloaded onto the computer which is running the custom output. Since ANT is java-based, you may simply unzip the ANT directory structure, and add the underlying **“bin”** directory to the system path so that calls to execute **“ant”** are found. If ANT is not added to the system path, simply call the fully-loaded path to the ant executable instead.

Since ANT is a java-based utility, **%JAVA\_HOME%** must also be defined, but this should have been done earlier in the installation process and if so, no additional action is necessary.

There are three files of importance for executing the batch process:

* **build.properties** – This file contains the properties associated with each batch process.
* **build.xml** – This file contains the configuration and calls to each underlying batch process, using the parameters defined in the build.properties file.
* **ant\_execution\_samples** – this file contains sample calls to execute each process via ant

### General Parameters

These parameters must be set in the build.properties file

* **optivault.dir=**The directory path of the OptiCash war file. e.g. [C:/IBM/WebSphere/AppServer/profiles/AppSrv01/installedApps/ironhideNode01Cell/OptiVault.ear/OptiVault.war/](file:///C:\Users\TB250131\Downloads\ProductDocumentationMigrationFiles\OptiVault\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\ironhideNode01Cell\OptiCash.ear\OptiCash.war\)
* **optivault.lib.dir=**The directory path to the application server jar files. e.g. C:/IBM/WebSphere/AppServer/lib
* **optivault.oracle.dir=**The directory oracle ojdbc jar file.
* **optivault.user=**A valid user in OptiVault who has rights to the given batch functions and cashpoints.

## Load Balance

The Load\_Balancebatch will load daily load file(s), i.e., the file(s) that supply the activity and balance figures for the **VAULT** and **COMMERCIAL** cashpoints. Refer to the document ***OptiVault Input/Output Formats*** for more information about this load format.

### Properties

* **Load\_Balance.fileName=**Name of the file to be loaded. The file must be in the applicable defined import directory (e.g. C:\OptiSuite\optivault\import). Supply only the Basic Filename - No path is necessary. If loaded from ETL, put *‘none’* or *‘na’*.
* **Load\_Balance.cashpointType=**Valid Cashpoint Types: VAULT, COMMERCIAL
* **Load\_Balance.delim=**Supported separators – comma, tab. If loaded from ETL, put ***‘none’*** or ***‘na’***.
* **Load\_Balance.mailaddr=**Email addresses, where the log file is sent once the process is completed
* **Load\_Balance.source=**Data source: file, etl
* **Syntax**
* **ant -f build.xml Load\_Balance**

## First Level Aggregation

The First\_Level\_Aggregationbatch will run the first level aggregation between OptiCash and OptiVault.

### Properties

* **First\_Level\_Aggregation.startDate=**Starting date of the aggregation. The format should be yyyy-mm-dd
* **First\_Level\_Aggregation.endDate=**End date of the aggregation. The format should be yyyy-mm-dd
* **First\_Level\_Aggregation.HorizonLen=**Length of desired Horizon
* **First\_Level\_Aggregation.CurrencyID=**Currency ID to be aggregated

### Syntax

ant -f build.xml First\_Level\_Aggregation

## Run Recommendations

The Run\_Recommendations batch will run the OptiVault recommendation process.

### Properties

* **Run\_Recommendations.Group=**valid group in OptiVault
* **Run\_Recommendations.OVSetId=**Valid Recommendation Job Process ID (e.g. 1, 2, 3, etc.)

### Syntax

ant -f build.xml Run\_Recommendations

## Run AllRecommendations

The Run\_AllRecommendations batch will run all of the OptiVault recommendation processes which are marked as **“Recurring”.**

### Properties

* This job requires no parameters.

### Syntax

ant -f build.xml Run\_AllRecommendations

## Orders Output

The Output\_Orders batch will output OptiVault orders.

### Properties

* **Output\_Orders.delim=**Supported separators – comma
* **Output\_Orders.mailaddr=**Email addresses, where the log file is sent once the process is completed
* **Output\_Orders.jobID=**Valid Orders Order Job Process ID (e.g. 1, 2, 3, etc.)

### Syntax

ant – f build.xml Output\_Orders

## Recommendations Output

The Output\_Recommendations batch will output OptiVault orders.

