TopCAT Configuration

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Overview

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

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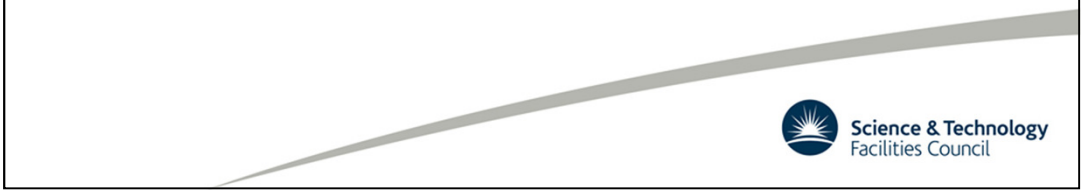
Configuration



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
```

Create a deploy.conf from the deploy.conf.example and customise it as required

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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There looks to be an issue in the deploy.sh for setting up the connection pool if you are using MySQL

Bash Configuration Script Options

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

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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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On some sites for the production system there maybe a DBAdmin who will create the database/schema for you and give you the contact string

Bash Configuration Script Options

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

Bash Configuration Script Options

- `./deploy.sh deploy`
  - Deploy TopCAT within Glassfish
- `./deploy.sh undeploy`
  - Un-deploy TopCAT from Glassfish

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Deploying TopCAT will result in the tables being created if they do not already exist

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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You must deploy TopCAT first (./deploy.sh deploy) in order to create the tables, as setupICAT writes to the tables.

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`

In the new Python version of the configuration script the `icat.list` file will no longer be used.

The presence of an `.icat` file in the `icats.d` directory will be sufficient for it to be used by the configuration script

In order to communicate with a secure ICAT server the TopCAT server must trust ICAT

openssl s_client -showcerts -connect HOST.DOMAIN:PORT</dev/null | sed -ne '/-BEGIN CERTIFICATE-/,/-END CERTIFICATE-/p' > $GLASSFISH_HOME/domains/domain1/config/facility.cert

keytool -import -noprompt -alias XXXX -file $GLASSFISH_HOME/domains/domain1/config/facility.cert -keystore $GLASSFISH_HOME/domains/domain1/config/cacerts.jks --storepass changeit

Example localhost.icat

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

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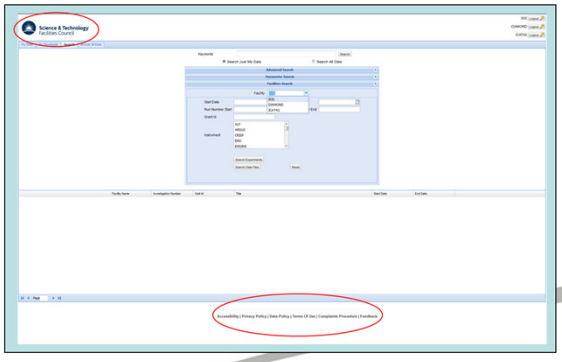
This is currently only giving you the option to provide the main fields. In the new script you will be able to provide all the configuration options.

topcat.properties

- Allows you to change the logo
- Provides the values for the links at the bottom of the GUI page



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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/`

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Deployment Summary

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

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
```

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This will be tidied up in the new release.

Setting up oracle

rpm -Uvh /root/topcat/oracle-xe-10.2.0.1-1.0.i386.rpm
/etc/init.d/oracle-xe configure
choose a port other than 8080

Setting up glassfish
./glassfish-3.1.2.2-unix.sh

Facilities Search Panel

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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

