WebFOCUS

Hyperstage MySQL-based to PostgreSQL-based Migration

Release 8.1 Version 05
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This document describes the tools for migrating from Hyperstage MySQL to Hyperstage PostgreSQL.

How This Manual Is Organized

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<th>Chapter/Appendix</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Introduction</td>
<td>Describes the technical requirements for installing Hyperstage.</td>
</tr>
<tr>
<td>2 Installing and Configuring Hyperstage</td>
<td>Describes the installation and configuration steps to install and configure Hyperstage.</td>
</tr>
<tr>
<td>3 Hyperstage MySQL to PostgreSQL Migration Using the External Migrator</td>
<td>Describes how to use the External Migrator to migrate from MySQL to PostgreSQL.</td>
</tr>
<tr>
<td>4 Hyperstage MySQL to PostgreSQL Migration Using Quick ETL Copy</td>
<td>Describes how to use Quick ETL Copy to migrate from MySQL to PostgreSQL.</td>
</tr>
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Documentation Conventions

The following table describes the documentation conventions that are used in this manual.

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIS TYPEFACE or this typeface</td>
<td>Denotes syntax that you must enter exactly as shown.</td>
</tr>
<tr>
<td>this typeface</td>
<td>Represents a placeholder (or variable) in syntax for a value that you or the system must supply.</td>
</tr>
<tr>
<td>underscore</td>
<td>Indicates a default setting.</td>
</tr>
</tbody>
</table>
### Related Publications

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## Table of Conventions

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>this typeface</em></td>
<td>Represents a placeholder (or variable), a cross-reference, or an important term. It may also indicate a button, menu item, or dialog box option that you can click or select.</td>
</tr>
<tr>
<td>Key + Key</td>
<td>Indicates keys that you must press simultaneously.</td>
</tr>
<tr>
<td>{ }</td>
<td>Indicates two or three choices. Type one of them, not the braces.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Indicates a group of optional parameters. None are required, but you may select one of them. Type only the parameter in the brackets, not the brackets.</td>
</tr>
<tr>
<td></td>
<td>Separates mutually exclusive choices in syntax. Type one of them, not the symbol.</td>
</tr>
<tr>
<td>...</td>
<td>Indicates that you can enter a parameter multiple times. Type only the parameter, not the ellipsis (...).</td>
</tr>
<tr>
<td>.</td>
<td>Indicates that there are (or could be) intervening or additional commands.</td>
</tr>
<tr>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>
You can also access support services electronically, 24 hours a day, with InfoResponse Online. InfoResponse Online is accessible through our website, http://www.informationbuilders.com. It connects you to the tracking system and known-problem database at the Information Builders support center. Registered users can open, update, and view the status of cases in the tracking system and read descriptions of reported software issues. New users can register immediately for this service. The technical support section of www.informationbuilders.com also provides usage techniques, diagnostic tips, and answers to frequently asked questions.

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To help our consultants answer your questions effectively, be prepared to provide the following information when you call:

- Your six-digit site code (xxxx.xx).
- Your WebFOCUS configuration:
  - The front-end software you are using, including vendor and release.
  - The communications protocol (for example, TCP/IP or HLLAPI), including vendor and release.
  - The software release.
  - Your server version and release. You can find this information using the Version option in the Web Console.
- The stored procedure (preferably with line numbers) or SQL statements being used in server access.
- The Master File and Access File.
- The exact nature of the problem:
  - Are the results or the format incorrect? Are the text or calculations missing or misplaced?
  - Provide the error message and return code, if applicable.
  - Is this related to any other problem?
Has the procedure or query ever worked in its present form? Has it been changed recently? How often does the problem occur?

What release of the operating system are you using? Has it, your security system, communications protocol, or front-end software changed?

Is this problem reproducible? If so, how?

Have you tried to reproduce your problem in the simplest form possible? For example, if you are having problems joining two data sources, have you tried executing a query containing just the code to access the data source?

