

Structured Data Manager

Software Version 7.6.7

Troubleshooting Guide



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About this document

Structured Data Manager provides powerful tools to create and use an archive solution that copies or moves data from an online transaction processing database (active database) into less expensive storage (archive data store).

Prerequisites

Prerequisites for using this product include:

- knowledge of the operating system
- database knowledge
- application knowledge

Related documentation

Document Name	Description
<i>Structured Data Manager API Reference Guide</i>	Provides reference to the available programming interfaces.
<i>Structured Data Manager Certification Matrix</i>	Provides information about supported Operating Systems, databases, browsers, software integrations and other technology stacks.
<i>Structured Data Manager Concepts Guide</i>	Explains the major concepts of database archiving in general and Structured Data Manager in particular.
<i>Structured Data Manager Developer's Guide</i>	Explains how to use the Designer component to design, build, test, and deploy your archiving projects.
<i>Structured Data Manager Installation Guide</i>	Explains how to install the product.
<i>Structured Data Manager Release Notes</i>	Lists any items of importance that were not captured in the regular documentation.
<i>Structured Data Manager Runtime</i>	Explains how to use the Web Console component to run, monitor, and administer business flows that move data to and from the database.

Document Name	Description
<i>Guide</i>	
<i>Structured Data Manager Tutorial</i>	Provides step-by-step instructions to build a sample archiving module, deploy, run, and troubleshoot errors in it.
<i>Structured Data Manager Upgrade Guide</i>	Explains how to upgrade the product and archive schema generated by the earlier versions of the product.
<i>Structured Data Manager Discovery Guide</i>	Explains the purpose, how to install and use Discovery.

Chapter 1: Diagnose problems

This section describes how to diagnose problems in Structured Data Manager.

- [Diagnose problems](#)
- [Diagnose installation and deployment problems](#)
- [Diagnose Web Console problems](#)
- [Diagnose model and cartridge problems](#)
- [Diagnose business flow deployment problems](#)
- [Diagnose business flow runtime problems](#)
- [Diagnose data masking problems](#)
- [Diagnose AQS problems](#)
- [Diagnose redeployment, uninstall, and reinstall problems](#)
- [Manage the home directory](#)
- [Start Designer in debug mode](#)

Diagnose problems

How you diagnose problems with Structured Data Manager varies depending upon the task you are performing. For example, the available diagnostic tools and techniques are different for product installation than they are for running jobs.

The most commonly used tools for diagnosing and fixing problems with Structured Data Manager are log files. The log files provide a great deal of useful information that can usually help you narrow down the problem and resolve it.

See also

- [Log files](#)
- [Errors and solutions](#)

Diagnose installation and deployment problems

The first tasks you perform with Structured Data Manager are installing the product and deploying the database to database or database to file archiving configuration. If you receive errors while installing, deploying or configuring Structured Data Manager, you can use the error logs to discover the cause and fix the problem.

NOTE: If you are installing on Windows, ensure that the name of the installation directory is less than 38 characters. For example, C:\SDM\SDM760, where C:\ counts as three characters.

The Installer and Web Console include the following facilities to help you find and fix problems:

- Error messages in the Install Anywhere and Web Console panels
- Log file entries

Your first steps in diagnosing errors during installation and deployment include:

1. If you receive an error about one of your inputs, ensure that you did not misspell a user name or password.
2. If you receive an error that the installation or deployment failed, see the appropriate log file for more information. See [Log files , on page 23](#).
3. Look for the error you are receiving among those listed in section, [Errors and solutions , on page 30](#).

Diagnose Web Console problems

This section provides solutions to known Web Console problems.

- [Repository install](#)
- [Startup, shutdown, and remote connectivity errors](#)
- [Business flow problems](#)
- [Forgot Web Console admin user password](#)

Repository install

The repository installation occurs once at first run. When you first install the Web Console, you may encounter the following issues:

- **Installation fails**—If the default port number 8080 is in use when installing the Web Console, the installation will fail.
Solution—Change the port number to one that is not currently in use.
- **Delay in launching**—After installing the Web Console, when attempting to refresh, it does not launch properly.
Solution—Go to `<install_dir>\obt\bin` and run `webconsole.bat --port <port_number>`.

Error while restarting after an upgrade or repository install

Symptom

Web Console throws *This is very likely to create a memory leak. Stack trace of thread* error while restarting the application after an upgrade or repository install.

Resolution

Ignore the error message or restart the Web Console because currently, this does not have any impact on the performance and functionality of the Web Console.

Startup, shutdown, and remote connectivity errors

- **Connectivity issues**—Repository issues will affect connectivity.

Solution—For the repository, ensure the repository database is running.

- **Eligibility analytics**—You are not receiving eligibility analytics do to the following:
 - None of your rules have eligibility analytics turned on.
 - The configuration parameter for eligibility analytics is not turned on.
 - You did not put a pause point in the correct spot to see eligibility analytics.

Solution—If you want to use eligibility analytics you have to enable it in Designer or in the Web Console before you deploy.

Business flow problems

- **Character limit**—For Windows only, if you do not limit the length of your installation directory to 38 characters, your maximum business flow name capability will be reduced.

Solution— Ensure that the installation directory is less than 38 characters.

- **Missing business flow**—Business flow does not appear in the Web Console.

Solution—If your business flow does not appear in the Web Console, examine the subdirectory for your environment in <OBT_HOME>/businessflow and <OBT_HOME>/businessflow/<env name>; check to see if the .busflow files are located there. If not, you need to deploy the business flows to that environment. See the *Structured Data Manager Developer's Guide* and the *Structured Data Manager Runtime Guide* for information about deploying business flows.

Forgot Web Console admin user password

Symptom

Logging on to Web Console fails with some errors.

Cause

The issue might happen if you have forgotten the Web Console admin password and entered the wrong one leading to password miss match.

Resolution

To resolve this issue, you have to reset the Web Console admin password. Perform the following steps:

1. Log on to the database as **OBT_REP**.



2. Execute the following query to check the value of RESET_PASSWORD_TOKEN in OBTWC_PERSON table.

```
SELECT *  
FROM OBTWC_PERSON;
```

3. If the value of RESET_PASSWORD_TOKEN is NULL, update the value of the attribute with a new value as follows:

```
update OBTWC_PERSON set RESET_PASSWORD_TOKEN='HELLO' where USERNAME='admin';  
commit;
```

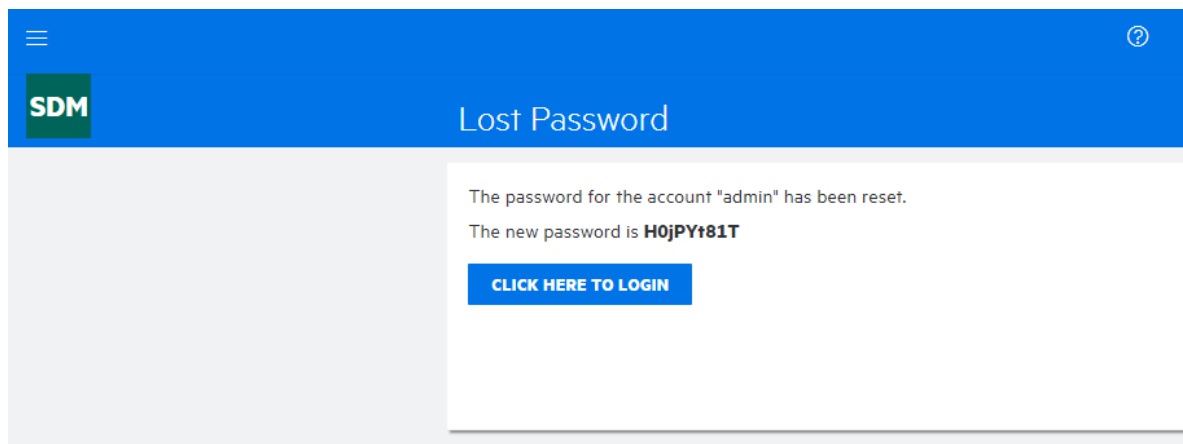
You can verify that the attribute RESET_PASSWORD_TOKEN has been updated with new value as follows:

```
SELECT *  
FROM OBTWC_PERSON;
```

4. Using the following link, log on to Web Console:

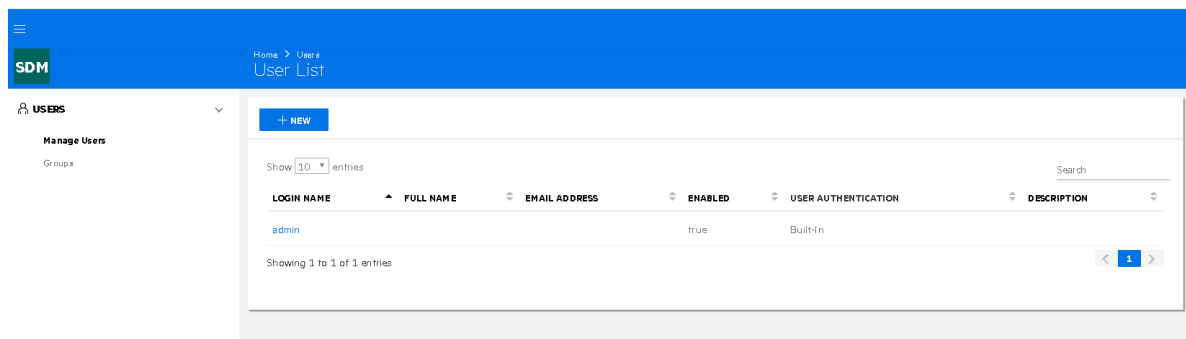
<http://<host>:<port>/WebConsole/login/reset?t=HELLO>

You have to replace the value of **host** and **port** with your system IP address and port number.



5. Log on to Web Console using the new password displayed on the screen.
6. Navigate to **User Management > Manage Users**.

The user list is displayed.



Change the password for the admin user as you desire and then log off. Log on to Web Console again to verify if the new password works fine.

Diagnose model and cartridge problems

The first tasks you perform with Designer are creating models and rules to visualize your archive and implement it. If you receive errors while creating models, cartridges, or business flows, you can use the diagnostic features of Designer to discover the cause and fix the problem.

See also

- [Log files](#)
- [Errors and solutions](#)

To learn more about models and cartridges, see the *Structured Data Manager Tutorial*, sections, [Creating an Archive Definition](#) and [Creating a Cartridge](#).

This section includes:

- [Models](#)
- [Common model issues](#)
- [Cartridges](#)
- [Common cartridge issues](#)

Models

To diagnose model errors when using Designer

1. Run preview frequently as you develop your model. You should, at a minimum, run preview when you:
 - complete the data modeling
 - add or remove tables
 - add or remove rules
 - modify rules

2. Click **Validate** wherever it appears to confirm your syntax is correct.
3. Examine the model editor for red lines or red table uses, as these indicate problem conditions in a model.

For more information on possible causes and solutions, see [Common model issues](#), below.

Common model issues

Issues may arise due to the following:

- **Schema mapping**—The mapping has been done but the table, view, or queryable synonym backing a table use is not found.
Solution—Open the Table Use Properties dialog by double-clicking the problematic table use and note the schema name for the backing table. Open the Schema Mapping dialog by clicking Connections and select Map Schema and ensure that the schema for the table is properly mapped.
- **Working offline**—You are working offline and the table backing the table use is not found.
Solution—Open the Table Use Properties dialog by double-clicking the problematic table use and note the schema name for the backing table. Click **Connections** and select Local Cache Settings dialog for the offline connection and ensure that the table has been captured.
- **Database changed**—The database has changed since you created your model and the table backing a table use has been deleted.
Solution—From the Project view, go to the lower navigation pane and ensure that the table is present.
- **Connection changed**—You have a different connection associated with the Project than the one it was set up to work against. To check your current connection, open the Project Connection dialog by clicking **Connection** and selecting Project Connection.
Solution—If you have the wrong connection associated with your Project, open the Project Connection dialog and select the proper connection or create a new one. Or, if you have intentionally specified a different connection, using Schema Mapping might allow you to match entities in your model with those of the database for the new connection.
- **Missing data movement key**—You receive an error message indicating that you must select a data movement key.
Solution—Open the **Table Use Properties** dialog by double-clicking the problematic table use. Select an appropriate unique key as the data movement key. If no appropriate unique key is present, you will need to create a new unique key and designate it in the Table Use Properties dialog as the data movement key.
- **Online connection fails**—You notice that Designer is not working properly and/or some elements in the model are red.
Solution—Ensure that you have an online connection.
- **Missing foreign or unique key**—A foreign key or unique key associated with a link between two table uses is not found. This could mean that the foreign key or its referencing unique key is missing. For example, a database unique/foreign key could have been dropped from the database or you might have deleted a virtual foreign/unique key in Designer. Or the problem

could be that the expected columns in a key are missing. For example, the database has changed or you might have deleted some columns from the virtual referenced unique key for a virtual foreign key.

Solution—Fix any problems with missing table uses as explained in the solutions located above. If the tables are present, the issue involves the foreign and/or unique keys associated with the table.

- For a unique key—Create a new virtual unique key to replace the missing unique key. Select the problematic table use and open the Virtual Constraints dialog. Add a virtual unique key with the same name and columns as the missing unique key.
- For a foreign key—Create a new virtual foreign key to replace a missing foreign key. Select the problematic table use and open the Virtual Constraints dialog. Add a virtual foreign key with the same referenced unique key and the same name as the missing foreign key.
- If the referenced unique key does not exist or you want to use a different referencing unique key, do the following: Right-click the red link and select Replace Foreign Key Connection and use the wizard to replace the link with one based on the new information you provide.
- If the virtual key is present, edit and add/remove columns. Select the problematic table use and open the Virtual Constraints dialog. Edit the unique/foreign key.

NOTE: To edit the foreign key associated with the link between two table uses, double-click the foreign key to open the Virtual Foreign Key dialog.

- **Other deployment issues**

If a transactional or chaining table use in the model is backed by a view that is based on more than one table, deployment will fail but no error dialog is displayed. The log file (for Oracle) will contain the following exception:

```
ORA-01445: cannot select ROWID from, or sample, a join view without a key-preserved table
```

To verify, open the Connection Object viewer to see whether the objects backing a transactional or chaining table use is a table or an acceptable view. To determine whether or not a particular view is backed by more than one table, you will need to use a native database query tool, or a third-party tool.

Cartridges

Your first steps in diagnosing cartridge errors when using Designer include:

1. Run preview frequently as you develop your cartridge. You should, at a minimum, run preview when you:
 - Complete the data modeling
 - Add or remove tables
 - Add or remove rules
 - Modify rules
2. Click **Validate** wherever it appears to confirm your syntax is correct.

Examine the cartridge editor for red items, as these indicate problem conditions in a cartridge. For more information on possible causes and solutions, see [Common cartridge issues, below](#).

Common cartridge issues

Issues may arise due to the following:

- **Information not updated**—Content in the cartridge editor should respond to changes made in the model editor for the associated model, but did not in this case.

Solution—Close the cartridge editor and reopen it to refresh the content.

Diagnose business flow deployment problems

After a business flow has been created in Designer it can be deployed via Designer, the Web Console, or the command line.

NOTE: You can deploy cartridges outside of a business flow, but by default they are automatically wrapped in a business flow. Therefore you are always running business flows, even if you deployed a cartridge.

See also:

- [Log files](#)
 - [Errors and solutions](#)
1. If you receive an error while in Designer about one of your inputs, ensure that you did not misspell a user name or password.
 2. If you receive an error in the Finished screen, see the appropriate log file by clicking Show Log.
 3. Check the list of common errors to find the error you are receiving.

Diagnose business flow runtime problems

If you receive errors in the Web Console while running business flows, you can use Monitoring and the logs to discover the error and fix them.

NOTE: You can deploy cartridges outside of a business flow, but by default they are automatically wrapped in a business flow. Therefore you are always running business flows, even if you deployed a cartridge.

See also:

- [Log files](#)
- [Errors and solutions](#)

To learn more about the Web Console, see the *Structured Data Manager Tutorial* and the *Structured Data Manager Runtime Guide*.

To fix errors using the Web Console, do the following:

1. If you receive an error while in the Web Console about the runtime parameters, ensure the parameter is in the correct column data type format based on the database column, such as a string or a date.
2. If you receive an error in the Web Console that the business flow did not start, was suspended or is otherwise incomplete, see the appropriate log file for more information. See [Log files , on page 23](#) for more information.
3. Check the list of common errors to find the error you are receiving.

Diagnose data masking problems

If you receive errors while attempting to mask or unmask data in the Web Console or Designer, you can use the error logs to discover the cause and fix the problem.

The standard data masking functions provided with Structured Data Manager are applicable to the standard data types, such as int, float, varchar, etc.

IMPORTANT: Masking of primary keys is supported for copy jobs (in database to file cartridge) in non-intrusive environments only.

