

# HP Test Data Management

Software version: 1.10

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## Troubleshooting Guide

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Software release date: October 2010



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# About this document

HP Test Data Management provides powerful tools to create and use an extract solution that copies data from an online transaction processing database into less expensive storage.

## Intended audience

This guide is intended for:

- Developers testing and debugging models, cartridges, and business flows
- Database administrators debugging failed jobs at runtime

## Prerequisites

Prerequisites for using this product include:

- Knowledge of the operating system
- Database knowledge
- Application knowledge

## New and revised information

This document includes the following new and revised features in the HP Test Data Management software:

- DB2 support
- Generic JDBC drivers
- Non-intrusive environments
- Groovy-based masking for non-intrusive environments
- Define data movement key for selection and data movement
- Include upload activity in business flow
- JDBC certification testing
- JDBC connection configuration utility

- Specify data source location for 3-tier extracts

See the *HP Test Data Management Installation Guide* for more details about new and revised features for this release.

## Related documentation

In addition to this guide, please refer to other documents for this product:

- *HP Test Data Management Installation Guide*  
Explains how to use the Installer to install the product.
- *HP Test Data Management Concepts Guide*  
Explains the major concepts of test data management in general and HP Test Data Management in particular.
- *HP Test Data Management Tutorial*  
Provides step-by-step instructions to build a sample project with business flows, deploy them, run them, and troubleshoot errors.
- *HP Test Data Management Designer User Guide*  
Explains how to use the Designer component to design, build, test, and deploy your test data management projects.
- *HP Test Data Management Web Console and Query Server User Guide*  
Explains how to use the Web Console component to run, monitor, and administer the business flows that copy data to and from the database. This guide also explains how to install, configure, and use the query server to access data that has been extracted from the database.
- *HP Test Data Management Release Notes*  
Lists any items of importance that were not captured in the regular documentation.

The latest documentation for the most recent HP Test Data Management release can be found on:

<http://support.openview.hp.com/selfsolve/manuals>

## Document conventions and symbols

Convention	Element
Medium blue text: <a href="#">Figure 1</a>	Cross-reference links and e-mail addresses
Medium blue, underlined text ( <a href="http://www.hp.com">http://www.hp.com</a> )	Web site addresses
<b>Bold</b>	<ul style="list-style-type: none"><li>• Key names</li><li>• Text typed into a GUI element, such as into a box</li><li>• GUI elements that are clicked or selected, such as menu and list items, buttons, and check boxes</li></ul>
<i>Italics</i>	Text emphasis
Monospace	<ul style="list-style-type: none"><li>• File and directory names</li><li>• System output</li><li>• Code</li><li>• Text typed at the command-line</li></ul>
<i>Monospace, italic</i>	You must supply a value. <ul style="list-style-type: none"><li>• Code variables</li><li>• Command-line variables</li></ul>
<b>Monospace, bold</b>	Emphasis of file and directory names, system output, code, and text typed at the command line

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**CAUTION** Indicates that failure to follow directions could result in damage to equipment or data.

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**NOTE** Provides additional information.

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**TIP** Provides helpful hints and shortcuts.

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**RECOMMENDATION** Provides guidance from HP for best practice or optimum performance.

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## Command syntax conventions

<b>literal</b>	Specifies text to be typed exactly as shown, such as commands, path names, file names, and directory names.
<i>variable</i>	Indicates that you must supply a value.
output	Denotes text displayed on the screen.
[ ]	Indicates that the enclosed element is optional and may be left out.
{ }	Indicates that you must specify one of the listed options.
	Separates alternatives.
...	Indicates a repetition of the preceding parameter.

## Documentation updates

The title page of this document contains the following identifying information:

- Software version number  
Indicates the software version.
- Document release date  
Changes each time the document is updated.
- Software release date  
Indicates the release date of this version of the software.

To check for recent updates, or to verify that you are using the most recent edition of a document, go to:

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- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract.

To find more information about access levels and register for HP Passport, go to:

[http://support.openview.hp.com/new\\_access\\_levels.jsp](http://support.openview.hp.com/new_access_levels.jsp)



# 1

# Diagnosing problems

This chapter describes how to diagnose problems in the HP Test Data Management software.

*This chapter includes*

- [Diagnosing problems](#) (page 11)
- [Diagnosing installation and deployment problems](#) (page 11)
- [Diagnosing Web Console problems](#) (page 12)
- [Startup, shutdown, and remote connectivity errors](#) (page 12)
- [Diagnosing model and cartridge problems](#) (page 13)
- [Diagnosing business flow deployment problems](#) (page 16)
- [Diagnosing data masking problems](#) (page 17)
- [Diagnosing business flow runtime problems](#) (page 17)
- [Diagnosing data through the query server](#) (page 18)
- [Diagnosing redeployment, uninstall, and reinstall problems](#) (page 19)
- [Starting Designer in debug mode](#) (page 20)

## Diagnosing problems

How you diagnose problems with HP Test Data Management 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 HP Test Data Management 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* [Chapter 2, Log files](#)

[Chapter 3, Common errors and solutions](#)

## Diagnosing installation and deployment problems

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

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**NOTE** If you are installing on MS Windows, ensure that the installation directory is less than 38 characters. For example, C:\Program Files\HPTDM, where **C:\** counts as three characters.

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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

*See also* [Chapter 2, Log files](#)

[Chapter 3, Common errors and solutions](#)

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, refer to the appropriate log file for more information.
- 3 Check the list of common errors to find the error you are receiving.

## Diagnosing Web Console problems

This section provides solutions to known Web Console problems.

### 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 8090 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**—Use `webconsole.bat --port 8090`.

### Startup, shutdown, and remote connectivity errors

- **Connectivity issues**—Repository and embedded repository issues will affect connectivity.

**Solution**—For the repository, ensure the repository database is running. For the embedded repository; ensure that you started the embedded repository on the server.

- **Eligibility analytics**—You are not receiving eligibility analytics do to the following:
  - None of your rules have eligibly 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 eligibility analytics you have to enable it in Designer or in the Web Console *before* you deploy.

## Business flow problems

- **Character limit**—For MS 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 directory `<install dir>/obt/businessflow` and `<install dir>/obt/businessflow/<env name>`, where `<install dir>` is the installation directory on the machine where the Web Console is running; this is especially important if you are running multiple Web Consoles.

## Diagnosing model and cartridge problems

The first tasks you perform with Designer are creating models and rules to visualize your extract 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* [Chapter 2, Log files](#)

[Chapter 3, Common errors and solutions](#)

To learn more about models and cartridges, refer to the *Tutorial: Designing and deploying extract modules*, Chapter 3 Creating an extract definition and Chapter 4 Creating a cartridge.

## Models

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

- 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, refer to [Common model issues](#).

## 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**—A data movement key was specified but is missing or (for non-Oracle databases) a data movement key has not been specified.  
**Solution**—For non-Oracle databases or non-intrusive deployment, 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 tables
  - Add 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, refer to [Common cartridge issues](#).

### 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.

## Diagnosing 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. Business flows are associated not only with cartridges but also source files in Designer and generated deployment files.

---

*See also* [Chapter 2, Log files](#)



### Chapter 3, Common 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, refer to the appropriate log file by clicking **Show Log**.
- 3 Check the list of common errors to find the error you are receiving.

## Diagnosing 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* [Chapter 2, Log files](#)

### Chapter 3, Common errors and solutions

To learn more about the Web Console, refer to the *Tutorial: Designing and deploying extract modules* and the *HP Test Data Management 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 format as a string or date.
- 2 If you receive an error in the Web Console that the business flow did not start, was suspended or is otherwise incomplete, refer to the appropriate log file for more information.
- 3 Check the list of common errors to find the error you are receiving.

## Diagnosing 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 HP-TDM are applicable to the standard data types, such as int, float, varchar, etc.

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**WARNING!** Masking primary keys is currently unsupported.

---

*See also* [Chapter 2, Log files](#)

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 extract job,” make sure that your custom mask exists in the source database and OBT-IF users can access it. To do this, log in to the source database as an OBT\_IF user and execute the custom data mask from sql-prompt on test input.
- If unmasking, ensure that the corresponding unmasking function exists and is accessible for an OBT\_REP user.
- Ensure you have entered in a fully qualified name of the masking function when you created an extract or reload cartridge.
- String map function—the string map function is for masking columns of type `varchar`, with a maximum length of 256 characters. If you encounter a problem while using the string map or number map functions, ensure the following:
  - Columns in a map table are of type `varchar(n)` with `n` less than or equal to 256.
  - You have specified a fully qualified name for the map table while creating a cartridge.
- Masking functions—For detailed information about the various types of credit cards and their formats that HP-TDM currently supports, refer to the *HP Test Data Management Designer User 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 extract table.
  - For social security numbers, HP-TDM supports only two formats: `xxxxxxxxx` 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, refer to the *HP Test Data Management Designer User Guide*.

