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# **MyTardis Documentation**

***Release 3.9***

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# CHAPTER 1

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## Overview

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MyTardis began at Monash University to solve the problem of users needing to store large datasets and share them with collaborators online. Its particular focus is on integration with scientific instruments, instrument facilities and research storage and computing infrastructure; to address the challenges of data storage, data access, collaboration and data publication.

[Read more...](#)



# CHAPTER 2

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## Key features for users

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The MyTardis data management platform is a software solution that manages research data and the associated metadata. MyTardis handles the underlying storage to ensure that data is securely archived and provides access to the data through a web portal. Data hosted in MyTardis can also be accessed via SFTP.

[Read more...](#)



# CHAPTER 3

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## Key features for instrument facilities

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MyTardis takes care of distributing data to your users. Its instrument integration technology takes care of securely and automatically shifting data from instrument to repository and makes it accessible by the right users.

[Read more...](#)



# CHAPTER 4

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## Developing for MyTardis

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MyTardis is mostly written in the [Python](#) programming language and is built on top of the [Django](#) web framework. A complete installation of the service also includes an [Elasticsearch](#) index, a [RabbitMQ](#)-based task queue, an [Nginx](#) server, and a [PostgreSQL](#) database.

To set up and manage these services we employ the [SaltStack](#) orchestration software and cloud technologies.

[Read more...](#)



# CHAPTER 5

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Find out more

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Project homepage <http://mytardis.org>

The source code is hosted at <https://github.com/mytardis/mytardis>

Documentation at <http://mytardis.readthedocs.org> includes

- User documentation
- Administrator documentation
- Developer documentation

The wiki at <https://github.com/mytardis/mytardis/wiki> includes

- Links to MyTardis add-ons, including apps and post-save filters
- Information about MyTardis community events



# CHAPTER 6

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## Known deployments

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- **Store.Synchrotron:** <https://store.synchrotron.org.au/>
- **Store.Monash:** <https://store.erc.monash.edu>
- **NIF ImageTrove:** <https://imagetrove.cai.uq.edu.au/>
- **MHTP Medical Genomics:** <https://mhtp-seq.erc.monash.edu/>
- **ANSTO:** <https://tardis.nbi.ansto.gov.au/>
- **Monash MyTardis Demo:** <https://mytardisdemo.erc.monash.edu/>



# CHAPTER 7

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## Related projects and repositories

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- **MyData:** <https://github.com/mytardis/mydata>
  - A desktop application for managing uploads to MyTardis
- **NIF ImageTrove:** <https://github.com/NIF-au/imagetrove>
  - A tool for ingesting and archiving NIF datasets, including
    - \* Web front end: [MyTardis](#)
    - \* A DICOM server: [DICOM ToolKit](#)
    - \* A dataset uploader: [imagetrove-uploader](#)
    - \* Federated authentication with the Australian Access Federation’s [Rapid Connect](#) service
- **NIF ImageTrove Docker deployment:** <https://github.com/UWA-FoS/docker-mytardis>
  - For ease of deployment, all of ImageTrove’s components are packaged into a Docker container.
- **NIF Trusted Data Repositories:** <https://github.com/NIF-au/TDR>
  - Delivering durable, reliable, high-quality image data



# CHAPTER 8

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## Releases

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The default branch on GitHub is `develop`. This is the cutting edge development version. Please DO NOT use this in production, as it may have bugs that eat your data.

The `master` branch is the current stable release with all the latest bugfixes included. It will move to newer versions automatically. Follow this branch if you want to stay up to date in a production environment.

Each version has its own branch named by version number. At the time of writing, the latest release is `3.9`, tagged from the `series-3.9` branch. Follow this branch for your production installation and perform version upgrades manually.

Each bugfix or set of fixes bumps the minor version and each new release is tagged, eg. `3.9.1`. Use tagged releases if you are paranoid about changes to the code you have not tested yourself.

To follow development, please see the contributing section below.



# CHAPTER 9

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## Reporting Bugs

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Bug reports and feature requests can be made via our [public issue tracker](#).



# CHAPTER 10

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## Contributing

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New contributors are always welcome, however all developers should review the [pull-request checklist](#) before making pull requests.

For any wishes, comments, praise etc. either open a GitHub issue or contact us.

Active developers are also welcome to join our Slack team.

Contact details can be found on [mytardis.org](#).



# CHAPTER 11

## Documentation

### 11.1 User Guide

#### 11.1.1 Basics

##### Organising Data

##### Data Structure Overview

Data in MyTardis is organised into a uniform hierarchy, which includes Experiments, Datasets and Data Files. Experiments are at the top of the hierarchy and can contain multiple Datasets. Similarly, Datasets can contain multiple Data Files. The hierarchy can be thought of like a directory structure on a typical PC (Fig. 1) in which a the Experiment directory contains multiple Dataset directories, which in turn contain multiple Data Files.

##### Creating Experiments

1. Navigate to the **My Data** page.
2. Click on the **Create** button to the right of the page.

The screenshot shows the 'My Data' page with the 'Experiments' tab selected. At the top right, there is a yellow button labeled '+ Create'. Below it are two green buttons: 'Collapse all' and 'Expand all'. A blue button labeled 'yesterday' shows statistics: 1 experiment, 0 datasets, and 0 data files. To the right of these buttons is a link 'Download data as .tar'. The main content area displays one experiment titled 'Test Experiment' created by Peter Capaldi. It is described as a 'Microscopy experiment'. A note at the bottom says 'Latest dataset in this experiment'. A blue button labeled 'Dataset 1' is visible at the bottom left of the experiment card.

3. Fill in the 'Create Experiment' form. Requires at least a Title and one author.

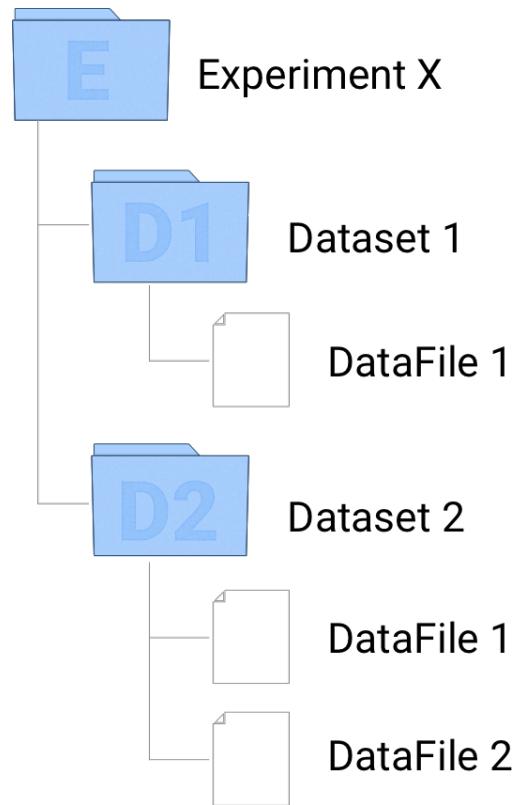


Fig. 1: Fig. 1. Data hierarchy in MyTardis

MyTardis Home About My Data Public Data Stats Help thedoctor ▾

### Create Experiment

Title

Authors   
Comma-separated authors and optional emails/URLs

Institution name

Description

Powered by [MyTardis](#)

4. Click **Save**.

## Adding Datasets

Datasets always have at least one parent Experiment. To add a dataset to an Experiment:

1. Navigate to the Experiment page into which you would like to add a dataset.
2. Click the **+ Add New** button to the right of the page.