See also: [Log files , on page 23](#)

Your first steps in diagnosing data masking errors when using Designer include:

- **Custom Data Masking**

- If you see error messages, for example, Custom data mask not found during archive job, make sure that your custom mask exist under <OBT_HOME>/extensions/runtime/masking or its sub-folder as designed by you.

- If unmasking, ensure that the masking function is reversible masking function.

- **Masking functions**—For detailed information about the various types of credit cards and their formats that Structured Data Manager currently supports, see the *Structured Data Manager Developer's Guide*.

- If the credit card number that you are masking belongs to the credit card type that is not supported, or is in a format that is not supported, or is invalid, then this function will write back the same original number in the archive table.

- For social security numbers, Structured Data Manager supports only two formats: xxxxxxxx and xxx-xx-xxxx, where x is a digit [0-9]. All other formats are not supported.

- **Undo/Reload**

- If your business flow uses any masks that are not reversible and you tried to undo or reload data back to the source database, it will fail by default. This is by design, otherwise the source database might get corrupted by these masked values. You can override this default behavior by setting the value of the configuration parameter to Allow masked value on undo in the Web Console. For detailed information, see the *Structured Data Manager Developer's Guide*.

Diagnose AQS problems

If you receive errors while extracting data with the Archive Query Server (AQS), see the *Structured Data Manager Runtime Guide*. For errors in viewing with Excel or other programs, see the appropriate product manuals.

See also:

- [Log files](#)
 - [Errors and solutions](#)
1. If you receive an error while using the AQS about one of your SQL statements, ensure that all statements end with a semicolon (;).
 2. If you receive an error, see the appropriate log file for more information.
 3. Check the [Errors and solutions](#) to find the error you are receiving.

Extracting binary zero in Oracle CHAR or VARCHAR

Some Oracle instance may have binary zero (CHR(0)) in the character strings. Columns containing CHR(0) characters can be extracted by SDM but fails refreshing the AQS cache.

1. Create a SDM masking function.

In OBT home directory `${home}\extensions\runtime\masking`

Create a groovy file: `cleanzerobin.groovy` with the following content.

```
Object mask(Object _in) {  
    return _in.replaceAll("[\\x00-\\x00]", " ");  
}  
  
Object revert_mask(Object _in){  
    return _in;  
}
```

2. Add `cleanzerobin` masking function.
3. Apply the `cleanzerobin` masking function to dirty columns.
4. Run the business flow with AQS cache enabled and you should have all the binary zeros replaced with space.
5. After performing the above steps, the data in `AQS_CACHE` appears without binary zeros.

AQS Cache Refresh on files generated from SDM 7.2 or below

After upgrading to SDM 7.53 version or above, follow the below steps to perform AQS cache refresh on D2F files that are generated from SDM 7.2 version or below:

- Add the following contents within the source tag of each `summary.xml` file:

```
<locationProperty name="MajorVersion"> value </locationProperty>
```

```
<locationProperty name="MinorVersion"> value </locationProperty>  
<locationProperty name="RDBMSProductName"> value </locationProperty>  
<locationProperty name="BaseNickName"> value </locationProperty>  
<locationProperty name="RDBMSName"> value </locationProperty>  
<locationProperty name="RDBMSVendor"> value </locationProperty>
```

- Add the following contents to outerbay.properties file that is available under <SDM_HOME_DIRECTORY>/config folder and recover the job.

```
## AQS Cache metadata schema and table names  
aqscache.metadata.schema.name=public  
aqscache.metadata.table.d2f_archive_summary=d2f_archive_summary  
aqscache.metadata.table.d2f_target_tables=d2f_target_tables  
aqscache.metadata.table.d2f_files=d2f_files
```

Diagnose redeployment, uninstall, and reinstall problems

If you receive errors while redeploying, or reinstalling Structured Data Manager, you can use the error logs to discover the cause and fix the problem.

See also:

- [Log files](#)
- [Errors and solutions](#)

For detailed information about redeploying and installing, see the *Structured Data Manager Installation Guide*.

Redeployment

If you receive errors while redeploying, do the following:

1. In Designer, ensure that the user name and/or password are correct.
2. If deployment failed, check the appropriate log file for more information.
3. Check the list of common errors to find the error you are receiving.

Uninstalling Structured Data Manager completely removes the application from your computer.

If you receive errors while uninstalling, do the following:

NOTE: Ensure you have uninstalled the repository and all of your environments prior to performing the uninstall.

1. In Installer, ensure that the user name and/or password are correct.
2. If uninstalling failed, check the appropriate log file for more information.

3. If a failure to delete an environment occurs and the Web Console does not allow you to try again then use the scripted mode to delete the environment.

Uninstallation

NOTE: Ensure you have uninstalled the repository and all of your environments prior to performing the uninstall.

If you receive errors while uninstalling, do the following:

1. In Installer, ensure that the user name and/or password are correct.
2. If uninstalling failed, check the appropriate log file for more information.
3. If a failure to delete an environment occurs and the Web Console does not allow you to try again then use the scripted mode to delete the environment.

Reinstallation

After uninstalling Structured Data Manager you will need to reinstall it.

If you receive errors while reinstalling, do the following:

1. In Installer, ensure that the user name and/or password are correct.
2. If installation failed, check the appropriate log file for more information.
3. Check the list of common errors to find the error you are receiving.

Manage the home directory

Structured Data Manager stores its program data, such as configuration, log, and archive files, in a location that is separate from its program files. This home directory is determined at installation time:

- By default, Structured Data Manager attempts to configure its home directory in the standard location for application data on the operating system. For example, on Windows, the Installer tries to use C:\.
- If you prefer not to use the default location as determined by Structured Data Manager, you can explicitly set the OBT_HOME environment variable prior to installation to create a custom location.

After installation, you can change the home directory by following the instructions in [Change the home directory, on the next page](#).

Example

Configuration files might be stored in:

```
<OBT_HOME>/config
```

TIP: On Windows, the ProgramData directory may be hidden by default. You need to show that directory in order to find the log files. For more information, see your Windows documentation.

Change the home directory

To change home directory for Structured Data Manager

1. Stop all Structured Data Manager processes, including Web Console and AQS.
2. Open `<install_dir>\obt\config\obt.env` in a text editor and change existing path to the new path. For example:

```
OBT_HOME=C:/SDM/OBTHOME
```

NOTE: Even on Windows, the directory separator is a forward slash (/).

3. In your file system, copy all of the directories and files except `aqsdatasources` from your current home directory to the new one that you just specified in `obt.env`.
4. For `aqsdatasources`, run the following command from `<install_dir>\obt\bin`:

```
oacommandexec -m <data src name> <new location>
```

For example:

```
oacommandexec -m xmlArchive D:\home1\aqsdatasources\xmlArchive
```

5. Restart Structured Data Manager processes, such as Web Console and AQS.

Start Designer in debug mode

To view the SQL statements used in Designer, you need to run it in debug mode:

For Windows:

1. Navigate to the directory where you installed Structured Data Manager.
2. Open the `<install_dir>/obt/bin` directory and double-click **designer_debug.bat**.

The debug mode of Designer is now running.

For UNIX:

- Launch `./designer_debug.sh`

Chapter 2: Log files

Structured Data Manager automatically generates several different log files for diagnostic purposes.

This section includes:

- [Use log files](#)
- [Edit the logging properties](#)
- [Combined log file \(obt.log\)](#)
- [Groovy log](#)
- [Tomcat log](#)
- [View job history](#)
- [View the job log](#)

Use log files

Use the procedures in this section to view the installation log files and determine what information you want captured.

View log files

By default, the log files are saved in the home directory under log and the logging level is set to INFO.

For more information about the home directory, see [Manage the home directory, on page 21](#).

To view install log files

1. Navigate to the directory containing the log file. For example:

```
<Install_Dir>/obt/log/
```

2. Open the following log file using a text editor:

File Name	Description
Structured_Data_Manager_Install_<Date_Time>.log	The Structured_Data_Manager_Install_<Date_Time>.log is generated by the installation software, and includes information on the overall installation.

To view log files

1. Navigate to the directory containing the log file. For example:

<OBT_HOME>/log/

2. Open the following log file using a text editor:

File Name	Description
obt.log	<p>The obt.log file captures all logging information for the Database Archiving software.</p> <p>Multiple log files are numbered in sequence. For example, obt.log1.</p> <p>To change the types of information captured in the log, see Edit the logging properties, below.</p>

3. Check the outerbay.properties files for changes that can occur in those files.

Edit the logging properties

After you have installed the product, you can edit the log4j2.properties file to change the logging properties. For example, you can change:

- where the log files are kept.
- what information is logged.
- the maximum size of the log file.
- how much logging information is kept.

By default, the obt.log file is limited to 100 MB. When it exceeds the default limit, the obt.log file is renamed to a backup file, and a new obt.log file is created. By default, a total of nine backup files are kept, limiting the log files to a 1000 MB maximum size.

For more information, see [Installation and upgrade errors](#) and [Combined log file \(obt.log\)](#)

1. Navigate to the directory that contains the log4j2.properties file.

For example:

<OBT_HOME>/config/

2. Open the log4j2.properties file with a text editor and edit appropriately.
3. Search (Ctrl+F) for “rootLogger.level.”
4. Change the value from INFO to DEBUG.

For example

Change rootLogger.level=INFO to rootLogger.level=DEBUG

5. Save the `log4j2.properties` file.

The changes are applied automatically.

After your installation is complete this log remains in the log directory, but no more information is added to it. Any uninstall information is logged in the `obt.log`.

Combined log file (`obt.log`)

The `obt.log` is a consolidation of the contents of all the other log files. The `obt.log` file contains information on all Designer and non-Designer aspects of Structured Data Manager, including deployment, Console error messages, applied patches, and uninstallation of business flows.

Review the `obt.log` for all logging information.

View the `obt.log`

By default, the log files are located in the home directory under `log` and the logging level is set to `INFO`. For more information about the home directory, see [Manage the home directory, on page 21](#).

To view the `obt.log`

1. Navigate to the directory containing the log files.

Example: `<OBT_HOME>/log`

2. Open `obt.log` using a text editor.
3. Search (Ctrl+F) for “error” or “exception.”

Some example errors are listed in “Common errors and solutions.”

TIP: The most recent information is appended to the end of the file. When looking for the most recent log entries, start at the end of the file.

Edit the logging properties

To edit the logging properties

1. Navigate to the directory containing the configuration files.
Example: `<OBT_HOME>/config`
2. Open the `log4j2.properties` file with a text editor.
3. Make the desired changes to the file.
4. Save the `log4j2.properties` file.

Edit logging properties for a specific issue

You can temporarily edit the logging properties to gather information for a specific process or issue.

To edit the logging properties

1. Navigate to the directory that contains the `log4j2.properties` file.

For example:

```
<OBT_HOME>/config/
```

2. Open the `log4j2.properties` file with a text editor and edit appropriately.
3. Search (Ctrl+F) for “rootLogger.level.”
4. Change the value from INFO to TRACE.

For example

```
Change rootLogger.level=INFO to rootLogger.level=TRACE
```

5. Save the file.
6. Stop the Web Console by the following method:
 - a. Change to the `bin` directory where you installed Structured Data Manager.

Windows: `cd <install_dir>\obt\bin`

UNIX: `cd <install_dir>/obt/bin`

- b. Enter the stop command:

Windows: `webConsole.bat stop`

UNIX: `./webConsole.sh stop`

7. Rename the existing `obt.log` file in the log location to `obt.log.old1`:

- a. Navigate to the directory containing the log files.

Example

```
<OBT_HOME>/log
```

- b. Ensure that there are no other `obt.log` files in the directory. If so, rename those to a `*.oldN` filename.

8. Restart the Web Console by the following method:

- a. Change to the `bin` directory where you installed Structured Data Manager.

Windows: `cd <install_dir>\obt\bin`

UNIX: `cd <install_dir>/obt/bin`

- b. Enter the start command:

Windows: `webConsole.bat start`

UNIX: `./webConsole.sh start`

9. Run the process (for example, an API command, a tool or other process) according to the issue you are investigating.

When the program fails, collect the following information:

- a. From the <OBT_HOME>\log directory, navigate to the directory named for the job you ran from the Web Console.
 - b. Select the last four files based on their modified date.
 - c. Send those files, along with the obt.log file to your Structured Data Manager support representative.
10. When you are finished collecting information for the specific issue, restore the log4j2.properties tracing level back to INFO.

For example:

Change rootLogger.level=TRACE to rootLogger.level=INFO

11. Stop and restart the Web Console.

The logging level of obt.log is returned to its previous trace level.

Groovy log

Review the run log for your Groovy script, <env_name>/logname.log, for any errors or issues. This script is useful for verifying the script was used in the business flow. The Groovy script log may provide information about errors in the Groovy scripts.

To view the Groovy script as a diagnostic tool

1. Navigate to the directory containing the log files.

Example

```
<OBT_HOME>/log/BusinessFlow@<NameBusinessFlow>
```

<NameBusinessFlow> is the name of your business flow.

2. Open the GroovyScript.log file using a text editor.
3. Search (Ctrl+F) for “error” or “exception.”

TIP: The most recent information is appended to the end of the file. When looking for the most recent log entries, start at the end of the file.

Debug with println

You can also debug Groovy scripts with the println statement by inserting a println statement, deploying and running the business flow, and then checking the run logs for the println outputs. By checking the run log for these println outputs, you can determine whether the script execution actually reached those statements (for example, whether the script errored out before or after the println statements).

NOTE: To use the println function, you must add it to the Groovy script where it validates your script one line at a time.

For example, for a business flow called OrderData and a Groovy activity named split, any println statement within that split activity is written to the <OBT_HOME>/log/BusinessFlow@OrderData/split.log.

The log is updated at every run and contains the results from previous runs.

You can delete the log to remove the results of previous runs.

By default, the logs are saved to <OBT_HOME>/log/BusinessFlow@<busflow name>/<GroovyScriptName>.log. If you have conditions within you business flow, you will then have a Groovy script inside a condition; log file <OBT_HOME>/log/BFInternal@<busflow_name>_<#>/<groovy_script_name>.log.

NOTE: If you have println in your Groovy script, the files will go to the log regardless of the logging level.

1. Navigate to the directory containing the log files.

Example

```
<OBT_HOME>/log/BusinessFlow@<BusinessFlowName>/<groovy activity name>.log
```

where

- <BusinessFlowName> is the name of your business flow.
- <groovy activity name> is the name of the Groovy activity.

2. Open the log files using a text editor.
3. Search (Ctrl+F) for “error” or “exception.”;

TIP: The most recent information is appended to the end of the file. When looking for the most recent log entries, start at the end of the file.

Tomcat log

The tomcat log files provides information about errors in the tomcat. The following log files are generated for tomcat and are appended with the date on which they are generated:

- localhost_access_log.<date>
- catalina.<date>
- localhost.<date>
- host-manager.<date>
- manager.<date>

To view the tomcat as a diagnostic tool

1. Navigate to the directory containing the log files.

Example

```
<install_dir>\obt\webconsole\apache-tomcat\logs
```

2. Open any of the tomcat log files mentioned above using a text editor.
3. Search (Ctrl+F) for “error” or “exception.”

View job history

In the Web Console, the History page displays all business flows and jobs that were run in the environment you are currently viewing.

To view job history

1. Click **Monitoring** from the menu at the top of the page.
2. Click **History**.

You can filter the data by:

- group run id
- run id
- the date the job started
- the date the job finished
- the name of the job
- the batch name of the job

Click the red X to clear individual filters.

3. Click **CSV** or **XML** to export the filtered data to a CSV or XML file.

View the job log

To view the output that the job produced

1. Navigate to the directory containing the log files.

Example

```
<OBT_HOME>/log/users/<username>
```

2. Open the log file with a text editor.
3. Search (Ctrl+F) for “error” or “exception.”

TIP: The most recent information is appended to the end of the file. When looking for the most recent log entries, start at the end of the file.

Chapter 3: Errors and solutions

This section contains error messages along with solutions.

What to check first

- When having problems using Structured Data Manager that results in errors, check these items first:
- Ensure that you are using the correct case. All user names and encryptions keys are case-sensitive.
- Ensure you are connected to the correct database(s), and it is running.
- Check the number of open cursors in Oracle by using the select count(*) from v\$open_cursor command.

List of errors

- [Advanced selection and partition-based delete errors](#)
- [Database to database errors](#)
- [Database to file errors](#)
- [Data masking errors](#)
- [Deployment errors](#)
- [Designer errors](#)
- [Discovery Errors](#)
- [Free Text Search Error](#)
- [In-Place Masking Errors](#)
- [Indexing Error](#)
- [Installation and upgrade errors](#)
- [Other errors](#)
- [Runtime errors](#)
- [Uninstalling and redeploying errors](#)
- [Upload errors](#)
- [Web Console configuration errors](#)

Advanced selection and partition-based delete errors

Error messages involving advanced selection and partition-based delete can appear in `obt.log`.