## Diagnosing data through the query server

If you receive errors while extracting data with the Query Server (QS), refer to the *HP Test Data Management Runtime Guide*. For errors in viewing with Excel or other programs, refer to the appropriate product manuals.

See also [Chapter 2, Log files](#)

### [Chapter 3, Common errors and solutions](#)

- 1 If you receive an error while using theQS about one of your SQL statements, ensure that all statements end with a semi-colon (;).
- 2 If you receive an error, refer to the appropriate log file for more information.
- 3 Check the list of common errors to find the error you are receiving.

## Diagnosing redeployment, uninstall, and reinstall problems

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

*See also* [Chapter 2, Log files](#)

### [Chapter 3, Common errors and solutions](#)

For detailed information about redeploying and installing, refer to the *HP Test Data Management 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**

Uninstalling HP Test Data Management completely removes the application from your computer.

---

**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.

### **Reinstalling**

After uninstalling HP Test Data Management 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.

## Starting 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 the TDM.
- 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`

# 2

## Log files

The HP Test Data Management automatically generates several different log files for diagnostic purposes.

*This chapter includes*

- [Using log files](#) (page 21)
- [Combined log file \(obt.log\)](#) (page 23)
- [Groovy log](#) (page 24)
- [Log files for individual cartridges](#) (page 25)
- [Advanced selection logs](#) (page 26)
- [Viewing job history](#) (page 28)
- [Viewing the job log](#) (page 28)
- [Query server logs](#) (page 29)

### Using log files

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

### Viewing log files

By default, the log files are saved to the <install\_directory>/obt/log/ directory and the logging level is set to INFO.

- 1 Navigate to the directory containing the log file.

*Example*

```
cd <install_directory>/obt/log/
```

where <install\_directory> is the location where you installed the software.

2 Open one of the following log files using a text editor:

File name	Description
*_InstallLog.log	The *_InstallLog.log file is generated by the installation software, and includes information on the overall installation.
obt.log	<p>The obt.log file captures all logging information for the Test Data Management.</p> <p>To change the types of information captured in the log, see “<a href="#">Editing the logging properties</a>” (page 22).</p> <p>Multiple log files are numbered in sequence. For example, obt.log1.</p>

You should also check the outerbay.properties files and the changes that can occur in those files. For details, go to <http://wiki.internal.outerbay.com/cgi-bin/moin.cgi/EnhancedLogging630>.

## Editing the logging properties

After you have installed the product, you can edit the log4j.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 10 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 100 MB maximum size.

*See also* [Installation errors](#) (page 37) and [Combined log file \(obt.log\)](#) (page 23) for more details.

1 Navigate to the directory that contains the log4j.properties file.

*Example*

```
cd <install_directory>/obt/config/
```

where install\_directory is the location where you installed the software.

2 Open the log4j.properties file by using a text editor and edit appropriately.

3 Search (Ctrl+F) for “log4j.rootLogger.”

4 Change the value from INFO to DEBUG.

*Example*

```
log4j.rootLogger=DEBUG, A1
```

5 Save the log4j.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 the HP Test Data Management including deployment, Console error messages, applied patches, and uninstallation of business flows.

Review the obt.log for all logging information. It is located in the <install\_dir>/obt/log/obt.log subdirectory where the HP Test Data Management is installed. If you want only specific logging information, refer to the log for that particular aspect.

## Viewing obt.log

By default, the log files are saved to <install\_directory>/obt/log/ and the logging level is set to INFO.

1 Open the log file by doing the following:

- a Navigate to the directory containing the log files.

*Example*

<install\_directory>/obt/log/

where <install\_directory> is the location you installed the software.

- b Open the obt.log using a text editor.
- c Search (Ctrl+F) for “error” or “exception.”

Some example errors are listed in “[Common errors and solutions](#)” (page 31).

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**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.

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2 Optionally, after you have installed the product, you can edit the log4j.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 10 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 100 MB maximum size.

- a Navigate to the directory containing the log files.

*Example*

```
<install_directory>/obt/log/
```

where <install\_directory> is the location you installed the software.

- b Open the log4j.properties file by using a text editor and edit appropriately.
- c Save the log4j.properties file.

The changes are applied automatically.

## 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.

### Viewing the Groovy script as a diagnostic tool

*Example*

- 1 Navigate to the directory containing the log files.

```
<install_directory>/obt/log/  
BusinessFlow@<NameBusinessFlow>
```

where <install\_directory> is the location you installed the software and <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.

---

### Debugging 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).

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/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 log files are saved to the <install\_dir>/obt/log/BusinessFlow@<busflow name>/<GroovyScriptName>.log subdirectory where the HP Test Data Management is installed. If you have conditions within your business flow, you will then have a Groovy script inside a condition; log file <install\_dir>/obt/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* <install\_directory>obt/log/BusinessFlow@<BusinessFlowName>/<groovy activity name>.log

where <install\_directory> is the location you installed the software and <groovy activity name> s 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.

---

## Log files for individual cartridges

Each cartridge creates its own log file named after the name of the cartridge. For example, the Flexible AP/PO Extract and Purge creates the obt\_poflex.log file.

As every cartridge is wrapped in a business flow at deployment, the cartridge logs are found under the business flow directory.

*Example* <install\_dir>/obt/obtlog/environment/env\_<environment name>/businessflow/<busflow\_name>/

As the business flow has a date and version appended to it, a real-world example might appear more like this.

*Example* <install\_directory>obt\artifacts\businessflow\Orders\_Bus\_Flow.2009-08-18\_10.11.57\cartridge\oa\Orders\_DB\_to\_File

where <install\_directory> is the location you installed the software, Orders\_Bus\_Flow.2009-08-18\_10.11.57 is the name of the business flow, and Orders\_DB\_to\_File is the name of the cartridge.

## Viewing cartridge logs as a diagnostic tool

By default, the log files are saved to the artifacts/businessflow/<busflow\_name> directory and the logging level is set to INFO.

- 1 Navigate to the directory containing the log files.

*Example*

```
install_directory>/artifacts/businessflow/  
<BusinessFlowName>/cartridge/la/<CartridgeName>
```

where <install\_directory> is the location you installed the software, <BusinessFlowName> is the name of the business flow, and <CartridgeName> is the name of the cartridge.

- 2 Open the cartridge 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.

---

## Advanced selection logs

For issues involving advanced selection, check the following HP Test Data Management logs for information:

- `pdm_server_<RUNID>.log` is the advanced selection server side log containing detailed server-side information including all executed SQL statements and exec plans. The log files are saved to the `<install_directory>/obt/log/` directory, where `<install_directory>` is the location you installed the software.
- For advanced selection you can view the server-side log table, `PDM_LOG` located on both IF and RL to find details about all SQL statements executed.

---

**NOTE** Information about advanced selection is also consolidated into `obt.log`.

---

All the advanced selection logs can be adjusted to contain different levels of information. The log setting is set in the Job Launcher console associated with the PDM runtime parameter "RUN\_OPTION".

Log Setting	Information
Run	Runs the business flow with minimal (almost no) logging from the server side.
Run and Log the SQL	Runs the business flow and lists every important SQL statement run by the server in the server-side log file.
Run and Log the SQL and the PLAN	Runs the business flow and lists every important SQL statement run by the server in the server-side logfile, together with its execution plan.
Log the SQL without Running	Lists all the potential SQL statements in the server-side logfile but does not actually execute them.
Log the SQL and the PLAN without Running	Lists all the potential SQL statements in the server-side logfile together with their execution plans, but do not actually execute them.

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.

## Viewing the Advanced selection logs as a diagnostic tool

By default, the log files are saved to the <install\_directory>/obt/log/ directory and the logging level is set to INFO.

*See also* Example errors are listed in [Chapter 3, Common errors and solutions](#).

- 1 Navigate to the directory containing the log files.

*Example*

```
<install_directory>/obt/log/
```

where <install\_directory> is the location you installed the software.

