

<https://github.com/pivotal-cf/PivotalMySQLWeb>

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PivotalMySQLWeb

PivotalMySQLWeb is a free Pivotal open source project, intended to handle the administration of a Pivotal MySQL Service Instance over the Web. PivotalMySQLWeb supports a wide range of operations on a Pivotal MySQL Service Instance such as managing tables, views, indexes which can all be performed via the user interface, while you still have the ability to directly execute any number of SQL statements.

It includes the following capabilities:

- Multiple Command SQL worksheet for DDL and DML
- Run Explain Plan across SQL Statements
- View/Run DDL command against Tables/Views/Indexes/Constraints
- Command History
- Auto Bind to Pivotal MySQL Services bound to the Application within Pivotal Cloud Foundry (PCF)
- Manage JDBC Connections
- Load SQL File into SQL Worksheet from Local File System
- SQL Worksheet with syntax highlighting support
- HTTP GET request to auto login without a login form
- Export SQL query results in JSON or CSV formats

Pivotal MySQL*Web - Welcome

Success! Connected to MySQL using P-MYSQL bound Instance

Home | Tables(5) | Views(0) | Indexes(5) | Constraints(5) | SQL Worksheet | View Connections | Health Endpoints | Information

The p-mysql product delivers a fully managed, "Database as a Service" to Cloud Foundry users. When installed, the tile deploys and maintains a single or three-node cluster running a recent release of MariaDB, SQL Proxies for super-fast failover, and Service Brokers for Cloud Foundry integration

— by Pivotal

Current Preferences | Preferences

Size of SQL History List: 500

Records to Display in Worksheet: 500

About Pivotal MySQL*Web

Schema Objects

- Tables(5)
- Views(0)
- Indexes(5)
- Constraints(5)

Select Theme

- Default | Sandstone | Cyborg | Spacelab

Current Databases

SCHEMA_NAME	DEFAULT_CHARACTER_SET_NAME	DEFAULT_COLLATION_NAME
cf_631efb34_6372_47ce_8ade_35774bcd0ef	utf8	utf8_unicode_ci
information_schema	utf8	utf8_general_ci

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Run stand alone outside of PCF

```
git clone https://github.com/pivotal-cf/PivotalMySQLWeb.git
cd PivotalMySQLWeb
```

```
mvn -DskipTests=true package
```

```
./mvnw -DskipTests=true package
./mvnw spring-boot:run
```

Note: If you opt-in to running tests, you must have Docker installed. We employ the [MySQL container](#) from [testcontainers.org](#) library.

```
./mvnw spring-boot:run
```

• • •

```

      .  _ _ _ _ _      _ _ _ _ _      _ _ _ _ _      _ _ _ _ _
     / \ / \ _ _ _ _ _      _ _ _ _ _      _ _ _ _ _      _ _ _ _ _
    ( ( ) \ _ _ _ _ _      _ _ _ _ _      _ _ _ _ _      _ _ _ _ _
     \ \ / \ _ _ _ _ _      _ _ _ _ _      _ _ _ _ _      _ _ _ _ _
      | _ _ _ _ _      _ _ _ _ _      _ _ _ _ _      _ _ _ _ _
      | _ _ _ _ _      _ _ _ _ _      _ _ _ _ _      _ _ _ _ _
=====|=====|=====|=====|=====|=====|=====|=====|
:: Spring Boot ::                (v2.1.0.RELEASE)

```

• • •

```
2016-07-03 17:13:44.164 INFO 19664 --- [main]
.m.m.a.ExceptionHandlerExceptionHandler : Detected @ExceptionHandler methods in
repositoryRestExceptionHandler
2016-07-03 17:13:44.225 INFO 19664 --- [main]
o.s.j.e.a.AnnotationMBeanExporter : Registering beans for JMX exposure on
startup
2016-07-03 17:13:44.291 INFO 19664 --- [main]
s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat started on port(s): 8080 (http)
2016-07-03 17:13:44.294 INFO 19664 --- [main]
c.p.p.m.PivotalMySQLWebApplication : Started PivotalMySQLWebApplication in
3.4 seconds (JVM running for 3.761)
```

Access and connect to your MySQL instance using the default username/password as follows:

Default username = admin Default password = cfmysqlweb

<http://localhost:8080/>

Note: When connecting to a MySQL database instance ensure you JDBC URL includes a database name as shown below which e.g., targets the "employees" database:

```
jdbc:mysql://localhost:3306/employees
```