Do you have a trace file?

How is the problem affecting your business? Is it halting development or production? Do you just have questions about functionality or documentation?

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Thank you, in advance, for your comments.

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Introduction

Hyperstage combines the Hyperstage storage engine with PostgreSQL server implementation. Hyperstage consists of several layers. The upper layers are provided by the PostgreSQL server implementation, and the lower layers are provided by Hyperstage.

Hyperstage ships with the full PostgreSQL binaries required. PostgreSQL is used to store catalog information (as with other storage engines). You can use the PostgreSQL instance for other purposes, but joining PostgreSQL and Hyperstage tables may result in reduced performance as the PostgreSQL query engine will be used.

In this chapter:

- Hyperstage Technical Requirements

Hyperstage Technical Requirements

Before installing Hyperstage, review the following technical requirements.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platforms</td>
<td>Windows Server® 2003</td>
</tr>
<tr>
<td></td>
<td>Windows Server 2008</td>
</tr>
<tr>
<td></td>
<td>Red Hat® Enterprise Linux® 5.x and 6.x</td>
</tr>
<tr>
<td></td>
<td>CentOS® 5.x and 6.x</td>
</tr>
<tr>
<td></td>
<td>Debian® 6</td>
</tr>
<tr>
<td></td>
<td>Novell® SUSE® Linux Enterprise 11</td>
</tr>
<tr>
<td>Processor Architecture</td>
<td>Intel® 64-bit</td>
</tr>
<tr>
<td></td>
<td>AMD® 64-bit</td>
</tr>
</tbody>
</table>
# Hyperstage Technical Requirements

## Requirements  

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For Personal Evaluation and Application Development</strong></td>
<td></td>
</tr>
<tr>
<td>CPU Speed</td>
<td>1.8GHz minimum, 2.0GHz or faster dual core or quad core recommended</td>
</tr>
<tr>
<td>Memory</td>
<td>2GB minimum, 4GB or higher recommended</td>
</tr>
<tr>
<td><strong>For Multi-User Evaluation or Production Deployment</strong></td>
<td></td>
</tr>
<tr>
<td>CPU Speed</td>
<td>2.0GHz minimum, 2.0GHz or faster dual core or quad core recommended</td>
</tr>
<tr>
<td>Memory</td>
<td>4GB minimum, 8GB or higher recommended</td>
</tr>
</tbody>
</table>
The following section describes the installation and configuration steps for Hyperstage.

**In this chapter:**
- Installing Hyperstage
- Configuring the Hyperstage (PG) Adapter
- Configuring Hyperstage

## Installing Hyperstage

Hyperstage is packaged as part of the Hyperstage version of the Reporting Server installation. This version of the Reporting Server installation installs a Reporting Server and Hyperstage, and configures the Reporting Server for use with Hyperstage.

**Procedure: How to Install Hyperstage**

1. Download the installation package for Hyperstage for the desired platform.
2. Follow the Reporting Server installation instructions in the *Server Installation* manual.
3. By default, Hyperstage data directories (ib_data and pg_data) will be installed under the ibi\HyperstagePG directory.
In order to customize the location of the Hyperstage data directories, select the *Customize default directory locations* check box in the Select the Program Folder and Standard Location Prompt dialog box, as shown in the following image.

![Select the Program Folder and Standard Location Prompt dialog box](image)
4. Enter the desired Hyperstage directory location, as shown in the following image.
5. By default, the HTTP Listener Port on the Configure Basic Server Information dialog box is 8121, as shown in the following image.

![Configure Basic Server Information dialog box]

The port for Hyperstage will automatically configure to three port numbers higher than the HTTP Listener Port (for example, 8124).

**Configuring the Hyperstage (PG) Adapter**

When installing the Hyperstage version of the WebFOCUS Reporting Server, the Hyperstage (PG) adapter will automatically be configured. If the WebFOCUS Reporting Server and Hyperstage version of the Reporting Server exist on different boxes, then the Hyperstage (PG) adapter needs to be manually configured on the WebFOCUS Reporting Server pointing to the Hyperstage port.