- 2 Open the advanced selection log file using a text editor. The following is the format and an example of the file name:

```
Format = pdm_server_<RUNID>.log
```

```
Example = pdm_server_242.log
```

- 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.

---

## Viewing 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.

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

3 Click the red X to clear individual filters.

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

## Viewing the job log

To view the output that the job produced:

1 Navigate to the directory containing the log files.

*Example*

```
<install_directory>/obt/log/users/<username>
```

where <install\_directory> is the location you installed the software and <username> is the name of the file.

2 Open the 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.

---

# Query server logs

The log files for the query server (QS) are saved in the following directory:

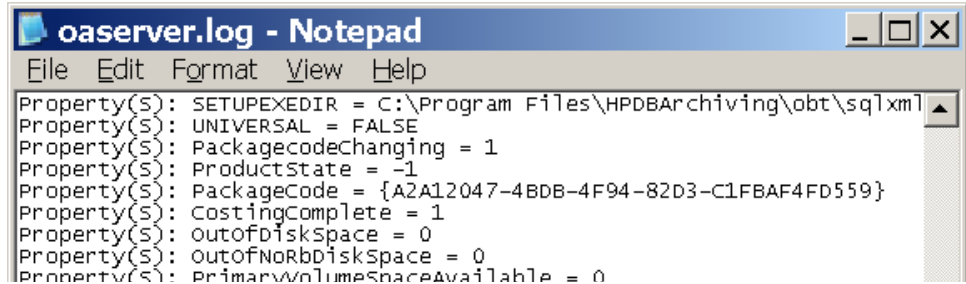
```
<install_directory>/obt/log/
```

where <install\_directory> is the location you installed the software.

*See also* The *HP Test Data Management Runtime Guide*.

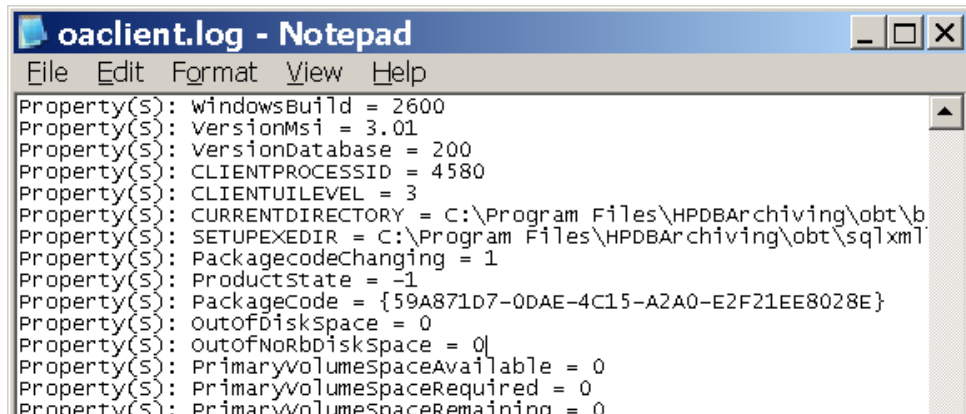
- query server installation logs

```
oaserver.log
```



```
oaserver.log - Notepad
File Edit Format View Help
Property(S): SETUPEXEDIR = C:\Program Files\HPDBArchiving\obt\sqlxml
Property(S): UNIVERSAL = FALSE
Property(S): PackageCodeChanging = 1
Property(S): ProductState = -1
Property(S): PackageCode = {A2A12047-4BDB-4F94-82D3-C1FBAF4FD559}
Property(S): CostingComplete = 1
Property(S): OutOfDiskSpace = 0
Property(S): OutOfNoRBDiskSpace = 0
Property(S): PrimaryVolumeSpaceAvailable = 0
```

```
oaclient.log
```



```
oaclient.log - Notepad
File Edit Format View Help
Property(S): windowsBuild = 2600
Property(S): versionMsi = 3.01
Property(S): versionDatabase = 200
Property(S): CLIENTPROCESSID = 4580
Property(S): CLIENTUILEVEL = 3
Property(S): CURRENTDIRECTORY = C:\Program Files\HPDBArchiving\obt\b
Property(S): SETUPEXEDIR = C:\Program Files\HPDBArchiving\obt\sqlxml
Property(S): PackageCodeChanging = 1
Property(S): ProductState = -1
Property(S): PackageCode = {59A871D7-0DAE-4C15-A2A0-E2F21EE8028E}
Property(S): OutOfDiskSpace = 0
Property(S): OutOfNoRBDiskSpace = 0
Property(S): PrimaryVolumeSpaceAvailable = 0
Property(S): PrimaryVolumeSpaceRequired = 0
Property(S): PrimaryVolumeSpaceRemaining = 0
```

- query server uninstall logs
  - oaserveruninstall.log
  - oaclientuninstall.log
- query server config/runtime error log
  - oaerror.log

**NOTE** All of the above logs appear under obt/log directory. Any interaction with the query server will be logged in obt.log. Installation / uninstallation logs will be created only on windows

- <install\_dir>/obt/sqlxml/server/login/\*.log  
<install\_directory>/obt/sqlxml/server/login/\*.log. These are hidden logs. Their purpose is to look for the latest agent and java service log.



# 3

## Common errors and solutions

This chapter contains error messages along with solutions.

### What to check first

When having problems using the HP Test Data Management 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.
- Ensure the embedded repository is started before invoking the Web Console or the Designer.
- Check the number of open cursors in Oracle by using the select count(\*) from v\$open\_cursor command.

If you are working in	Problem	Errors
Designer	Building/modifying models, cartridges, parameters, or business flows	<p>Designer errors (page 36)</p> <ul style="list-style-type: none"> <li>• Eligibility analysis not available (page 36)</li> <li>• Multiple table uses - row sets overlap (page 36)</li> <li>• Non-unique data movement key (page 36)</li> <li>• Internal Errors (page 37)</li> <li>• Maximum open cursors exceeded (page 37)</li> </ul>
Installer	Installing the product	<p>Installation errors (page 37)</p> <ul style="list-style-type: none"> <li>• Query server will not install 1.10 in an MBCS directory (page 37)</li> <li>• Could not setup database connection (page 38)</li> <li>• ORA-01450 maximum key length (3218) exceeded (page 38)</li> <li>• Error launching the embedded repository (page 38)</li> <li>• Linux install fails with connection error (page 38)</li> <li>• Linux install fails with connection error (page 38)</li> <li>• Unable to retrieve "" database character set (page 39)</li> <li>• Uninstalling and redeploying errors (page 59)</li> <li>• Cartridge expects the following 4 parameters to be passed (page 60)</li> <li>• OBTCO_ENGINE_FAILED (page 61)</li> </ul>
Deployment	Deploying cartridges or business flows	<p>Deployment errors (page 39)</p> <ul style="list-style-type: none"> <li>• User index table creation failed with uniqueconstraint exception (page 39)</li> <li>• Blocked UDP ports (page 40)</li> <li>• Job appears to hang in Sybase (page 40)</li> <li>• Deploy time failure-SQL validation error (page 40)</li> <li>• Not available because product has not been fully installed (page 41)</li> <li>• Table or schema not found in source database (page 41)</li> <li>• ORA-01450 maximum key length (3218) exceeded (page 41)</li> <li>• Cartridge deployment error (page 41)</li> </ul>



