

# Installing and Configuring the Database

Parasoft Development Testing Platform requires a relational database to store data for Report Center and Project Center. A DTP distribution is available that includes an embedded database server (Windows and Linux only), but you can also connect DTP to a MySQL or Oracle database server. The embedded database distribution automatically installs and configures the server so you can immediately begin using DTP after installation, but you can still connect to an external database server (see [Switching to an External Database](#)). This chapter covers MySQL installations. Contact your Oracle administration for details on installing and configuring Oracle database servers.

## Database Requirements

MySQL 5.5.x to 5.7. MySQL 5.6.25 is highly recommended to ensure optimal performance.

Beginning with MySQL 5.6, the default `binlog_format` is `STATEMENT`, which may cause issues when integrating with external bug tracking systems (BTS), such as Bugzilla or JIRA. To ensure that the BPEL process starts and that the 'Update BTS' function is available, set `binlog_format` to `ROW` or `MIXED`.

A known issue in versions of MySQL prior to 5.6.25 may result in problems when databases hosting large amounts of data are queried (see <https://bugs.mysql.com/bug.php?id=76996>). This issue can cause DTP to wait indefinitely for a query result because no error will be thrown. If you are unable to upgrade to or install MySQL 5.6.25, you can edit the `my.cnf` or `my.ini` MySQL configuration file to avoid this (see <https://dev.mysql.com/doc/refman/5.7/en/option-files.html> to locate this file in your installation):

1. Stop DTP server, Data Collector, and MySQL server
2. Open the `my.ini` or `my.cnf` file in an editor and add the following line under the `[mysqld]` section: `read_rnd_buffer_size=1048576`.
3. Save the file and start MySQL server
4. Start DTP server and Data Collector

If data continuously loads in an explorer view, increase the value of the `read_rnd_buffer_size` variable.

DTP does not ship with the MySQL and Oracle JDBC drivers necessary to set up a database connection. Download the drivers and place them in the `DTP_HOME/lib/thirdparty` directory after completing the installation.

## Installing MySQL Database Server for Windows

Refer to the MySQL documentation for instructions on how to install and configure MySQL: <http://dev.mysql.com/doc/refman/5.6/en/index.html>.

### Additional Notes

- MySQL should be installed as a service to be launched automatically upon system startup.
- Do not set for an international character set.
- Check the available disk space in the location where Report Center data will be located. On Windows, the location is usually: `C:\Program Files\MySQL\MySQL Server [version]\data\`
- Assign and remember a password for the root user. You can set the password from the command line:

```
mysqladmin -u root password 'new-password'
```

- Check your MySQL database for corruption on a regular basis to ensure data integrity using the following command (Windows):

```
mysqlcheck -u grs -pgrs GRS
```

## Installing MySQL Database Server for Linux

Many Linux distributions come with MySQL pre-installed. Contact your Linux administrator for details on your Linux system. If you need to install MySQL, consult the MySQL documentation for installation instructions specific to your Linux distribution: <https://dev.mysql.com/doc/refman/5.5/en/linux-installation-native.html>

## Preparing the Database Table Structure

Development Testing Platform uses two databases, GRS and DTP, to store data and retrieve data. You can create the database structures manually when you log into DTP for the first time. You also can run the database creation script located in the `DTP_HOME/bin/` directory to quickly set up the GRS and DTP databases.

Run the script after the initial DTP installation but before the services are started. See [Stopping DTP Services](#) for instructions on how to stop services if they are already running.

## Running the Database Creation Script on Windows

The database creation script packaged in the Windows installer will only create new database schemas and schema objects. Administrative privileges is required to execute this script.

1. Open the DTP\_HOME/bin directory in Windows Explorer.
2. Right-click databasesetup.bat and choose **Run as administrator** from the contextual menu.  
The script checks for previously configured database connection settings for the GRS and DTP databases. Provide the database connection settings for the GRS/DTP databases if prompted. Default values for prompts will be shown in brackets if available.
3. Start up the DTP services after the script completes successfully. See [Starting DTP Services](#).