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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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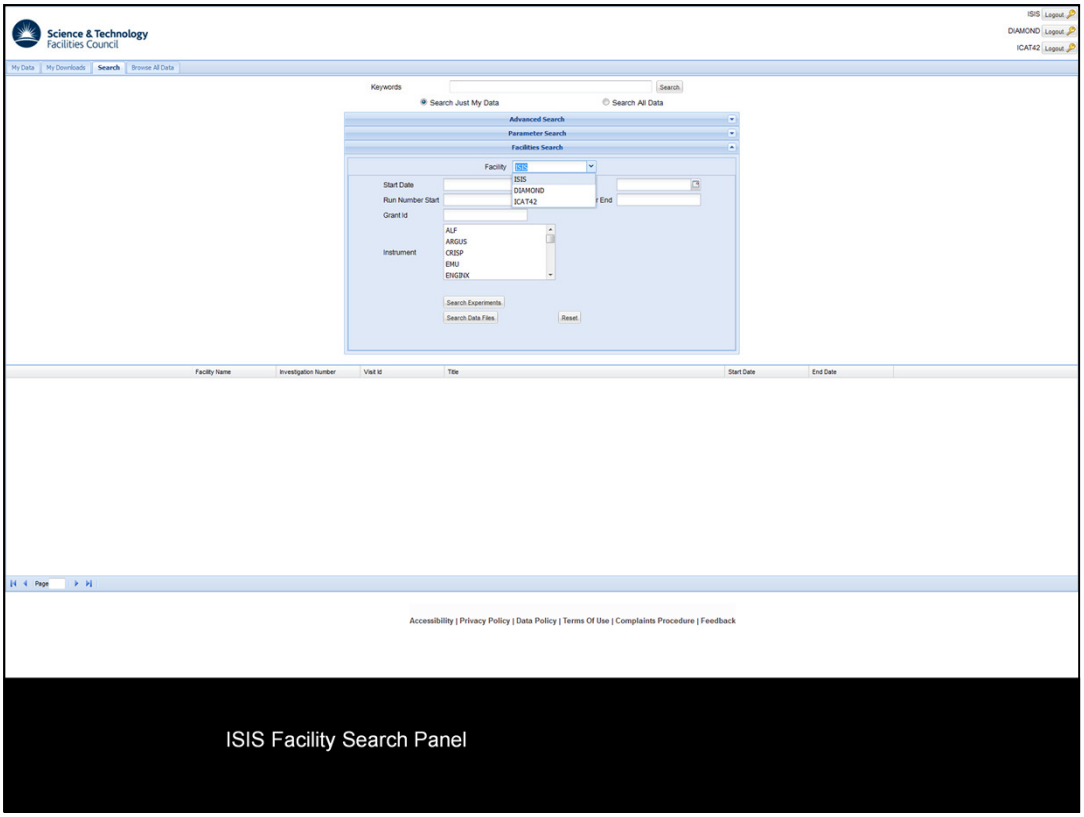
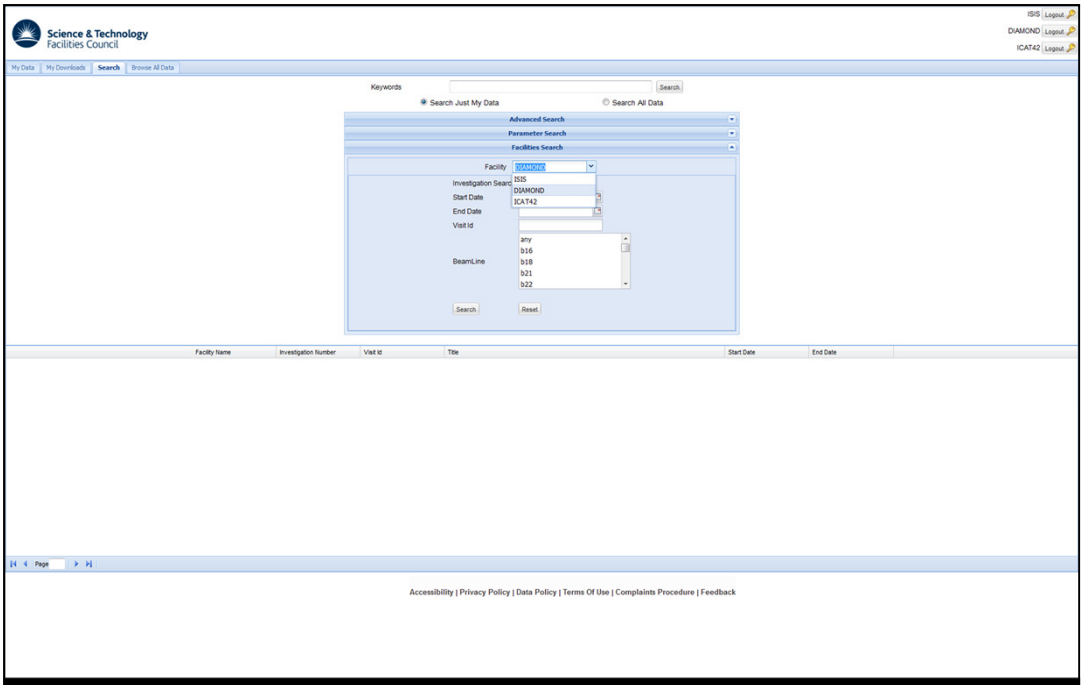
You will be able to specify the search panel to associate with a facility via the new setup script. The mapping will be added to the .icat file