Deploy to Pivotal Cloud Foundry

To deploy to Pivotal Cloud Foundry it's best to bind the application to a Pivotal MySQL service instance so it automatically connects to the MySQL instance as shown in the sample manifest below. If you don't bind to a MySQL instance it will simply ask you to login to a MySQL instance itself.

```
applications:
- name: pivotal-mysqlweb
  memory: 1024M
  instances: 1
  random-route: true
  path: ./target/PivotalMySQLWeb-1.0.0-SNAPSHOT.jar
  services:
  - some-mysql-database-instance
  env:
    JAVA_OPTS: -Djava.security.egd=file:///dev/urandom
```

Push to PCF using:

```
cf push -f manifest.yml
```

Screen Shots

HomeLogoutMenuSchema Objects[User: PAS]

Pivotal MySQL*Web - Tables

HomeTables[12]Views[2]Indexes[16]Constraints[13]SQL WorksheetView Connections

Table NameemployeesSearch

Success! Found 12 Table(s)

Show10entriesSearch:

	Catalog	Schema	Name	Type	Action
	def	employees	current_dept_emp	VIEW	
	def	employees	departments	BASE TABLE	
	def	employees	dept_emp	BASE TABLE	
	def	employees	dept_emp_latest_date	VIEW	
	def	employees	dept_manager	BASE TABLE	
	def	employees	employees	BASE TABLE	
	def	employees	Persons	BASE TABLE	
	def	employees	salaries	BASE TABLE	
	def	employees	titles	BASE TABLE	
	def	employees	uuu	BASE TABLE	

Showing 1 to 10 of 12 entries

Previous12Next

Check All / Uncheck All

With selected:

HomeLogoutMenuSchema Objects[User: PAS]

Pivotal MySQL*Web - SQL Worksheet

HomeTables[12]Views[2]Indexes[16]Constraints[13]SQL WorksheetView Connections

BrowsersNo file connectionsLoad SQL File

Query Count:NoElapsed Time:NoExplain Plan:NoCommitRollbackHistory

Run SQL query, DML, or DDL into the query window below

1select * from employees limit 50;

ExecuteReset

Pivotal MySQL*Web - select * from employees limit 50; Success! Query completed successfully

Show10entriesSearch:

emp_no	birth_date	first_name	last_name	gender	hire_date
10001	1953-09-02	Georgi	Farslo	M	1986-06-26
10002	1964-06-02	Bernald	Simnel	F	1985-11-21
10003	1959-12-03	Piero	Barnford	M	1986-08-28
10004	1954-05-01	Christian	Koblick	M	1989-12-01
10005	1955-01-21	Kylechi	Mullins	M	1989-09-12
10006	1953-04-20	Annelie	Proving	F	1989-04-02
10007	1957-05-23	Tovetan	Zelinski	F	1989-02-10
10008	1958-02-19	Samiya	Kaloufi	M	1994-09-15
10009	1952-04-19	Sumant	Pisc	F	1985-02-18
10010	1963-06-01	Duangluew	Pivetsau	F	1989-08-24

Showing 1 to 10 of 50 entries

Previous12345Next

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The screenshot shows the Pivotal MySQL*Web - SQL*Worksheet interface. The top navigation bar includes links for Home, Logout, Menu, Schema Objects, and a user profile (User: PAS). The main header displays the application name and a sub-header with navigation tabs: Home, Tables[12], Views[2], Indexes[16], Constraints[13], SQL Worksheet (active), and View Connections. Below the header, there's a section for file uploads with a 'Browse...' button and a 'Load SQL File' button. A query execution control area includes 'Query Count' (set to No), 'Elapsed Time' (set to No), 'Explain Plan' (set to No), and buttons for Commit, Rollback, and History. A message prompt says 'Run SQL query, DML or DDL into the query window below'. The query window contains the SQL statement: `1 select * from employees limit 5;`. Below the query window, there are 'Execute' and 'Reset' buttons. A green success message box states: 'Pivotal MySQL*Web> select * from employees limit 5; Success! Query completed successfully'. Below this, a table displays the results of the query, showing 5 entries with columns: emp_no, birth_date, first_name, last_name, gender, and hire_date.

emp_no	birth_date	first_name	last_name	gender	hire_date
10001	1953-09-02	Georgi	Facello	M	1986-06-26
10002	1964-06-02	Bezael	Simmel	F	1985-11-21
10003	1959-12-03	Parto	Bamford	M	1986-08-28
10004	1954-05-01	Christian	Koblick	M	1986-12-01

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25 DROP DATABASE IF EXISTS employees;
26 CREATE DATABASE IF NOT EXISTS employees;
27 USE employees;
28
29 SELECT 'CREATING DATABASE STRUCTURE' as 'INFO';
30
31 DROP TABLE IF EXISTS dept_emp,
32 dept_manager,
33 titles,
34 salaries,
35 employees,
36 departments;
37
38 /*150503 set default storage engine = InnoDB */
39 /*150503 select CONCAT('storage engine: ', @@default_storage_engine) as INFO */
40
41 CREATE TABLE employees (`. Below the query window, there are 'Execute' and 'Reset' buttons. A green success message box states: 'Pivotal MySQL*Web> select * from employees limit 5; Success! Query completed successfully'. Below this, a table displays the results of the query, showing 5 entries with columns: emp_no, birth_date, first_name, last_name, gender, and hire_date.