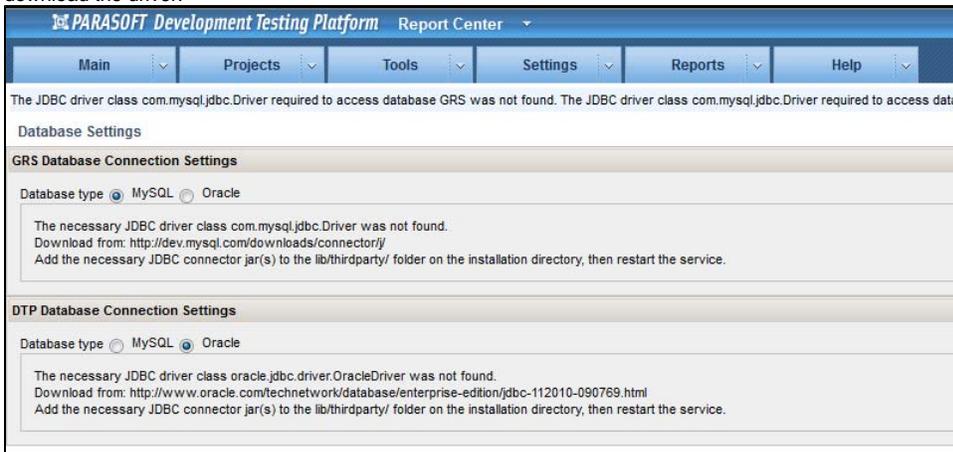
## Running the Database Creation Script on Linux

1. Open the DTP\_HOME/bin directory and run the dtconsole.sh script.
2. Choose **Option 4 - Database configuration** when the console opens.
3. The script checks for previously configured database connection settings for the GRS and DTP databases. If a database has not been previously configured, then you will be prompted to either create a new database schema, populate an existing schema with schema objects, use a previously configured database schema, or perform no actions.
4. Provide the database connection settings parameters when prompted. Default values for prompts will be shown in brackets if available.
5. Start up the DTP services after the script completes successfully. See [Starting DTP Services](#).

## Connecting to the Database

After the database creation scripts have run successfully, you can set the authentication settings for connecting to the database through the web UI.

1. After logging in and the license code is accepted, Parasoft checks the database structure and redirects you to the Database Settings page if applicable. If you have not met the JDBC driver requirement (see [Database Driver Requirements](#)), you will receive a message prompting you to download the driver.



- When the JDBC driver is installed, you can make configure your database connections or create new databases

The screenshot shows the 'Database Settings' page in the PARASOFT Development Testing Platform Report Center. It is divided into two sections: 'GRS Database Connection Settings' and 'DTP Database Connection Settings'. Both sections have 'Database type' set to 'MySQL' and 'JDBC url definition mode' set to 'Simple'. The GRS section has 'Host' as 'localhost', 'Port' as '3306', and 'DB name' as 'GRS'. The DTP section has 'Host' as 'localhost', 'Port' as '3306', and 'DB name' as 'DTP'. Both sections have 'User' and 'Password' fields, with 'User' set to 'grs' for GRS and 'dtp' for DTP. Each section has 'Check', 'Save', and 'Create New' buttons.

- Click **Create New** to begin creating database tables (requires root access to the database server).
- Restart DTP Server and Data Collector services. See [Starting DTP Services](#).

## Switching to an External Database

You can connect the DTP with embedded database server distribution to another database by switching the database connection type in the database connection settings page.

- Click the **administration** link in Report Center and choose **Settings> Database**.
- Enable the **External Database Connection Type** to switch to the standard DTP database configuration view.

The screenshot shows the 'Database Settings' page in the PARASOFT Development Testing Platform Report Center. The 'Database Connection Type' is set to 'External'. The 'Embedded Database Connection' section is visible, containing 'Check' and 'Save' buttons. A status message at the top indicates 'Connected successfully to the GRS database. Connected successfully to the DTP database.'

- Following the instructions for preparing and configuring the external database as described in [Connecting to the Database](#).