TopCAT Configuration

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ICAT Workshop

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Overview

- Configuration
  - Configuration files
  - Configuration script
- Facilities search panel
- Summary

Configuration

TopCAT tar

- TopCAT released as a tar that includes
  - A configuration script
  - Example configuration files
- The configuration script is `deploy.sh`
- Configuration files
  - `deploy.conf`
  - `icats.d/icat.list`
  - `icats.d/localhost.icat`
  - `topcat.properties`

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Example deploy.conf

```
# Database connection information
DB_TYPE=oracle
#DB_TYPE=mysql
DB_ROOT_PASSWORD=secret
DB_HOSTNAME=localhost
# Topcat database schema user name and password
TOPCAT_DB_USER_NAME=topcat
TOPCAT_DB_PASSWORD=mytopcatpasswd
# Topcat war file location
WAR_LOCATION=TopCAT.war
# Must contain "glassfish/domains"
GLASSFISH_HOME=/usr/glassfish3
# Port for glassfish admin calls (normally 4848)
GLASSFISH_ADMIN_PORT=4848
```

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deploy.conf

- The `DB_ROOT_PASSWORD` is ONLY required if you are using `deploy.sh` to create or delete the TopCAT schema/database and user

- If your db URL is **NOT** in the form `jdbc:dbType:thin:@//hostname:port/dbName` add a value for `databaseURL` in `deploy.conf`

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Configuration Script

- Currently the script is bash
- Being migrated to python
- Prerequisites
  - Glassfish => v3
  - A database
    - Oracle
    - MySQL

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Bash Configuration Script Options

- Script options
  - setupDB
  - deleteDB
  - create
  - delete
  - deploy
  - undeploy
  - setupICAT
  - deleteICAT

Bash Configuration Script Options

- `./deploy.sh setupDB`

  – Create the TopCAT database and the topcat user

- `./deploy.sh deleteDB`

  – Delete the TopCAT database and user

  – ONLY for use in a testing environment or if you want to do a clean installation

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Bash Configuration Script Options

- `./deploy.sh create`
  - Create the jdbc connection pool in Glassfish
- `./deploy.sh delete`
  - Delete the jdbc connection pool in Glassfish

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Bash Configuration Script Options

- `./deploy.sh deploy`

  – Deploy TopCAT within Glassfish

- `./deploy.sh undeploy`

  – Un-deploy TopCAT from Glassfish

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Bash Configuration Script Options

- `./deploy.sh setupICAT`

  – Add entries for ICATs to TopCAT

- `./deploy.sh deleteICAT`

  – Delete entries for ICATs from TopCAT

- These currently rely on two or more configuration files

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Configuring TopCAT to Point to ICAT(s)

- `icats.d/icat.list` contains a list of `.icat` files

- Each `.icat` file contains details about an ICAT

- To connect to additional ICATs create corresponding `.icat` files and add them to the list in `icat.list`

