

# **PAT User Guide**

## **The Definitive Edition**

**Tom Barber**  
**Will Selwood**  
**Michael Green**

---

# **PAT User Guide: The Definitive Edition**

by Tom Barber, Will Selwood, and Michael Green

Documentation in progress

Copyright © 2010 Analytical Labs

This document can be freely redistributed according to the terms of the GNU General Public License v2.

---

---

# Table of Contents

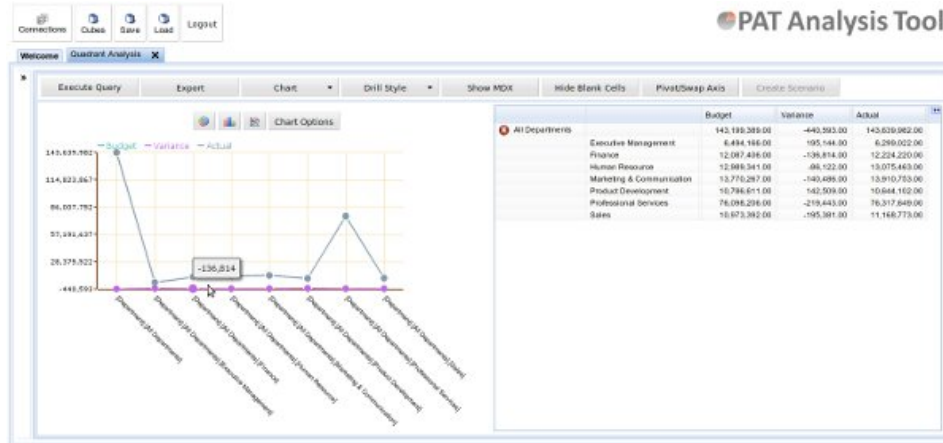
- 1. Introduction ..... 1
  - 1.1. About Analytical Labs ..... 1
  - 1.2. About PAT ..... 1
- 2. Requirements ..... 2
  - 2.1. Installation ..... 2
  - 2.2. PCI Install ..... 2
  - 2.3. WAR File ..... 2
  - 2.4. Pentaho BI Server Plugin ..... 2
  - 2.5. Changing the Hibernate database location ..... 3
    - 2.5.1. Postgresql, MySQL, Oracle ..... 3
- 3. Using PAT ..... 6
  - 3.1. Using PAT ..... 6
    - 3.1.1. Configuring Data Sources ..... 6
    - 3.1.2. Creating your first query ..... 8
    - 3.1.3. Editing a query ..... 8
    - 3.1.4. Drilling ..... 8
    - 3.1.5. Charts ..... 8
    - 3.1.6. Saving and Loading ..... 8
    - 3.1.7. Visualization ..... 8
- 4. Contact Us ..... 9
  - 4.1. Email ..... 9
- 5. References ..... 10
  - 5.1. Online ..... 10

---

# Chapter 1. Introduction

## About Analytical Labs

Analytical Labs [<http://www.analytical-labs.com>] is an organization started by Tom Barber and Paul Stoellberger with an aim to provide a complete Open Source analytical platform, our core product currently is the PAT Analysis Tool, although this will shortly be split up into various subprojects, affording us a greater deal of flexibility and power.



## About PAT

PAT [<http://code.google.com/p/pentahoanalysistool/>] is an Open Source analytical processing tool aimed at business users. We try to make finding the the data you require and visualizing it how you want as easy and straightforward as possible.

---

# Chapter 2. Requirements

## Installation

To install PAT you first need to download one of the available packages. You will currently find the latest development builds at our Hudson CI Server [<http://ci.analytical-labs.com>] and the latest stable builds at our download site [<http://www.analytical-labs.com/downloads>].

## PCI Install

Our PCI packages are designed to be downloaded and run. They include a sample hypersonic database, and various schema for you to test PAT with.

Installing is as simple as Download, Extract, run start-patserver.bat / start-patserver.sh and access it via <http://localhost:8080/pat/>

## WAR File

Analytical Labs also supplies a ready to run WAR file to install just drop the WAR file into your favourite Java Webserver and access it via e.g: <http://localhost:8080/pat-0.x/> , where x is the version number

PAT will use per default an in-memory HSQLDB for persistence, so if you restart its all gone.

You can change the settings in `tomcat/webapps/pat-0.x/WEB-INF/application.properties` and the according Hibernate dialect in `tomcat/webapps/pat-0.x/WEB-INF/classes/pat-hibernate.cfg.xml`

## Pentaho BI Server Plugin

Need brief explanation of PAT plugging here...

Note: Currently, we rely on some new plugin functionality that is only provided in the TRUNK builds of the biserver. For your convenience we have bundled a working version with the plugin.