### Properties

* **Output\_Recommendations.fileName=**Name of the file to be output.
* **Output\_Recommendations.delim=**Supported separators – comma
* **Output\_Recommendations.startDate=**Starting date of recommendations
* **Output\_Recommendations.endDate=**Endign date of recommendations
* **Output\_Recommendations.mailaddr=**Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Output\_Recommendations

## Orders Load

The Load\_Orders batch will load VAULT orders.

### Properties

* **Load\_Orders.loadfile=**Name of the file to be loaded
* **Load\_Orders.delim=**Supported separators – comma
* **Load\_Orders.mailaddr=**Email addresses, where the log file is sent once the process is completed
* **Load\_Orders.overwrite=**Overwrite existing order records in the data- yes, no
* **Load\_Orders.optld=**Write invalid records to a file - yes, no
* **Load\_Orders.datchk=**Validate order & due date - yes, no

### Syntax

ant -f build.xml Load\_Orders

## Calculate CI Constraints

The Calculate\_Constraints batch will run the **CI CAP/OBMH** calculations.

### Properties

* **Calculate\_Constraints.setID=**Calculation Settings ID
* **Calculate\_Constraints.mailaddr=**Email addresses, where the log file is sent once the process is completed
* **Calculate\_Constraints.integerStart=**Start at date relative to today; 0 is today, -1 is yesterday, 4 is four days in future
* **Calculate\_Constraints.integerEnd=**End at date relative to today; 0 is today, -1 is yesterday, 4 is four days in future
* **Calculate\_Constraints.from=**from
* **Calculate\_Constraints.to=**to
* **Calculate\_Constraints.day=**day

### Syntax

ant -f build.xml Calculate\_Constraints

## Run Forecast

The Run\_Forecast batch will run the forecast in batch.

### Properties

* **Run\_Forecast.ForecastType=**batch
* **Run\_Forecast.Horizon=**Valid Forecast Definition ID
* **Run\_Forecast.FilterType=**Filter type. Method of selecting cashpoints. **I = institution** (all cashpoints). **G = group**. **V = cashpoint** (vault or commercial)
* **Run\_Forecast.Filter=**The ID of the filter based on the filter type. Used if the filter type IS NOT **"I"**
* **Run\_Forecast.mailaddr=**Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Run\_Forecast

## Run Commercial Consolidation

The ComConsolidation batch will run merge the commercial forecast into the associated vault’s forecast.

### Properties

* **ComConsolidation.setID=**Valid Commercial Consolidation Setting ID from within OptiVault.

### Syntax

ant -f build.xml ComConsolidation

## Cost Calculation

The Cost Calculation batch process will determine the costs of actual or projected activity in vaults. The resulting values will be available in OptiVault reports.

### Properties

* **Cost\_Calculation.cashGroup\_id=** ID of the group of cashpoints for which cost calculation will run.
* **Cost\_Calculation.model\_id=** “none” – not used in this version of OptiVault
* **Cost\_Calculation.startDate=**YYYY-MM-DD – costs will be calculated for activity beginning on this date
* **Cost\_Calculation.endDate =** YYYY-MM-DD – costs will be calculated for activity ending on this date
* **Cost\_Calculation.calcType =** “ACTUAL” or “PROJECTED”

### Syntax

ant -f build.xml Cost\_Calculation

## Purge Application File Data

The process to delete temporary files (usually report document files and generated graph images)

### Properties

* **Purge\_ApplicationFile\_Data.daysInPast=** Delete files which were created more than this number of days in past.
* **Purge\_ApplicationFile\_Data.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_ApplicationFile\_Data

## Purge Cashpoint Costs

The process to delete cashpoint cost records.

### Properties

* **Purge\_Cashpoint\_Cost.monthsInPast=** Delete data more than this number of months in the past
* **Purge\_Cashpoint\_Cost.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_Cashpoint\_Cost

## Purge Calendar Events

The process to delete calendar Event records.

### Properties

* **Purge\_Event.monthsInPast=** Delete data more than this number of months in the past
* **Purge\_Event.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_Event

## Purge Forecast Adjustments

The process to delete Forecast Adjustment records which were only applicable in the past.

### Properties

* **Purge\_Forecast\_Adjustment.monthsInPast=** Delete data more than this number of months in the past
* **Purge\_Forecast\_Adjustment.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_Forecast\_Adjustment

## Purge CI CAP/OBMH

The process to delete Custodial Inventory CAP and OBMH (On Book Minimum Holding) records.