NOTE: You can also check the trace files in `udump` logs for all Oracle-based data movement methods. `Udump` contains trace files that relate to specific user Oracle processes and Combined log file (`obt.log`) as necessary.

- [Business flow using Advanced Selection cannot be recovered](#)
- [Database to file job fails during delete process](#)
- [Deadlock during delete](#)
- [Integrity constraint \(<FK Name>\)](#)
- [Missing expression when rule parameter is left Null](#)

Business flow using Advanced Selection cannot be recovered

Symptom

The following error is received upon attempting to resume processing of a business flow that uses advanced selection and either fails or is killed during the “PDM propagates selection from driving table” action or a later action:

ORA-00001: unique constraint error

Cause

A business flow that fails at this point cannot be recovered. The error will reference a unique index beginning with `NODE`. The failed or killed job must be cancelled and resubmitted. If you attempt to recover the job instead of cancelling, it will result in a `ORA-00001: unique constraint error`. The error will reference a unique index beginning with `NODE`. The job must be cancelled and resubmitted, even after recovery is attempted.

NOTE: If the business flow fails or is killed in a step on or before the “PDM makes selections in driving table” action, then it can be recovered after the cause of the failure has been corrected.

Resolution

Cancel the job and resubmit it.

Database to file job fails during delete process

Symptom

A database to file job involving advanced selection fails during delete and cannot be resolved by recovering the job.

Cause

An unexpected error during the delete stage of an archive job that uses advanced selection which results in a job failure and also causes the recovery job to fail also.

Resolution

Advanced selection needs the original set of data in order to guarantee all related data is successfully archived. If a database to file job involves advanced selection and if that job fails during delete there is a high risk upon re-running the same job that advanced selection will not be able to identify the complete set of data that should be archived because certain data has been deleted which may be required by advanced selection to identify all related data.

Deadlock during delete

Symptom

When performing a batch delete based on non-indexed columns, the job hangs due to deadlock, possibly generating the following error:

```
ORA-00060: deadlock detected while waiting for resource
```

Cause

The distributed update operation failed; rollback required.

Resolution

Identify missing indexes and then create them on all foreign keys for tables in the model and disable foreign keys that do not have indexes.

TIP: You can use the following script to identify missing indexes.

```
column columns format a20 word_wrapped
column table_name format a30 word_wrapped
select decode( b.table_name, NULL, '****', 'ok' ) Status,
a.table_name, a.columns, b.columns
from
( select substr(a.table_name,1,30) table_name,
substr(a.constraint_name,1,30) constraint_name,
max(decode(position, 1, substr(column_name,1,30),NULL)) ||
max(decode(position, 2, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position, 3, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position, 4, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position, 5, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position, 6, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position, 7, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position, 8, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position, 9, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position,10, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position,11, ' ' || substr(column_name,1,30),NULL)) ||
max(decode(position,12, ' ' || substr(column_name,1,30),NULL)) ||
```



```
max(decode(position,13,' '||substr(column_name,1,30),NULL)) ||  
max(decode(position,14,' '||substr(column_name,1,30),NULL)) ||  
max(decode(position,15,' '||substr(column_name,1,30),NULL)) ||  
max(decode(position,16,' '||substr(column_name,1,30),NULL)) columns  
from user_cons_columns a, user_constraints b  
where a.constraint_name = b.constraint_name  
and b.constraint_type = 'R'  
group by substr(a.table_name,1,30), substr(a.constraint_name,1,30) ) a,  
( select substr(table_name,1,30) table_name, substr(index_name,1,30) index_name,  
max(decode(column_position, 1, substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 2, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 3, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 4, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 5, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 6, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 7, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 8, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position, 9, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position,10, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position,11, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position,12, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position,13, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position,14, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position,15, ' '||substr(column_name,1,30),NULL)) ||  
max(decode(column_position,16, ' '||substr(column_name,1,30),NULL)) columns  
from user_ind_columns  
group by substr(table_name,1,30), substr(index_name,1,30) ) b  
where a.table_name = b.table_name (+)  
and b.columns (+) like a.columns || '%'  
/  

```

Integrity constraint (<FK Name>)

Symptom

When trying to archive data using a model with multiple instances of the same chaining table, the delete failed and you saw the following error:

```
ORA-02292: integrity constraint (<ForeignKeyName>) violated - child record found
```

Cause

This error may be the result of using two instances of the same chaining table or using a view of the same table as a chaining table. For example, you might have a model that contains a table CUSTOMER as a chaining table to the table ORDER_LINE and a view of that same table, CUSTOMER_V, as a chaining table to another table, ORDER_HEADER. This error is more common with models using advanced selection or database to XML.

Resolution

If possible remove all duplicate chaining tables. If this is not possible, you must change the second chaining table to a view and add the view as a lookup table in the model.

Missing expression when rule parameter is left Null

Symptom

You received the following error when trying to run an advanced selection and partition-based delete business flow.

Symptom: ORA-00936: missing expression when policy parameter is left NULL

Cause

The parameter was left empty when using PDM_DTAB_SELECTION.

Resolution

Rerun the business flow with values for all three parameters.

Database to database errors

Error messages encountered with database to database archiving.

- [Delete tasks running slowly](#)
- [Functions and procedures not cloned for DB2](#)
- [Reload to SQL Server fails in distributed](#)

Delete tasks running slowly

Symptom

For database to database archiving, your delete task is taking a long time to run.

Cause

The delete task minimum size setting may not be optimal for your system.

Resolution

In your home directory, under config, update the la.minimum.delete.task.size setting in outerbay.properties. Either specify a number or leave it blank to indicate that the system should choose the value for you. For more information about the home directory, see [Manage the home directory, on page 21](#).

Functions and procedures not cloned for DB2

Symptom

When running the CreateAA job for an environment with DB2, not all procedures and functions are cloned in the target database schema.

Cause

CreateAA will not clone routines unless they are written in DB2 SQL/PL. If the schema has a routine not written in DB2 SQL/PL, it is not cloned into the archive access schema.

Resolution

Avoid using anything other than DB2 SQL/PL for your functions and procedures.

Reload to SQL Server fails in distributed

During reload, you receive a SQL Server error similar to the following:

```
SQLNCLI11 for linked server 16.103.11.115\sdmsql2k8
```

Cause

Network DTC access was not enabled and the inbound and outbound settings for DTC were not checked.

Resolution

To enable Network DTC Access for MS DTC for both inbound and outbound transactions:

1. Open MS Windows Component Services (dcomcnfg).
2. Expand the console tree to locate the DTC (for example, Local DTC) for which you want to enable **Network MS DTC Access**.
3. On the Action menu, click **Properties**.
4. Click the **Security** tab and make the following changes:
 - In Security Settings, ensure that Network DTC Access is checked.
 - In Transaction Manager Communication, ensure that **Allow Inbound** and **Allow Outbound** are both checked.

Database to file errors

Error messages encountered with database to file (D2F).

- [Archive or copy to Amazon S3 fails with 400 Bad Request Error](#)
- [Arithmetic overflow error occurs when converting numeric to data type numeric](#)
- [Business flow fails in file format conversion](#)
- [Copy to Amazon S3 fails](#)

- [D2F job fails on MongoDB](#)
- [Database to file fails when remapping key column names](#)
- [Deadlock during delete from Oracle](#)
- [ORA 01031: Insufficient privileges](#)
- [Orphaned rows](#)
- [Runtime errors for database to file](#)
- [Schema based archive fails with default batch size](#)

Archive or copy to Amazon S3 fails with 400 Bad Request Error

Symptom

When Archiving or copying to an Amazon S3 location, the job fails. The error log displays **400 Bad Request**.

Cause

- Amazon S3 Location was not created with proper credentials.
- Values of Access Key, Secret Access Key, host, port or Encryption passcode would be wrong.

Resolution

In the Web Console, go to **Environment > Active Environment > Locations**, choose the S3 location and update all the details with the correct credentials, save the changes, and then recover the job.

Arithmetic overflow error occurs when converting numeric to data type numeric

Symptom

You receive the overflow error converting numeric to data type numeric.

Cause

This error occurs when uploading from Oracle to SQL Server if the data from Oracle has a higher precision than what the SQL Server can support.

Resolution

Do the following:

1. Cancel the upload.
2. Run the Copy ARCHIVE to new temporary location.
3. Edit the data files to reduce the precision.
4. Perform upload on edited files.

Business flow fails in file format conversion

Symptom

When running a database to file business flow, it fails with an error similar to the following:

```
ERROR: File format conversion thread 0:
```

```
root: Failed to execute depth first traversal adapter
```

Cause

Eligibility analytics are enabled and the batch size is too small.

Resolution

- Run eligibility analytics separately from the archiving job. Do not run archive when eligibility analytics are enabled.
- Increase the batch size such that all ranges have at least one eligible row.

Copy to Amazon S3 fails

Symptom

When copying to an Amazon S3 location, the job fails.

Cause

Amazon S3 was not accessible.

Resolution

In the Web Console, go to **Business Flow Management > Parameters > Database to File > Amazon S3**. Increase the Maximum number of read attempts from 3 to 10.

D2F job fails on MongoDB

Symptom

A D2F job fails in the MongoDB BI Connector when connecting via a read-only JDBC driver with the following errors:

```
Can't call commit when autocommit=true
```

```
Can't call rollback when autocommit=true
```

Cause

MySQL JDBC driver throws an error while trying to commit without any transactions.

Resolution

Create the MongoDB read-only environment with the JDBC url:

```
jdbc:mysql://<IP  
address:port>/<source>?useLocalTransactionState=true&relaxAutoCommit=true
```

Database to file fails when remapping key column names

Symptom

The database to file upload mapping file can map column names that differ from source to target table. This works for all columns except the unique index columns names.

Resolution

The schema for Oracle is just the user name, for example: DEMARC, INV, GL.

The schema for SQL Server is just the DB.schema name, for example: DEMARC.dbo, AdvWorks.Sales.

Mapping files:

- `extract_schema=upload_schema`
- `extract_schema.object_name=upload_schema.object_name`
- `extract_schema.object_name.col_name=upload_schema.object_name.col_name`
- `extract_schema.object_name.col_name.col_type=upload_schema.object_name.col_name.col_type`

Deadlock during delete from Oracle

Symptom

While running database to file jobs, you may run into a deadlock issue when deleting records from the source database. This issue is usually specific to Oracle but may apply to other databases as well. You may receive the following or a similar error:

```
ORA-00060: deadlock detected while waiting for resource
```

Cause

- The `intrans` parameter for the table is too small.
- The delete operation is based on unindexed columns.

Resolution

- Increase the value of the `intrans` parameter for the table. Alter the table:

```
table_name INTRANS N;
```


where N should be more than 1. Value of 4 or 5 would normally suffice.
- Index the key columns of the table.

ORA 01031: Insufficient privileges

Symptom

You deploy a two-tier database to file advanced archive cartridge with the database to file archadmin user and it fails with `java.sql.SQLException, ORA-01031: insufficient privileges`.

Resolution

Deploy a database to file two-tier business flow with database to database obt_source_admin_user_pdm_bf.sql. Since the obt_source_admin_user_d2f_bf.sql is missing, you have to alter any procedure grant.

Orphaned rows

Symptom

Orphaned rows or a failure to delete detail rows in D2F.

Cause

The validation steps miss the additional detail records.

Resolution

You must manually clean-up these files.

Runtime errors for database to file

Symptom

Runtime errors.

Cause

You will receive runtime errors if you:

- Validate a column that is excluded
- Index a column that is excluded
- Index a LOB column

Resolution

Do not validate a column that is excluded, index a column that is excluded, and index a LOB column.

Schema based archive fails with default batch size

Symptom

Schema based archive with default batch size (50000) fails , and the following error appears:

```
java.sql.SQLRecoverableException: No more data to read from socket.
```

Resolution

Perform the following steps:

1. Go to **Tasks > System Parameters > Database to File**.
2. Click **Performance** tab.
3. Set the '**Data movement Batch size**' parameter to 10000, and recover the archive job.

Data masking errors

This section describes some of the common errors you may encounter and their resolution.

- [Data is not masked](#)
- [SecureData Appliance changes do not get reflected in Structured Data Manager](#)

Data is not masked

Symptom

Some data will not be masked even though column is masked by the cartridge.

Cause

If your column contains any invalid data, such as invalid characters, the pre-built masks will not mask the value at all. For example, if you have a Social Security Number value that contains an invalid special character like the pound sign (#), none of that value will be masked in the archive.

Resolution

If invalid data is an issue in your data, you may wish to create a custom mask that includes logic for handling invalid data as you desire.

SecureData Appliance changes do not get reflected in Structured Data Manager

Symptom

When any of the authentication, authorization or format related changes done in the SecureData Appliances are not getting reflected in Structured Data Manager

Cause

It occurs due to the in-memory cache used by the underlying SecureData SimpleAPI.

Resolution

Ensure to restart the Web Console.

Deployment errors

You can deploy cartridges and business flows through the Web Console, Designer, or the command line.

- [Ajax error while running DAC](#)
- [Blocked UDP ports](#)
- [Cartridge already deployed](#)
- [Cartridge deployment error](#)
- [Cartridge log errors](#)
- [COPY_BY_SEL_DB_TO_FS fails for two table updatable view](#)

- [Data access cartridge deployment failure](#)
- [Deployment fails](#)
- [Deployment fails on DB2 with Z/os environment](#)
- [Deploy time failure](#)
- [Deployment failure of OEBS business flow on upgrade environment:](#)
- [Deployment of data access cartridge failing](#)
- [Error establishing connection for connection source](#)
- [Error starting the agent and/or Java service - port is already in use](#)
- [Job appears to hang in Sybase](#)
- [Not available because product has not been fully installed](#)
- [ORA-01450 maximum key length \(3218\) exceeded](#)
- [Port busy when trying to start Deployment Assistant](#)
- [Table or schema not found in source database](#)
- [Table does not exist](#)
- [Unexpected exception](#)
- [User index table creation failed with unique constraint exception](#)

Ajax error while running DAC

Symptom

While running DAC, if the pseudo column name contains spaces and special characters it causes the following error:

```
DataTables warning: table id=dataTablesList - Ajax error
```

Resolution

Pseudo column name must not contain spaces or space characters.

Blocked UDP ports

Symptom

A UDP on port 1434 is blocked by a firewall with a connection to SQL server using an instance name.

Resolution

Reconnect to the database from a database tool with a URL that specifies the port, but not the instance name.

Cartridge already deployed

Symptom

When attempting to deploy a previously deployed advanced selection cartridge, the following error appeared in the Deployment Assistant:

This cartridge has already been deployed

Cause

The previous version of the cartridge has not been uninstalled.

Resolution

Install the new version of the cartridge.

Cartridge deployment error

Symptom

You received the following error in the obt.log while trying to deploy a cartridge or business flow:

```
ERROR : main : root : Cartridge deployment error
java.lang.reflect.InvocationTargetException at
com.hp.ilm.db.installer.ui.cartridge.BaseInstallCartridgeWizard$LongRunningOperation
.run(BaseInstallCartridgeWizard.java:372) at
org.eclipse.jface.operation.ModalContext$ModalContextThread.run
(ModalContext.java:113) Caused by: java.lang.Exception: All cartridges and business
flows failed to deploy
```

For Sybase, you may see the following error:

```
Error writing table mapping seed file
```

Cause

The deployment error can result from multiple causes:

- Names are too long. Check the length of names used in the model.
- Table has been dropped.
- InvocationTargetException is a general error reported by ant for any deployment errors. Examine the log file to find the exact error.
- The Sybase JDBC driver reports the maximum table name length as 30.

Resolution

- Resolve this error by performing one or more of the following procedures:
- If you redeploy a business flow or cartridge, but there is an unfinished job or failed job that corresponds to that business flow or cartridge, redeployment will fail. To resolve this, either recover the job until it succeeds or cancel the job before redeploying.
- Length of table name, column name, index name, constraint name is limited to 200 characters. Reduce the length of names used by your cartridge.
- Return to the model in Designer and look for red outlines indicating a missing table or view. Fix, regenerate, and redeploy.
- For Sybase, edit the following file:

```
<install_dir>\obt\config\dbms\Adaptive_Server_Enterprise_15_7\Adaptive_Server_Enterprise_15_7.properties
```

This file is created after you create an environment. Set MAX_TABLE_NAME_LENGTH=200.

Cartridge log errors

See Log files for individual cartridges for details on the cartridge logs.

COPY_BY_SEL_DB_TO_FS fails for two table updatable view

Database to database supports archiving updatable views related to a single table. Updatable views related to more than one table cannot be archived or reloaded.