ISIS Facility Search Panel



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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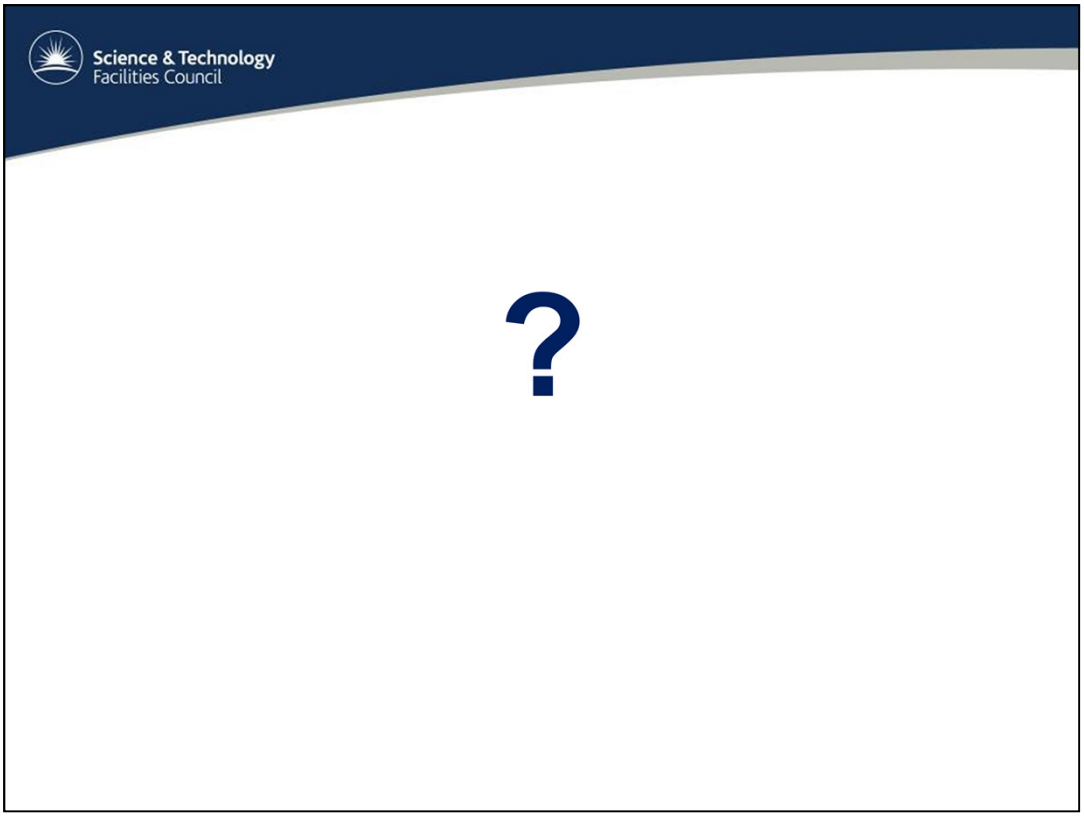
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