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Example localhost.icat

```
FACILITY_NAME=ICAT
ICAT_URL=http://localhost:8080/ICAT
  Service/ICAT?wsdl
ICAT_VERSION=v420
```
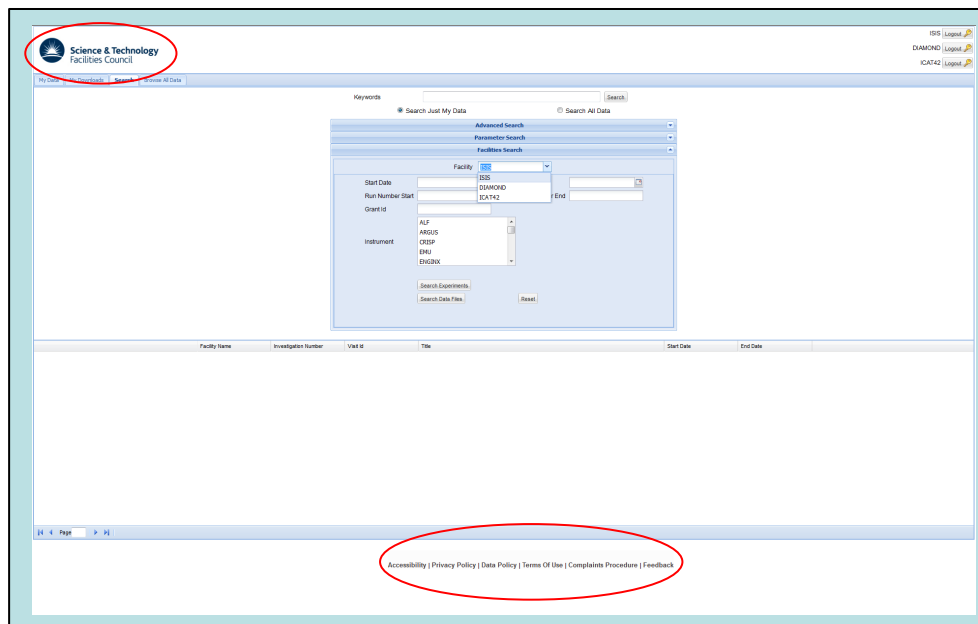
topcat.properties

- Allows you to change the logo

- Provides the values for the links at the bottom of the GUI page

topcat.properties

- Create a `topcat.properties` file from `topcat.properties.example`

- Update the contents of `topcat.properties` as required

- This file should be put in the directory `$GLASSFISH_HOME/glassfish/domains/domain1/lib/classes/`

Deployment Summary

- Create and customise
  - `topcat.properties`
  - `deploy.conf`
  - `icat.list`
  - `xxx.icat` files

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Deployment Summary

```
export ORACLE_HOME=/usr/lib/oracle/xe/app/oracle/product/10.2.0/server
export ORACLE_SID=XE
export PATH=$PATH:$ORACLE_HOME/bin

cp topcat.properties /usr/glassfish3/glassfish/domains/domain1/lib/classes/
cp /usr/lib/oracle/xe/app/oracle/product/10.2.0/server/jdbc/lib/ojdbc14.jar
    /usr/glassfish3/glassfish/domains/domain1/lib/
/usr/glassfish3/glassfish/bin/asadmin restart-domain domain1

./deploy.sh setupDB
./deploy.sh create
./deploy.sh deploy
./deploy.sh setupICAT

https://localhost:8080/TOPCATWeb.jsp
```

Facilities Search Panel

Search Panel

- Within the search panel there is a facilities search panel

- It is possible to write a custom search panel for a facility

- Current facilities search panels are:
  - Default
  - Diamond
  - ISIS

Facilities Search Panel

- Mapping between facility and panel is in the TopCAT database
- Selecting a facility from a drop down list displays the associated panel

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| My Data | My Downloads | **Search** | Browse All Data |

Keywords [   ] Search

◉ Search Just My Data   ○ Search All Data

Advanced Search	▼
Parameter Search	▼
Facilities Search	▲

Facility [ISIS ▼]

| ISIS |
| DIAMOND |
| ICAT42 |

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Search Experiments

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ISIS Facility Search Panel

My Data | My Downloads | Search | Browse All Data

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Investigation Search

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Facility Name	Investigation Number	Visit Id	Title	Start Date	End Date

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Diamond Facility Search Panel

Writing a Facilities Search Widget

- The relevant TopCAT package is
  `uk.ac.stfc.topcat.gwt.client.facility`

- Update `FacilityPluginFactory.class`

- Write a class that extends `FacilityPlugin`
  - For an example see `ISISFacilityPlugin.java`

- Write a search widget
  - For an example see `ISISSearchWidget.java`

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Summary

- `deploy.conf` and `deploy.sh` are used to configure and start TopCAT

- `icat.list`, `XXX.icat` and `deploy.sh` are used to configure TopCAT to use different ICAT instances

- `topcat.properties` is used to configure the GUI

- You can write you own facilities search plugin

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