Data access cartridge deployment failure

Symptom

DAC when deployed from Designer fails with the following error:

```
Read timed out
```

Resolution

This happens due to poor database connectivity. Although the Designer throws error, the DAC deployment will still happen.

Deployment fails

Symptom

Deployment fails with errors such as the following:

```
Failure validating SQL Statement
```

```
NATIVE_MOVE_02H.Datamaskingcart1.DataMasking.COPY_TRX_RANGE
```

```
with error: 206 -
```

```
Operand type clash: int is incompatible with uniqueidentifier
```

Cause

You chose a data mask for a column that does not match the data type of the column.

Resolution

In the cartridge, choose a mask of the appropriate type for the column and deploy your business flow again.

See *Structured Data Manager Developers Guide* for more information about applying data masks.

Deployment fails on DB2 with Z/os environment

Symptom

Deployment fails on DB2 with Z/os environment with errors such as the following:

ERROR: Column SDMDV4Y.COCXBQ does not exist

Cause

This happens due to special setup requirement for accessing Db2 for z/OS servers from Java programs.

Resolution

Refer to the section **Special setup for accessing Db2 for z/OS servers from Java programs in Application Programming Guide and Reference for Java** available at https://www.ibm.com/support/knowledgecenter/SSEPEK_12.0.0/pdf/imjcc_z12_javabook.pdf.

The same information is available at the links

https://www.ibm.com/support/knowledgecenter/SSEPEK_12.0.0/java/src/tpc/imjcc_t0024156.html and https://www.ibm.com/support/knowledgecenter/en/SSEPGG_11.1.0/com.ibm.db2.luw.apdv.java.doc/src/tpc/imjcc_t0024156.html as well. Refer to appropriate details depending on your Db2 and z/OS version.

Deploy time failure

Symptom

You receive the following error:

```
C:\apps\HPDBArchiving\obt\artifacts\MG1010A\businessflow\Requests_
BF\cartridge\oa\Requests\build.xml:684: The following error occurred while executing
this line:
```

```
C:\apps\HPDBArchiving\obt\artifacts\MG1010A\businessflow\Requests_
BF\cartridge\oa\Requests\build.xml:451: Failure validating SQL Statement OLTP_
SELECTION.Requests.KCRT_REQUESTS.INSERT_SELECTION_ANALYTICS with error:
```

```
942 - ORA-00942: table or view does not exist
```

```
Failure validating SQL Statement OLTP_SELECTION.Requests.KCRT_REQUESTS.INSERT_
SELECTION_NO_ANALYTICS with error: 942 - ORA-00942: table or view does not exist
```

Cause

A rule containing a subquery did not pre-fix table names with the appropriate schema reference.

Resolution

Ensure all database objects are correctly referenced in rules. To avoid hard-coding schema names in rules use symbolic schema names as described in the *Structured Data Manager Developers Guide*.

Deployment failure of OEBS business flow on upgrade environment:

Symptom

After Upgrade from 7.492 to 7.51 or 7.52, while deployment of OEBS business flows if failure happens.

Cause

After Upgrade from 7.492 to 7.51 or 7.52, the new business flows fails while deployment of OEBS business flows. During such scenarios, you must check the `obt.log` file, if the log file displays the following warning message:

```
Warning: Could not find file <OBT_HOME>\generate\<Env Name>\businessflow\<Business  
Flow name> copy.
```

The warning is due to a new upgrade environment. The new environment needs to be rebuilt with the archive access layer business flow.

Resolution

Redeploy the `EBSIntegration Create ArchiveAccess` business flow in the 7.52 environment.

Deployment of data access cartridge failing

Symptom

The deployment of a data access cartridge against a non-Oracle database fails with error `java.lang.IllegalStateException: Deployment failed:.`

Cause

For standard environments, Structured Data Manager expects an archive cartridge will be run before the data access cartridge. Otherwise, you would not need a standard environment and could use a non-intrusive environment instead. For example, if you are using a data access cartridge only in conjunction with an indexing cartridge, you could use a non-intrusive environment, which would not cause this error.

Resolution

If you are archiving and need a standard environment, ensure that you run the archive cartridge before you run the data access cartridge. If you are not planning to run an archive job, then you should use a non-intrusive environment.

Error establishing connection for connection source

Symptom 1

You received the following error in the `obt.log` when using Deployment Assistant:

```
32: Error establishing connection for Connection Source 'OLTP_ADMIN' :  
java.sql.SQLException: ORA-01017: invalid username/password; logon denied.
```

Symptom 2

From the Deployment Assistant you see the following error in the `obt.log`:

```
Caused by: com.outerbay.foundation.services.dbms.ConnectionSourceNotFoundException:  
There is no connection source for HISTORY_DB
```

```
at com.outerbay.foundation.services.dbms.SQLDBException.fillInStackTrace  
(SQLDBException.java:82)
```

Cause

If you have tried to run an install before, you might be running into some erroneous connection data left over from a previous install attempt.

Resolution

To clean up your environment

1. Delete the connection-sources.xml file in the <obtpa_top>\config directory (if it exists).
2. Drop the repository, interface, and build AA schemas (if any exist).

This should get rid of any lingering connection data and provide a clean slate for the next install.

Error starting the agent and/or Java service - port is already in use

Symptom

You might see is error in <install_dir>/obt/sqlxml/server/loggin/*.log. These are hidden logs. Looks for the latest agent and java service log.

Network problem, listener could not be started because port is already in use

Resolution

Although you can install AQS in different directories, you can run only one process at one port. So, start/stop the services at the desired port to resolve this issue. Alternately, you can install different AQS instances on different ports.

Job appears to hang in Sybase

Symptom

Job is taking a long time to conclude or appears stuck in the selection step.

Cause

This behavior sometimes occurs because the transaction log segment of the Sybase instance is full. The server log contains a warning to this effect.

Resolution

To clear the log segment, run the following command:

```
dump transaction <database_name> with no_log
```

The database that is full will be specified in the server log.

TIP: Avoid this problem, you should consider adding more space to the log. You can also slow the pace at which the log segment fills up by setting `trunc log on chkpt` using the `s` command.

Not available because product has not been fully installed

Symptom

You receive the error:

Not available because product has not been fully installed.

Cause

The Deploy Locally radio button is only enabled when you are running Designer from the Structured Data Manager instance where the repository has been installed. It does not look to see if there is an additional instance on the server.

Resolution

The way to tell if a repository was installed in an Structured Data Manager instance is to look for the existence of the connection-sources.xml file in the home directory under config.

ORA-01450 maximum key length (3218) exceeded

Symptom

You receive a ORA-01450 maximum key length error.

```
ORA-02049 maximum key length (3218) exceeded
```

```
java.sql.SQLException: ORA-01450: maximum key length (3218) exceeded
```

Cause

This an Oracle limitation.

Resolution

Increase the database block size of the tablespace associated with the Repository Database User, for example obt_rep.

Port busy when trying to start Deployment Assistant

Symptom

You may receive an error that the port is in use when trying to open the Deployment Assistant.

```
ORA-12154: TNS:could not resolve the connect identifier specified
```

Cause

This may be the result of more than one listeners running on your machine. It can also result from another java program using the port you want to use.

Resolution

See the **Oracle Database Error Messages** manual for information on how to address this error.

- If there are multiple java programs running, open and check the Task Manager and carefully stop any java programs that are currently running. This should free up a port for your use.
- If more information is needed, try this command to see if xmlArchive is listed as a java program using a port:

```
lsnrctl services
```

Table or schema not found in source database

Symptom

You receive the error, "Table or schema not found in source database."

Cause

You used one database as the source database when installing the product and then used another database connection in Designer when creating the business flow.

Resolution

Ensure the project connection in Designer is pointing to the source database of the installed product.

Table does not exist

Symptom

You received the following error when deploying a 3-tier configuration cartridge or business flow with the deployment assistant.

Table does not exist.

Cause

A table was selected that does not exist.

Resolution

Resolve this error by performing one of the following procedures:

- Return to the Deployment Assistant and select a table that exists in the archive data store. This table cannot be a lookup table.
- Connect to the correct database.
- Complete the database to database install. The database to database install populates the archive data store with tables. The 3-tier configuration cannot be properly utilized until the database to database install is complete.
- Ensure you have deployed a database to database business flow with a database to database cartridge before trying to deploy a XML related business flow using the 3-tier configuration.

Unexpected exception

Symptom

You received the following error when trying to install a database to database cartridge.

```
Symptom: ERROR : main : root : Unexpected Exception : while executing Deployment  
Descriptor file: <install_  
dir>/obt/appspack/oracle/la/modules/<NameOfCartridge>/metadata/<NameOfFile>.xml  
com.zerog.ia.api.pub.FatalInstallException
```

Resolution

To resolve the error

1. Uninstall any parts of the cartridge that did install.
2. Reinstall the cartridge.

User index table creation failed with unique constraint exception

Symptom

Cartridge deployment failed with SQLException: ORA-00001: unique constraint (OBT_REP_311.OBTPA_NAME_REGISTER_U1).

Resolution

Increase the page size and decrease the number of columns included in the user defined index.

Designer errors

Errors in Designer and preview are typically resolvable in the panel or editor in which they are seen.

For error messages that are displayed at the top of title area dialogs, sometimes the entire message is not visible. To be able to view the entire message, either resize the dialog box horizontally, or click in the error message text and drag vertically to view the entire text.

- [Asian fonts not displaying in PDF](#)
- [Connection timeout](#)
- [Data movement keys: various warnings and error messages](#)
- [Eligibility analysis not found](#)
- [Error in Groovy object](#)
- [Internal errors](#)
- [Maximum open cursors exceeded](#)
- [Multiple Table Uses-Row Sets Overlap](#)
- [Non-unique data movement key](#)
- [Preview fails for integration pack models with dynamic parameters](#)
- [Table not found](#)

Asian fonts not displaying in PDF

Symptom

- You generate PDF documentation from Designer, but the PDF file does not display all of the content.

Cause

- You have multi-byte characters in your database. Structured Data Manager does not embed the necessary fonts in the PDF by default.

Resolution

- In `<install_dir>\obt\config\outerbay.properties`, use the `pdf.font` property to include the necessary fonts. For example:
`pdf.font=STSong-Light-H`

Connection timeout

Symptom

- You receive the following error in designer when connecting to Azure SQL database.
- ERROR:

Failed to create a selection table. (Check Preview Tables Location in "Edit Connection" dialog.) The connection is closed.

Resolution

- Relaunch the designer.

For more information, refer to *Connections dropped* section in the *Microsoft Programming guide* at the following location:

<https://docs.microsoft.com/en-us/sql/connect/jdbc/connecting-to-an-azure-sql-database?view=sql-server-ver15#connections-dropped>.

Data movement keys: various warnings and error messages

On rare occasions, a warning or error message may appear concerning the data movement key.

Depending on circumstances, a table may or may not require a data movement key. If a data movement key is required and none is already selected by you, Structured Data Manager will select one for you if possible. If it cannot choose one for you for some reason, you receive an alert in the model editor or the cartridge editor that a data movement key is required and you must select one yourself.

You can select a data movement key in the following ways:

- In the model editor table properties dialog. In Designer, right-click the table in the model editor and click **Properties**. Select a suitable data movement key in the drop down list.
- For schema-based cartridges, in the cartridge editor data movement key tab. Double-click the schema-based cartridge in the Projects pane of Designer, and click the tab **Data Movement Key**.

Eligibility analysis not found

Symptom

- Eligibility analysis is not available on lookup tables when a history snapshot is enabled.

Cause

- Managed tables do not have eligibility analysis.

Error in Groovy object

Symptom

- You get an error like the following in Designer or Web Console:
- Error in "<object>": Cannot cast object '647' with class 'com.outerbay.foundation.components.datamovers.lw2.groovy.GroovyDataNodeWrapper' to class 'int'

Cause

- This is due to Grails upgrade. The `as Type` construction does not work in the newer version.

Solution

Check your Groovy scripts for `as Type` constructions and replace them. For example:

```
List<Integer> prices = priceValues.collect{it as Integer}
```

should change to:

```
List<Integer> prices = priceValues.collect{it.toInteger()}
```

Internal errors

Symptom

- When adding a table to your model, you may see an Internal Error.

Cause

- The database connection for your current project is no longer working. For example, you have chosen the wrong connection for your project.

Resolution

- Select the correct connection or fix your connectivity issue.

Maximum open cursors exceeded

Errors in preview are typically resolvable in the panel or editor in which they are seen.

Symptom

- You received the following SQL exception when previewing a cartridge or business flow in Designer.

```
SQLExceptions of type: ORA-01000 "maximum open cursors exceeded"
```

Resolution

- To monitor the number of open cursors in Oracle using a database tool, you can use the following select:

```
select count(*) from v$open_cursor
```

If you have two preview editors open, closing one reduces the number of open cursors.

Multiple Table Uses-Row Sets Overlap

Database to database supports archiving updatable views related to a single table. Updatable views related to more than one table can not be archived. Single tables cannot be used multiple times.

Non-unique data movement key

Symptom

- You received the following error when generating a cartridge in Designer.
- ERROR : Update rowcount summary for the run thread 0 : root : Rowcounts for ARCHIVE_SELECTION@ELIGANANULL (= 200) and Rowcounts for ARCHIVE_TRANSACTIONAL@ELIGANANULL (= 0) do not match. To disable rowcount-check, set VERIFY_ROW_COUNTS configuration to false.

Cause

- The table accidentally has a non-unique key. When the row checks were performed, an apparent mismatch was found.

Resolution

- Check the Data Movement Key specified when you added the table to the model. To view the Data Movement Key, right-click the table in your model and choose Properties to open the Table Use Properties dialog. Verify each unique key is unique.

Preview fails for integration pack models with dynamic parameters

Symptom

Preview functionality will not work with E-Business or PeopleSoft integration pack models if they include dynamic parameters.

Resolution

- When you create a parameter in Designer for an integration pack model, use a runtime parameter instead of a dynamic parameter. Give the parameter a list of values populated by a SQL statement.
- If your model already includes a dynamic parameter, convert it to a runtime parameter. In this case, either configure the List of Values as SQL and place the same query there that is in the dynamic parameter, or configure the List of Values as None and assign a default value.

Table not found

Symptom

- When adding a table to the model, you receive a table not found error even though you know the table to exist.

Cause

- The table name has double dollar signs in it (\$\$).

Resolution

- Remove consecutive dollar signs (\$\$) from table names to fix. If it is not possible to change the table name, you can create a view or synonym of the table without the dollar signs and include that in your model instead.

Discovery Errors

The following are few troubleshooting scenarios you may encounter for Discovery:

- [Configuration changes does not reflect in Discovery CLI](#)
- [Unable to view all schema in discovery for SQL intrusive environment](#)
- [XMLTYPE on Oracle database](#)

Configuration changes does not reflect in Discovery CLI

Symptom

Any configuration changes, for example, setup IP and port other than the localhost and port 8080, Discovery UI reflects the correct information. However, the Discovery command line interface fails to update and register the configuration changes.

Workaround

Whenever there is a change in configuration, quit the Discovery command line interface and log in again to reflect the changes.

Unable to view all schema in discovery for SQL intrusive environment

Symptom

In discovery SQL intrusive environment, when you add schema to the project only the interface user's schema is shown. Unable to view all the schema present in the database.

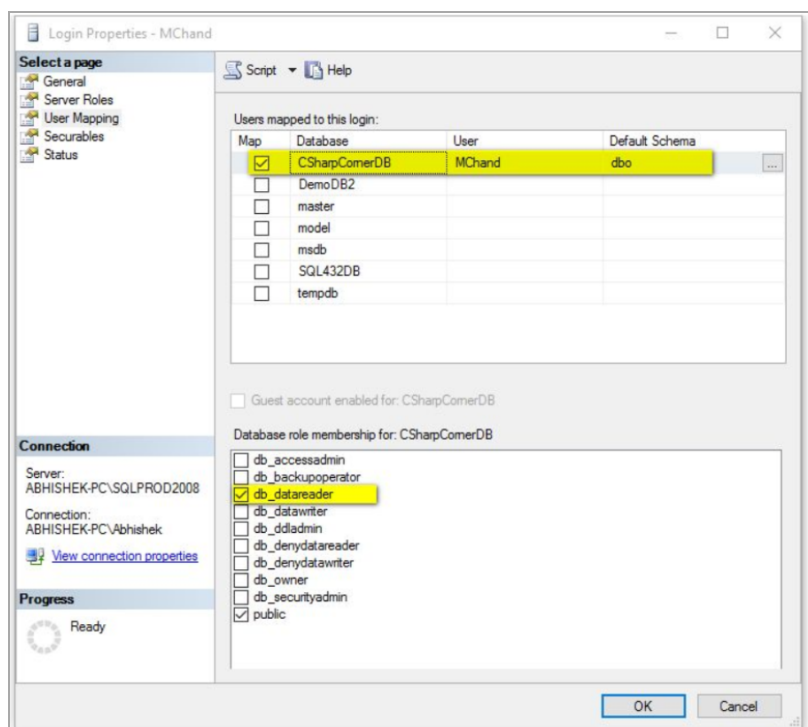
Cause

This is because the interface user requires catalog read permission to view all the schema in the database.