**Procedure:** How to Configure the Hyperstage (PG) Adapter

1. Launch the Web Console and click the **Adapters** tab.
2. Expand **Available** and then expand the **SQL** folder.

3. Right-click **Hyperstage (PG)** and click **Configure**, as shown in the following image.

The Add Hyperstage (PG) Configuration window opens.

4. Complete the following fields:
   - In the **Connection Name** box, type a name for the connection.
   - In the **URL** box, type the URL to the Hyperstage port and database, for example, `jdbc:postgresql://hsserver:28124/webfocus`.
   - In the **Driver Name** box, type `org.postgresql.Driver`.
   - In the **IBI_CLASSPATH** box, add the location of the JDBC Jar file.

   **Note:** The PostgreSQL jar files exist in the home\hs\java directory of the Hyperstage version of the Reporting Server, for example, `\ibi\srv77\home06HSstandalone\hs\java`. These could be copied to a location on the machine where the WebFOCUS Reporting Server resides, for example, `C:\ibi\SQLJDBC\postgresql-9.2-1003.jdbc3.jar` and `C:\ibi\SQLJDBC\postgresql-9.2-1003.jdbc4.jar`.

   - In the **Home Directory** box, enter the location of the home directory for Hyperstage (PG).

   **Note:** The location is the home\hs directory of the Hyperstage version of the Reporting Server, for example, `D:\ibi\srv77\home06HSstandalone\hs`.
In the Tools Directory box, type the location of the tools directory for Hyperstage (PG).

**Note:** The location is the `home\hs\bin` directory of the Hyperstage version of the Reporting Server, for example, `D:\ibi\srv77\home06HSstandalone\hs\bin`.

Type the User and Password for the PostgreSQL database. By default, the credentials are `srvadmin/srvadmin`.

The following image shows the window with all of the fields completed.

5. Click **Configure**.
Configuring Hyperstage

The Hyperstage configuration file is called brighthouse.ini and is located in the ib_data subdirectory within the Hyperstage Data directory installation directory (for example, C:\ibi\HyperstagePG\ib_data). The configuration file is a text file containing the Hyperstage configuration parameters.

Each parameter is shown on a separate line and uses the following form:

ParameterName=ParameterValue

If a parameter is not present in the configuration file or if the configuration file does not exist, the default values are used. Blank lines and comments (lines starting with #) are ignored.

Be sure to customize the following parameters to optimize performance. These tuning parameters are case-sensitive and must be typed as shown in the following table.

<table>
<thead>
<tr>
<th>Parameter Syntax</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ServerMainHeapSize=size</td>
<td>Not less than 320</td>
<td>Size of the main memory heap in the server process, in MB. The larger the heap size, the more effectively the server works. However, the sum of the heap sizes in the server and the loader should not exceed physical memory installed in the machine. Otherwise, performance decreases radically.</td>
</tr>
<tr>
<td></td>
<td>Default: 600</td>
<td></td>
</tr>
<tr>
<td>LoaderMainHeapSize=size</td>
<td>Not less than 320</td>
<td>Size of the memory heap in the loader process, in MB. The sum of the heap sizes in the server and the loader should not exceed physical memory installed in the machine. Otherwise, performance decreases radically.</td>
</tr>
<tr>
<td></td>
<td>Default: 320</td>
<td></td>
</tr>
<tr>
<td>CacheFolder=directory</td>
<td>Directory name</td>
<td>This is a mandatory parameter. Path to the directory where temporary files will be created and stored. This is set as one of the installation script parameters.</td>
</tr>
<tr>
<td></td>
<td>Default: none</td>
<td></td>
</tr>
</tbody>
</table>
Note: The values are commented out (preceded by #) in the brighthouse.ini file, which causes them to default to the application minimum allowed values of 600 and 320 for ServerMainHeapSize and LoaderMainHeapSize, respectively.