MyTardis Home About My Data Public Data Stats Help thedoctor

**Experiment**  
**Test Experiment**  
Peter Capaldi

Microscopy experiment

**1 Dataset**  
Download Selected

Just start typing to filter datasets based on descriptions

Description Metadata Sharing Transfer Datasets

Institution Monash University  
Licensing Unspecified  
Administrators thedoctor

Dataset 1

0 bytes

Download All TAR SFTP

Powered by MyTardis

3. Fill in the ‘Add new dataset’ form. Note: The ‘Description’ field is actually the name of the dataset.

MyTardis Home About My Data Public Data Stats Help thedoctor

**Add new dataset**

Description Dataset 1

Directory

Instrument -----

Save

Powered by MyTardis

4. Click **Save**.

## Adding Data Files

Data Files can be added to a particular Dataset from the Dataset page.

1. Navigate to the Dataset into which you want to add new files.
2. Click the green **Add files...** button to the right of the page.

The screenshot shows the 'Dataset 1' page from MyTardis. At the top, there's a navigation bar with links for Home, About, My Data, Public Data, Stats, and Help. A user account 'thedocor' is shown on the right. Below the navigation, the dataset title 'Dataset 1' is displayed, along with a note 'From the experiment: Test Experiment'. On the left, there are three main sections: 'Datafile Information' (with a note to click the icon to view details), 'Dataset Metadata' (noting no metadata), and 'Other Experiments' (noting none). On the right, there's a file list section titled '0 Files' with download options for TAR, SFTP, and MD5. It includes a search bar, a 'Select' dropdown, and a 'Download Selected Files' button. A green 'Add files...' button is also present.

Powered by [MyTardis](#)

3. Select the files you want to add from the file selector dialog and Click **Open**. You can add multiple files by holding the “Shift” or “Ctrl” keys to select multiple files in the dialog.

## Accessing Data

### Download a Data File

Individual Data Files can be downloaded as follows:

1. Navigate to the Dataset containing the Data File you want to download.
2. Click the **Download** button on the Data File you want to download.

This screenshot shows the same 'Dataset 1' page as above, but with more content visible. In the 'Preview Images' section, there's a placeholder image with arrows for navigation and a file name 'cell5\_deskewed\_C2\_T0.ome.tif'. Below this, the 'Datafile Information' section has a note to click the icon for details. The 'Dataset Metadata' section notes no metadata. On the right, the file list shows '4 Files' with download links for each file: 'cell5\_deskewed.companion.ome' (292.2 KB), 'cell5\_deskewed\_C0\_T0.ome.tif' (1.0 GB), 'cell5\_deskewed\_C1\_T0.ome.tif' (1.0 GB), and 'cell5\_deskewed\_C2\_T0.ome.tif' (1.0 GB). The 'cell5\_deskewed\_C0\_T0.ome.tif' link is highlighted with a red box. The 'Add files...' button is also visible.

## Download a Dataset

Entire Datasets can be downloaded as a tar archive.

1. Navigate to the Dataset you want to download.
2. Click the **tar** button to the right of the page.

The screenshot shows the 'Dataset 1' page on MyTardis. At the top, there's a navigation bar with links for Home, About, My Data, Public Data, Stats, Help, and a user account dropdown. Below the navigation is the dataset title 'Dataset 1' and a note 'From the experiment: Test Experiment'. To the right is an 'Edit Dataset Description' button. In the center, there's a preview section titled 'Preview Images' with a large black placeholder image and arrows for navigation. Below it is a file list titled '4 Files' with a 'Download Dataset' button (labeled 'TAR') highlighted in red. The file list includes four entries: 'cell5\_deskewed.companion.ome' (292.2 KB), 'cell5\_deskewed\_C0\_T0.ome.tif' (1.0 GB), 'cell5\_deskewed\_C1\_T0.ome.tif' (1.0 GB), and 'cell5\_deskewed\_C2\_T0.ome.tif' (1.0 GB). Each file entry has a checkbox, a download icon, and a more options icon. A search bar and a 'Select' dropdown are also visible. At the bottom left is a 'Datafile Information' section with a note about viewing details, and at the bottom right is a 'Dataset Metadata' section noting 'There is no metadata for this dataset.'

Note: *tar* is an archive format like *zip* that may not be familiar to Windows users and a default Windows installation may not have the appropriate software to expand *tar* archives. We suggest that users install [7-zip](#) to expand *tar* archives from MyTardis.

## Download an Experiment

Entire Experiments can be downloaded as a tar archive.

1. Navigate to the Experiment you want to download.
2. Click the **tar** button under the 'Description' section of the page.

The screenshot shows the 'Test Experiment' page on MyTardis. At the top, there's a navigation bar with links for Home, About, My Data, Public Data, Stats, Help, and a dropdown for 'thedocor'. Below the navigation is the experiment title 'Test Experiment' by 'Peter Capaldi'. To the right are buttons for 'Create publication' and 'Edit Experiment'. Below the title, it says '1 Dataset' and '3.1 GB'. A timestamp '5th December 2017' and a 'Private' link are also present. On the left, there's a sidebar with tabs for Description (selected), Metadata, Sharing, and Transfer Datasets. It shows details like 'Institution: Monash University', 'Licensing: Unspecified', and 'Administrators: thedoctor'. Below this is a download section with 'Download All' buttons for TAR (highlighted with a red box) and SFTP. On the right, there's a search bar for datasets and a preview of 'Dataset 1' which contains four files (labeled 1, 2, 3, 4) totaling 3.1 GB.

Note: *tar* is an archive format like *zip* that may not be familiar to Windows users and a default Windows installation may not have the appropriate software to expand *tar* archives. We suggest that users install [7-zip](#) to expand *tar* archives from MyTardis.

## Sharing and Publishing Data

MyTardis provides 3 primary mechanisms for sharing your data:

- Sharing with another MyTardis user.
- Sharing via a temporary (obfuscated) link.
- Making data public.

Data sharing is done at the Experiment level and you can find the options to share an Experiment under the **Sharing** tab on the left side of an Experiment page.

**Experiment**

# Test Experiment

Peter Capaldi

Microscopy experiment

[Description](#)[Metadata](#)[Sharing](#)[Transfer Datasets](#)

## Public Access

**Current Public Access Settings**[Private](#)**Current License**

Unspecified

[⚙ Change Public Access](#)

## Sharing

**Users**

Users who have a share in this experiment:

Username	Name
thedoctor	none

[➡ Change User Sharing](#)**Groups**

Groups who have a share in this experiment:

*There are currently no groups with access to this experiment.*[➡ Change Group Sharing](#)

## Links

This experiment is private. A temporary link can be created by its owner(s) and privately shared.

Temporary access links provide full access to recipients regardless of an experiment's public status.

No tokens defined

[Create New Temporary Link](#)

### **Sharing Data with Another MyTardis User**

To share an Experiment with another MyTardis user:

1. Navigate to the Experiment you want to share.
2. Click on the **Sharing** tab on the left side of the page.
3. Click the **Change User Sharing** button.

**Experiment**

# Test Experiment

Peter Capaldi

Microscopy experiment

[Description](#)[Metadata](#)[Sharing](#)[Transfer Datasets](#)

## Public Access

**Current Public Access Settings**[Private](#)**Current License**

Unspecified

[⚙ Change Public Access](#)

## Sharing

**Users**

Users who have a share in this experiment:

Username	Name
thedoctor	none

[➡ Change User Sharing](#)**Groups**

Groups who have a share in this experiment:

*There are currently no groups with access to this experiment.*[➡ Change Group Sharing](#)

## Links

This experiment is private. A temporary link can be created by its owner(s) and privately shared.