Workaround

To provide permission to the interface user, perform the following steps:

1. Open **SQL Server Management studio**.
2. In the **Object Explorer**, go to **Security > Logins**.
3. Select the interface user, right-click and scroll down to access **Properties**. The **Login Properties** page is displayed.



4. Click **User Mappings** on the left panel.
5. On the right panel, click the check box against the database and the database role for which you want to give permission to the interface user. The minimum permission required to view all the schema is **db_datareader**.
6. Click **OK** to save changes.

The interface user will now be able to view all the selected schema.

XMLTYPE on Oracle database

Symptom

Scanning error for tables having columns of type XMLTYPE on Oracle database.

Resolution

Manually install XML Oracle jar if you have Oracle XML types.

Free Text Search Error

Error messages encountered with free text search:

- [Invalid reference URL in XML file](#)

Invalid reference URL in XML file

Symptom

When you perform a free text search with Elastic Search as indexing server and download the result set as XML then the reference URLs in the XML file containing **&** is getting escaped as **&** in the URL making it invalid. See, ADM-10987.

Workaround

To overcome this issue, perform one of the following steps:

- Open the downloaded XML using a browser and copy paste the reference URL in another tab of the browser.

or

- Download the result set as HTML or PDF to access the reference URL.

In-Place Masking Errors

Error messages encountered with IPM:

- [Error while running business flow for In-Place Masking Cartridge](#)
- [Error while running undo business flow for In-Place Masking Cartridge](#)

Error while running business flow for In-Place Masking Cartridge

Symptom

When running a business flow for In-Place Masking Cartridge, update of few tables might fail due to unexpected reasons. In such a case, following error message are expected along with

WorkflowTaskException:

```
Audit table OBTAUD_IPM_UPDATE_DETAILS failed to update in previous run.  
If table XXXX is masked then please update the audit table accordingly.  
For further instructions please refer SDM Troubleshooting Guide.
```

Cause

This issue might happen after masking a particular table when SDM fails to update the rowcount details in OBTD_M_ROWCOUNT_DETAILS or audit details in OBTAUD_IPM_UPDATE_DETAILS table.

Resolution

Browse to that particular table (here, XXXX) and figure out whether it has been masked.

- If masking process has completed for that particular table then browse to OBTAUD_IPM_UPDATE_DETAILS in the SDM repository and change the STATUS for that particular table from START to COMPLETE.

- If masking process has failed for that particular table then browse to `OBTAUD_IPM_UPDATE_DETAILS` in the SDM repository and change the STATUS for that particular table from START to FAIL.

After this, **Recover** the failed business flow.

Symptom

When running a business flow for non-intrusive In-Place Masking Cartridge, update of few tables might fail due to **SQLException: ORA-01555**.

Cause

The **UNDO** table space may be too small leading to **out of memory exception**.

Resolution

You need to increase the UNDO table space. Perform the following steps:

1. Use the following command to create and extend the UNDO table space:

```
create tablespace UNDOTBS1 datafile '<path>\UNDOTBS02.DBF' size 1G autoextend on;
```

2. Re-run the business flow.

Error while running undo business flow for In-Place Masking Cartridge

Symptom

When running undo business flow for In-Place Masking Cartridge, update of few tables might fail due to unexpected reasons. In such a case, following error message are expected along with `WorkflowTaskException`:

It seems like audit table couldn't be updated post update of oltp table. Please follow SDM trouble shooting guide to update the table and continue the job.

Cause

This issue might happen after unmasking a particular table when SDM fails to update the audit details in `OBTAUD_IPM_UPDATE_DETAILS` table.

Resolution

Browse to that particular table (here, XXXX) and figure out whether it has been masked.

- If unmasking process has completed for that particular table then browse to **OBTAUD_IPM_UPDATE_DETAILS** in the SDM repository and change the STATUS for that particular table from START to COMPLETE.
- If unmasking process has failed for that particular table then browse to **OBTAUD_IPM_UPDATE_DETAILS** in the SDM repository and change the STATUS for that particular table from START to FAIL.

After this, Recover the failed undo business flow.

Indexing Error

Error messages encountered with indexing:

- [Indexing job fails on MYSQL for large data](#)

Indexing job fails on MYSQL for large data

Symptom

When running an indexing cartridge on MYSQL for large dataset, the job fails either by closing DB connection or by GC overload exception.

Cause

In case of MySQL, by default, ResultSets are completely retrieved and stored in memory. In this case we are working with ResultSets that has large number of rows and cannot allocate heap space in JVM for the memory required.

Resolution

To resolve this issues, you should append useCursorFetch parameter with value as true to the MYSQL JDBC URL. Perform the following steps:

1. Log on to Web Console.
2. Navigate to **Environment Management > Environment > Manage > Active Environment > Locations**.
3. Modify **OLTP_DB** location by appending useCursorFetch=true to the URL.
For example,
`jdbc:mysql://<Host>:<Port>/<Database>?useCursorFetch=true`
4. Click **Update**.
5. Repeat steps 3 and 4 for **OBTINTF_DB** location.
6. Re-run the business flow.

Installation and upgrade errors

This section describes some of the common errors you may encounter during installation and their resolution.

- [Installation of 64-bit version on a 32-bit system begins without warning, then fails](#)
- [Turkish character set is unsupported](#)
- [Upgrade Issue - Cannot login to Web Console after Upgrade, on the next page](#)

Installation of 64-bit version on a 32-bit system begins without warning, then fails

Symptom

When you attempt to install the 64-bit version of Structured Data Manager on a 32-bit system, the installation initially appears to proceed normally, but fails midway through the installation process. No warning message appears to the user.

Resolution

Install the correct version of Structured Data Manager: the 32-bit version for 32-bit systems, or the 64-bit version for 64-bit systems.

Turkish character set is unsupported

Symptom

- The Web Console and Designer do not support the Turkish character set.

Cause

- Sun Java bug 6208680.

Resolution

- For the character set to work in the Turkish or Azeri environment you will have to make following changes in the code tree:

Add `-Duser.language=en` in following three files

`obt/ui/designer.ini`

`obt/bin/webconsole.bat`

`obt/bin/obt-launcher.bat`

Upgrade Issue - Cannot login to Web Console after Upgrade

Symptom

LDAP user unable to connect to Web Console.

Cause

The LDAP connectivity issue is due to the missing LDAP Servers Root CA certificate from the list.

Resolution

Copy or import the cacert file from the previous installation and do the following:

1. Stop Web Console. Also, ensure to stop the designer if it is running.
2. Rename `<Install_Dir>/jre/lib/security/cacerts.bak`
as `<Install_Dir>/jre/lib/security/cacerts`
3. Copy `<Old Install_Dir>/jre/lib/security/cacerts`

to <Install_Dir>/jre/lib/security

4. Restart the Web Console.
5. You should be able to login with the LDAP user credentials.

Other errors

This section contains descriptions of miscellaneous errors.

- [Asian fonts not displaying in PDF](#)
- [Error when running security scripts](#)
- [IJ ERROR: Unable to establish prepared statement PRIVILEGE](#)
- [Monitoring page takes a long time to load](#)
- [OBTCO_JOB_RUNS_errors](#)
- [Remote view fails for archive job](#)
- [Unable to Delete Environment When Source Data is No Longer Available](#)

Asian fonts not displaying in PDF

Symptom

- You generate PDF documentation from Designer, but the PDF file does not display all of the content.

Cause

- You have multi-byte characters in your database. Structured Data Manager does not embed the necessary fonts in the PDF by default.

Resolution

- In <install_dir>\obt\config\outerbay.properties, use the pdf.font property to include the necessary fonts. For example:

```
pdf.font=STSong-Light-H
```

Error when running security scripts

Symptom

When working with Oracle 11g client on Windows, running the security scripts returns an error of:

```
SP2-1506: START, @ or @@ command has no arguments.
```

Cause

This problem is a known issue with Oracle 11g.

Resolution

Close and ignore the error.

IJ ERROR: Unable to establish prepared statement PRIVILEGE

Symptom

While attempting to use the remove privilege command, for example, remove privilege READ_SYSTEM from TEST_ROLE; the following error appeared:

```
IJ ERROR: Unable to establish prepared statement PRIVILEGE
```

Cause

The REMOVE Identifier command is not being parsed correctly.

Resolution

Rerun the query enclosing the main body of the query in single quotes. For example,

```
'remove privilege READ_SYSTEM from TEST_ROLE';
```

By including the query inside quotes, you are telling ij not to parse the query.

NOTE: This only applies to the IJ client.

Monitoring page takes a long time to load

Symptom

When you go to the monitoring page, it takes a long time to load.

Cause

You have no filter set and the history table is very large. Therefore, it takes a long time to load the history table.

Resolution

In the home directory, under config, edit the `webconsole.properties` file and set `jobmonitor.hideHistoryTableIfNoFilter` to **True**.

For more information about the home directory, see [Manage the home directory, on page 21](#).

OBTCO_JOB_RUNS_errors

Symptom

Unable to view the OBTCO_JOB_RUNS in PgAdmin Client.

Cause

The OBTCO_DATEDIFF procedure requires explicit type casting, to view the OBTCO_JOB_RUNS in PgAdmin Client.

Resolution

On the PgAdmin client, select the repository database. Navigate to the repository schema and do the following:

1. Go to the **Functions** tab and look for **OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE** function.
2. Right click on the function and select **Scripts>Create Scripts**.

3. Check your scripts and replace them. The script looks as follows:

```
- FUNCTION: obtrep."OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE"(timestamp with time zone,  
character varying, character varying)  
  
- DROP FUNCTION obtrep."OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE"(timestamp with time  
zone, character varying, character varying);  
  
CREATE OR REPLACE FUNCTION obtrep.OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE(  
p_last_update_time timestamp with time zone,  
p_status character varying,  
p_phase character varying)  
RETURNS character varying  
LANGUAGE 'plpgsql'  
COST 100.0  
VOLATILE  
AS $function$\br/>BEGIN  
if (((p_status = 'JOB_INCOMPLETE' and p_phase = 'RUNNING')  
or (p_status = 'JOB_IGNORE' and p_phase = 'INITIALIZING'))  
and not "OBTCO_DATEDIFF"('second', p_last_update_time, clock_timestamp()) < 120)  
then  
return 'NOT_RESPONDING';  
else  
return p_phase;  
end if;  
END;  
$function$;  
  
ALTER FUNCTION obtrep."OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE"(timestamp with time zone,  
character varying, character varying)  
OWNER TO obtrep;
```

should change to:

```
- FUNCTION: obtrep."OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE"(timestamp with time zone,  
character varying, character varying)  
  
- DROP FUNCTION obtrep."OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE"(timestamp with time  
zone, character varying, character varying);  
  
CREATE OR REPLACE FUNCTION obtrep."OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE"(  
p_last_update_time timestamp with time zone,
```

```
p_status character varying,  
p_phase character varying)  
RETURNS character varying  
LANGUAGE 'plpgsql'  
COST 100.0  
VOLATILE  
AS $function$\nBEGIN\nif (((p_status = 'JOB_INCOMPLETE' and p_phase = 'RUNNING')\nor (p_status = 'JOB_IGNORE' and p_phase = 'INITIALIZING'))\nand not obtrep."OBTCO_DATEDIFF"('second':: character varying, p_last_update_time,\nclock_timestamp()) < 120) then\nreturn 'NOT_RESPONDING';\nelse\nreturn p_phase;\nend if;\nEND;\n$function$;\nALTER FUNCTION obtrep."OBTCO_PHASE_GET_ADJUSTED_JOB_PHASE"(timestamp with time zone,\ncharacter varying, character varying)\nOWNER TO obtrep;
```

NOTE: Ensure to add `:: character varying` in `OBTCO_DATEDIFF` procedure and append the repo username with the procedure name. You must also add quotation marks to all the procedure names.

4. Refresh the functions tab. The total number of functions count should be the same as before and no new functions must be created.
5. Repeat the same with `OBTCO_PHASE_GET_ADJUSTED_TASK_PHASE` procedure.

Remote view fails for archive job

Symptom

While attempting to perform a job movement using a cartridge model that contains an update-able remote view, you receive the following error:

```
com.microsoft.sqlserver.jdbc.SQLServerException:  
SCHEMA LOCK permission denied on object 'S1', database 'DEMARC60', schema 'dbo'
```

Cause

You do not have enough permissions on the remote table.

Resolution

Add `obt_rep` as a user for the remote table (S1 in this example) and grant select on remote table permissions to `obt_rep`.

Unable to Delete Environment When Source Data is No Longer Available

Symptom

Using the Web Console, you are unable to delete an environment when the source database is no longer available, for instance, in the case of an application retirement.

Cause

The delete operation hangs in an incomplete state because deletion of the source database is a necessary phase in the deletion of an environment when the Web Console is used. You cannot delete an environment using the Web Console if the source database is no longer available, but you can delete this environment using the command line.

Resolution

To delete an environment using the command line

1. Open a command line window.
2. Invoke the following command:

```
obt/install/deploy_product.[sh|bat] "<product.install_admin>.properties"  
uninstall "-Dforce.repo.only=true"
```

where `<product.install_admin>` is the name of the file.

NOTE: Structured Data Manager marks the environment as deleted, but it may not delete all of the objects related to the environment.

Delete the environment using the command line instead of the Web Console:

1. Open a command line window.
2. Invoke the following command:

```
obt/install/deploy_product.[sh|bat] "<product.install_admin>.properties"  
uninstall "-Dforce.repo.only=true"
```

Runtime errors

Error messages when running business flows can appear in the Job Monitor or the log files.

For runtime errors involving advanced selection and partition-based delete, see Advanced selection and partition-based delete errors.

- [AQS cache fails with Multiple target column type mappings found in the mapping file error](#)
- [AQS cache on MySQL environment fails](#)

- Assorted errors with cursor sharing in Oracle
- Cannot create unique index
- Cannot close file
- Cannot fetch data from the repository
- Cannot retrieve driving table records
- Connectivity issues
- COPY_BY_SEL_DB_TO_BE step failing
- Could not recover Group ID 10 because it is a child job
- Exception executing Groovy script
- Exception in task
- Failed to get business flow based on Job ID
- Insufficient privileges
- Job not recoverable immediately after failure
- Job run failed error
- Maximum index size of 600 on Sybase
- No more lock classes available from transaction
- Not responding
- Oracle table access
- ORA-02049 timeout
- Preventing deadlocks while running database to database
- Reload error: failure in XML deserialization
- Reload error: out of memory
- Rollback segment error
- Remote call error from a mainframe database
- Requested conversion is not supported
- Snapshot qualifying OLTP-Table rows into archive
- Update rowcount summary

AQS cache fails with Multiple target column type mappings found in the mapping file error

Symptom

During D2F AQS cache fails with the following error:


```
ERROR : Create AQS cache data thread 0 : root : () Could not get dest-DataType for  
srcDataTypeName = INTEGER from mapping-file: null
```

```
com.outerbay.foundation.components.transform.util.DataTypeMappingException: Multiple  
target column type mappings found in the mapping file - <install_  
dir>\obt\foundation\components\config\AQSCache\ansiToPostgresql.xml
```

Cause

This is due to the multiple outputs found in the `ansiToPostgresql.xml` mapping file.

For example:

```
<mapping>  
<columnInput>INTEGER</columnInput>  
<columnOutput>serial</columnOutput>  
<columnOutput>int4</columnOutput>  
</mapping>
```

Resolution

Update the `ansiToPostgresql.xml` mapping file with the required datatype for `columnOutput`.

For example

```
<mapping>  
<columnInput>INTEGER</columnInput>  
<columnOutput>bigint</columnOutput>  
</mapping>
```

AQS cache on MySQL environment fails

Problem 1:

Symptom

Running AQS cache on MySQL environment fails with any of these following errors:

Destination connection does not support catalogs, but catalog `<catalogname>` is found in the mapping file.

Destination database does not contain schema: null

Resolution

While running AQS cache on MySQL environment, you should map the catalog and table name of MySQL with the schema and table name of destination database.

For example

```
<catalogname>.<tablename>=<schemaname>.<tablename>
```

Problem 2:

Symptom

Running AQS cache on MySQL environment with target schema name as **Use driving table schema** fails with the following error:

```
Destination database does not contain schema: null
```

Resolution

While running AQS cache on MySQL environment, you should set the target schema name as **Use cartridge name** or **Use mapping file** to load the AQS cache.