If you are working in	Problem	Errors
Web Console	Installation and configuration	<p><a href="#">Installation errors</a> (page 43)</p> <ul style="list-style-type: none"> <li>• <a href="#">HTTP error 503 on AIX cannot access Web Console</a> (page 43)</li> <li>• <a href="#">Turkish character set is unsupported</a> (page 43)</li> <li>• <a href="#">Auto launch does not work</a> (page 44)</li> <li>• <a href="#">Unable to log in to Web Console</a> (page 44)</li> </ul> <p><a href="#">Data Masking errors</a> (page 45)</p> <ul style="list-style-type: none"> <li>• <a href="#">Deployment fails</a> (page 45)</li> <li>• <a href="#">Unexpected results from skew by multiplication or percent mask</a> (page 45)</li> <li>• <a href="#">Names containing ? and ' must be aliased</a> (page 45)</li> <li>• <a href="#">Custom mask deployment fails</a> (page 45)</li> <li>• <a href="#">Data is not masked</a> (page 46)</li> </ul>
	Running business flows	<p><a href="#">Runtime errors</a> (page 46)</p> <ul style="list-style-type: none"> <li>• <a href="#">Connectivity issues</a> (page 47)</li> <li>• <a href="#">Not responding</a> (page 47)</li> <li>• <a href="#">Failed to get business flow based on Job ID</a> (page 47)</li> <li>• <a href="#">Exception in Task</a> (page 48)</li> <li>• <a href="#">Rollback segment error</a> (page 48)</li> <li>• <a href="#">ORA-02049 timeout errors</a> (page 48)</li> <li>• <a href="#">Reload error: failure in XML deserialization</a> (page 48)</li> <li>• <a href="#">Could not recover GroupID 10 because it is a child job</a> (page 49)</li> <li>• <a href="#">Cannot fetch data from the repository...UnexpectedDbException: failed to get cycle steps for the cycle</a> (page 49)</li> <li>• <a href="#">Job run failed, there may be more information available in the job monitor</a> (page 49)</li> <li>• <a href="#">java.lang.IllegalStateException: exception while executing a groovy script</a> (page 49)</li> <li>• <a href="#">Could not find any column information for table</a> (page 50)</li> <li>• <a href="#">Requested conversion is not supported</a> (page 50)</li> </ul>

If you are working in	Problem	Errors
Query server	Extracting data to file	<p data-bbox="867 239 1214 273"><a href="#">Query server errors</a> (page 56)</p> <ul style="list-style-type: none"> <li data-bbox="867 281 1446 348">• <a href="#">Microsoft OLEDB clients do not handle early dates</a> (page 56)</li> <li data-bbox="867 357 1386 424">• <a href="#">Query image failed with disk cache error</a> (page 56)</li> <li data-bbox="867 432 1206 466">• <a href="#">Rounding issue</a> (page 57)</li> <li data-bbox="867 474 1370 508">• <a href="#">Multi-byte character set issue</a> (page 57)</li> <li data-bbox="867 516 1450 583">• <a href="#">Coredumps after running same query multiple times</a> (page 57)</li> <li data-bbox="867 592 1430 659">• <a href="#">Unquoted question mark characters in create collection causes error</a> (page 58)</li> <li data-bbox="867 667 1424 735">• <a href="#">Problem installing query server on Japanese solaris server</a> (page 58)</li> <li data-bbox="867 743 1450 810">• <a href="#">Unable to find table&lt;table_name&gt; in table list</a> (page 58)</li> </ul>
Advanced selection	Deploying or running business flows	<p data-bbox="867 842 1292 875"><a href="#">Advanced selection errors</a> (page 52)</p> <ul style="list-style-type: none"> <li data-bbox="867 884 1382 917">• <a href="#">ORA-00001 unique constraint</a> (page 52)</li> <li data-bbox="867 926 1409 959">• <a href="#">ORA-006000 internal error code</a> (page 53)</li> <li data-bbox="867 968 1248 1001">• <a href="#">OR condition error</a> (page 53)</li> <li data-bbox="867 1010 1438 1077">• <a href="#">ORA-00060 deadlock detected while waiting for resource</a> (page 53)</li> <li data-bbox="867 1085 1458 1152">• <a href="#">Missing expression when rule parameter is left null</a> (page 55)</li> <li data-bbox="867 1161 1208 1194">• <a href="#">Low disk space</a> (page 55)</li> </ul>

If you are working in	Problem	Errors
Database to File	Source database	<p data-bbox="867 239 1179 270">Database to File (page 62)</p> <ul data-bbox="867 281 1459 894" style="list-style-type: none"> <li data-bbox="867 281 1435 348">• <a href="#">ORA-1460 error Unimplemented or unreasonable conversion requested (page 63)</a></li> <li data-bbox="867 359 1446 426">• <a href="#">D2F fails when remapping key column names (page 63)</a></li> <li data-bbox="867 436 1382 537">• <a href="#">Arithmetic overflow error occurs when converting numeric to data type numeric (page 64)</a></li> <li data-bbox="867 548 1459 615">• <a href="#">Mapping and timestamp issues when uploading from Oracle to SQL server (page 64)</a></li> <li data-bbox="867 625 1170 657">• <a href="#">Upload fails (page 67)</a></li> <li data-bbox="867 667 1406 699">• <a href="#">Error with D2F upload or reload (page 64)</a></li> <li data-bbox="867 709 1378 777">• <a href="#">MBCS unsupported environment names (page 64)</a></li> <li data-bbox="867 787 1206 819">• <a href="#">Orphaned rows (page 64)</a></li> <li data-bbox="867 829 1425 896">• <a href="#">XML reload/upload may run out of memory (page 65)</a></li> </ul>
Upload issues	Various	<ul data-bbox="867 917 1450 1564" style="list-style-type: none"> <li data-bbox="867 917 1419 984">• <a href="#">Cannot upload all datatypes from Sybase to SQL Server (page 65)</a></li> <li data-bbox="867 995 1450 1096">• <a href="#">Upload from SQL server to Oracle (table with special characters) does not upload any data (page 65)</a></li> <li data-bbox="867 1106 1419 1173">• <a href="#">Not able to set length for CLOB and BLOB columns on DB2 during upload (page 66)</a></li> <li data-bbox="867 1184 1435 1251">• <a href="#">Upload from mainframe to DB2 fails for real column type (page 66)</a></li> <li data-bbox="867 1262 1403 1329">• <a href="#">Upload from SQL Server to MYSQL fails (page 66)</a></li> <li data-bbox="867 1339 1443 1407">• <a href="#">Upload fails with drop indexes on destination tables (page 66)</a></li> <li data-bbox="867 1417 1375 1484">• <a href="#">Upload hangs with out of memory error (page 66)</a></li> <li data-bbox="867 1495 1395 1526">• <a href="#">Truncation of data upon upload (page 66)</a></li> <li data-bbox="867 1537 1170 1568">• <a href="#">Upload fails (page 67)</a></li> </ul>
Other issues	Various	<p data-bbox="867 1589 1130 1621">Other errors (page 67)</p> <ul data-bbox="867 1631 1385 1812" style="list-style-type: none"> <li data-bbox="867 1631 1385 1698">• <a href="#">IJ ERROR: Unable to establish prepared statement PRIVILEGE (page 67)</a></li> <li data-bbox="867 1709 1385 1776">• <a href="#">IJ ERROR: Unable to establish prepared statement PRIVILEGE (page 67)</a></li> <li data-bbox="867 1787 1190 1818">• <a href="#">Upload issues (page 65)</a></li> </ul>

# 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.

- This section includes:*
- [Eligibility analysis not available](#) (page 36)
  - [Multiple table uses - row sets overlap](#) (page 36)
  - [Non-unique data movement key](#) (page 36)
  - [Internal Errors](#) (page 37)
  - [Maximum open cursors exceeded](#) (page 37)

## Eligibility analysis not available

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

*Cause* Managed tables do not have eligibility analysis.

## 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 extracted. 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.

## 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.

## Installation errors

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

*This section includes*

- [Query server will not install 1.10 in an MBCS directory](#) (page 37)
- [Could not setup database connection](#) (page 38)
- [ORA-01450 maximum key length \(3218\) exceeded](#) (page 38)
- [Error launching the embedded repository](#) (page 38)
- [Linux install fails with connection error](#) (page 38)
- [Unable to retrieve "" database character set](#) (page 39)
- [Error installing QS – QS already installed on the server.](#) (page 39)

## Query server will not install 1.10 in an MBCS directory

- Symptom* Query server will not install 1.10 in an MBCS directory. In version 1.0, it installs but will not run. This is due to DataDirect software issue.
- Resolution* Due to this limitation, you cannot install the product in an MBCS directory. This issue is only in QS; however, QS is installed where the main product is installed, so therefore the main product inherits the same limitation.

## Could not setup 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.

## 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.

## Error launching the embedded repository

- Symptom* You receive the following error when launching the embedded repository:
- ```
Could not listen on port 1527 on host 0.0.0.0: -
java.net.BindException: Address already in use: JVM_Bind
```
- Cause* Port issue. You either already have the repository running or are using the port for some other program (the default port is 1527). If it is the latter, you will need to change the port number.
- Resolution* To change the port number: from the command line enter bin/launch\_repository.bat 1528 (or alternate port number). Ensure that this is the port being used; you will receive the message, Ready for transactions. If you entered incorrect information, the port will revert to the default port number.