Temporary access links provide full access to recipients regardless of an experiment's public status.

No tokens defined

[Create New Temporary Link](#)

4. Enter the **Username** of the user with which you want to share the data.

The screenshot shows a user sharing interface. At the top, it displays the current user's information: [thedoctor] (doctor@tardis.org) with permissions Read, Edit, Owner, and a row of buttons for Edit and Delete. Below this, a section titled "Add new user" contains fields for "Username" (with an empty input field) and "Permissions" (a dropdown menu set to "View and Edit"). A note below the permissions dropdown states: "Owners have the ability to change access controls and share experiments with others." A blue button labeled "+ Add User" is located at the bottom left of the form area.

**Note:** Entering the users name or email address with activate autocomplete, which helps to find the username of the user.

5. Select the permissions you'd like to give the user from the **Permissions** dropdown.
6. Click the **+Add User** button.
7. You should now see a new entry under the **Current User Permissions** section showing the user you've shared the Experiment with and the permissions you've given them.

# User Sharing

## Current User Permissions

[thedoctor] (doctor@tardis.org)	<span>Read</span>	<span>Edit</span>	<span>Owner</span>	<span>Edit</span>	<span>Delete</span>
[rosetyler] (rosetyler@tardis.org)	<span>Read</span>	<span>Edit</span>		<span>Edit</span>	<span>Delete</span>

## Add new user

Username:

rosetyler

Permissions:

View and Edit

*Owners have the ability to change access controls and share experiments with others.*

+ Add User

## Sharing Data via a Temporary Link

You can also share Data in an Experiment via a temporary (obfuscated) link. Temporary links expire after 1 month or can be deleted manually. Note: temporary links are not protected (i.e., anybody with the link can access the data); however, they are obfuscated and are thus difficult to find without prior knowledge of the link.

To share an Experiment via a temporary link:

1. Navigate to the Experiment you want to share.
2. Click on the **Sharing** tab on the left of the page.
3. Click the **Create New Temporary Link** button in the links section.

### Links

This experiment is private. A temporary link can be created by its owner(s) and privately shared for direct access.

Temporary access links provide full access to recipients regardless of an experiment's public status.

No tokens defined

Create New Temporary Link

4. You should now see a new entry in the **Links** section. The new entry will provide links to both the Experiment page and a direct download link. These can be copied to the clipboard using the relevant buttons. These can then be shared with collaborators using email etc.

### Links

This experiment is private. A temporary link can be created by its owner(s) and privately shared for direct access.

Temporary access links provide full access to recipients regardless of an experiment's public status.

Temporary Link	Archive direct download	Expiry	Granted By	
<a href="#">Page link</a> <a href="#">Copy to clipboard</a>	<a href="#">Archive link</a> <a href="#">Copy to clipboard</a>	10th January 2018	thedoctor	<a href="#">Delete</a>
<a href="#">Create New Temporary Link</a>				

### Publishing Data

Access to an Experiment in MyTardis is set to “private” by default and no license is attached to the data; however, MyTardis allows data from an Experiment to be made publicly available with an appropriate license. To make an Experiment publicly available:

1. Navigate to the Experiment you wish to publish and activate the **Sharing** tab to the left of the page.
2. Click the **Change Public Access** button. This will activate the Public Access dialog and display the current status of the data.
3. Select **Public** in the “Public access” dropdown menu.
4. Select an appropriate license from the list of licenses presented. In the following screenshot, a “Creative Commons Attribution” license is selected; however, your choices may be different as licenses are configured by your service provider.

# Public Access

## Step 1: Change Public Access:

Public access     

## Step 2: Select a license:

### Creative Commons Attribution 3.0 Australia (CC BY 3.0)

This licence lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. This is the most accommodating of licences offered under Creative Commons.



[Reselect License](#)

## Step 3: Accept The Legal Agreement:

Monash University (ABN 12 377 614 012) ("University") maintains a digital repository ("Repository") in which it stores and makes available various works via the Internet or other electronic means.

By submitting material for the Repository ("Work") the person(s) submitting the Work ("Depositor") agree to the following terms and conditions:

5. Agree to the "Terms of Publishing" of your service provider.
6. Click **Confirm**

## 11.1.2 SFTP Access

SFTP is a secure and convenient way to access, browse and download large Experiments, Datasets and Files from MyTardis.

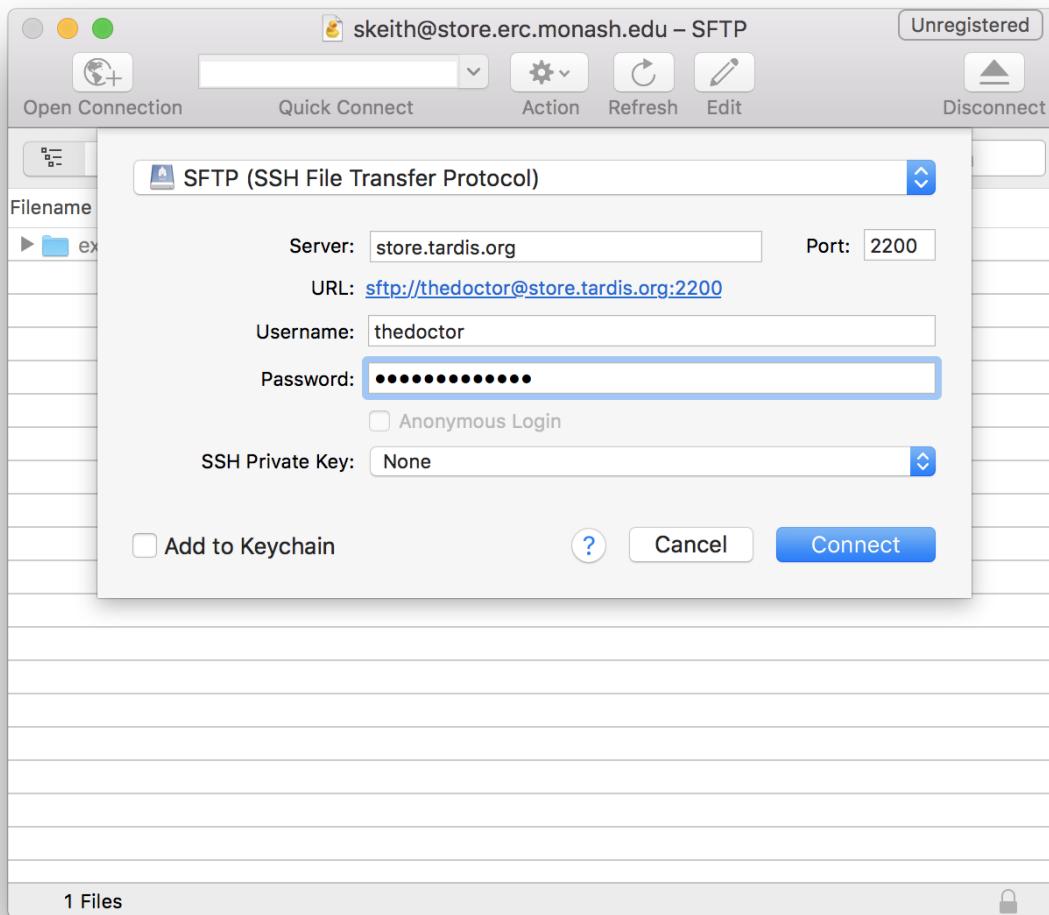
In order to access data on MyTardis via SFTP, you will first need to install an SFTP client. There are many free and commercial SFTP clients for you to choose from; however, we recommend [Cyberduck \(Win & Mac\)](#), [FileZilla \(All platforms\)](#) or [WinSCP \(Win only\)](#) for the majority of users. The instructions here will focus on Cyberduck (Win & Mac).