The following table describes additional Hyperstage parameters.

<table>
<thead>
<tr>
<th>Parameter Syntax</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNFolder=directory</td>
<td>Directory name</td>
<td>Directory where the Knowledge Grid is stored. If not specified, these files are located in a subdirectory of the data directory. Allow free space of at least 1% of database size (compressed).</td>
</tr>
<tr>
<td></td>
<td>Default: BH_RSI_Repository</td>
<td></td>
</tr>
<tr>
<td>ControlMessages=number</td>
<td>0, 1, 2, 3, 4, 5</td>
<td>Set to 2 to turn the control messages on with timestamps. This is usually needed by Hyperstage to support performance investigation.</td>
</tr>
<tr>
<td></td>
<td>Default: 0 (lowest level of detail)</td>
<td>For descriptions of other Control Messages levels, see <a href="https://www.infobright.org/index.php//ICE_Wiki/wiki-4/troubleshooting/query-execution-log/">https://www.infobright.org/index.php//ICE_Wiki/wiki-4/troubleshooting/query-execution-log/</a>.</td>
</tr>
</tbody>
</table>

Configuration Tips and Examples

Important: You must properly configure your memory settings to ensure optimal performance.

The following table shows sample, recommended memory configurations for different systems.

<table>
<thead>
<tr>
<th>System Memory</th>
<th>Server Main Heap Size</th>
<th>Loader Main Heap Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>64GB</td>
<td>48000</td>
<td>800</td>
</tr>
<tr>
<td>48GB</td>
<td>32000</td>
<td>800</td>
</tr>
<tr>
<td>32GB</td>
<td>24000</td>
<td>800</td>
</tr>
<tr>
<td>16GB</td>
<td>10000</td>
<td>800</td>
</tr>
<tr>
<td>8GB</td>
<td>4000</td>
<td>800</td>
</tr>
<tr>
<td>4GB</td>
<td>1300</td>
<td>400</td>
</tr>
</tbody>
</table>
In most cases, the loader does not benefit from larger memory settings. However, increasing the LoaderMainHeapSize can help when:

- A table to be loaded has very long text values.
- or
- The table has many columns (for example, 1000 columns).

You can use more memory at import if you are planning to execute several concurrent load tasks to different data tables. However, disk access may become a bottleneck.

ServerMainHeapSize should be as large as possible, but safely smaller than the amount of physical memory on the machine. If performance decreases because of memory swapping by the operating system, try to set lower heap sizes. We also recommend decreasing the heap size if many users are running queries in parallel.

**Note:**

- Hyperstage may use additional memory for heavy loads or queries. Also, other applications on your server will use memory for their processes. It is important that the total of ServerMainHeapSize and LoaderMainHeapSize is less than the total available physical memory. If the system needs to swap memory, performance will be severely impacted.
- For information on configuring the Hyperstage adapter and connecting to the database using the Reporting Server, see *Using the Adapter for Hyperstage* in the *Adapter Administration* manual.
The following section describes how to use the External Migrator to migrate Hyperstage MySQL data to Hyperstage PostgreSQL.

**In this chapter:**
- Hyperstage MySQL to PostgreSQL Migrator (“External Migrator”)
- Limitations and Notes
- Using the External Migrator
- MySQL to PostgreSQL Data Type Mappings

**Hyperstage MySQL to PostgreSQL Migrator (“External Migrator”)**

The Hyperstage External Migrator allows for migration of Hyperstage MySQL data to Hyperstage for PostgreSQL. The current version of the utility works under the following basic assumptions and conditions.

