

TGAC Browser - Installation Guide v0.2.0

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Getting Started

Prerequisite

- TGAC Browser requires running Apache Tomcat, Ensembl core MySQL database (i.e. [Example](#)), TGAC Browser package [GitHub](#) and properties file (/storage/browser/tgac-browser/browser.properties) [browser.properties](#).
- Maven 2.0 or above
- Java 1.7

Setting up

- You will need to install MySQL v5 or greater. You will then need the latest TGAC Browser demo database dump. This is available from our repository here: [tgac_browser_demo.sql](#)
- Log in to your local MySQL install, and create a database called 'tgac_browser_demo':

```
CREATE DATABASE tgac_browser_demo'  
  
USE tgac_browser_demo;
```

- Then populate the database with the two dumps by running the following commands at a shell prompt:

```
mysql -u <username> -p -D tgac_browser_demo < tgac_browser_demo.sql
```

- Log in to your local MySQL install, and create a database called 'tgac_browser_blast_manager':

```
CREATE DATABASE tgac_browser_blast_manager '  
  
USE tgac_browser_blast_manager;
```

- This is available from our repository here: [tgac_browser_blast_manager.sql](#) Then populate the database with the two dumps by running the following commands at a shell prompt:

```
mysql -u <username> -p -D tgac_browser_blast_manager < tgac_browser_blast_manager.sql
```

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Installing and running TGAC Browser

- You will need Maven 2.2.1 to build TGAC Browser (*NOTE Not Maven 3!*). Once you have grabbed the code and installed Maven, in the root of the project (you should see a pom.xml file and module directories like browser-web and core etc) call:

```
mvn clean install -Dprofile=<profile-name> -Dprofile-path=<property-file path>
```

- It will generate a tgac-browser.war file copy it to Apache Tomcat webapps and start the Tomcat server.
- TGAC Browser should be running at `http://<server-path>/tgac-browser`

Configuring TGAC Browser

Properties file

- TGAC Browser property file contains many features those can be changed in browser straight away
- **Standard features**
 1. **browser.fasta** = true/false
 - turns on and off fasta features it also affects BLAST
 2. **browser.title** = Demo
 - you can set the Web Page Title from here
 3. **browser.header** = TGAC Browser Demo
 - you can set the Web Page Header from here
 4. **browser.urlpath** = tgac-browser
 - you can set the Web Page URL path from here
 - i.e. tgac-browser-new will be `http://<server-path>/tgac-browser-new`
 5. **browser.defaultRef** = scaffold1.1-size1749886
 - you can set the default reference from database when browser starts
- **BLAST configurations**
 1. **browser.blastdblink** = CHO
 - sets link to TGAC Browser instance if you have more than one it should refer to **browser.urlpath** of other instance that you want to linked to
 - more than one BLAST dbs need corelated links seaprated by comma (,)
 2. **browser.blastdblocation** = /storage/browser/TGAC_CHO_v1.2_COMPLETE.fa
 - sets location for the database must be accessible to your computer and user
 - more than one BLAST dbs can be put seaprated by comma (,)
 3. **browser.blastType** = local/NCBI/server
 - select a blast type you want to use
 - local needs path to the BLAST+ binary file
 - server doesn't work at the moment but *browser-process* pipeline will support it
 4. **browser.blastLocation** = /opt/blast+
 - path for BLAST+ binary files
- **Link**
 1. **browser.linkLocation** = <link-to-url>
 - set-up a link to external web-database from genes, will use same name
- **Database config**
 1. **db.driver**:com.mysql.jdbc.Driver
 - jdbc driver - Don't change
 2. **db.url**:jdbc:mysql://kathmandu.nbi.bbsrc.ac.uk:3306/bianx_cho_ensembl61_browser
 - Mysql server location followed by database name
 - localhost can be used
 3. **db.username**:tgac
 - MySQL database user name
 4. **db.password**: pwd
 - MySQL database password
- **BAST Database config**
 1. **blast_db.driver**:com.mysql.jdbc.Driver
 - jdbc driver - Don't change
 2. **blast_db.url**:jdbc:mysql://kathmandu.nbi.bbsrc.ac.uk:3306/bianx_cho_ensembl61_browser
 - Mysql server location followed by database name
 - localhost can be used
 3. **blast_db.username**:tgacbrowser
 - MySQL database user name
 4. **blast_db.password**: pwd
 - MySQL database password

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- **Tracks from files**

1. **browser.trackfiles** = /storage/browser/temp.sam, storage/browser/temp2.sam
 - specify location for .sam/.bam/.wig file

- **Tracks from files**

1. Now tracks can be added from ensembl database

source = file and file path = location of file

web_data in analysis_description

```
{
  "colour": "blue",
  "source": "file",
  "filepath": "/storage/browser/data/LIB1777_nonrrna_accepted_hits_sort_Reverse_norm_neg.bw",
  "group-name": LIB1777,
}
```