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

## 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.

## Error installing QS – QS already installed on the server.

*Symptom* When you try to install the query server on the same server more than once, you might see the following error:

```
This product is already installed on your machine. If you wish to uninstall please use the silent uninstall command or user the Add/Remove program option.
```

*Resolution* You can find detailed error at <install\_directory>/obt/log/oa\*.log, but you will not be seeing any errors on the Console.

## Deployment errors

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

*This section includes:*

- [User index table creation failed with uniqueconstraint exception](#) (page 39)
- [Blocked UDP ports](#) (page 40)
- [Job appears to hang in Sybase](#) (page 40)
- [Deploy time failure-SQL validation error](#) (page 40)
- [Not available because product has not been fully installed](#) (page 41)
- [Table or schema not found in source database](#) (page 41)
- [ORA-01450 maximum key length \(3218\) exceeded](#) (page 41)
- [Error starting the agent and/or java service - port is already in use](#) (page 41)
- [Cartridge deployment error](#) (page 41)
- [Error establishing connection for connection source](#) (page 42)
- [Cartridge already deployed](#) (page 43)

## User index table creation failed with uniqueconstraint 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.

## 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 DbVisualizer with a URL that specifies the port, but not the instance name.

## 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** To 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 sp\_dboption command.

---

## Deploy time failure-SQL validation error

- Symptom* You receive the following error:
- ```
C:\apps\HPTDM\obt\artifacts\MG1010A\businessflow\Requests_BF\car
tridge\oa\Requests\build.xml:684: The following error occurred while
executing this line:

C:\apps\HPTDM\obt\artifacts\MG1010A\businessflow\Requests_BF\car
tridge\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_ANALYT
ICS 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 *HP Test Data Management Developer's Guide*.



## Not available because product has not been fully installed

- Symptom* You receive the error, “Not available because product has not been fully installed.”
- Cause* In Designer direct deployment, the Deploy Locally radio button is disabled and you receive this error even though the product is installed.
- Resolution* Check the connection-sources.xml file is present in <obt\_top>config\.

## 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.

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

- Symptom* You received a ORA-01456 maximum key length error.
- ```
ORA-02049 maximum key length (3218) exceeded
java.sql.SQLException: ORA-01450: maximum key length
(3218) exceeded
```
- Cause* This a an Oracle limitation.
- Resolution* Increase the database block size of the tablespace associated with the Interface User for example, obt\_if.

## 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 QS 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 QS instances on different ports.

## 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.BaseInstallCartridge
Wizard$LongRunningOperation.run(BaseInstallCartridgeWizar
```

```
d.java:372) at
org.eclipse.jface.operation.ModalContext$ModalContextThre
ad.run (ModalContext.java:113) Caused by:
java.lang.Exception: All cartridges and business flows
failed to deploy
```

*Cause* The Cartridge 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.

*Resolution* Resolve this error by performing the following procedure:

- If you redeploy a business flow or cartridge, but there's 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.

## Error establishing connection for connection source

*Symptom 1* You received the following error in the obt.log when using the Web Console:

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

*Symptom 2* From the Web Console you see the following error in the obt.log:

```
Caused by:
com.outerbay.foundation.services.dbms.ConnectionSourceNot
FoundException: There is no connection source for
HISTORY_DB
at
com.outerbay.foundation.services.dbms.SQLDBException.fill
InStackTrace (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* Clean up your environment by performing the following procedure:

- 1 Delete the connection-sources.xml file in the <obtpa\_top>\config directory (if it exists)
- 2 Drop the repository and interface.

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

## Cartridge already deployed

<i>Symptom</i>	When attempting to deploy a previously deployed advanced selection for application partitioning and partitioned data movement cartridge, the following error appeared in the Web Console:  This cartridge has already been deployed
<i>Cause</i>	The previous version of the cartridge has not been uninstalled.
<i>Resolution</i>	Install the new version of the cartridge.

## Cartridge log errors

Refer to [Log files for individual cartridges](#) (page 25) for details on the cartridge logs.

## Installation errors

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

*This section includes:*

- [HTTP error 503 on AIX cannot access Web Console](#) (page 43)
- [Turkish character set is unsupported](#) (page 43)
- [Auto launch does not work](#) (page 44)
- [Unable to log in to Web Console](#) (page 44)
- [Redirect loop error](#) (page 44)

## HTTP error 503 on AIX cannot access Web Console

<i>Symptom</i>	You receive HTTP ERROR 503 on AIX, with a <code>stacktrace.log</code> reporting <code>java.lang.NoClassDefFoundError</code> errors.
<i>Cause</i>	This error indicates a problem with the temporary directory that the Web Console creates within the <code>\${java.io.tmpdir}</code> directory.
<i>Resolution</i>	Implement the following workaround which will create a <code>obt/webconsole/work</code> folder for the Web Console to use instead of the temporary directory:  Create a <code>\${jetty.home}/work</code> directory or <code>YOUR_INSTALL_DIR/obt/webconsole/work</code> folder.

## Turkish character set is unsupported

<i>Symptom</i>	The Web Console and Designer does not support Turkish character set
<i>Cause</i>	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
```

## Auto launch does not work

*Symptom* When installing on Windows Server 2008, the auto launch option does not work.

*Cause* This is caused by a permission issue. The auto launch process is launched with the wrong permissions and is unable to write log files, etc.

*Resolution* Start the Web Console from the command line and do not select auto launch. If you have inadvertently selected auto launch, do the following: right-click and manually change the permission from the File Security tab and grant access to all users.

## 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 an Hibernate bug.

*Resolution* Ensure there are no duplicate names.

## 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.

# Data Masking errors

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

*This section includes:*

- [Deployment fails](#) (page 45)
- [Unexpected results from skew by multiplication or percent mask](#) (page 45)
- [Names containing ? and ' must be aliased](#) (page 45)
- [Custom mask deployment fails](#) (page 45)
- [Data is not masked](#) (page 46)

## Deployment fails

<i>Symptom</i>	Deployment fails with errors such as the following:  Failure validating SQL Statement NATIVE_MOVE_O2H.Datamaskingcart1.DataMasking.COPY_TRX_RANGE with error: 206 - Operand type clash: int is incompatible with uniqueidentifier
<i>Cause</i>	You chose a data mask for a column that does not match the data type of the column.
<i>Resolution</i>	In the cartridge, choose a mask of the appropriate type for the column and deploy your business flow again. Refer to <i>HP Test Data Management Developer's Guide</i> for more information about applying data masks.

## Unexpected results from skew by multiplication or percent mask

<i>Symptom</i>	Using SQL Server, the masked values for columns employing the skew by multiplication or percent mask seem to be incorrect.
<i>Resolution</i>	Only whole numbers are supported by SQL Server for the multiply and percent masks.

## Names containing ? and ' must be aliased

<i>Symptom</i>	Oracle JDBC cannot properly process names that contain ? or '.
<i>Resolution</i>	If a table, view, and/or synonym name contains the characters ? or ', the table, views, and/or synonym will need to be aliased with an object that does not contain these characters.

## Custom mask deployment fails

<i>Symptom</i>	Oracle JDBC cannot deploy custom masks if the function name contains the / character.
----------------	---

*Cause* If your custom mask function name contains a / deployment will fail.  
*Resolution* Do not use the / character in your function name.

## 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 #, none of that value will be masked.  
*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.

## Runtime errors

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

For runtime errors involving advanced selection for application partitioning and partitioned data movement, refer to [Advanced selection errors](#) (page 52).

*This section includes:*

- [Database to file issues](#) (page 47)
- [Connectivity issues](#) (page 47)
- [Not responding](#) (page 47)
- [Failed to get business flow based on Job ID](#) (page 47)
- [Exception in Task](#) (page 48)
- [Rollback segment error](#) (page 48)
- [ORA-02049 timeout errors](#) (page 48)
- [Reload error: failure in XML deserialization](#) (page 48)
- [Could not recover GroupID 10 because it is a child job](#) (page 49)
- [Cannot fetch data from the repository...UnexpectedDbException: failed to get cycle steps for the cycle](#) (page 49)
- [java.lang.IllegalStateException: exception while executing a groovy script](#) (page 49)
- [Job run failed, there may be more information available in the job monitor](#) (page 49)
- [Could not find any column information for table](#) (page 50)
- [Requested conversion is not supported](#) (page 50)
- [Out of memory error](#) (page 50)
- [Cannot CREATE UNIQUE INDEX; duplicate keys found](#) (page 51)

- [Snapshot qualifying OLTP-Table rows into selection tables thread 0 \(page 51\)](#)
- [Integrity constraint \(<FK name>\) violated - child record found \(page 51\)](#)
- [No more lock classes available from transaction \(page 52\)](#)

## Database to file issues

*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.