**Assumptions and Conditions**

- Migrates data from version 4 (latest Hyperstage MySQL) to data version 5 (latest PostgreSQL version).
- Destination data directories must be created for PostgreSQL.
- Migration of text types is supported under the following conditions (all conditions must be satisfied):
  - If UTF-8 is a charset in all text columns and no other charset is used.
  - If binary collations used.
  - If max text length from a column does not exceed 16K.
- Both PostgreSQL and the MySQL instances must be offline.
- Columns of time types must not contain 0 (zeros).
- Specific data types will require more space.
After the conversion to PostgreSQL, VARCHAR(n) types will require more than 64KB for a single value. Hyperstage for MySQL using UTF-8 may have to up 3 bytes whereas Hyperstage for PostgreSQL uses up to 4 bytes. The maximum value for n is 16K characters.

### Limitations and Notes

- Table migration is done by copying the data. In-place migration is not supported.
- Tables with decomposition rules are currently not supported.
- The External Migrator will change all ‘0000-00-00’ DATE values to ‘100-01-01’.
- The External Migrator will change all ‘0000-00-00 00:00:00’ DATETIME and TIMESTAMP values to ‘100-01-01 00:00:00’ and ‘1970-01-01 00:00:00’.
- The External Migrator will apply a common character set to all columns being migrated. This is necessary because Hyperstage for PostgreSQL requires that all columns within a given database have the same character set.
- The External Migrator will recalculate Data Pack Nodes and Knowledge Nodes.
- Tables previously using LOOKUP columns will be migrated to DIMENSION columns.
- There is no support for Default values within PostgreSQL. Therefore, this modifier will not be migrated.

### Using the External Migrator

To use the External Migrator, run the following command:

```bash
dir/ibextmigrator options
```

The available External Migrator options are listed in the following table.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-h [ -help]</td>
<td>Prints help messages.</td>
</tr>
<tr>
<td>-f [ -force ]</td>
<td>Continues migration, even if an error occurs.</td>
</tr>
<tr>
<td>-v [ -verbose ]</td>
<td>Shows more details.</td>
</tr>
<tr>
<td>-b [ -pg-bin ]</td>
<td>PostgreSQL installation path.</td>
</tr>
<tr>
<td>-u [ -pg-user ]</td>
<td>PostgreSQL user used to create the migration database.</td>
</tr>
</tbody>
</table>
### Option Description

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-s { -src-datadir } arg</td>
<td>Source MySQL datadir.</td>
</tr>
<tr>
<td>-i { -dst-ibdatadir } arg</td>
<td>Destination Hyperstage Server datadir (ib_data).</td>
</tr>
<tr>
<td>-p { -dst-pgdatadir } arg</td>
<td>Destination PostgreSQL datadir (pg_data).</td>
</tr>
<tr>
<td>-d { -dst-db } arg</td>
<td>Destination PostgreSQL database name.</td>
</tr>
<tr>
<td>-t { -tables } arg</td>
<td>List of tables to migrate in the form &quot;db1.t1 db2.t3 db2.*&quot; where * implies migration of every table in the database. If not specified, the External Migrator will attempt to migrate the entire datadir.</td>
</tr>
<tr>
<td>-c { -dst-schema } arg</td>
<td>Name of destination schema to which tables specified with the -t option should be migrated. Defaults to public.</td>
</tr>
<tr>
<td>-connection-db arg</td>
<td>Database that External Migrator will use to connect to PostgreSQL.</td>
</tr>
<tr>
<td>-force-charset-conversion</td>
<td>Specifying this option will turn off the option to check if all data selected for migration has a common character set, and will trigger the conversion to the specified character set, if necessary. The default character set is UTF8. You can also use this option to trigger conversion of all data to specified charset.</td>
</tr>
</tbody>
</table>

#### Note: Using this setting will significantly increase the time that it takes to complete the migration.

| -version                  | Print program version number and exit.                                      |