### Properties

* **Purge\_Obmh\_Cap.daysInPast=** Delete data more than this number of days in the past
* **Purge\_Obmh\_Cap.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_Obmh\_Cap

## Purge Audit Records

The process to delete records of OptiVault user activity.

### Properties

* **Purge\_Audit.daysInPast=** Delete data more than this number of days in the past
* **Purge\_Audit.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_Audit

## Purge History

The process to delete cashpoint history data.

### Properties

* **Purge\_History.monthsInPast=** Delete data more than this number of months in the past
* **Purge\_History.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_History

## Purge Recommendations

The process to delete recommendation records.

### Properties

* **Purge\_Recommendations.daysInPast=** Delete data more than this number of days in the past
* **Purge\_Recommendations.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_Recommendations

## Purge Orders

The process to delete order records.

### Properties

* **Purge\_Orders.daysInPast=** Delete data more than this number of days in the past
* **Purge\_Orders.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Purge\_Orders

## Cashpoint Synchronization

The process to bring OptiCash cashpoint details into OptiVault. Create, update, and delete cashpoints as well as ensure relationships between cashpoints are the same as OptiCash.

### Properties

* **Batch\_Cashpoint\_Synchronization.insertFlag=** “yes” or “no”. New cashpoints in OptiCash will be added to OptiVault.
* **Batch\_Cashpoint\_Synchronization.updateFlag=** “yes” or “no”. Cashpoint details from OptiCash will overwrite the same that already exists in OptiVault.
* **Batch\_Cashpoint\_Synchronization.deleteFlag=** “yes” or “no”. Cashpoints already removed from OptiCash will be removed from OptiVault.
* **Batch\_Cashpoint\_Synchronization.mailaddrPurge\_Orders.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Batch\_Cashpoint\_Synchronization

## Calendar Refresh

The process to bring OptiCash system settings into OptiVault. Calendars, Events, Currency and Denomination Definitions, Service Depots, and Exchange Rates are all made to be the same as OptiCash.

### Properties

* **Batch\_Calendar\_Refresh.mailaddr=** Email addresses, where the log file is sent once the process is completed

### Syntax

ant -f build.xml Batch\_Calendar\_Refresh

## Extend Event Dates

Process for automatically extending Event date definition. “Events” in OptiVault are defined like rules: for example, Event “X” happens on the 4th Thursday of November. “Event Dates” are that rule translated to specific calendar days: for example, 28-Nov-2013, 27-Nov-2014, 26-Nov-2015, 25-Nov-2016. Event Dates need to exist for the Forecast process, so occasionally there is a need to extend further into the future. This process does that in an automatable fashion.

### Properties

* **ExtendEventDates.startDate=** YYYY-MM-DD or “default” or “all”. If a specific date is given, Event date generation begins then. If “default” is specified, Event date generation begins at end of existing Event Dates and goes to the current date + 5 years. If “all” is specified, Event dates are generated for 2 years in past, the current year, and 2 years beyond.
* **ExtendEventDates.mailaddr=** Email addresses, where the log file is sent once the process is completed
* **ExtendEventDates.overwrite=** “yes” or “no”. If “yes” is specified, existing event dates are removed and replaced with newly generated Event dates. If “no”, then newly generated Event dates are added to whatever existed before.

### Syntax

ant -f build.xml ExtendEventDates

# File Maintenance

The following directories should regularly be purged in the deployed instance of OptiVault:

* dynimages\ - (Kavachart images (pie charts, forecast graphs, etc.) as generated by the UI)
* dynreports\ - (old CSV and PDF reports)

User institutions should purge these directories weekly. Deleting files from these directories should have no negative impact on the application.

Process logs (i.e., Recommendation logs, Forecast logs, Orders Output logs, etc.) should be purged occasionally, as well. The directory location for these log files will be the logs directory of the deployed instance. The interval for purging these logs will vary on how much the client decides to archive, but it is not recommended to keep these files for more than a month, at most, unless there are compelling reasons.

# Redeploying the OptiVault Oracle Schema

1. It is recommended to have nightly backups of the OptiVault Oracle schema.
2. You may backup the data using replication, a simple ***Oracle EXP*** command, or other tools of choice for the DBA.
3. You would reload data following the schema user create and import methods outlined earlier in the installation guide.