Assorted errors with cursor sharing in Oracle

Symptom

When cursor sharing is configured as `cursor_sharing=FORCE`, and there are bind variables with indicators and literals to be replaced, assorted errors may occur. These can include unexpected results, unexplainable errors, or wrong results due to values in binds being swapped. The problem is usually seen in RMAN or the OCI/Precompiler application.

Resolution

Configure cursor sharing as `cursor_sharing=EXACT` with Oracle databases.

Cannot create unique index

Symptom

You received one of the following errors in the log file after a business flow failed:

```
cannot CREATE UNIQUE INDEX; duplicate keys found
```

or,

```
Failure in action: UPD_ROWCOUNT_SUMMARY
```

Cause

An invalid transactional model was created, possibly by multiple usage tables having overlapping rows. This results in duplicate rows in the history and a unique constraint exception.

Resolution

Use advanced selection when you have a chaining table or table that has multiple uses with overlapping rows.

See the *Structured Data Manager Developer's Guide* for details.

Cannot close file

Symptom

You receive an error message during the archive process indicating that a specific file cannot be closed:

```
Cannot close file <filename>.
```

Cause

The archive process attempted to replicate the file on a remote server, and, during this process, encountered an error.

Resolution

Review the job's log file to determine the remote server error condition and correct it according to that remote server's procedures. After correcting the problem on the remote server, recover the failed job.

Cannot fetch data from the repository

Symptom

After a business flow failed, the log file error is:

```
Cannot fetch data from the Repository.  
com.outerbay.foundation.businessobj.UnexpectedDbException: Failed to get Cycle Steps  
for the Cycle. ""
```

Resolution

Take appropriate steps to reconnect to the database. Database connections are discussed in detail in the *Structured Data Manager Installation Guide*.

Cannot retrieve driving table records

Symptom

Data movement failed with the following error:

```
Cannot retrieve driving table records  
com.microsoft.sqlserver.jdbc.SQLServerException: Login failed for user 'obt_rep'.
```

Cause

You created a view of a remote table as the user `obt_rep`, and then created a cartridge using the view of the remote table as the driving table. However, the user `obt_rep` does not have the permissions needed to access the `REMOTE_INV` database on the remote server. The error in data movement is caused by this lack of permissions into the remote server.

Resolution

To allow the `obt_rep` user to have access to the view of the remote table, log in to the history server and the `REMOTE_INV` database. From here you can add `obt_rep` as either:

- aliased to `dbo`

or

- a user, then grant the `obt_rep` user `select`, `insert`, `update`, `delete` privileges on `REMOTE_ORD`.

Connectivity issues

Symptom

You receive the following error when attempting to connect to the Console:

```
Error connecting to server <Server name> on port <Port> with message Connection  
refused: connect
```

Cause

The repository is not running due to an authentication failure. This occurs when an invalid userid or password was entered or you have not installed the base product.

Resolution

You need to check your connection properties and verify that you have a user configured. From the Deployment Assistant, setup your database and establish your password.

COPY_BY_SEL_DB_TO_BE step failing

Symptom

The COPY_BY_SEL_DB_TO_BE step fails during a data movement job.

Cause

Structured Data Manager checks for SQL warnings when fetching data and fails if the database raises a warning that it cannot deliver the data. This condition occurs in very few databases.

Resolution

The default setting of Structured Data Manager is to fail when the database raises warnings during fetch, but you can change the setting to ignore such warnings in <install_dir>\obt\config\outerbay.properties:

```
datamovemnt.failOnFetchWarnings=false
```

Could not recover Group ID 10 because it is a child job

Symptom

After a business flow failed, the log file error is:

```
Could not recover GroupID 10 because it is a child job. Recover its parent group instead; GroupID 8
```

Resolution

Run the recover job by specifying the correct GroupId at the parent level.

Exception executing Groovy script

Symptom

After a business flow failed, the error in the log file is something like:

```
java.lang.IllegalStateException: Exception while executing a Groovy script  
Caused by: groovy.lang.MissingMethodException: No signature of method: Script1.p_cutoff() is applicable for argument types: (null) values: {null}
```

Resolution

This specific error was caused by a missing underscore in the Groovy code. The parameter p_cutoff should have been written as p_cutoff_date. It can be prevented by always using the validate function of the Groovy screen. To view the error message, go to the run log.

Exception in task

Symptom

You received the following error in the job monitor or obt.log when attempting to run a business flow:

```
WARN : Call archive data from database to filesystem thread 0 : root : Exception in Task
```

Cause

Various causes. For example, the problem may be due to a lack of space available, and you would need to allocate more space.

Resolution

If you are unable to resolve this issue, contact support. After resolving this issue, recover the failed job.

Failed to get business flow based on Job ID

Symptom

The following message may be seen in the Job Monitor when trying to find details on any particular business flow job or step.

```
Exception trying to display JobMonitor WorkBench.... Failed to get Job based on Job ID
```

Cause

An invalid job ID was entered.

Resolution

Check the Job Monitor for the correct Job ID and reenter.

Insufficient privileges

Symptom

You received the following error in the job monitor when attempting to run a business flow:

```
PDM merges new archive rows into history tables thread 0 : root : ORA-20004: ORA-01031: insufficient privileges
```

Resolution

You must add grants and restart the business flow.

To add grants and restart the business flow

1. Verify the error message in the log files
2. Add alter, delete, update, select, and insert grants in the desired table in the target (history) database to the correct user.

In this example:

- the database is demarc60
 - the tables are hist.order_line and hist.order_line_dist
 - the user is obt_reloc
- ```
grant alter, delete, update, select, insert on
demarc60_hist.order_line to obt_reloc;

grant alter, delete, update, select, insert on
demarc60_hist.order_line_dist to obt_reloc;
```

3. Restart the failed business flow. In this example the name of the job is PDM\_ARCHIVE@OrderEntry\_DBarch.

```
cd $OBTPA_TOP/bin
./launch_la_job.sh -j PDM_ARCHIVE@OrderEntry_DBarch \
Min_months_to_retain=2000.01.01 -r
```

## Job not recoverable immediately after failure

### Symptom

An attempt to recover a failed job is unsuccessful when attempted immediately after the job has failed.

### Resolution

Wait at least 60 seconds between running a job and recovering it. After the lapse of 60 seconds, the job state should be “Not responding” and you can recover the job.

Less time may result in an error message saying another instance of the job is still running.

## Job run failed error

### Symptom

You received the following error in the obt.log after a business flow failed.

```
Job run failed, there may be more information available in the Job Monitor
```

### Resolution

Using Job Monitor, you can drill down to the Job Actions screen and the Tasks screen for further status detail.

1. Open the Web Console.
2. Click the Monitoring page.
3. On the Monitoring page, look for the Status column. If any row in the Status column says Failed or Cancelled, double click the row for details.

The **Job Runs > Actions** page appears.

4. Look in the table for numbers in the failed column. Double click any row with a number 1 in the failed column or more details.

The **Job Runs > Actions > Tasks** page appears.

5. Click the Message tab to see the error message.

## Maximum index size of 600 on Sybase

### Symptom

You received the following error in the log file after a business flow failed:

```
600 is the maximum allowable size of an index. Composite index specified is xxx bytes
```

### Cause

The Sybase table name is longer than 200.

### Resolution

Shorten your table name to less than 200.

## No more lock classes available from transaction

### Symptom

You received the following error in the obt.log after a Database to XML business flow failed:

```
ERROR: Validate data unchanged since archival thread 0 : root : Cannot execute main query com.microsoft.sqlserver.jdbc.SQLServerException: No more lock classes available from transaction.
```

### Cause

The configuration parameter Combined Statement Count is set to permit too many database statements to be combined in a single query.

### Resolution

1. Open the Administrator.
2. Go to the **Performance** tab.
3. Reduce the number for Combined Statement Count.\*\*
4. Change the default value of 50 to 20.
5. Save and close.
6. Rerun the business flow.

## Not responding

### Symptom

In the Job Monitor, you see Not Responding in the status column.

### Cause

Typically this happens when the database session (or the database instance itself) failed before the business flow was able to update its own status.

#### **Resolution**

Recover the failed job.

### **Oracle table access**

#### **Symptom**

Running a cartridge, you get an Oracle error that the table is not accessible.

#### **Cause**

A cartridge with multiple table uses and an append parallel hint is run with parallel DML enabled.

#### **Resolution**

None, because it is a limitation of the database. Contact Micro Focus Support for the most recent information on this issue.

### **ORA-02049 timeout**

#### **Symptom**

You received a ORA-02049 timeout error while running business flows.

ORA-02049 timeout error

#### **Resolution**

Reduce the Number of Parallel Workers parameter. Options are from 4 to 32.

Using too many workers can cause ORA-02049 timeout errors.

### **Preventing deadlocks while running database to database**

#### **Symptom**

While running a business flow the system appeared to stop, and no amount of clicking Refresh made any changes except in the timestamp.

#### **Resolution**

If you experience issues with deadlock, then use the following steps to resolve the issues:

1. Ensure that the following are complete before running business flows:
  - The system is configured to use only one worker at a time.
  - Only one business flow is running at a time.
  - There is no write activity on the tables when running business flows.
2. Cancel or recover the business flow.
3. Restart the database to database business flow.



## Reload error: failure in XML deserialization

### Symptom

You received the following error in the job monitor or obt.log when attempting to run a reload business flow:

```
ERROR: Copy from filesystem to database -Failure in XML deserialization
```

### Resolution

This error typically occurs when the model contains an error. Double check the model the business flow was based on and redeploy.

## Reload error: out of memory

### Symptom

Reload to database fails when the dataset is larger than 250GB.

### Resolution

When reloading a large amount of data to the database, configure the data movement batch size parameter in the web console to be 10K or less, and use a machine with at least 8GB of RAM. If more RAM is available, a larger data movement batch size can be used. If tables contain a large number of columns or a large amount of data, more RAM may be required.

## Out of memory error (general)

### Symptom

You received one of the following error messages in the log file after a failed business flow.

One of the following error messages are displayed:

```
WARN : Call archive data from database to filesystem thread 0 : root : Exception in Task java.lang.OutOfMemoryError: Java heap space
```

```
java.lang.OutOfMemoryError: Java heap space js: exception from uncaught JavaScript throw: java.lang.OutOfMemoryError: Java heap space
```

### Resolution

If any business flow stops with an out of memory error, set the OBT\_JAVA\_VM\_OPTIONS environment variable to increase the JVM heap size. The increased heap size setting is also useful when archiving CLOBs over 5 megabytes in size.

### To set the environment variable for business flows run from the command line

1. Set the OBT\_JAVA\_VM\_OPTIONS environment variable for the UNIX session.

For example:

```
setenv OBT_JAVA_VM_OPTIONS "-Xms64M -Xmx512M"
```

Or, you can increase the memory available to java up to 1Gb.

```
setenv OBT_JAVA_VM_OPTIONS -Xmx1024m
```

## Out of memory error when running a database to file upload job

### Symptom

If the data from a database to file archive job is subsequently uploaded to another database, that is, a database to file upload job is run, the following error can appear in the obt.log if the business flow fails:

```
java.lang.OutOfMemoryError: Java heap space
```

This change applies to upload jobs (from CSV and XML) and reload jobs from CSV. The change is not applicable to reload jobs from XML.

### Cause

Heap space required to hold the java objects for the number of rows to be uploaded has exceeded the available heap.

### Resolution

Reduce the number of rows of data to be held in memory before batch inserting them into the database. The default setting is 1,000 rows.

1. Open the following configuration file in a text editor:

```
<install_dir>\obt\config\outerbay.properties
```

2. Find the following line:

```
upload.batch.size=1000
```

3. Reduce the batch size value as needed.

## Rollback segment error

### Symptom

You received the following error in the job monitor or obt.log when attempting to run a business flow:

```
rollback segment error
```

### Cause

If you receive a rollback segment error when running business flows in Oracle, it could be that the BATCH\_SIZE is set too high. When the BATCH\_SIZE parameter is set too high, it can cause an internal buffer in Oracle to overflow, and the business flow fails.

### Resolution

By default, the database to database deployment sets the BATCH\_SIZE to 10000. If you have increased the BATCH\_SIZE and receive an error, reduce the BATCH\_SIZE.

## Remote call error from a mainframe database

### Symptom

Received remote call error when archiving data from a mainframe database:

```
ERROR: Write XSD file for ATT instance group files thread 0 : root : JBC0016E:
Remote call failed
```

### **Resolution**

Bounce the connectivity server.

## **Requested conversion is not supported**

### **Symptom**

For SQL Server, if you query on the ntext datatype through the Archive Query Server, you may receive the following error:

```
OLE DB provider "MSDASQL" for linked server "XML_ARCHIVE" returned message
"Requested conversion is not supported."
```

```
Msg 7341, Level 16, State 2, Line 1
```

### **Resolution**

Change your query so it does not use the ntext datatype.

## **Snapshot qualifying OLTP-Table rows into archive**

### **Symptom**

You received one of the following errors in the obt.log after a business flow failed:

```
Snapshot qualifying OLTP-Table rows into Archive Selection Tables thread 0
```

```
Error executing sql statement:
```

### **Cause**

You have used a column that not exist in the table.

### **Resolution**

Make sure that any conditional relationship in the model refers to valid tables and columns. As an alternative, try replacing the conditional relationship with a rule.

## **Update rowcount summary**

### **Symptom**

After creating and running a cartridge, you received an error that your rowcounts do not match:

```
ERROR : Update rowcount summary for the run thread 0
```

or you may see an error similar to this:

```
ERROR : Update rowcount summary for the run thread 0 : root : Rowcounts for ARCHIVE_
SELECTION@ELIGANANULL (= 200) and Rowcounts for ARCHIVE_TRANSACTIONAL@ELIGANANULL (
= 0) do not match. To disable rowcount-check, set VERIFY_ROW_COUNTS configuration to
false.
```

### **Cause**

The table has an accidentally non-unique key. When the row checks were performed, an apparent mis-match is found.

## Resolution

You must return to Designer and verify each unique key is unique. Open the model and right click on each table to view or change the Data Movement Key.

You can also open the Web Console administrator and set VERIFY\_ROW\_COUNTS to false as a short-term solution.

## Uninstalling and redeploying errors

Error messages when redeploying or uninstalling can appear in the installation log or the log files.

After you reinstall or redeploy a cartridge, you must run the create archive access job again.

- [Cannot redeploy business flow](#)
- [Cannot uninstall cartridge while business flows are in incomplete stage](#)
- [Cartridge expects the following for parameters to be passed](#)
- [Error running reinstallBF.groovy script](#)
- [Objects marked invalid by Oracle](#)
- [OBTCO engine failed](#)
- [Upgrade that fails and cannot resume from the Web Console](#)
- [Windows error 193 occurred while loading the Java VM](#)

### Cannot redeploy business flow

#### Symptom

You received the following error message, Cannot re-deploy business flow: missing artifacts.

#### Cause

You have attempted to deploy a business flow that has been previously deployed; however, the artifacts of the deployed business flow are missing.

#### Resolution

Ensure that the business flow folder is present in the path <obt\_top>\artifacts\<environment\_name>\businessflow\.

### Cannot uninstall cartridge while business flows are in incomplete stage

#### Symptom

You received the following error when attempting to remove a cartridge.

```
C:\Program Files\HPDBArchiving_ORCL\obt\artifacts\businessflow\Orders_Bus_
Flow\cartridge\oa\
Orders_DB_to_File\build.xml:591: Can not uninstall cartridge while jobs are in
Incomplete stage.('Running','Not Repsponding','Failed')
```

Please check the console and try to Run these jobs with -r(Recovery) option or cancel the jobs.

### Cause

You have attempted to deploy a new version of a cartridge, but the old version cannot be uninstalled because it has one or more business flows in an incomplete status.

### Resolution

Use the Cancel Job or Recover Job functions from the Monitoring tab.

After all business flows using the cartridge are in a non-running state (Completed, Cancelled, Recovered, or Suspended) you can redeploy from Designer or the Web Console.

## Cartridge expects the following for parameters to be passed

### Symptom

You received the following error attempting to reinstall a modified cartridge or business flow.

```
C:\Program Files\HPDBArchiving\obt\bin\ui_job_launcher.bat" executing: "launch_ea_job.bat" -e "DefaultEnvironment" -j "ARCHIVE_DB_TO_FS@OrderEntryOLTPtoXML" -r "sourceLocation=3DOBTINTF_DB" "destLocation=3DLOCAL_ARCHIVE_FS" "XML_Archive_Date=3D1995.01.01" Job ARCHIVE_DB_TO_FS@OrderEntryOLTPtoXML expects the following 4 parameters to be passed:
```

```
"sourceLocation" "destLocation" "XML_Archive_Date" "DB_Archive_Date"
```

but found the following parameters:

```
"sourceLocation=3DOBTINTF_DB" "destLocation=3DLOCAL_ARCHIVE_FS" "XML_Archive_Date=3D1995.01.01"
```

```
Usage: launch_ea_job.bat [-e] environmentID -j jobName [-r] "sourceLocation" "destLocation" "XML_Archive_Date" "DB_Archive_Date"
```

```
-e,--environmentID The Environment identifier, found in the console (optional)
```

```
-j,--jobName Name of the job in the form batch_name@job_name
```

```
-r,--recoverFailed Recover a failed run of this job, if one exists (optional)
```

### Resolution

You must uninstall the cartridge before redeployment of a modified cartridge. The uninstall script is in the directory where the cartridge was deployed. Modifying or adding parameters to a cartridge counts as modifying it.