## 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 obt tree, check if you have the file access.cfg. This file is required to be able to log in to your repository. If you do not have this file, you need to setup your database and establish your password. From the Web Console, setup your database and establish your password.

## 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. The resolution is to recover the failed job.

*Resolution* 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.

## 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.

## 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.

## ORA-02049 timeout errors

- 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.

## 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. Please double check the model the business flow was based on and redeploy.



## Could not recover GroupID 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.

## Cannot fetch data from the repository...UnexpectedDbException: failed to get cycle steps for the cycle

- 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 *HP Test Data Management Installation Guide*.

## Job run failed, there may be more information available in the job monitor

- 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.
  - 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.

## java.lang.IllegalStateException: exception while executing a 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.

## Could not find any column information for table

*Symptom* You received the following error in the log file after a business flow failed.

```
[DataDirect][OpenAccess ODBC]Could not find any column information for table:<#Table Name#>
```

*Cause* Associated tables can be seen in a collection, but cannot be queried.

*Resolution* Change your query so it does not run against an associated table.

## Requested conversion is not supported

*Symptom* For SQL Server, if you query on the ntext datatype through the query server, you may receive the following error:

```
OLE DB provider "MSDASQL" for linked server "XML_EXTRACT" 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.

## Out of memory error

*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
```

*Cause* 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, then 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.

Setting 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
```

## Cannot CREATE UNIQUE INDEX; duplicate keys found

*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 duplicates rows in the history and a unique constraint exception.

*Resolution* Use advanced selection and partitioned data movement when you have a chaining table or table that has multiple uses with overlapping rows.

Refer to the *HP Test Data Management Designer User Guide* for details.

## Snapshot qualifying OLTP-Table rows into selection tables thread 0

*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.

## Integrity constraint (<FK name>) violated - child record found

*Symptom* When trying to extract 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 either advanced selection for application partitioning and partitioned data movement 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 look-up table in the model.

## No more lock classes available from transaction

- Symptom* You received the following error in the obt.log after a Database to File 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.

## Advanced selection errors

Error messages resulting the advanced selection can appear in the advanced selection or the obt.log. Please refer to [Advanced selection logs](#) (page 26) and [Combined log file \(obt.log\)](#) (page 23) as necessary.

*This section includes:*

- [ORA-00001 unique constraint](#) (page 52)
- [ORA-006000 internal error code](#) (page 53)
- [OR condition error](#) (page 53)
- [ORA-00060 deadlock detected while waiting for resource](#) (page 53)
- [Missing expression when rule parameter is left null](#) (page 55)
- [Low disk space](#) (page 55)

## ORA-00001 unique constraint

- Symptom* When running a job you may receive the following error: ORA-00001: unique constraint (OBT\_IFF.PDM\_CHAINS\_U).
- Resolution* PDM propagates selections from driving table: root : Failed to execute task due to: java.sql.SQLException: ORA-06502: PL/SQL: numeric or value error: character string buffer too small is to examine the rules defined in the model and ensure extra white space is removed.

## ORA-006000 internal error code

- Symptom* When running a PDM archiving job you may receive the following error:  
ORA-00600: internal error code.
- Resolution* The workaround is to break a job into several chunks and make a new connection for each chunk. This bug was fixed in 9.2.0.1. Please check the version of the database, and see if you can use a later version of Oracle.

## OR condition error

- Symptom* OR conditions defined in relationship filters which are not wrapped in parenthesis will result in the following error:
- ```
ERROR : PDM propagates selections from driving table thread 0 :
root java.sql.SQLException: ORA-00001: unique constraint
violated
```
- Cause* OR conditions defined in relationship filters which are not wrapped in parenthesis.
- Resolution* Wrap parenthesis around OR conditions defined in relationship filters.

## ORA-00060 deadlock detected while waiting for resource

- Symptom* You received the following error:
- ```
ORA-00060: deadlock detected while waiting for resource
```
- Cause* The distributed update operation failed; rollback required.
- Resolution* Create missing indexes 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 || '%'
/

```

## Missing expression when rule parameter is left null

- Symptom** You received the following error when trying to run an advanced selection for application partitioning and partitioned data movement 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.

## Low disk space

- Symptom** Low disk space: ORA-00600 occurred while Advance Selection merges new rows into history tables.
- Cause** This is due to Oracle bug 2747978.
- Resolution** This is fixed in Oracle 9.2.0.4 and 10.1.0.2.

## Query server errors

Error messages when running the query server appear in the QS logs and the log files.

*This section includes:*

- [Microsoft OLEDB clients do not handle early dates](#) (page 56)
- [Query image failed with disk cache error](#) (page 56)
- [Rounding issue](#) (page 57)
- [Multi-byte character set issue](#) (page 57)
- [Coredumps after running same query multiple times](#) (page 57)
- [Unquoted question mark characters in create collection causes error](#) (page 58)
- [Problem installing query server on Japanese solaris server](#) (page 58)
- [Unable to find table<table\\_name> in table list](#) (page 58)
- [Column\[corrupted tablename\] not found.\[0\]](#) (page 59)
- [Column: <first char> not found](#) (page 59)

### Microsoft OLEDB clients do not handle early dates

*Symptom* If connecting to query server through OLEDB while using a Microsoft client (for example, Excel/MSQuery, SQLServer), and a date data type field contains very early dates (for example, the year 1), you will receive an error message for the entire query and you will not receive any data. The actual date range for SQL Server, for example, is Jan 1, 1753 through Dec 31, 9999.

*Resolution* Do one of the following:

---

**NOTE** The built-in oledb client, (oaisql.[bat|sh] -oledb) does not have this issue.

---

- The administrator can change the date datatype to a varchar datatype and the date will display.
- You can write a view that changes early dates (before Jan 1, 1753) to a valid value.

### Query image failed with disk cache error

*Symptom* The following queries resulted in the error “Disk cache error. Field length:6506110 exceeds maximum limit of 65535:”

Query 1: select image\_type from CASES

Query 2: select varcharmax\_type, varbinarymax\_type, image\_type, text\_type, ntext\_type, xml\_type from PARAMS\_TABLE

*Resolution* You need to include the image column in the selection.



## Rounding issue

- Symptom* Occasionally, you may encounter rounding issues, for example, extract data with a float value having 16 significant digits will get rounded, or if you use too many decimal points or date ranges.
- Resolution* You will need to use a different connection: `oaisql-odbc` to view the data.

## Multi-byte character set issue

- Symptom* When multi-byte unicode data is stored in a single byte data type, you will receive an error when selecting the data.
- Cause* For example, a Japanese platform generates an extract with multi-byte Japanese characters stored in a `varchar2` type field.
- Resolution* You will need to set the following:
- ```
!set option type varchar2=WVARCHAR;
!set option type CHAR=WCHAR;
!set option type VARCHAR=WVARCHAR;
```

## Coredumps after running same query multiple times

- Symptom* Query server will coredump if you run queries using the same information multiple times in a row.
- Cause* This occurs on HP Itanium if you run the same query multiple times.
- Resolution* To workaroud this issue:
1. Start the HPQueryServer (`<installed-location>/obt/bin/oaserver.sh -start`).
  2. Start the `oacla` (`<installed-location>/obt/bin/oacla.sh`).
  3. In the `oacla` program type the following commands.
    - `oacla>aoc`  
Configuration file:`<installed-location>/obt/sqlxml/server/cfg/oadm.ini`
    - `oacla>saa`  
Service Name:HPQueryServer  
Attribute name:ServiceJVMOptions  
Newvalue:-XX:+PreferInterpreterNativeStubs
    - `oacla>exit`
  4. Stop HPQueryServer(`<installed-location>/obt/bin/oaserver.sh -stop`).
  5. Restart the HPQueryServer and connect to this server using any client (`oaisql`) and run the queries.