The following code is an example of the migration command for all the tables within a MySQL database named salesdatabase, to a PostgreSQL database named salesdatabase.

```bash
c:\ibi\srv77\home06Hyperstage\hs\bin>ibextmigrator.exe
-b "C:\ibi\srv77\home06Hyperstage\hs\bin" -u srvadmin
-s "C:\HyperstageMySQL\Data"
-p "C:\HyperstagePG\pg_data"
-i "C:\HyperstagePG\ib_data"
-d salesdatabase
-t "salesdatabase.*"
```
The following code is an example of the migration command for all of the tables within a MySQL database named salesdatabase, to a PostgreSQL database named salesdatabase. In this example, the option to check if all data selected for migration has a common character set is also included, and will force the character set conversion to UTF8.

c:\ibi\srv77\home06Hyperstage\hs\bin>ibextmigrator.exe
-b "C:\ibi\srv77\home06Hyperstage\hs\bin" -u srvadmin
-s "C:\HyperstageMySQL\Data"
-p "C:\HyperstagePG\pg_data"
-i "C:\HyperstagePG\ib_data"
-d salesdatabase
-t "salesdatabase.*"
--force-charset-conversion=utf8

MySQL to PostgreSQL Data Type Mappings

The following table lists the data type mappings for MySQL to PostgreSQL.

<table>
<thead>
<tr>
<th>Hyperstage MySQL Data Type</th>
<th>Hyperstage PostgreSQL Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOOL</td>
<td>SMALLINT</td>
</tr>
<tr>
<td>TINYINT</td>
<td>SMALLINT</td>
</tr>
<tr>
<td>MEDIUMINT</td>
<td>INT</td>
</tr>
<tr>
<td>INT</td>
<td>INT</td>
</tr>
<tr>
<td>BIGINT</td>
<td>BIGINT</td>
</tr>
<tr>
<td>FLOAT</td>
<td>REAL</td>
</tr>
<tr>
<td>DOUBLE</td>
<td>DOUBLE PRECISION</td>
</tr>
<tr>
<td>DECIMAL(M,N)</td>
<td>DECIMAL(M,N)</td>
</tr>
<tr>
<td>YEAR</td>
<td>(To be decided)</td>
</tr>
<tr>
<td>TIME</td>
<td>INTERVAL HOUR TO SECOND</td>
</tr>
<tr>
<td>DATE</td>
<td>DATE</td>
</tr>
</tbody>
</table>
### MySQL to PostgreSQL Data Type Mappings

<table>
<thead>
<tr>
<th>Hyperstage MySQL Data Type</th>
<th>Hyperstage PostgreSQL Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATETIME</td>
<td>TIMESTAMP WITHOUT TIME ZONE)</td>
</tr>
<tr>
<td>TIMESTAMP</td>
<td>TIMESTAMP WITH TIME ZONE)</td>
</tr>
<tr>
<td>CHAR(N)</td>
<td>CHAR(N)</td>
</tr>
<tr>
<td>VARCHAR(N)</td>
<td>VARCHAR(N)</td>
</tr>
<tr>
<td>TINYTEXT</td>
<td>VARCHAR(255)</td>
</tr>
<tr>
<td>TEXT</td>
<td>VARCHAR(N)</td>
</tr>
<tr>
<td>BINARY(N)</td>
<td>BYTEA(N)</td>
</tr>
<tr>
<td>VARBINARY(N)</td>
<td>BYTEA(N)</td>
</tr>
</tbody>
</table>
Migration of Hyperstage MySQL to PostgreSQL can be done using the Quick ETL Copy tool. The following section describes how to use Quick ETL Copy to migrate using the MySQL ODBC or JDBC driver.

In this chapter:
- Migration Using Quick ETL Copy With the MySQL ODBC Driver
- Migration Using Quick ETL Copy With the MySQL JDBC Driver

Migration Using Quick ETL Copy With the MySQL ODBC Driver

Quick ETL Copy using the MySQL ODBC driver allows for migration of individual Hyperstage MySQL tables to Hyperstage for PostgreSQL. Once you have installed and configured the ODBC Driver on your machine, you will access the Reporting Server Web Console to configure the adapter connection and run the Quick ETL Copy.