The Web Console is not able to refresh itself when cartridges are uninstalled and redeployed. You must close and restart the Console after redeployment of a previously deployed cartridge.

## Error running reinstallBF.groovy script

### Symptom

The following error message appears when you run the reinstallBF.groovy script:

Missing property key <KEYNAME> in  
<obtpaTop>/foundation/components/config/bfDeployKey.properties

### Cause

reinstallBF.groovy now validates the list of properties created with the create file option against <OBTPA\_TOP>/foundation/components/config/bfDeployKey.properties.

This error message displays if a property key is not available in the list of properties in bfDeployKey.properties.

### Resolution

Run the reinstallBF.groovy script after adding the property to the bfDeployKey.properties file:

1. Open <obtpaTop>/foundation/components/config/bfDeployKey.properties.
2. Extract the property name present in <KEYNAME> and add it to the file. If the property name has the environment name, or business flow or cartridge name in the prefix, remove the prefix and just include the property name.

For example, if the <KEYNAME> was Oracle\_D2F.property.name, assuming Oracle\_D2F is your environment name, you should add property.name to bfDeployKey.properties file as follows:

```
property.name=
```

3. Run the reinstallBF.groovy script.

## Objects marked invalid by Oracle

### Symptom

After you deploy your business flows on Oracle, some of the objects may be marked as invalid by Oracle.

### Cause

The objects are not invalid but are marked as such due to a limitation of Oracle.

### Resolution

To remove the invalid designation for the objects, you can run obt\_recompile\_invalid\_objects.sql found in <install\_dir>/foundation/util/sql/oracle.

## OBTCO engine failed

### Symptom

After using the History Schema Upgrade scripts to update the schemas of your archive data stores, you may see the following error when redeploying a cartridge:

```
OBTCO_ENGINE_FAILED
```

### Resolution

Run all three of the following commands:

1. To update OBTCO\_JOB\_PARAMS run the following:

```
set param_name = 'Creation Date High'
```

2. To update obtco\_detail\_params run the following:

```
set short_name = 'Creation Date High'
where short_name = 'Creation Date High';
```

3. To update obtco\_detail\_params run the following:

```
set value = 'Creation Date High'
where value = 'Creation Date High';
```

The unusual capitalization of High is correct for versions of Oracle previous to 11.5.10.2.

## Upgrade that fails and cannot resume from the Web Console

### Symptom

When an upgrade is run from the Web Console and fails before it is completed, the upgrade cannot be resumed with the Web Console.

### Resolution

Perform the upgrade with the upgrade script, as described in the *Structured Data Manager Upgrade Guide*.

## Windows error 193 occurred while loading the Java VM

### Symptom

While attempting to reinstall Structured Data Manager, a Windows error message is returned (193).

### Cause

This occurs when you use the wrong installer for your platform. For example, the software comes with a 32-bit and a 64-bit Windows installer. If you run the 64-bit installer on a 32-bit Windows, you will receive this error.

### Resolution

Make sure that you have installed the correct installer for your Windows system.

## Upload errors

The following are some common challenges you may encounter while uploading.

- [Cannot upload all datatypes from Sybase to SQL Server](#)
- [Error during reload, upload, or undo action on Oracle](#)
- [Mapping and timestamp issue when uploading from Oracle to SQL Server](#)
- [Not able to set length for CLOB and BLOB columns on DB2 during upload](#)

- [Truncation of data upon upload](#)
- [Upload cannot get type from mapping file](#)
- [Upload fails](#)
- [Upload fails with drop indexes in destination tables](#)
- [Upload from MySQL to any database fails](#)
- [Upload from SQL Server to Oracle \(table with special characters\) does not upload any data](#)
- [Upload from mainframe to DB2 fails for real column type , on page 83](#)
- [Upload from SQL to MYSQL fails](#)
- [Upload hangs with an out of memory error](#)
- [Upload to Vertica fails](#)
- [XML reload or upload may run out of memory](#)

## Cannot upload all datatypes from Sybase to SQL Server

### Symptom

When uploading a table from Sybase to SQL Server with no mapping file, all datatypes will not upload from Sybase to SQL server.

### Resolution

Create a table and use a mapping file.

## Error during reload, upload, or undo action on Oracle

### Symptoms

When reload, upload, or undo of a data on Oracle is performed, the process fails with following error:

```
java.sql.BatchUpdateException: ORA-06550: line 1, column 18:
```

```
PLS-00905: object TSTMARC.SP_LONGX72618332 is invalid
```

```
ORA-06550: line 1, column 8:
```

```
PL/SQL: Statement ignored
```

### Cause

Oracle has deprecated Long and Long Raw data types since version 9i. Therefore, the Oracle suggests to switch to any of the LOB types for Long and Long Raw data types columns. For more details, refer to [Long Data Type](#).

### Resolution

Migrate the columns with Long and Long Raw data types to LOB columns (CLOB, NCLOB, BLOB).

## Mapping and timestamp issue when uploading from Oracle to SQL Server

### Symptom



When uploading from Oracle to SQL Server, incorrect mapping and timestamp occurs in Oracle and effects binary in SQL Server.

**Cause**

The create table process uses the wrong mapping/timestamp in Oracle to binary in SQL Server or other datatypes.

**Solution**

To resolve this issue, cut and paste the create table statement from the log file and fix the datatype, then recover the upload.

**Not able to set length for CLOB and BLOB columns on DB2 during upload**

**Symptom**

DB2 allocates 1MB as the default size for CLOB and BLOB columns when the table is created. If you try to upload an image column for example, of a size more than 1MB to DB2, it will fail.

**Resolution**

The CLOB, BLOB, and DBCLOB lengths are now exposed through the DBMSDataTypes.

**Truncation of data upon upload**

**Symptom**

Upload may truncate data for some of the RDMS if the datatype max size is set smaller than source data.

**Resolution**

Use a mapping file to create the upload tables.

**Upload cannot get type from mapping file**

**Symptom**

When trying to upload, you receive a message that a type, such as dest-DataType, could not be gotten from the mapping file.

**Cause**

You may be trying to upload to a database type (Oracle or SQL Server) to which you have not previously connected. When you connect to a database, Structured Data Manager sets up database mapping files in <install\_dir>\obt\config\dbms for the type of database to which you are connecting. If you have not previously connected and attempted to perform an upload, the mapping file is not present for that database and you receive errors about mappings not found.

**Resolution**

Copy the files from another instance of Structured Data Manager, or connect to the database and it will generate the mapping files in <install\_dir>\obt\config\dbms.

**Upload fails**

**Symptom**

When uploading to a SQL Server database from an Oracle-based archive file (XML or CSV), the upload fails.

#### **Cause**

When a numeric column has default precision and scale settings, then there is the risk that during upload into a heterogeneous database, the default settings for precision and scale will be more restrictive and this will cause upload to fail.

#### **Solution**

To avoid potential problems with upload with precision errors with numeric data, the recommended solution is to explicitly set precision and scale settings where appropriate.

### **Upload fails with drop indexes in destination tables**

#### **Symptom**

You receive a `MySQLSyntaxErrorException` when uploading; run any database to file archive business flow from a MySQL database, then upload it to a different MySQL database than the MySQL source database currently being used.

#### **Resolution**

If you receive this error, you need to manually run the drop query.

### **Upload from MySQL to any database fails**

#### **Symptom**

Running upload from MySQL to any database fails with any of these following errors:

Destination connection does not support catalogs, but catalog <catalogname> is found in the mapping file.

Destination database does not contain schema: null

#### **Resolution**

While running upload from MySQL environment to any database, you should map the catalog and table name of MySQL with the schema and table name of destination database.

For example

```
<catalogname>.<tablename>=<schemaname>.<tablename>
```

### **Upload from SQL Server to Oracle (table with special characters) does not upload any data**

#### **Symptom**

When creating a simple model and cartridge and upload to Oracle, the job completes but does not upload any data.

#### **Resolution**

Mapping file for upload now allows . (dot) in the mapped name. The following rules apply:

- If the mapped name contains . (dot) then it should be enclosed in the double quotes.  
For example, if the mapped name is new.Customer, use "new.Customer"
- If the mapped name contains ", then double quotes should be doubled.  
For example, if mapped name is new."Customer use "new.""Customer" in the mapping file.

## Upload from mainframe to DB2 fails for real column type

### Symptom

The upload fails when using FLOAT column from mainframes and also when the mainframe environment is created as DB2 type.

### Resolution

To resolve this, the mainframe environment should be created as Generic JDBC (ANSI) type. This makes the upload heterogeneous.

## Upload from SQL to MYSQL fails

### Symptom

When uploading from SQL Server to MYSQL, the upload fails during the running of the action "convert XML data to CSV format."

### Resolution

If you receive this error, you need to use lower case table names in the mapping file and the job.

## Upload hangs with an out of memory error

### Symptom

Database to file for a non-intrusive environment fails at upload job.

### Resolution

Fix this by setting:

```
VARIABLE_LOB=true
```

in file obt\config\dbms\MySQL\_5\_5\MySQL\_5\_5.properties.

## Upload to Vertica fails

### Symptom

You receive the following error message when running a job that uploads archived data to Vertica:

```
<table_name>: Cannot update a table without a unique key.
```

### Cause

When running the same job to Vertica multiple times and inserting or modifying rows in existing tables, you need a data movement key for each table. Otherwise, only the first run will succeed and all of the subsequent runs will fail.

## Resolution

In most cases, Structured Data Manager can automatically select a unique key to use as the data movement key. In cases where it cannot, you may have to manually select one.

For more information about data movement keys, see the *Structured Data Manager Developers Guide*.

## XML reload or upload may run out of memory

### Symptom

XML reload or upload has the potential of running out of memory.

### Resolution

First convert the XML files into CSV and then reload or upload the CSV file.

## Web Console configuration errors

This section describes some of the common errors you may encounter during Web Console configuration and their resolution.

- [Business Flow Launch page displays invalid details](#)
- [Cannot install on RDBMS type <rdcms\\_type>](#)
- [Could not set up database connection](#)
- [Deployment of D2F business flow fails on DB2 which is on zOS](#)
- [Invalid key size error](#)
- [Linux install fails with connection error](#)
- [ORA-01450 maximum key length \(3218\) exceeded](#)
- [Redirect loop error](#)
- [Unable to log in to Web Console](#)
- [Unable to delete environment when source database is no longer available](#)
- [Unable to retrieve "" database character set](#)
- [Unable to login to Web Console when LDAP is configured](#)
- [Web Console fails to launch](#)

## Business Flow Launch page displays invalid details

### Symptom

After the deletion of an environment, when you try to create another environment with the same name and configuration, then on the **Launch** tab, under the **Tasks**, you can view all the business flows deployed to the environment before deletion. But while launching these business flows, it displays an error as they were deployed to the environment before deletion.

### Resolution

Assume the environment name is nint\_sql:

**For oracle repo:**

1. ID = Select "CYCLE\_ID" from "obtrep"."OBTCO\_CYCLES" where "SHORT\_NAME"='BF-nint\_sql'
2. Delete from "obtrep"."OBTCO\_CYCLE\_STEPS" where "CYCLE\_ID"=ID

**For sql repo:**

1. ID = Select [CYCLE\_ID] from [obt\_rep].[dbo].[OBTCO\_CYCLES] where "SHORT\_NAME"='BF-nint\_sql'
2. Delete from [obt\_rep].[dbo].[OBTCO\_CYCLE\_STEPS] where [CYCLE\_ID] = ID

**For PostgreSQL repo:**

1. ID = Select "CYCLE\_ID" from "obtrep"."OBTCO\_CYCLES" where "SHORT\_NAME"='BF-nint\_sql'
2. Delete from "obtrep"."OBTCO\_CYCLE\_STEPS" where "CYCLE\_ID"=ID

## Cannot install on RDBMS type <rdcms\_type>

### Symptom

You received the following error when installing the database to database configuration of Structured Data Manager.

Can not install LA base on rdbms type <rdcms\_type>

### Cause

You attempted to install Structured Data Manager against an invalid database.

### Resolution

Find a valid database and reinstall.

**NOTE:** Review the supported databases in the *Structured Data Manager Certification Matrix*.

## Could not set up database connection

### Symptom

You receive the following error:

Cannot connect to database

### Cause

When setting up the repository database, you entered an administrative user that did not have the correct privileges.

### Resolution

Ensure the administrator user that you specify has the capability/privilege to create user and grant permission to non-owned tables.

## Deployment of D2F business flow fails on DB2 which is on zOS

### Symptom

Deployment is failing:

```
[obtpreparebf] [obtpreparecartridge] ERROR: Error fetching information for table T_
CLM_HDR_FAC_FFS
```

```
[obtpreparebf]
```

```
[obtpreparebf] [obtpreparecartridge] ERROR: Error fetching information for table T_
CLM_HDR_FAC_PCP
```

```
[obtpreparebf]
```

```
[obtpreparebf] [obtpreparecartridge] ERROR: Error fetching information for table T_
CLM_HDR_NPS_FFS
```

```
[obtpreparebf] [obtpreparecartridge] Semantic Content
```

Or

If you get the following error:

Caused by: com.ibm.db2.jcc.am.SqlSyntaxErrorException: DB2 SQL Error: SQLCODE=-206,  
SQLSTATE=42703, SQLERRMC=GENERATED, DRIVER=3.66.46 at..

### Resolution

1. Set useGenericSchemaDAOForDB2 flag to true in outerbay.properties file as shown below:

```
useGenericSchemaDAOForDB2=true
```

**NOTE:** DB2SchemaDAO does not work for zOS/ iSeries/ VM/VSE operating systems as the default value is false.

2. Set HAS\_CATALOG and HAS\_SYNONYMS to false in the <SDM-Home>\config\dbms\DB2\_<Version>\DB2\_<Version>.properties file.

**NOTE:** Ensure that the HAS\_CATALOG and HAS\_SYNONYMS are set to true for iSeries.

Refer to the following guides for more information on the prerequisites for zOS:

- To create a new DB2 connection on zOS on Designer, see **JDBC connections** section in Chapter7 of the *Developers Guide*
- To create a new DB2 environment on zOS, see **Create an environment** section in Chapter2 of the *Runtime Guide*.

**NOTE:** If you are unable to fix the deployment issue using the above resolution, then you may find the following information on *special setup for accessing Db2 for z/OS servers from Java programs* useful: [https://www.ibm.com/support/knowledgecenter/en/SSEPGG\\_11.1.0/com.ibm.db2.luw.apdv.java.doc/src/tpc/imjcc\\_t0024156.html](https://www.ibm.com/support/knowledgecenter/en/SSEPGG_11.1.0/com.ibm.db2.luw.apdv.java.doc/src/tpc/imjcc_t0024156.html).

## Invalid key size error

### Problem

When you are trying to upload the data to S3, you get an error.

### Cause

This means that the JRE is not allowing the encryption of data using keys which are more than 128-bit in length.

### Resolution

To resolve this problem, you need to replace the unlimited strength policy jars in jre at this location:  
<install\_dir>/jre/lib/security/.

## Linux install fails with connection error

### Symptom

You received the following error when attempting to install:

```
java.sql.SQLException: Listener refused the connection with the following error:
```

```
ORA-12519, TNS:no appropriate service handler found
```

```
The Connection descriptor used by the client was:
```

```
demo-linux-cust-mob-01:1521:LOTUS
```

### Cause

An Oracle error occurred.

### Resolution

See the *Oracle Database Error Messages* manual for information on how to address this error.

## ORA-01450 maximum key length (3218) exceeded

### Symptom

You receive a ORA-01450 maximum key length error.

```
ORA-02049 maximum key length (3218) exceeded
```

```
java.sql.SQLException: ORA-01450: maximum key length (3218) exceeded
```

### Cause

This an Oracle limitation.

### Resolution

Increase the database block size of the tablespace associated with the Repository Database User, for example obt\_rep.

## Redirect loop error

### Symptom

When connecting to the Web Console using Firefox, you receive the following error:

Redirect Loop

Firefox has detected that the server is redirecting the request for this address in a way that will never complete.

The browser has stopped trying to retrieve the requested item. The site is redirecting the request in a way that will never complete.