### Browse and Download your MyTardis data using SFTP

1. Open your SFTP client and create a new connection with the following configuration:

Parameter	Value
Server:	<i>URL for your MyTardis deployment e.g. <a href="https://store.erc.monash.edu">https://store.erc.monash.edu</a></i>
Port:	2200
Username:	<i>Your MyTardis username</i>
Password:	<i>Your MyTardis password</i>

Note: you should substitute your MyTardis details for *italicised* values.



### 2. Click Connect

3. Upon successful connection you will be presented with a file browser showing all your data on MyTardis.

Data is organised according to the Experiment/Dataset/Data File hierarchy/structure described in the *Organising Data* section.

### Browse and/or Download a Specific Experiment or Dataset

MyTardis also provides a convenient way to access/browse a particular Experiment or Dataset via SFTP.

1. Navigate to the Experiment or Dataset page that you want to access via SFTP using your web browser.
2. There is an **SFTP** button in the *Download* section on both the Experiment and Dataset views.

# Experiment View

## Experiment Test Experiment

Peter Capaldi

Microscopy experiment

Description    Metadata    Sharing    Transfer Datasets

Institution Monash University

Licensing Unspecified

Administrators Peter Capaldi

Download All     

# Dataset View

4 Files

Download Dataset:   

Add files...

Search: Enter part or all of a filename, then press enter.

Select: All / None



**cell5\_deskewed.companion.ome**  
(292.2 KB)



**cell5\_deskewed\_C0\_T0.ome.tif** (1.0 GB)



**cell5\_deskewed\_C1\_T0.ome.tif** (1.0 GB)



**cell5\_deskewed\_C2\_T0.ome.tif** (1.0 GB)



- Clicking the SFTP button at either of these two locations will redirect you to a page with instructions and links for starting an SFTP session for a specific experiment or dataset.

## 11.2 Configuration and Administration

### 11.2.1 Installation

The sections through to Extended Configuration below provide a Quick Start guide for getting a basic MyTardis installation up and running. The following section provides additional information on advanced configuration and add-on capabilities of MyTardis.

#### Prerequisites

##### Ubuntu 14.04

Run the script:

```
sudo bash install-ubuntu-requirements.sh
```

It will install required packages with this command:

```
apt-get update
apt-get install git ipython libldap2-dev libsasl2-dev \
libssl-dev libxml2-dev libxslt1-dev nodejs npm python-anyjson \
python-billiard python-bs4 python-crypto python-dateutil \
python-dev python-flexmock \
python-pip python-pystache \
python-virtualenv python-wand python-yaml virtualenvwrapper \
zlib1g-dev libfreetype6-dev libjpeg-dev
```

### Redhat/CentOS 7

Redhat based distributions are not actively supported. Here is a starting point, but you may require additional packages:

```
sudo yum install epel-release
sudo yum install cyrus-sasl-ldap cyrus-sasl-devel openldap-devel \
libxslt libxslt-devel libxslt-python git gcc graphviz-devel \
python-virtualenv python-virtualenvwrapper python-pip php-devel php-pear \
ImageMagick ImageMagick-devel libevent-devel compat-libevent14-devel
```

Note that at least one of `libevent-devel` and `compat-libevent14-devel` needs to be successfully installed as they are alternatives of the same package for different distributions.

### Download

To get the most recent stable release:

```
git clone -b master https://github.com/mytardis/mytardis.git
cd mytardis
```

This clones the repository as read-only.

Or, to get the current development branch:

```
git clone -b develop git://github.com/mytardis/mytardis.git
cd mytardis
```

### Quick configuration

It is recommended that you use a virtualenv. The list of packages above includes the `virtualenvwrapper` toolkit. Set up your environment with these commands:

Ubuntu 14.04:

```
source /usr/share/virtualenvwrapper/virtualenvwrapper.sh
```

Redhat/CentOS 7:

```
source /usr/bin/virtualenvwrapper.sh
```

Then create the `mytardis` virtual environment

```
mkvirtualenv --system-site-packages mytardis
pip install -U pip
```

Note: the next time you want to work with this virtualenv, run the appropriate `source` command and then use the command: `workon mytardis`

MyTardis dependencies are then installed with `pip`:

```
pip install -U -r requirements.txt
```

For Redhat/CentOS 7, also run:

```
pip install -U -r requirements-centos.txt
```

Javascript dependencies are then installed with npm:

```
npm install
```

Configuring MyTardis is done through a standard Django `settings.py` file. MyTardis comes with a sample configuration file at `tardis/default_settings.py`. You can import this as the basis of your own config file - options defined here will override the relevant options in `default_settings.py`.

Create a new file `tardis/settings.py` containing the following:

```
from default_settings import *

# Add site specific changes here.

# Turn on django debug mode.
DEBUG = True

# Use the built-in SQLite database for testing.
# The database needs to be named something other than "tardis" to avoid
# a conflict with a directory of the same name.
DATABASES['default']['ENGINE'] = 'django.db.backends.sqlite3'
DATABASES['default']['NAME'] = 'tardis_db'
```

In addition you will need to create a new SECRET\_KEY for your installation. This is important for security reasons.

A convenient method is to run the following command in your mytardis installation location:

```
python -c "import os; from random import choice; key_line = '%sSECRET_KEY=%\"%s\" #_'
˓→generated from build.sh\n' % ('from tardis.default_settings import * \n\n' if not_
˓→os.path.isfile('tardis/settings.py') else '', ''.join([choice(
˓→'abcdefghijklmnopqrstuvwxyz0123456789\\!@#$%^&*(-_=+)') for i in range(50)]));_
˓→f=open('tardis/settings.py', 'a+'); f.write(key_line); f.close()"
```

This is the minimum set of changes required to successfully run the server in development mode. You can make any other site-specific changes as necessary.

## Initialisation

Create and configure the database:

```
python mytardis.py migrate
```

This avoids creating a superuser before the MyTardis specific `UserProfile` table has been created. More information about the `migrate` commands can be found at admin.

Next, create a superuser:

```
python mytardis.py createsuperuser
```

MyTardis can now be executed in its simplest form using:

```
python mytardis.py runserver
```

This will start the Django web server at <http://localhost:8000/>.

### Extended configuration

See below for some extra configuration options that are specific to MyTardis.

An automatically generated documentation of the settings can be found in `pydoc/tardis`.

### Essential Production Settings

These settings are essential if you want to run MyTardis in production mode (`DEBUG = False`).

#### **SECRET\_KEY**

This key needs to be unique per installation and, as the name implies, be kept secret.

A new one can be conveniently generated with the command:

```
echo "SECRET_KEY='`python mytardis.py generate_secret_key`'" >> tardis/settings.py
```

However, the more complex command shown above needs to be used at installation time.

#### **ALLOWED\_HOSTS**

`ALLOWED_HOSTS` is a list of hostnames and/or IP addresses under which the server is accessible. If this is not set you will get a 500 Error for any request.

## Database

### `tardis.default_settings.DATABASE_ENGINE`

The database server engine that will be used to store the MyTardis metadata, possible values are *postgresql\_psycopg2*, *postgresql*, *mysql*, *sqlite3* or *oracle*.

### `tardis.default_settings.DATABASE_NAME`

The name of the database to used to store the data, this is the path to the database if you are using the SQLite storage engine.