### 1. Install the plugin

- Download the latest plugin bundle from <http://ci.analytical-labs.com/job/pat-plugin/>
- Stop the Pentaho server
- Extract the zip file contents to your `\pentaho\biserver-ce\pentaho-solutions\system` folder
- Start the Pentaho server

### 2. Verify Installation

- Open Pentaho in your browser (usually <http://servername/pentaho/home>)
- Verify new icon - "New PAT Analysis" -



3. Select New PAT Analysis and configure data sources as normal (see: Configuring Data Sources)

## Changing the Hibernate database location

If you are using PAT in a standalone mode, currently we have an internal hibernate instance that loses its settings when you restart the server. If you want a persistent setup then you need to move hibernate to an alternative location.

### Postgresql, MySQL, Oracle

1. Modify the PAT properties file

- If using the standalone server, this file is `pat.properties` located in: `pat-server/tomcat/webapps/pat/WEB-INF/`

- If using the Pentaho plugin, this file is `pat-plugin.properties` located in: `\pentaho\biserver-ce\pentaho-solutions\system\pat-plugin\resources` folder

- If deployed via the WAR file download, locate the `/pat/WEB-INF` folder within your Tomcat installation's webapp folder

- a. Change the line containing `hibernate.dialect=org.hibernate.dialect.HSQLDialect` to your new your new Hibernate database system

- For PostgreSQL:

```
org.hibernate.dialect.PostgreSQLDialect
```

For example: `hibernate.dialect=org.hibernate.dialect.PostgresqlDialect`

- MySQL:

```
org.hibernate.dialect.MySQLDialect
```

- Oracle:

```
org.hibernate.dialect.OracleDialect
```

- Others can be found here: <http://docs.jboss.org/hibernate/core/3.3/reference/en/html/session-configuration.html#configuration-optional-dialects>

- b. Using the `#` symbol, comment out the `HSQLDB` section at the top of the file

c. Identify the desired database system for your persistence database within the properties file

d. Uncomment the 4 lines for the desired RDBMS

e. Modify the JDBC settings for your environment:

i. PostgreSQL

- Note: This document was authored using PostgreSQL 8.4

- Note: The Postgre driver is packaged with the WAR deployment (postgresql-8.4-701.jdbc4.jar)

A. Create hibernate database in Postgres

- Use PGAdmin's wizard, or,
- Using SQL console, execute "create database hibernate;" where hibernate is the database name

B. Modify the section PostgreSQL Persistence Database Sample for your environment

- jdbc.driver=org.postgresql.Driver
- jdbc.url=jdbc:postgresql://localhost:5432/hibernate
- jdbc.username=postgres
- jdbc.password=password

ii. MySQL

- Note: The MySQL driver is packaged with the WAR deployment (mysql-connector-java-5.1.6.jar)

A. Create hibernate database in MySQL

B. Modify the section MySQL Persistence Database Sample for your environment:

- jdbc.driver=com.mysql.jdbc.Driver
- jdbc.url=jdbc:mysql://localhost:3306/pat
- jdbc.username=root
- jdbc.password=password

iii. Oracle (thin client)

A. Create Oracle database

B. Download and extract the Oracle Instant Client (<http://www.oracle.com/technology/tech/oci/instantclient/>)

C. From the installation location of Instant Client, copy the ojdbc6.jar (or v5, depending on your Oracle version) file to the /pat/WEB-INF/lib folder

D. Modify section Oracle Persistence Database Sample for your environment:

E. Modify the section Oracle Persistence Database Sample for your environment:

- jdbc.driver=oracle.jdbc.OracleDriver
- jdbc.url=jdbc:oracle:thin:@ip\_address:1521:orcl
- jdbc.username=pat
- jdbc.password=pat

f. Save and close the pat.properties file

2. (Optional) Stop the hsql database server from starting when running start-patserver.bat/.sh

a. Open the start-patserver file for your operating system

b. Remove the line “start start\_hypersonic.bat”

