BioMAJ Watcher
User Guide

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1. Application purpose

Biomaj Watcher (BW) has been designed to provide a quick overview of the banks managed by Biomaj and a simple access to the most common administration tasks.

2. Features

BW allows :
- A guest user to visualize/search/filter the online banks. It includes charts and detailed information about a bank.
- A logged-in user to :
  - Run updates
  - Visualize the status of the banks
  - Schedule updates with a cron-like syntax.
  - View the latest errors with access to the related log files
  - Create/modify banks properties

3. Setting up

Most of the configuration for BW is done via the installer, but you can manually modify it via the properties in, preferably:
`<tomcat dir>/conf/Catalina/<host>/BmajWatcher.xml`
Or:
`<tomcat dir>/webapps/BmajWatcher/WEB-INF/web.xml`

3.1. Configuration

3.1.1. Authentication
Two authentication methods are available: local authentication and LDAP authentication.

3.1.1.1. Local authentication
Local authentication is done against the Biomaj database. You need to have at least one user present in the database (should have be added during Biomaj installation).
To enable local authentication:
- Set the `USELOCAL` property to 1.

3.1.1.2. LDAP authentication
To enable LDAP authentication, modify the following parameters in the configuration file:
- `USELDAP` : Set to 1.
- `LDAPHOST` : LDAP server address
- `LDAPDN` : LDAP distinguished name
- `OPTFILTER` : Search filter

3.1.2. Administrator selection

The database holds no information about which user is the administrator. The admin selection is done in the configuration file by specifying what user (identified by his login) should be given the admin privileges.

- `ADMIN_LOGIN` parameter set to desired login.

3.1.3. Host selection

3.1.3.1. Local host

The default behavior for BW is to run the bank updates on the localhost. It means that you need both BW and BioMAJ to be installed on the same computer.
It is set with the parameter `EXECUTION` set to `local`.

3.1.3.2. Remote host

BW can run updates on any host that is reachable via SSH. However, there are some requirements to use this functionality:
- BW does not handle the update process. It only starts "`biomaj.sh`" in an external shell with the required parameters. So the remote servers must have BioMAJ installed.
- BW and BioMAJ access common data such as the banks properties files or the production directories. Therefore each host must share the same data and configuration. More precisely, the following directories have to be shared:
  - BIOMAJ_ROOT directory and its subdirectories (bin, log, tmp, conf…) defined in `$BIOMAJ_ROOT/general.conf`.
  - `data.dir` that contains the production directories

Remote execution is configured with the following parameters:
- EXECTION : set to `remote`
- SSH_AUTH_TYPE: `login` for login/password authentication or `key` for SSH key authentication.
- SSH_LOGIN: user login
- SSH_PASSWD: user password
- SSH_KEY_PATH: private key location for key authentication
- SSH_PASSPHRASE: passphrase for key authentication
- SSH_HOSTS: hosts list to connect to, separated by a comma.

If several hosts are specified:
- BW will connect to one that is available: BW considers a host to be available if an update is not already running on that host. If no hosts are available, BW will connect to the next one in its list.
- If a connection to a specific host fails, BW will try to connect to each remaining host until it succeeds.

3.1.4. Other parameters
- BIOMAJ_ROOT: Main Biomaj installation directory. Same as $BIOMAJ_ROOT
- JOBS_LOCATION: Absolute path of your jobs.xml/jobs.xsd files.
- MESSAGE_MAX: Maximum number of error messages to display in the "errors" tab of the web interface.

3.2. Start up

3.2.1. Embedded tomcat server

To run BW, start the application server that hosts it. If it is the tomcat server shipped with the biomaj-<version>.tar.gz archive, run `apache-tomcat-6.0.24/bin/startup.sh`. The application can be reached at `http://<server>:8080/BmajWatcher/`

3.2.2. Already installed server

If you already have a tomcat server running, copy the following files in your tomcat directory:
- <tomcat>/webapps/BmajWatcher.war
- <tomcat>/lib/biomaj.jar (symbolic link)
- <tomcat>conf/Catalina/<host>/BmajWatcher.xml
- <tomcat>conf/Catalina/<host>/BmajWatcher#logs.xml

4. Multitenancy

4.1. Customized view

BW supports multitenancy, meaning that each user sees a different content depending on his privileges on the banks. It has introduced user group and bank ownership notions.

What a user has access to is detailed in the following table:

	Private bank	Public bank
Belongs to user	Full access	Full access
Belongs to a group member	Full access	Full access
Belongs to another group	No access	Restricted access

The default access for a bank is defined in "global.properties" with the property:
`visibility.default=private|public`

Looking into the consequences of multitenancy on the interface:
- Scheduler: The user only sees the jobs of his group
- Errors: The user only sees the errors of his group
- Global statistics: Only statistics of the group. If not logged, the statistics are processed for the public banks.

4.2. Override general settings

Each user inherits "global.properties" but only the admin can modify it.
If you have specific settings, make sure you override the required properties. You have 2 ways to do so:
- Rewrite the properties in the bank file.
- Rewrite the properties in an intermediate file that you include in your bank file. This way it is reusable.

⚠ If you override **data.dir**, make sure that the user that runs tomcat has write access on the directory.

5. User interface