### `tardis.default_settings.DATABASE_USER`

The user name used to authenticate to the database. If you are using SQLite this field is not used.

### `tardis.default_settings.DATABASE_PASSWORD`

The password used to authenticate to the database. If you are using SQLite this field is not used.

### `tardis.default_settings.DATABASE_HOST`

The host name of the machine hosting the database service. If this is empty then localhost will be used. If you are using SQLite then this field is ignored.

### `tardis.default_settings.DATABASE_PORT`

The port the database is running on. If this is empty then the default port for the database engine will be used. If you are using SQLite then this field is ignored.

## LDAP

For further information see [LDAP authentication](#)

## Repository

### tardis.default\_settings.DEFAULT\_STORAGE\_BASE\_DIR

The path to the default MyTardis storage location. This is where files will be stored to if you do not provide any other location explicitly through “StorageBox”‘es.

### tardis.default\_settings.STAGING\_PATH

The path to the staging path. This is where new files to be included in datasets will be sourced. This functionality, however, is not available in current MyTardis versions.

### tardis.default\_settings.REQUIRE\_DATAFILE\_CHECKSUMS

If True, a Datafile requires an MD5 or SHA-512 checksum from the time it is first recorded in the MyTardis database. This enables a model-level constraint check each time a Datafile record is saved. Defaults to True. Datafile record is saved.

### tardis.default\_settings.REQUIRE\_DATAFILE\_SIZES

If True, a Datafile require a size from the time it is first recorded in the MyTardis database. This enables a model-level constraint check each time a Datafile record is saved. Defaults to True.

### tardis.default\_settings.REQUIRE\_VALIDATION\_ON\_INGESTION

If True, ingestion of a Datafile is only permitted if the Datafile matches its supplied size and/or checksums. Defaults to True.

## Access Rights & Licensing

### Licences

By default, no licences are loaded. A user can make metadata public without assigning a licence, but they cannot allow public access to their data.

Creative Commons licences (for Australia) are available in `tardis/tardis_portal/fixtures/cc_licenses.json`. You can load them with

```
python mytardis.py loaddata.
```

You can use the admin interface to add other licences. Please ensure `allows_distribution` is set to the correct value to ensure the licence appears in conjunction with suitable public access types.

### Legal Notice

When changing the public access rights or licence for an experiment, a legal notice is displayed. You can override it by either:

1. creating a new app (probably your site theme) and putting your legal text in `tardis/apps/<app_name>/static/publishing_legal.txt`, or
2. directly making changes to `tardis/tardis_portal/static/publishing_legal.txt`.

### Filters

### tardis.default\_settings.POST\_SAVE\_FILTERS

This contains a list of post save filters that are execute when a new data file is created.

The `POST_SAVE_FILTERS` variable is specified like:

```
POST_SAVE_FILTERS = [
    ("tardis.tardis_portal.filters.exif.EXIFFilter", ["EXIF", "http://exif.schema"
    ↵"]),
]
```

For further details please see the [Filter Setup](#) section.

### Archive Organizations

#### `tardis.default_settings.DEFAULT_ARCHIVE_FORMATS`.

This is a prioritized list of download archive formats to be used in contexts where only one choice is offered to the user; e.g. the “download selected” buttons. (The list allows for using different archive formats depending on the user’s platform.)

#### `tardis.default_settings.DEFAULT_PATH_MAPPER`.

This gives the default archive “organization” to be used. Organizations are defined via the next attribute.

#### `tardis.default_settings.DOWNLOAD_PATH_MAPPERS`.

This is a hash that maps archive organization names to Datafile filename mapper functions. These functions are responsible for generating the archive pathnames used for files written to “tar” and “zip” archives by the downloads module.

The `DOWNLOAD_PATH_MAPPERS` variable is specified like:

```
DOWNLOAD_PATH_MAPPERS = {
    'test': ('tardis.apps.example.ExampleMapper',),
    'test2': ('tardis.apps.example.ExampleMapper', {'foo': 1})
}
```

The key for each entry is the logical name for the organization, and the value is a tuple consisting of the function’s pathname and a set of optional keyword arguments to be passed to the function. At runtime, the function is called with each Datafile as a positional argument, and an additional ‘rootdir’ keyword argument. The function should compute and return a (unique) pathname based on the Datafile and associated objects. If the function returns `None`, this tells the archive builder to leave out the file.

By default, the archive builder uses the built-in “deep-storage” mapper which gives pathnames that try to use directory information to rebuild a file tree.

### Storage Locations ( `StorageBox` es)

A MyTardis instance can be configured to support multiple locations ( `StorageBox` es) for storing data files. Each location holds copies ( `DataFileObject` s) of `DataFile` s that are recorded in the MyTardis database.

The `StorageBox` architecture is compatible with the [Django File Storage API](#). This makes it relatively easy to support a number of different storage backends such as cloud storage or SFTP servers. Please refer to the [StorageBox documentation](#) for more detailed information.

### Single Search

Instructions on installing and configuring Elasticsearch for advanced search are available from [Setting Up Search](#).

## Additional Tabs

Additional and custom tabs may be configured in MyTardis on a per-installation basis. The tabs are implemented as separate Django applications with a single view (index), listed in the TARDIS\_APPS configuration item and either linked to, or installed in the TARDIS\_APP\_ROOT directory, by default tardis/apps.

Documentation on the additional tabs is available from tabs.

## Additional Views

Custom views may be configured in MyTardis on a per-installation basis. The tabs are implemented as separate Django applications with a single view function listed in the \*\_VIEWS configuration item and added to the INSTALLED\_APPS list.

Refer to the views documentation for further information.

## Site Customisations

Some settings that allow customised messages and styles.

```
PUBLICATION_INTRODUCTION = """
<p><strong>... introduction and publication agreement ...</strong></p>
"""
SITE_STYLES = '' # should be CSS

# if either GA setting is empty, GA is disabled
GOOGLE_ANALYTICS_ID = '' # whatever Google provides
GOOGLE_ANALYTICS_HOST = '' # the host registered with Google

# these refer to any template finder findable location, e.g. APPDIR/templates/...
CUSTOM_ABOUT_SECTION_TEMPLATE = 'tardis_portal/about_include.html'
CUSTOM_USER_GUIDE = 'user_guide/index.html'
```

## Deployment

### Collecting Static Files

For performance reasons you should avoid static files being served via the application, and instead serve them directly through the webserver.

To collect all the static files to a single directory:

```
python mytardis.py collectstatic
```

tardis.default\_settings.STATIC\_ROOT

This contains the location to deposit static content for serving.

tardis.default\_settings.STATIC\_URL

The path static content will be served from. (eg. /static or http://mytardis-resources.example.com/)

**See also:**

collectstatic, STATIC\_ROOT, STATIC\_URL

## Serving with Nginx + Gunicorn

In this configuration, Nginx serves static files and proxies application requests to a Gunicorn server:



Nginx should then be configured to send requests to the server. Here is an example configuration (SSL part from Mozilla SSL configurator). Please amend for your own needs and understand the settings before deploying it.:

```
upstream mytardis {
    server unix:/var/run/gunicorn/mytardis/socket;
    server 127.0.0.1:8000 backup;
}

server {
    listen 80 default_server;
    server_name demo.mytardis.org;
    return 301 https://$server_name$request_uri;
}

server {
    listen 443 default_server ssl;
    server_name demo.mytardis.org;

    # certs sent to the client in SERVER HELLO are concatenated in ssl_certificate
    ssl_certificate /path/to/signed_cert_plus_intermediates;
    ssl_certificate_key /path/to/private_key;
    ssl_session_timeout 5m;
    ssl_session_cache shared:SSL:50m;

    # Diffie-Hellman parameter for DHE ciphersuites, recommended 2048 bits
    ssl_dhparam /path/to/dhparam.pem;

    # intermediate configuration. tweak to your needs.
    ssl_protocols TLSv1 TLSv1.1 TLSv1.2;
    ssl_ciphers 'ECDHE-RSA-AES128-GCM-SHA256:ECDHE-ECDSA-AES128-GCM-SHA256:ECDHE-RSA-
    ↵AES256-GCM-SHA384:ECDHE-ECDSA-AES256-GCM-SHA384:DHE-RSA-AES128-GCM-SHA256:DHE-DSS-
    ↵AES128-GCM-SHA256:kEDH+AESGCM:ECDHE-RSA-AES128-SHA256:ECDHE-ECDSA-AES128-
    ↵SHA256:ECDHE-RSA-AES128-SHA:ECDHE-ECDSA-AES128-SHA:ECDHE-RSA-AES256-SHA384:ECDHE-
    ↵ECDSA-AES256-SHA384:ECDHE-RSA-AES256-SHA:ECDHE-ECDSA-AES256-SHA:DHE-RSA-AES128-
    ↵SHA256:DHE-RSA-AES128-SHA:DHE-DSS-AES128-SHA256:DHE-RSA-AES256-SHA256:DHE-DSS-
    ↵AES256-SHA:DHE-RSA-AES256-SHA:AES128-GCM-SHA256:AES256-GCM-SHA384:AES128-
    ↵SHA256:AES256-SHA256:AES128-SHA:AES256-SHA:AES:CAMELLIA:DES-CBC3-SHA:!aNULL:!eNULL:!
    ↵EXPORT:!DES:!RC4:!MD5:!PSK:!aECDH:!EDH-DSS-DES-CBC3-SHA:!EDH-RSA-DES-CBC3-SHA:!KRB5-
    ↵DES-CBC3-SHA';
    ssl_prefer_server_ciphers on;

    # HSTS (ngx_http_headers_module is required) (15768000 seconds = 6 months)
    add_header Strict-Transport-Security max-age=15768000;

    # OCSP Stapling ---
    # fetch OCSP records from URL in ssl_certificate and cache them
    ssl_stapling on;
    ssl_stapling_verify on;
```

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```

## verify chain of trust of OCSP response using Root CA and Intermediate certs
ssl_trusted_certificate /path/to/root_CA_cert_plus_intermediates;

resolver <IP DNS resolver>;

client_max_body_size 4G;
keepalive_timeout 5;

gzip off; # security reasons
gzip_proxied any;
# MyTardis generates uncompressed archives, so compress them in transit
gzip_types application/x-javascript text/css;
gzip_min_length 1024;
gzip_vary on;

location / {
    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
    proxy_set_header X-Forwarded-Protocol $scheme;
    proxy_set_header Host $http_host;
    proxy_redirect off;
    proxy_pass http://mytardis;
    # this is to solve centos 6 error:
    # upstream prematurely closed
    client_max_body_size 4G;
    client_body_buffer_size 8192k;
    proxy_connect_timeout 2000;
    proxy_send_timeout 2000;
    proxy_read_timeout 2000;
}

location /static/ {
    expires 7d;
    alias /srv/static_files/;
}
}

```

Don't forget to create the static files directory and give it appropriate permissions. The location is set in the `settings.py` file.

```

# Collect static files to ``settings.STATIC_ROOT``
python mytardis.py collectstatic
# Allow Nginx read permissions
setfacl -R -m user:nginx:rx static_dir

```

#### See also:

[Django with Gunicorn](#)

#### Serving with Apache HTTPD + mod\_wsgi

We do not support the use of Apache. If you need this and want to support this use case, we welcome your contribution of any relevant documentation.

## 11.2.2 Authentication Methods

### Users

MyTardis supports several sources of authentication and identity, referred to as user providers.

In the *settings.py* user providers are activated by specifying them within the **USER\_PROVIDERS** variable:

```
USER_PROVIDERS = ('tardis.tardis_portal.auth.localdb_auth.DjangoUserProvider',)
```

### Groups

MyTardis also supports several sources for group membership information, referred to as group providers.

In the *settings.py* group providers are activated by specifying them within the **GROUP\_PROVIDERS** variable:

```
GROUP_PROVIDERS = ('tardis.tardis_portal.auth.localdb_auth.DjangoGroupProvider',
                    'tardis.tardis_portal.auth.vbl_auth.VblGroupProvider',)
```

### Included Auth Plugins

#### HTTP Basic Endpoint Authentication

```
tardis.tardis_portal.auth.httpbasicendpoint_auth
```

HTTP Basic Endpoint authentication uses access to a HTTP resource (or endpoint) to determine if authentication should be allowed.

To use HTTP Basic Endpoint authentication, you'll need a HTTP resource protected by HTTP Basic Auth which is accessible from the MyTardis server.

In the *settings.py* add the following to **AUTH\_PROVIDERS** with an appropriate name. eg.

```
AUTH_PROVIDERS = (
    ('acls', 'acls', 'tardis.tardis_portal.auth.httpbasicendpoint_auth.
     ↪HttpBasicEndpointAuth'),
)
```

On each request, MyTardis will attempt to use basic authentication with the provided credentials to access the HTTP resource. If it fails, access is denied.

Endpoint to use in HTTP Basic Endpoint Auth. eg.

```
HTTP_BASIC_AUTH_ENDPOINT = 'https://test.example/endpoint'
```

#### LDAP Authentication

```
tardis.tardis_portal.auth.ldap_auth
```

To enable LDAP you'll need to specify which components of the LDAP authentication backend are enabled. In the *settings.py* add the following to either Authentication, User Provider, Group Provider slugs.:

```
'tardis.tardis_portal.auth.ldap_auth.ldap_auth'
```

This is a wrapper function that allows initialisation of the LDAP provider using *settings.py* values.

## ldap\_auth() Function

The following are configuration settings that are used when initialising the LDAP backend.

`tardis.default_settings.LDAP_TLS`

Enable TLS connections.

`tardis.default_settings.LDAP_URL`

Set the URL of the LDAP server, e.g. `ldap://localhost:389/`

`tardis.default_settings.LDAP_USER_LOGIN_ATTR`

Set the login attribute of the users, usually this will be either `cn` or `uid`

`tardis.default_settings.LDAP_USER_ATTR_MAP`

The LDAP user attribute map is used to map internal identifiers like `first_name`, `last_name` and `email` to their LDAP equivalents e.g. `{"givenName": "first_name", "sn": "last_name", "mail": "email"}`

`tardis.default_settings.LDAP_GROUP_ID_ATTR`

This is where you specify the group identifier from LDAP, usually it will be `cn`.

`tardis.default_settings.LDAP_GROUP_ATTR_MAP`

This map is used to map internal identifiers like `display` e.g. `{"description": "display"}`

`tardis.default_settings.LDAP_BASE`

Sets the search base of the LDAP queries `dc=example, dc=com`

`tardis.default_settings.LDAP_USER_BASE`

Sets the suffix to append to the user RDN (e.g. `uid=jsmith`) to construct the DN e.g. `"ou=People, " + LDAP_BASE`

`tardis.default_settings.LDAP_GROUP_BASE`

Sets the suffix to append to the group RDN (e.g. `cn=group1`) to construct the DN e.g. `"ou=Group, " + LDAP_BASE`

## Temporary Token Authentication

`tardis.tardis_portal.auth.token_auth`

To use token authentication, you'll need to specify the following `settings.py`

`'tardis.tardis_portal.auth.token_auth.TokenGroupProvider',`

`TOKEN_EXPIRY_DAYS = 30`

`TOKEN_LENGTH = 30`

`TOKEN_USERNAME = 'tokenuser'`

and create a user with

`bin/django createtokenuser`

## Cleaning up

`bin/django cleanuptokens`

It is recommended that you schedule regular purging of expired tokens. Set a cronjob to run `bin/django cleanuptokens`

## Expiry

Token auth works by hijacking the group provider system.

MyTardis groups are calculated and cached when a user logs in.

This means that if a session is active, and a token becomes invalid (either through deletion or expiry) that access will still be granted. To mitigate this, when a token user logs in, an explicit expiry is set on their session - the earlier of 4am the next day, or the session expiry date (the end of the day)

This forces the user to attempt to log in again, and be denied access.

- `tardis.tardis_portal.auth.ip_auth`

The `tardis.tardis_portal.auth package` module contains the authentication specific code.

## 11.2.3 Filter Setup

### *filters*

Filters are called once an object has been saved to the database. They build on the [Django Signals Infrastructure](#).

In the `settings.py` file filters are activated by specifying them within the `POST_SAVE_FILTERS` variable, for example