# Preventing Access to System Maintenance

All system maintenance functions are stored in the maint sub-directory in the **OptiVault.war/** directory.

If you choose to limit access to this directory, you may either:

1. Limit access to the URL using the provided security roles which can be mapped to plug-in Users and/or Groups (recommended).
2. Limit access to the URL at the web tier (recommended).
3. Move the directory to another location outside of the deployed instance once OptiVault is setup properly. You can always modify the **optivault.properties** file manually if needed.
4. Delete the directory once OptiVault is setup properly. You can always modify the **optivault.properties** file manually if needed.

# Additional Dependencies for OptiVault in Tomcat

For clients deploying OptiVault on Apache Tomcat, you will need to configure the CSRF security properties to use the random number generator included with your app server (default refers to one for IBM WebSphere). Find file {root directory}\WEB-INF\classes\Owasp.CsrfGuard.properties and modify the following two properties:

org.owasp.csrfguard.PRNG=SHA1PRNG  
org.owasp.csrfguard.PRNG.Provider=SUN

This example shows a typical Apache Tomcat setup. Similar lines referring to the IBM generator will need to be removed or commented out.

Also, you will need to deploy the following additional dependencies (jar files) under Tomcat **“lib”** directory (IBM WebSphere typically comes with these already included). For example, if Tomcat is installed under

C:\apache-tomcat-7.0.35

Then the jar files mentioned in this document should be put in

C:\apache-tomcat-7.0.35\lib

**Note:** The version of each depends on the version of Tomcat installed.

These files should be downloaded from a trusted internet source, such as mvnrepository.com.

### Tomcat 7

Following are dependencies that are required by OptiCash/OptiNet in Tomcat 7

|  |
| --- |
| File name |
| el-api-2.2.jar |
| el-impl-2.2.1-b05.jar |
| geronimo-jpa\_2.0\_spec-1.1.jar |
| javax.servlet.jsp-api-2.2.1.jar |
| javax.servlet-api-3.0.1.jar |
| jstl-1.2.jar |
| jstl-api-1.2.jar |
| jstl-impl-1.2.jar |
| jta-1.1.jar |
| validation-api-1.0.0.GA.jar |

### Tomcat 8

Following are dependencies that are required by OptiCash/OptiNet in Tomcat 8

|  |
| --- |
| File name |
| javax.el-api-3.0.0.jar |
| geronimo-jpa\_2.0\_spec-1.1.jar |
| javax.servlet.jsp-api-2.3.1.jar |
| javax.servlet-api-3.1.0.jar |
| jstl-1.2.jar |
| jstl-api-1.2.jar |
| jstl-impl-1.2.jar |
| jta-1.1.jar |
| validation-api-1.0.0.GA.jar |

### Tomcat 9

Following are dependencies that are required by OptiCash/OptiNet in Tomcat 9

|  |
| --- |
| File name |
| geronimo-jpa\_2.0\_spec-1.1.jar |
| javax.servlet.jsp-api-2.3.3.jar |
| javax.servlet-api-4.0.1.jar |
| taglibs-standard-impl-1.2.5.jar |
| taglibs-standard-spec-1.2.5.jar |
| jta-1.1.jar |
| validation-api-1.0.0.GA.jar |

# IMPORTANT NOTE

To upgrade the application version to 9.15 with SQL Server, below are the steps.

1. Customers having older versions (<9.15) must be upgraded to 9.15 without changing the DB server (Oracle).
   1. This step is taken care by the application if 9.15 war with oracle properties is deployed into the webserver.
   2. After deployment, the user is prompted to upgrade DB Schema. This is also specific to OC and OV. For VLM products the upgrade is taken care by Liquibase.
2. Create Database and schema in SQL Server as mentioned in installation.
3. Migrate data from Oracle to SQLServer (taken care by NCR Team).
4. Update Oracle DB properties with SQLServer Details in 9.15 war and deploy.

CXBanking, OptiVault, Installation Guide

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NCR welcomes your feedback on this document. Your comments can be of great value in helping us improve our information products. Please contact us using the following address:

[email: xxxx@yyyy]

[web: <https://xxx.xxx.xxx>]