\* Have you disabled or blocked cookies required by this site?

**NOTE:** If accepting the site's cookies does not resolve the problem, it is likely a server configuration issue and not your computer.

#### **Cause**

The Web Console is attempting to connect to an idle database.

#### **Resolution**

Stop the Web Console and restart it before reloading the page so it can create a new connection.

## **Unable to log in to Web Console**

#### **Symptom**

The Web Console installation will fail on Oracle if there is an existing table named as one of the Web Console tables (they all start with OBTWC\_), owned by a different schema and visible by PUBLIC.

#### **Cause**

This is caused by a Hibernate bug.

#### **Resolution**

Ensure there are no duplicate names.

## **Unable to delete environment when source database is no longer available**

#### **Symptom**

Using the Web Console, you are unable to delete an environment when the source database is no longer available, for instance, in the case of an application retirement.

#### **Cause**

The delete operation hangs in an incomplete state because deletion of the source database is a necessary phase in the deletion of an environment when the Web Console is used. You cannot delete an environment using the Web Console if the source database is no longer available, but you can delete this environment using the command line.

#### **Resolution**

#### **To delete an environment using the command line:**

1. Open a command line window.
2. Invoke the following command:



```
obt/install/deploy_product.[sh|bat] "<product.install_admin>.properties"
uninstall "-Dforce.repo.only=true"
```

where <product.install\_admin> is the name of the file.

**NOTE:** Structured Data Manager marks the environment as deleted, but it may not delete all of the objects related to the environment.

Delete the environment using the command line instead of the Web Console:

1. Open a command line window.
2. Invoke the following command:

```
obt/install/deploy_product.[sh|bat] "<product.install_admin>.properties"
uninstall "-Dforce.repo.only=true"
```

## Unable to retrieve "" database character set

### Symptom

While in the installer panels, you received the following error while trying to install database to database or database to XML:

Unable to retrieve "" database character set

### Resolution

You can ignore this error. It will not interfere with the operation of the software.

## Unable to login to Web Console when LDAP is configured

### Symptom

Neither LDAP nor built-in user able to login to Web Console when LDAP is configured.

### Cause

LDAP server is down

### Resolution

Make sure that LDAP server is up or if you want to use built-in logins only till the time you bring it up then follow the steps below:

1. Got to <OBT\_HOME>/config/webConsole.properties.
2. Comment all LDAP related properties (prefixed with security.ldap.).
3. Restart web console.

## Web Console fails to launch

### Symptom

- When you try to start the Web Console, it fails to launch, and, when you try to access it from your browser, it throws a not found error.

### Cause

- The Web Console may not have initiated properly. If it did initiate properly, then Tomcat failed to launch it for some other reason.

#### **Resolution**

- If you interrupted the Web Console process the first time you launched it, then you may have an incomplete Web Console setup. Delete the webconsole directory from your <install\_dir>\obt directory, and try launching the Web Console again.
- Check the Tomcat logs to determine the cause of failure:  
<install\_dir>\obt\webconsole\apache-tomcat\logs

# Chapter 4: Gather information for Support

If you are a customer with a current maintenance contract for Structured Data Manager, you can reach technical support by opening an issue using the Support site at [MySupport portal](#).

Include the following information in your email or fax to speed up the process:

|                                                                                                                                                                                  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Name                                                                                                                                                                             |  |
| Company Name                                                                                                                                                                     |  |
| Phone Number                                                                                                                                                                     |  |
| Structured Data Manager version                                                                                                                                                  |  |
| Operating system and version                                                                                                                                                     |  |
| Database version                                                                                                                                                                 |  |
| A description of the problem                                                                                                                                                     |  |
| Any relevant attachments: <ul style="list-style-type: none"><li>• Logs, see Chapter 2, Log files for the locations of the log files.</li><li>• Error messages received</li></ul> |  |
| Generated files: <ul style="list-style-type: none"><li>• On deployment—<code>obt/generate</code></li><li>• Post-deployment—<code>obt/artifacts</code></li></ul>                  |  |

# Glossary

## **active database**

The database from which you plan to move or copy data. Typically, this database is your online transaction processing (OLTP) or production database. In a two- or three-tiered configuration, the active database resides on tier one and is the source for data movement operations.

## **active environment**

The Web Console views and acts upon only one environment at a time, the active environment. To switch the active environment, you use the Change Active option in the Web Console.

## **activity**

In Designer, a component of a business flow, which is added by using the toolbar. For example, you can add archive and reload activities to your business flow. Note, activities in a business flow are different from what you see at runtime and therefore do not necessarily map directly to what you see in the Web Console.

## **advanced selection**

A method of data selection that discovers all of the interrelated rows from multiple tables and conceptually places them in the same application partition for archiving.

## **annotation**

In Designer, a comment associated with the project, or one of its objects or components. These comments are collected and published in a PDF file when you right click a project or business flow and select Generate Documentation.

## **application partitioning**

The concept of partitioning related rows together during data selection, regardless of whether they are in one or more tables. Application partitioning is unique to Structured Data Manager and contrasts with the more common table partitioning offered by the

database management software, which only groups related rows from one table.

## **archive data store**

The location where the data is to be archived. Can be a separate database, separate space on the same database, or an XML file. In a two-tiered configuration, the archive data store resides on tier two and can be a database or XML. In a three-tiered configuration, the archive data store is a database on tier two and XML on tier three, and is the target for data movement operations.

## **archive query server**

The component that provides SQL access to XML database archives.

## **Consolidated Archive**

A managed, scalable repository that consolidates electronic communications, attachments, and files, and provides complete control over corporate information assets, facilitating compliance with internal corporate governance policies and procedures as well as externally mandated laws and regulations.

## **business flow**

A series of activities, such as archive operations and scripts, that run in sequence. You build business flows in Designer.

## **business flow status**

The Web Console shows the last run of each business flow. The states are Complete/Error/Running.

## **cartridge**

An instance of model- or schema-based eligibility criteria used to move or copy data from one location to another. Cartridges capture the application and business rules to ensure referential integrity of the data. For any one model in your project, you may have many cartridges that use it.

## **chaining table**

The lower level table in a many-to-one or a many-to-many relationship between higher level and lower level tables in the model hierarchy.

**classification**

The Content Manager (formerly Records Manager) classification to be applied to the data moved by Structured Data Manager. This classification specifies where to place the data when it is ingested by Content Manager. For more information, see the Content Manager documentation.

**collection**

The configuration of a directory location and file pattern to match a set of archived XML files, thus allowing SQL access to the archived data.

**comma separated values (CSV)**

A database-to-file output format that stores the data as values separated by commas and a metadata file. Each line in the CSV file corresponds to a row in a table. Within a line, fields are separated by commas, each field belonging to one table column. CSV files provide a simple format that many applications can import.

**command**

Command files or JavaScript files launched by the Web Console on your behalf with status displays.

**condition**

In Designer, the way you branch your business flow to run or skip an activity based on some criteria.

**configuration parameter**

A type of parameter that has its values set by an administrator (someone who has repository privileges from the Web Console) through the administrator interface. Typically, this type of parameter represents values that should be changed very infrequently, perhaps only at deployment time.

**console user**

The Web Console identifies individual users, who are distinct from database users. The properties for a user are User Name, Full Name, Password, Enabled, Description, Email, Phone, and Privileges.

**console user name**

The login name associated with a Web Console user.

**constraint**

A column or a list of columns that enables you to identify rows in the database and relate them to one another.

**Content Manager**

Enterprise document and records management software designed to simplify the capture, management, security, and access to information. Content Manager enables organizations to more easily comply with regulations and corporate policies, and it helps secure information from inappropriate access and misuse.

**custom properties**

User-created name/value pairs in cartridges and business flows. These values are exposed at runtime as parameters.

**customization**

A change that an administrator or DBA makes to a project provided by a third party, typically for a packaged application like Oracle PeopleSoft or Oracle E-Business Suite. As long as the customization is allowable by the project, the user can merge the customization into newer revisions of the third party project.

**customization mode**

A Designer mode that provides visual cues to indicate customizations in the model. In a project with locked files, customization mode is on by default, but you can toggle it on and off from the toolbar in the model editor.

**data access cartridge**

A cartridge that provides lightweight query access to retired or archived data. Data access cartridges are designed by the archive developer but can be run by business users with no technical expertise.

**data masking**

The process of replacing private or confidential data during movement with a specified mask. You can choose from pre-defined masks that are part of Micro Focus or create your own mask. A mask may or may not

be reversible upon reload from the archive data store.

**data movement**

The method used by Structured Data Manager to actually move data (transactional, bulk or partitioned for database to database, and copy or archive for database to file).

**data transparency**

The ability to access archived data through your standard application interfaces for data access. Data transparency enables users to access archived data as though it were still in the active database.

**database constraint**

A constraint that exists in the database and can be discovered and referenced from Designer.

**database to database**

A movement in which data goes from an active database to an archive database, or separate tablespaces inside the active database. Typically, the archive database is located on cheaper storage devices.

**database to file**

A movement in which data goes from an active database to a file (XML or CSV format), which is offline but still accessible through SQL using the archive query server and a client tool of your choice.

**deployment assistant**

The user interface component within Designer used to deploy or generate business flows.

**description**

A technical description created by the developer for her own reference. These descriptions do not appear in the generated PDF file for the cartridge or business flow.

**Designer**

The user interface component used to develop, test, and deploy your archiving solution. Designer is a powerful graphical development environment for archive solutions.

**distributed instance**

A configuration option for database-to-database archiving where the data you archive is stored on a separate database from the source or active database.

**DRE**

See [Dynamic Reasoning Engine \(DRE\)](#).

**driving table**

A driving object is a root of a model hierarchy. Its relationship to the child tables drives the selection of transactions.

**dynamic list of values**

A list of values for a parameter that obtains its members from a SELECT statement that returns identifiers and labels.

**dynamic parameter**

A type of parameter that has its value set by a Groovy script that runs at deployment time to obtain a value. For example, this type of parameter can supply the type or version of a database or application, which can be obtained programmatically at deployment time.

**Dynamic Reasoning Engine (DRE)**

A platform technology that uses high performance pattern-matching algorithms to search for content stored in Micro Focus repositories. Performs core information operations for contextual analysis and concept extraction, enabling solutions for the categorization, summarization, personalization, hyperlinking, and retrieval of all forms of information.

**environment**

The source and (optional) target credentials against which you plan to run commands. You can define multiple environments within your installation to identify various source and target databases.

**error**

One of the ways in which you can interrupt a business flow. Error indicates that the business flow failed for some reason.

### **exclusive rules**

One of the ways in which Structured Data Manager determines whether to include or exclude rows from the archive operation. Exclusive rules require all rows in the constraint table to match for inclusion. Exclusive rules exclude the instance if the condition on any child is false, like STATUS='CLOSED'.

### **exit**

One of the ways in which you can interrupt a business flow. You can exit successfully or with a warning.

### **export**

The way that you save an Structured Data Manager project to an exchange format (.hdp) from the File menu. See also *import*.

### **export data**

The way that a user can send data to CSV format from Preview using the toolbar item.

### **generate documentation**

The process of collecting and grouping all annotations into a PDF file that also describes the business flow or cartridge structure.

### **history schema**

For database-to-database archiving, the schema in the target database where the archived data is stored.

### **IDOL**

See [Intelligent Data Operating Layer \(IDOL\)](#).

### **import**

The way that you transfer projects from exchange format (.hdp) into the Project Navigator. You can also use import to migrate cartridges created in 5.1 to 6.x. See also *export*.

### **inclusive rules**

One of the ways in which Structured Data Manager determines whether to include or exclude rows from the archive operation. Inclusive rules require only one row in the constraint table to match the rule and be included. Inclusive rules include the instance if the condition on any child is true, like PRODUCT\_RECALLED='Y'.

### **indexing cartridge**

A cartridge that indexes your data for better searching. For example, you might associate an indexing cartridge with a database-to-file archiving cartridge to improve performance when querying the archive data files.

### **Intelligent Data Operating Layer (IDOL)**

An information processing layer that collects indexed data from connectors and stores it in a structure optimized for fast processing and retrieval, integrating unstructured, semi-structured, and structured information from multiple repositories.

### **interrupt**

The way to stop or pause a business flow (pause, error, exit with warning, exit successfully).

### **local deployment**

The generation and deployment of your cartridge or business flow to an environment on your local, Designer client. Deployment files are generated locally and then deployed to the designated, local environment.

### **lookup table**

A table that contains helpful non-transactional information. For example, non-transactional information could be status definitions, or the name of the sales representative.

### **managed table**

A table in the model that is copied and then purged from the active database by a cartridge. Transactional, chaining, and driving tables in a model are all typically managed tables.

### **model**

A model identifies the tables and table relationships representing a business entity or related business entities. A project can have multiple models. Each model contains a driving table and all of its child and descendent tables.

### **model compatibility**

Each model in your project can have one or more dynamic parameters associated with it to verify the compatibility with the target environment. If the compatibility parameter

returns false, then the cartridge referencing the model will not deploy or run and throw an error. For example, the script could return false for Oracle 10.2 and true for Oracle 11.1 to indicate that a cartridge referencing the model can only deploy and run against Oracle 11.1.

#### **model-based cartridge**

A cartridge that moves data based upon a defined data model with relationships. This type of cartridge is typically used for ongoing archive operations.

#### **non-intrusive environment**

In a non-intrusive environment, data is archived without an interface schema and a generic JDBC driver is used. A non-intrusive environment enables you to copy or archive data from read-only sources, which is especially helpful in cases where the data is associated with older technologies that might not support basic SQL statements or when the database administrator or company policy prohibits write access to the production environment.

#### **OLTP database**

The online transaction processing database that typically is your active or source database.

#### **pause**

One of the ways in which you can interrupt a business flow. Pausing suspends the business flow while awaiting operator intervention.

#### **reload**

The act of taking data from an archive data store and loading it into the active database.

#### **remote deployment**

The generation and deployment of your cartridge or business flow to an environment on a system that is remote from your Designer client. Deployment files are generated locally and then deployed to the designated, remote environment.

#### **repository**

The location that holds business flow metadata, product configuration data, and data collected during runtime. The repository

can be located on your active database or another logical database.

#### **rule**

Qualifications added to the model in order to include or exclude data based on certain criteria. For example, you might add a rule to exclude from archiving any orders that are not yet closed.

#### **runtime parameter**

A type of parameter that has its values set by the operator executing the job in Console or on the command line. Typically, this type of parameter represents operational values that tend to change frequently and therefore need to be set each time the job is run.

#### **schema-based cartridge**

A cartridge that moves data based upon the database schema rather than a defined data model with relationships. This type of cartridge is typically used for database retirement or the cleanup of orphan tables.

#### **selection**

The form of data selection to use (standard or advanced) for choosing data. When deploying a cartridge or adding it to a business flow, you must specify the selection method.

#### **single instance**

A configuration option for database-to-database archiving where the data you archive is stored on the same database (Oracle) or the same server (SQL Server) as the source or active database.

#### **source**

The location (database) from which you are copying or moving data.

#### **SQL access server**

See *archive query server*.

#### **standard selection**

A method of data selection that restricts itself to the rows identified by the model. Unlike advanced selection, it does not attempt to traverse related rows across multiple tables.



**structured records management**

A type of solution that extracts structured data from a source application and moves it into XML format. The XML is then ingested into the corporate records management system for long term management and eventual disposal according to corporate policy.

**table use**

A database table, view, or synonym that is referenced in Designer, for example, in the model. The same table can be used multiple times in a model. For example, a table could be appear as a transactional table and a lookup table in the same model.

**target**

The location (database or XML) to which you are copying or moving data.

**tier**

A level in your database archiving configuration. You can have two- or three-tiered configurations. In a two-tiered configuration, tier one contains your active database and tier two your archive data store, which can be a database or XML. In a three-tiered configuration, tier one contains your active database, tier two an archive database, and tier three XML.

**transactional data movement**

Transactional movement uses set-based data movement and is the default method of movement.

**transactional table**

A table that contains information about the business transaction. For example, a transactional table might contain detailed tax or payment information related to each business transaction.

**unique identifiers (UIDs)**

A 16 hexadecimal identifier calculated based on the content of a Designer file. This value is used to determine if the user has customized key pieces of a project.

**unmanaged table**

A table in a model that is copied but not purged from the active database by a cartridge.

Lookup tables in a model are typically unmanaged tables.

**Vertica**

Column-oriented SQL database management software for storing and analyzing structured data. Used to manage large, fast-growing volumes of data and provide fast query performance for data warehouses and other query-intensive applications.

**virtual constraint**

A constraint that you define in Designer that only exists within Structured Data Manager.

**Web Console**

A browser-based interface where you can create and manage your deployment environments, and deploy, run, administer, and monitor your business flows.

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