c. Save and close the file

3. Start up your pat server as normal with the file edited in step 3

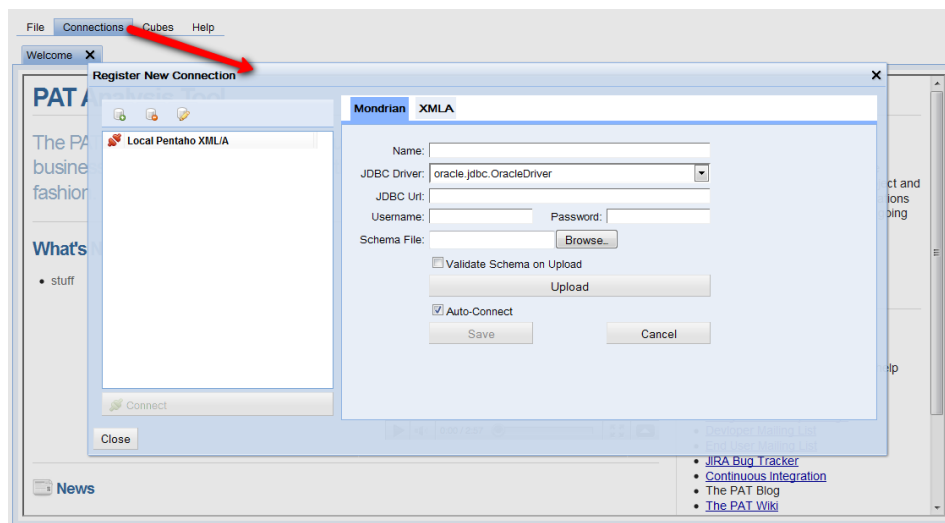
---

# Chapter 3. Using PAT

## Using PAT

### Configuring Data Sources

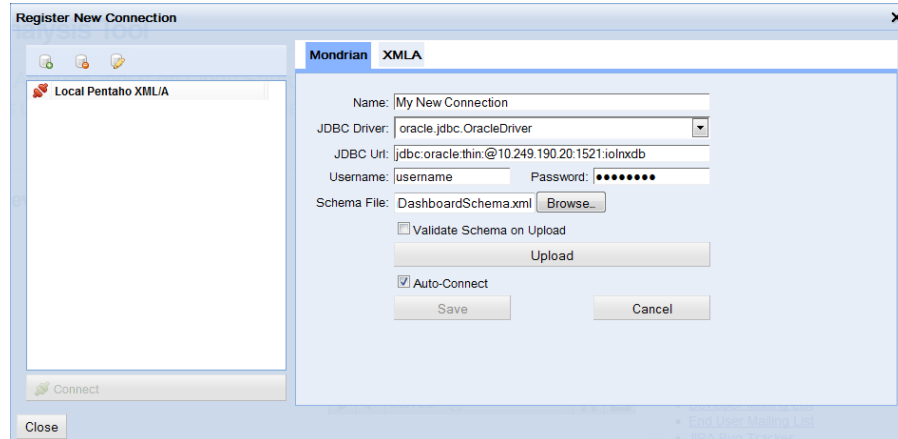
A Connection must be defined prior to accessing data. Connections -> New Connection will display the Register New Connection window (shown below).



#### 1. Mondrian Connection

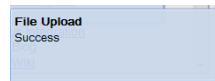
a. Required: within the Register New Connection window, populate:

- Name - name of connection.
- JDBC Driver - drop-down containing all available JDBC drivers. To add a new driver, copy the JDBC jar to the yourwebserver/pat/WEB-INF/lib folder.
- JDBC URL - standard JDBC connection string.
- Username/Password - authentication to your database.
- Schema File - Mondrian Schema file to be used for this connection



Select Upload to upload your schema file to the server. If the schema file is valid and is uploaded, a message box in the lower-right corner will appear momentarily.

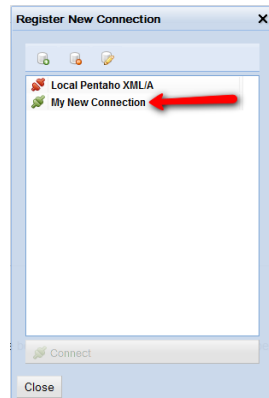
The Save button will be enabled once a successful schema file is uploaded.



Select Save.

A window will be displayed showing all connections. The new connection should be listed. If Auto-Connect was checked, and the connection details are valid, the icon for the connection should be "connected" and green.

Select Close. The connection is now ready for use.

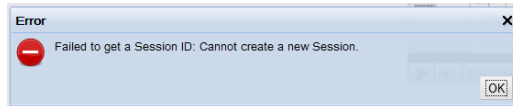


b. Optional connection attributes

- Validate Schema on Upload
- Role
- Auto-Connect

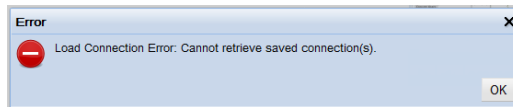
Note: If Auto-Connect is enabled for a connection and the connection is unavailable, errors will be displayed after login to the application:

Failed to get a Session ID: Cannot create a new Session.



Additionally, when selecting the Connections menu-drop-down, another error will be displayed preventing the Connections window from being displayed:

Load Connection Error: Cannot retrieve saved connection(s).



To prevent this from occurring, do not select the Auto-Connect option for connections that are not guaranteed to be online (development, local databases, etc)

2. XMLA Connection
  - a. XMLA needs to be authored.

## Creating your first query

## Editing a query

## Drilling

## Charts

## Saving and Loading

## Visualization

---

# Chapter 4. Contact Us

## Email

You can contact the PAT team at [info@analytical-labs.com](mailto:info@analytical-labs.com) [mailto:info@analytical-labs.com]. Where we will be happy to answer any questions you may have. You can also join the PAT User [<http://groups.google.com/group/pentahoanalysistool-users>] or PAT Developers [<http://groups.google.com/group/pentahoanalysistool-dev>] mailing lists.

---

# Chapter 5. References

## Online