```
POST_SAVE_FILTERS = [  
    ("tardis.tardis_portal.filters.exif.EXIFFilter",  
     ["EXIF", "http://exif.schema"]),  
]
```

The format they are specified in is

```
(<filter class path>, [args], {kwargs})
```

Where `args` and `kwargs` are both optional.

## 11.2.4 Database

### Initialising

When creating a new database the `syncdb` command will need to be called to initialise the schema and insert the initial data fixtures.

### Usage

```
python mytardis.py syncdb --noinput --all
```

### Migrating

Some of the upgrades to MyTardis will require that the database schema be upgraded to match the internal data model. This tool migrates data from old database schemas to the current one. It detects which version of the database you are currently running and will automatically migrate to the current version. If you decided not to use South for migrating the data models and have removed it from the list of `INSTALLED_APPS` in the `settings.py` file, you could skip this step and go on initiating an administrator account with the command `createsuperuser`, which is described in more detail below.

In certain cases it is also necessary to update the permissions table.

## Usage

Initial migration after syncdb --all:

```
python mytardis.py migrate --fake
```

Then:

```
python mytardis.py migrate
```

If the model changes require it, run:

```
python mytardis.py update_permissions
```

## creating superuser

After success of database initialization or migration, please use a command line utility called `createmysuperuser` to create an administrator account using the admin site which is hooked to the URL /admin/.

## Usage

```
python mytardis.py createmysuperuser
```

## Backup

The backupdb command allows to backup and to restore of the MyTardis database. The command uses the corresponding database tool to facilitate this task. Currently implemented are PostgreSQL and MySQL. In case of backup, a directory called backups is created (if it does not exist) in the working directory. In case of restore, the database for storing the tablespace must already exist before loading the backup file into the database.

## Usage

```
python mytardis.py backupdb
-r FILE, --restore=FILE
-v VERBOSITY, --verbosity=VERBOSITY
--settings=SETTINGS
--pythonpath=PYTHONPATH
--traceback
--version
-h, --help
```

### 11.2.5 Schema and Parameter Sets

MyTardis stores metadata as *Parameters*, which are grouped into *Parameter Sets*, which are defined by a *Schema*.

## Managing Schema

Schemas are managed through the Django administrative interface. The administrative interface is normally accessible from a link similar to:

```
http://domain.com:8000/admin/
```

Selecting “Schemas” in the administrative interface will display a list of the installed schemas. Clicking on a schema displays the editor for that schema.

Schema definitions are the combination of two tables, *Schema* and *ParameterName*.

The *Schema* fields are:

**Namespace** The namespace uniquely identifies the schema. When exporting an experiment as a METS file the namespace is used as an XML Namespace, and thus must follow the XML standard, i.e. in the form of a URL.

The MyTardis naming convention is:

```
http://domain.com/localidentifiers/schemaname/version
```

**Name** The display name of the schema.

**Type** Experiment, Dataset or Datafile.

**Subtype** Used to group and identify schema for forms based searching.

The *ParameterName* fields are:

**Schema** The namespace of the schema which this parameter belongs to.

**Name** The identifier used to ingest parameters.

**Full Name** The display name of the parameter.

**Units** The display name of the units for numerical values.

**Data Type** One of:

- Numeric
- String
- Longstring
- URL
- Filename
- Datetime
- Link

Strings use the input field widget for editing, while longstrings use a textarea widget.

**Immutable** If true, no user editing of the parameter is allowed, regardless of access.

**Comparison Type** The type of search to be performed with Forms Based Search. Not used by Advanced Search.

**Is Searchable** Flag whether this parameter is searchable.

**Choices** If defined, a drop down list of values is displayed.

**Order** The display order of the parameters within the schema. Sorting is by Order, then alphabetically.

## 11.2.6 Setting Up Search

Tardis comes with a single search option which provides users with a search field that returns a list of matching Experiments, Datasets and Datafiles.

The single search box uses Elasticsearch, with a django-haystack frontend, and accordingly requires some setup. The single search box is disabled by default.

### Setting up Elasticsearch

Elasticsearch doesn't work out of the box with MyTardis. It is not currently installed with pip and requires a number of manual steps to get working.

Elasticsearch can be found here: <https://www.elastic.co/products/elasticsearch>

The following are a very simple list of steps that will get everything up and running. It is advisable to follow up with the person responsible for overseeing security policy at your home institution to see if any extra setup is necessary.

### Django Configuration

#### Enabling Single Search

A list of default settings for Single Search are already in `default_settings.py` in the MyTardis repository. Single search is enabled by setting the `SINGLE_SEARCH_ENABLED` option to True.

Other settings are shown below:

#### `HAYSTACK_CONNECTIONS`

The default value is

```
HAYSTACK_CONNECTIONS = {
    'default': {
        'ENGINE': 'haystack.backends.elasticsearch_backend.'
                  'ElasticsearchSearchEngine',
        'URL': 'http://127.0.0.1:9200/',
        'INDEX_NAME': 'haystack',
    },
}
```

#### `HAYSTACK_SIGNAL_PROCESSOR`

This setting determines when the information in Elasticsearch is updated. The default value updates it in real time with db changes

```
HAYSTACK_SIGNAL_PROCESSOR = 'haystack.signals.RealtimeSignalProcessor'
```

A more performant implementation would trigger an update task on each db change.

Please see django-haystack documentation for further information: <http://haystacksearch.org>

## Updating Indexes

Once Elasticsearch is set up, and Single Search is enabled (i.e. the `SINGLE_SEARCH_ENABLED` option in settings is set to True) Haystack will automatically register the addition of and changes to models and reflect these in the search index. That is, as soon as a new instance of a model is added to the database, or changes are made to an existing instance, these changes will be searchable.

If you’re adding search to an existing deployment of Django then you’ll need to manually trigger a rebuild of the indexes (automatic indexing only happens through signals when models are added or changed).

Haystack registers a number of management commands with the Django framework, the important one here being the `rebuild_index` command. To rebuild, navigate to your checkout and call the following command