Note: You must access the Hyperstage version of the Reporting Server Web Console to complete these steps.

Procedure: How to Install and Configure the MySQL ODBC Driver

1. Go to the following webpage:
   
   http://dev.mysql.com/downloads/connector/odbc/5.2.html

2. Scroll to Windows (x86, 64-bit), MSI Installer and click Download to download the installation file for the MySQL ODBC Driver. The mysql-connector-odbc-5.2.7-winx64.msi file will be downloaded.

3. Double-click mysql-connector-odbc-5.2.7-winx64.msi to start the Driver installation.

4. Click Run.
5. Click Next, as shown in the following image.

6. Select *I accept the terms in the license agreement*, and click Next, as shown in the following image.
7. Select Typical, and click Next, as shown in the following image.

8. Click Install, as shown in the following image.
The MySQL ODBC Driver will start installing, as shown in the following image.

9. Click *Finish*, as shown in the following image.
10. From Windows Control Panel/Administrative Tools, double-click *Data Sources (ODBC)*, as shown in the following image.

11. Click the System DSN tab, and click *Add*, as shown in the following image.
12. Select either MySQL ODBC 5.2 ANSI Driver or MySQL ODBC 5.2 Unicode Driver, and click Finish, as shown in the following image.

13. Complete the fields in the MySQL Connector/ODBC Data Source Configuration dialog box, and then click Details, as shown in the following image.
14. In the Cursors/Results tab, select the *Don’t cache results of forward-only cursors* and *Force use of forward-only cursors* check boxes, as shown in the following image.

15. Click OK.

**Procedure:** How to Configure the Hyperstage MySQL ODBC Adapter Connection

1. Launch the Web Console and click the *Adapters* tab.
2. Expand *Available*. Then expand the SQL and *Hyperstage* folders, as shown in the following image.

3. Right-click *ODBC*, and click *Configure*, as shown in the following image.
4. Enter a Connection Name, the Datasource name used when configuring the MySQL ODBC driver, User, and Password, as shown in the following image.

![Add Hyperstage ODBC to Configuration](image)

5. Click Configure.

6. Click Restart Java Services.

**Procedure: How to Run Quick ETL Copy**

1. Ensure that the Lite mode for Quick ETL Copy is turned off.
2. Launch the Web Console and click the Adapters tab.
3. Right-click Adapters and then click Change Common Adapter Settings, as shown in the following image.

![Complete Adapter List](image)

The Change Settings for Common Adapter window opens.

4. From the LITE-MODE drop-down menu, select No.
5. From the ETL-TRG-DBMS drop-down menu, select blank space, as shown in the following image.

**Change Settings for Common Adapter**

<table>
<thead>
<tr>
<th>Customize data type mappings</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECOMPOSE-DATE</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Decompose Date fields into components</td>
</tr>
<tr>
<td>DATEFMT</td>
</tr>
<tr>
<td>Adapter specific default</td>
</tr>
<tr>
<td>Format for Date fields</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Miscellaneous settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCA</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Activate Foctransform Context Analysis</td>
</tr>
<tr>
<td>BLEND-MODE</td>
</tr>
<tr>
<td>Select only common values</td>
</tr>
<tr>
<td>Mode for processing blended structures</td>
</tr>
<tr>
<td>LITE-MODE</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Simplified mode driven by configuration parameters</td>
</tr>
<tr>
<td>ETL-TRG-DBMS</td>
</tr>
<tr>
<td>Default ETL Target DBMS</td>
</tr>
</tbody>
</table>

Select profile edasprof

6. Click Save.
7. Right-click the Hyperstage MySQL Master file for the data to be migrated, and then click *Quick ETL Copy*, as shown in the following image.

8. Select a Target Application for the Hyperstage PostgreSQL metadata.

9. From the Target Adapter drop-down menu, select *Hyperstage (PG)*.

10. From the Load Type drop-down menu, select *Extended Bulk Load Utility*.
11. In order for the Partition parameters for Quick ETL Copy to appear, the KEYS attribute must be set in the Access File that pertains to the MySQL table.