## Unquoted question mark characters in create collection causes error

- Symptom* If you do not use single quotes for syntax that contain question marks, you will receive an error. The example below represents incorrect syntax:
- ```
!create collection <collection_name> using pattern  
C:\downloads\abc\*group_?.xm*;
```
- Cause* You will receive this error if the syntax contains a question mark (?) AND either uses no quotes OR uses double quotes (").
- Solution* Use single quotes in the syntax, for example:
- ```
!create collection <collection_name> using pattern  
'C:\downloads\abc\*group_?.xm*';
```

## Problem installing query server on Japanese solaris server

- Symptom* Unable to install QS on a solaris Japanese server.
- Cause* Various
- Resolution* Create a directory where the absolute path (QS\_PATH) contains only ASCII characters and do the following:
- Copy <6.1 install root>/jre to QS\_PATH/jre
  - Create QS\_PATH/obt
  - Create QS\_PATH/obt/log
  - Copy <1.10 install root>/obt/bin to QS\_PATH/obt/bin
  - Copy <1.10 install root>/obt/lib to QS\_PATH/obt/lib
  - Copy <1.10 install root>/obt/sqlxml to QS\_PATH/obt/sqlxml
  - Execute scripts from QS\_PATH/obt/bin.
- The default xmlExtract data source will be create in QS\_PATH/obt/sqlxml/xmlExtract path.

## Unable to find table<table\_name> in table list

- Symptom* The following error appears when using the create range index query.
- ```
Error Message = [DataDirect][ODBC OpenAccess SDK  
driver][OpenAccess SDK SQL  
Engine]Unable to find table<table_name> in table list.
```
- Resolution* Use the following syntax for creating a range index:
- ```
create range index <idx_name> on  
<table_name>(<column_list>);
```

## Column[corrupted tablename] not found.[0]

*Symptom* A dialog box with the following error appeared when attempting to use the Query Wizard.

```
"Column[corrupted tablename] not found.[0]"
```

*Cause* With object names that contain punctuation character(s), Excel is not putting the object name within quotes. This is causing the SQL statement to be misinterpreted and query fails.

*Resolution* When writing the query:

- Place the object name containing the punctuation character in quotes.
- Ensure a semicolon (;) is the last character in the query.

## Column: <first char> not found

*Symptom* A dialog box with the following error appeared when attempting to query with Excel.

```
Column: <first char> not found.
```

*Cause* Excel errors with special characters in the xmlExtract if an object name contains special characters or punctuation marks.

*Resolution* When writing the query:

- Place the object name containing the punctuation character in quotes.
- Ensure a semicolon (;) is the last character in the query.

*Example* The following example query illustrates how you must quote table and column names:

```
SELECT "ORDER_HEADER"."ORDER&ID",  
"ORDER_HEADER"."DEPTNO+1"  
FROM "XMLEXTRACT"."ORDER_OA"."ORDER_HEADER"  
"ORDER_HEADER";
```

## 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 extract access job again.

*This section includes:*

- [Cannot re-deploy business flow](#) (page 60)
- [Cannot uninstall cartridge while business flows are in incomplete stage](#) (page 60)
- [Cartridge expects the following 4 parameters to be passed](#) (page 60)
- [OBTCO\\_ENGINE\\_FAILED](#) (page 61)

- [Error deleting file or folder \(page 61\)](#)
- [Windows error 193 occurred while loading the Java virtual machine \(page 62\)](#)

## Cannot re-deploy 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\HPTDM1.10_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 4 parameters to be passed

- Symptom* You received the following error attempting to reinstall a modified cartridge or business flow.
- ```
C:\Program Files\HPTDM1.10\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.

## OBTCO\_ENGINE\_FAILED

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

```
OBTCO_ENGINE_FAILED
```

**Resolution** You must run all three of the following commands:

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

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

## Error deleting file or folder

**Symptom** After attempting to uninstall the HP Test Data Management from the uninstaller, you went to remove the remaining directories under C:\Program Files\HPTDM1.10

**Cause** The DataDirect directories did not uninstall correctly

**Resolution** Completely remove following folders:

```
<1.10 root>/obt/sqlxml/server
```

```
<1.10 root>/obt/sqlxml/client
```

Remove all services that start with HPQueryServer or OpenAccess from the Windows service list. This can be achieved in a command prompt by running either `sc delete <service_name>` or if you install the Windows Resource Toolkit -> `instsrv <service_name> remove`

Go to `C:\WINDOWS\system32\drivers\etc` and open the services file. Delete any entries that have HPQueryServer or OpenAccess or DataDirect in it.

Run the `QS_cleanup.bat` script - `QS_cleanup.bat`.

Open the registry editor. Search for the keywords below and delete ALL (every last one) of the folders, subfolders, and their keys if any are found:

- datadirect
- openaccess
- 8653CD1A
- 8653CD1B
- F20AF0AE7
- 78FB64AFBF
- FA46BF87-7CFB-4176-B5EE-FBA3221938B5
- EA0FA02F-2D57-4C58-9AF7-2B126795FF75

Restart your machine and install again.

## Windows error 193 occurred while loading the Java virtual machine

<i>Symptom</i>	While attempting to reinstall the HP Test Data Management
<i>Cause</i>	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.
<i>Resolution</i>	Make sure that you have installed the correct installer for your Windows system.

## Database to File

Error messages encountered with database to file (D2F).

*This section includes:*

- [ORA-01031: insufficient privileges when deployed with D2F archadmin user \(page 63\)](#)
- [ORA-1460 error Unimplemented or unreasonable conversion requested \(page 63\)](#)
- [D2F fails when remapping key column names \(page 63\)](#)
- [Arithmetic overflow error occurs when converting numeric to data type numeric \(page 64\)](#)

- [Mapping and timestamp issues when uploading from Oracle to SQL server \(page 64\)](#)
- [Upload fails \(page 67\)](#)
- [Error with D2F upload or reload \(page 64\)](#)
- [MBCS unsupported environment names \(page 64\)](#)
- [Orphaned rows \(page 64\)](#)
- [XML reload/upload may run out of memory \(page 65\)](#)

## ORA-01031: insufficient privileges when deployed with D2F archadmin user

- Symptom* Deploy a two-tier database to file advanced extract cartridge fails with java.sql.SQLException.
- 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.

## ORA-1460 error Unimplemented or unreasonable conversion requested

- Symptom* You receive the following error:  
ORA-1460 error "unimplemented or unreasonable conversion requested"
- Cause* When running with Oracle Database 9.2.x under AL32UF8 character set on Linux, Database to XML reload jobs may fail if a target column is CHAR and there is a large amount of data (more than 1000 characters) to load. Oracle bug 4619165 refers to this issue.
- Resolution* It is fixed in Oracle version 10.1.0.4 or later.

## D2F fails when remapping key column names

- Symptom* The D2F 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, etc.  
The schema for SQL Server is just the DB.schema name, for example: DEMARC.dbo, AdvWorks.Sales, etc.
- 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`

## Arithmetic overflow error occurs when converting numeric to data type numeric

- Symptom* You receive the error 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 EXTRACT to new temporary location.
  3. Edit the data files to reduce the precision.
  4. Perform upload on edited files.

## Mapping and timestamp issues 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.

## Error with D2F upload or reload

- Symptom* When running upload or reload on Oracle 9i getting error; ORA-01461: can bind a LONG value only for insert into a LONG column.
- Cause* You have a column with a very large varchar field defined and you are uploading data to that column close to its capacity. This is a known bug in the Oracle JDBC driver.
- Resolution* Turn on the Oracle connection property `oracle.jdbc.RetainV9LongBindBehavior` by following the instructions in the `outerbay.properties` file.

## MBCS unsupported environment names

- Symptom* Version 6.2 does not support MBCS environment names.

## 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.



## XML reload/upload may run out of memory

<i>Symptom</i>	XML reload/upload has the potential of running out of memory.
<i>Resolution</i>	First convert the XML files into CSV and then reload/upload the CSV file.

## Upload issues

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

*This section includes:*

- [Cannot upload all datatypes from Sybase to SQL Server \(page 65\)](#)
- [Upload from SQL server to Oracle \(table with special characters\) does not upload any data \(page 65\)](#)
- [Not able to set length for CLOB and BLOB columns on DB2 during upload \(page 66\)](#)
- [Upload from mainframe to DB2 fails for real column type \(page 66\)](#)
- [Upload from SQL Server to MYSQL fails \(page 66\)](#)
- [Upload fails with drop indexes on destination tables \(page 66\)](#)
- [Upload hangs with out of memory error \(page 66\)](#)
- [Truncation of data upon upload \(page 66\)](#)
- [Upload fails \(page 67\)](#)

## Cannot upload all datatypes from Sybase to SQL Server

<i>Symptom</i>	When uploading a table from Sybase to SQL Server with no mapping file, all datatypes will not upload from Sybase to SQL server.
<i>Resolution</i>	Create a table and use a mapping file.

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

<i>Symptom</i>	When creating a simple model and cartridge and upload to Oracle, the job completes but does not upload any data.
<i>Resolution</i>	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 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.

## 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.

## 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 Server 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 fails with drop indexes on destination tables

- Symptom* You receive a MySQLSyntaxErrorException when uploading; run any database to file extract 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 hangs with out of memory error

- Symptom* Database to file Lite MySQL JDBC RT fails at upload job.
- Resolution* You can fix this by setting:  
`VARIABLE_LOB=true`  
in file `obt\config\dbms\MySQL_5_5\MySQL_5_5.properties`.

## 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 fails

<i>Symptom</i>	When uploading to a SQL Server database from an Oracle-based extract file (XML or CSV), the upload fails.
<i>Cause</i>	If 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.
<i>Solution</i>	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.

## Other errors

Miscellaneous errors.

*This section includes:*

- [IJ ERROR: Unable to establish prepared statement PRIVILEGE](#) (page 67)

## IJ ERROR: Unable to establish prepared statement PRIVILEGE

<i>Symptom</i>	While attempting to use the <code>remove privilege</code> command, for example, <code>remove privilege READ_SYSTEM from TEST_ROLE;</code> the following error appeared: <pre>IJ ERROR: Unable to establish prepared statement PRIVILEGE</pre>
<i>Cause</i>	The REMOVE Identifier command is not being parsed correctly.
<i>Resolution</i>	Please rerun the query enclosing the main body of the query in single quotes. For example, <pre>'remove privilege READ_SYSTEM from TEST_ROLE';</pre> By including the query inside quotes, you are telling ij not to parse the query.

---

**NOTE** This only applies to the IJ client.

---



# 4

## Gathering information for support

If you are a customer with a current maintenance contract for HP Test Data Management, you can reach technical support by opening an issue using SSO at <http://www.hp.com/go/hpsoftwaresupport>. Include the following information in your email or fax to speed up the process:

Name	
Company name	
Phone number	
HP Test Data Management version	
Operating system and version	
Database version	
A description of the problem	
Any relevant attachments: <ul style="list-style-type: none"><li>• Logs, refer to <a href="#">Chapter 2, Log files</a> 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—obt/generate</li><li>• Post-deployment—obt/artifacts</li></ul>	



# Glossary

<b>active database</b>	The database from which you plan to extract data. Typically, this database is your online transaction processing (OLTP) or production database. In a two-tiered configuration, the active database resides on tier one and is the source for data movement operations.
<b>active environment</b>	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.
<b>activity</b>	In Designer, a component of a business flow, which is added by using the toolbar. 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 Console.
<b>advanced selection</b>	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 extraction.
<b>annotation</b>	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.
<b>application partitioning</b>	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 HP Test Data Management and contrasts with the more common table partitioning offered by the database management software, which only groups related rows from one table.
<b>business flow</b>	A series of activities, such as extraction operations and scripts, that run in sequence. You build business flows in Designer.
<b>business flow status</b>	The Web Console shows the last run of each business flow. The states are Complete/Error/Running.
<b>cartridge</b>	An instance of model- or schema-based eligibility criteria used to 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.
<b>chaining table</b>	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.
<b>collection</b>	The configuration of a directory location and file pattern to match a set of extracted XML files, thus allowing SQL access to the extracted data.

<b>comma separated values (CSV)</b>	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.
<b>command</b>	Command files or JavaScript files launched by the Web Console on your behalf with status displays.
<b>condition</b>	In Designer, the way you branch your business flow to run or skip an activity based on some criteria.
<b>configuration parameter</b>	A type of parameter that has its values set by an administrator (someone who has repository privileges from Console) through the administrator interface. Typically, this type of parameter represents values that should be changed very infrequently, perhaps only at deployment time.
<b>console user</b>	The Web Console identifies individual users, who are distinct from database users. The properties for a Console user are User Name, Full Name, Password, Enabled, Description, Email, Phone, and Privileges.
<b>console user name</b>	The login name associated with a Console user.
<b>constraint</b>	A column or a list of columns that enables you to identify rows in the database and relate them to one another.
<b>customization</b>	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.
<b>customization mode</b>	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.
<b>data masking</b>	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 HP Test Data Management or create your own mask.
<b>data movement</b>	The method used by HP Test Data Management to actually copy data.
<b>database constraint</b>	A constraint that exists in the database and can be discovered and referenced from Designer.
<b>database to file</b>	A movement in which data goes from an active database to a file (XML or CSV format).
<b>Deployment Assistant</b>	The user interface component used to deploy or generate business flows. You invoke Deployment Assistant from within Designer.



<b>description</b>	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.
<b>Designer</b>	The user interface component used to develop, test, and deploy your extraction solution. Designer is a powerful graphical development environment for extraction solutions.
<b>driving table</b>	A driving object is a root of a model hierarchy. Its relationship to the child tables drives the selection of transactions.
<b>dynamic list of values</b>	A list of values for a parameter that obtains its members from a SELECT statement that returns identifiers and labels.
<b>dynamic parameter</b>	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.
<b>embedded repository</b>	A Java database, installed with HP Test Data Management, that can act as your repository database, where you store your HP Test Data Management metadata. Alternatively, your source database or another database can act as the repository database.
<b>environment</b>	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 databases.
<b>error</b>	One of the ways in which you can interrupt a business flow. Error indicates that the business flow failed for some reason.
<b>exclusive rules</b>	One of the ways in which HP Test Data Management determines whether to include or exclude rows from the extract 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'.
<b>exit</b>	One of the ways in which you can interrupt a business flow. You can exit successfully or with a warning.
<b>export</b>	The way that you save an HP Test Data Management project to an exchange format (.hdp) from the File menu. See also <i>import</i> .
<b>export data</b>	The way that a user can send data to CSV format from Preview using the toolbar item.
<b>extract data store</b>	The location where the data is to be copied. Can be an XML or CVS file.
<b>generate documentation</b>	The process of collecting and grouping all annotations into a PDF file that also describes the business flow or cartridge structure.

<b>import</b>	The way that you transfer projects from exchange format (.hdp) into the Project Navigator.
<b>inclusive rules</b>	One of the ways in which HP Test Data Management determines whether to include or exclude rows from the extract 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 <code>PRODUCT_RECALLED='Y'</code> .
<b>interrupt</b>	The way to stop or pause a business flow (pause, error, exit with warning, exit successfully).
<b>local cache</b>	A capture of the metadata for your databases, schemas, and tables used when working offline in Designer.
<b>local deployment</b>	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.
<b>lookup table</b>	A table that contains helpful non-transactional information. For example, non-transactional information could be status definitions, or the name of the sales representative.
<b>model</b>	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.
<b>model compatibility</b>	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.
<b>model-based cartridge</b>	A cartridge that moves data based upon a defined data model with relationships. This type of cartridge is typically used for ongoing extract operations.
<b>OLTP database</b>	The online transaction processing database that typically is your active or source database.
<b>pause</b>	One of the ways in which you can interrupt a business flow. Pausing suspends the business flow while awaiting operator intervention.
<b>query server</b>	The component that provides SQL access to XML or CSV files.
<b>remote deployment</b>	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.

<b>repository</b>	The location that holds business flow metadata, product configuration data, and data collected during runtime. The repository can be located on your active database, another logical database, or can be embedded database.
<b>rule</b>	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 extracting any orders that are not yet closed.
<b>runtime parameter</b>	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.
<b>schema-based cartridge</b>	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.
<b>selection</b>	The form of data selection to use (standard or advanced) for choosing data. When creating a cartridge or adding it to a business flow, you must specify the selection method.
<b>source</b>	The location (database) from which you are copying or moving data.
<b>standard selection</b>	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.
<b>table use</b>	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.
<b>target</b>	The location (XML) to which you are copying data.
<b>transactional data movement</b>	Transactional movement uses set-based data movement and is the default method of movement.
<b>transactional table</b>	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.
<b>unique identifiers (UIDs)</b>	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.
<b>virtual constraint</b>	A constraint that you define in Designer that only exists within HP Test Data Management as opposed to a database constraint, which exists within the database.
<b>Web Console</b>	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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