SQL Worksheet - Max Records to Display

You can control the number of records to display in the "SQL Worksheet" using the "Preferences" page. To do that follow these steps:

1. On the top menu bar select "Menu -> Preferences"
2. Set the value for "Max Records in Worksheet" to the value you require it should be more than 30 by default unless it was changed prior to deployment
3. Click "Update Preferences"

Alternatively you can also set that at deployment to use a default value by editing `main/resources/preferences.properties` and setting the property below:

```
maxRecordsinSQLQueryWindow=500
```

Security - HTTP Basic Authentication

By default this application is using HTTP Basic Authentication to protect every end point. The username/password is set in main/resources/application-cloud.yml file and can be altered here prior to repacking/deploying.

Default username = **admin** Default password = **cfmysqlweb**

```
spring:
  security:
    user:
      name: admin
      password: cfmysqlweb
```

Note: When running outside of Cloud Foundry Security is disabled as per this code

```
@Profile("!cloud")
@Configuration
static class ApplicationSecurity extends WebSecurityConfigurerAdapter {

    @Override
    public void configure(WebSecurity web) throws Exception {
        web
            .ignoring()
            .antMatchers("/**");
    }
}
```

Stored Procedures/Functions

PivotalMySQLWeb does not support the use of the DELIMITER statement. DELIMITER statement is for clients which do not have a way to have a terminated string, such as MySQL command line client. As a result the use of DELIMITER statement is not needed in JDBC and hence not supported in this tool. So to create a stored procedure or function you can do so using a single stored procedure or function. This tool does not support stored procedures or functions as multiple SQL statements so if you wish to create stored procedures you would create one at a time in the SQLWorksheet and some examples of what they look like are as follows

Note: DELIMITER is not required and/or supported

```
CREATE PROCEDURE spEmployee(empno decimal)
BEGIN
    SELECT
        Emp.empno,
        Emp.ename
    FROM
        Emp emp
    WHERE
        Emp.empno = empno;
END;
```

```
CREATE PROCEDURE spEmployee1(empno decimal)
BEGIN
END;

CREATE FUNCTION hello (s CHAR(20)) RETURNS CHAR(50) DETERMINISTIC
BEGIN
RETURN CONCAT('Hello, ',s,'!');
END;
```

Automatic Connection to Bound MySQL instance

Note: If you have multiple bound MySQL service instances then....

PivotalMySQLWeb will search through all the VCAP_SERVICES and connect to the first MySQL Database Service instance it finds in this order

```
clearDB
p-mysql (v1 instances)
p.mysql (v2 instances)
GCP Cloud SQL service broker instance
mariadbent
aws_aurora
```

If you have bound your application to multiple MySQL service instances then you can switch to the other Instances using the menu option "Instances" on the navigation bar as shown below

The screenshot shows the PivotalMySQLWeb web application interface. At the top, there is a navigation bar with links for Home, Logout, Menu, Schema Objects, Themes, and Instances. The 'Instances' dropdown menu is open, showing three options: 'Switch to pas-mysql-cleardb', 'Switch to pas-dedicated-mysql', and 'Switch to pas-mysql'. Below the navigation bar, the main content area displays a welcome message and a success message: 'Success! Connected to MySQL using ad_1c6a2f4d6cddb85 database'. The interface includes a sidebar with navigation links for Home, Tables[0], Views[0], Indexes[0], Constraints[0], SQL Worksheet, Connections, Endpoints, Information, and Variables. The main content area is divided into sections for Schema Objects, Select Theme, and Current Databases. The 'Current Databases' section contains a table with columns for database, charset, and collation.

database	charset	collation
information_schema	utf8	utf8_general_ci
cf_metadata	utf8	utf8_general_ci
mysql	utf8	utf8_general_ci
performance_schema	utf8	utf8_general_ci
service_instance_db	utf8	utf8_general_ci
sys	utf8	utf8_general_ci

PivotalMySQLWeb

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