For example:

```
SEGNAME=FACT_SALES, TABLENAME=wrds_fact_sales, CONNECTION=CON1, KEYS=1, $
```

**Migration Using Quick ETL Copy With the MySQL JDBC Driver**

Quick ETL Copy using the MySQL JDBC driver allows for migration of individual Hyperstage MySQL tables to Hyperstage for PostgreSQL. Once you have installed and configured the JDBC Driver on your machine, you will access the Reporting Server Web Console to configure the adapter connection and run the Quick ETL Copy.

**Note:** You must access the Hyperstage version of the Reporting Server Web Console to complete these steps.
Procedure: How to Install and Configure the MySQL JDBC Driver

To install the MySQL JDBC driver:

1. Download the installation file for the MySQL JDBC driver from the following location: 
2. From the Select Platform drop-down menu, select Platform Independent, as shown in the following image.

   ![Platform Independent](image1)

3. In the Platform Independent (Architecture Independent), ZIP Archive row, click Download. The mysql-connector-java-5.1.35.zip file is downloaded.
4. Unzip mysql-connector-java-5.1.35-bin.jar to the desired location, for example, C:\ibi\SQLJDBC, as shown in the following image.

   ![Unzipped Directory](image2)

Procedure: How to Configure the Hyperstage MySQL JDBC Adapter Connection

1. Launch the Web Console and click the Adapters tab.
2. Expand Available, and then expand the SQL and Hyperstage folders, as shown in the following image.

3. Right-click JDBC, and then click Configure, as shown in the following image.

The Add Hyperstage JDBC to Configuration window opens.

4. Complete the following fields:
   - In the Connection Name box, type a name for the connection.
   - In the URL box, type the JDBC URL in the following format:
     `jdbc:mysql://host:port/webfocus?useCursorFetch=true&/defaultFetchSize=50000`
   - In the Driver Name box, type `com.mysql.jdbc.Driver`.
   - In the IBI_CLASSPATH box, add the fully qualified path of the JDBC Jar file, for example, `C:\ibi\SQLJDBC\mysql-connector-java-5.1.35-bin.jar`.
In the Home Directory box, enter the location of the home directory for Hyperstage MySQL, for example, C:\HyperstageMySQL.

In the Tools Directory box, type the location of the tools directory for Hyperstage MySQL.

Type the User and Password for the MySQL database.

The following image shows the window with all fields completed.

Add Hyperstage JDBC to Configuration

5. Click **Configure**.

**Procedure: How to Run Quick ETL Copy**

1. Ensure that the Lite mode for Quick ETL Copy is turned off.
2. Launch the Web Console and click the **Adapters** tab.
3. Right-click Adapters and then click Change Common Adapter Settings, as shown in the following image.

![Image of Change Common Adapter Settings]

The Change Settings for Common Adapter window opens.

4. From the LITE-MODE drop-down menu, select No.

5. From the ETL-TRG-DBMS drop-down menu, select blank space, as shown in the following image.

![Change Settings for Common Adapter]

6. Click Save.
7. Right-click the Hyperstage MySQL Master file for the data to be migrated, and then click *Quick ETL Copy*, as shown in the following image.

8. Select a Target Application for the Hyperstage PostgreSQL metadata.
9. From the Target Adapter drop-down menu, select *Hyperstage (PG).*
10. From the Load Type drop-down menu, select *Extended Bulk Load Utility.*
In order for the Partition parameters for Quick ETL Copy to appear, the KEYS attribute must be set in the Access File that pertains to the MySQL table.

For example:

```
SEGNAME=FACT_SALES, TABLENAME=wrd_fact_sales, CONNECTION=CON1, KEYS=1,$
```
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Hyperstage MySQL-based to PostgreSQL-based Migration

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