```
python mytardis.py rebuild_index
```

Haystack will then ask you to confirm your decision (Note: Rebuilding will destroy your existing indexes, and will take a while for large datasets, so be sure), and then start rebuilding.

## 11.2.7 Storage Options and Architecture in MyTardis

### Database layout for storage

The storage for each DataFile is configured individually. A “way to store data” is called StorageBox. Each file has one or many related DataFileObjects, which link a DataFile with a StorageBox. A DataFile can have several copies stored in different StorageBoxes via several DataFileObjects.

### StorageBoxes

StorageBoxes contain all the information needed to store a file except an id unique to the file and storagebox.

Each StorageBox points to a class that implements the Django storage API via a python module path as string.

Optional instantiation parameters for each StorageBox can be stored in StorageBoxOptions. These are used as parameters to the storage class set in the `django_storage_class` attribute of a StorageBox

These parameters are string types by default. However, by setting the optional parameter `value_type` to `'pickle'`, any pickleable object can be stored here and hence used for instantiation of the storage class.

Optional classification and other metadata can be stored in StorageBoxAttributes.

A special case is where someone registers a file and wants to put it into location themselves but needs to be given the place to put it (via the API). Such situation can only be resolved with StorageBoxes that implement the “`build_save_location`” function. Such StorageBoxes need to have a StorageBoxAttribute with key “`staging`” and value “`True`”.

### DataFiles

DataFiles are the logical representation of the file. They contain information about the name, size, checksum, dates etc.

### DataFileObjects

DataFileObjects point to the DataFile they belong to and the StorageBox they reside in. They also have an identifier that the StorageBox uses to find the actual file. DataFileObjects also have a date, and a state-flag.

## Available backends

Django storage API compatible backends are available for example at <https://github.com/jschneier/django-storages>

We have tested the following backends with MyTardis:

- File on disk or any other system mounted storage
- SFTP
- SWIFT Object Storage

## Documented backends

### S3 compatible storage

S3 and S3 compatible storage backends are supported by the django-storages package.

We added some modifications that allow database driven configuration. Until these changes are accepted by the maintainer, use this fork and branch: <https://github.com/monash-merc/django-storages/tree/mytardis-branch>

Install it with:

```
pip install -e git+https://github.com/monash-merc/django-storages.git@mytardis-branch  
↪#egg=django-storages
```

## Configuration

The following options can be set as StorageBoxOption on your S3 storage box or system wide in your Django settings (a default of \* labels mandatory settings):

StorageBoxOption	Django Setting	Default
access_key	AWS_S3_ACCESS_KEY_ID	*
	AWS_ACCESS_KEY_ID	
secret_key	AWS_S3_SECRET_ACCESS_KEY	
	AWS_SECRET_ACCESS_KEY	
file_overwrite	AWS_S3_FILE_OVERWRITE	True
headers	AWS_HEADERS	{}
bucket_name	AWS_STORAGE_BUCKET_NAME	
auto_create_bucket	AWS_AUTO_CREATE_BUCKET	False
default_acl	AWS_DEFAULT_ACL	public-read
bucket_acl	AWS_BUCKET_ACL	default_acl
querystring_auth	AWS_QUERYSTRING_AUTH	True
querystring_expire	AWS_QUERYSTRING_EXPIRE	600
reduced_redundancy	AWS_REDUCED_REDUNDANCY	
location	AWS_LOCATION	''
encryption	AWS_S3_ENCRYPTION	False
custom_domain	AWS_S3_CUSTOM_DOMAIN	None
calling_format	AWS_S3_CALLING_FORMAT	SubdomainCallingFormat()
secure_urls	AWS_S3_SECURE_URLS	True
file_name_charset	AWS_S3_FILE_NAME_CHARSET	SET8
gzip	AWS_IS_GZIPPED	False
preload_metadata	AWS_PRELOAD_METADATA	False
gzip_content_types	GZIP_CONTENT_TYPES	('text/css', 'text/javascript', 'application/javascript', 'application/x-javascript', 'image/svg+xml')
url_protocol	AWS_S3_URL_PROTOCOL	http:
host	AWS_S3_HOST	S3Connection.DefaultHost
use_ssl	AWS_S3_USE_SSL	True
port	AWS_S3_PORT	None
proxy	AWS_S3_PROXY_HOST	None
proxy_port	AWS_S3_PROXY_PORT	None
The max amount of memory a returned file can take up before being rolled over into a temporary file on disk. Default is 0: Do not roll over.		
max_memory_size	AWS_S3_MAX_MEMORY_SIZE	

## Appendix: Conversion of ‘Replicas’

Replicas used to be the method of file storage abstraction in MyTardis versions 3.x. The StorageBoxes replace this. For pain-free upgrading, a conversion has been included with the database migrations that works as follows:

All ‘Locations’ that are local are converted to default (folder on disk) StorageBoxes. All ‘Locations’ that are not local are converted to dummy ‘link only’ StorageBoxes with the corresponding name. These can be upgraded manually to a StorageBox with an appropriate backend after the migration has taken place.

Max size is set to size of disk, hence for multiple locations on the same disk this number provides no protection. This also should be set to reasonable values manually after the migration.

Each ‘Replica’ of a file will be converted to a DataFileObject pointing to the relevant StorageBox.

All files are manually reverified, so that unverified entries can be checked for errors.

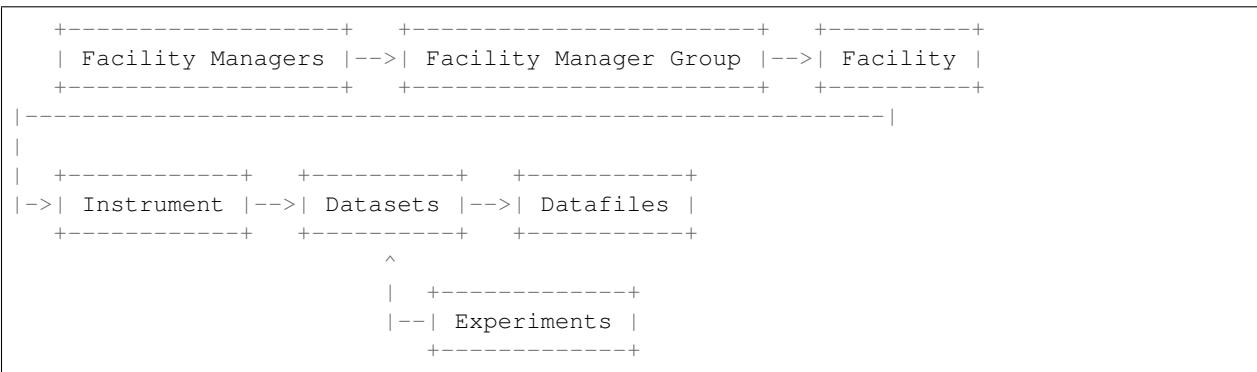
## 11.2.8 Facility Overview

### Introduction

The Facility Overview included with MyTardis allows facility administrators to monitor the output of connected instruments, highlighting unverified files, dataset size, file counts and file listings.

### Setup

In order for datasets to appear in the Facility Overview, each dataset must be associated with an Instrument, which is itself associated with a Facility. The Facility object will reference a facility administrator's group, members of which may view the Facility Overview.



The facility managers, facility manager groups, facilities and instruments may be configured via the django admin interface. MyData, the desktop uploader client for the MyTardis server, can be configured to assign the appropriate instrument to uploaded datasets at the point of ingestion.

It should be noted that the dataset visibility within the facility overview is limited to dataset and datafile listings only. Access to the experiment and dataset views, as well as raw data, is still controlled via the [ACL framework](#).

### Usage

Members of the facility manager groups for one or more facilities will see the “Facility Overview” menu item in the MyTardis web portal. After opening the facility overview, a list of recently ingested datasets will be displayed from the facility being managed. If a user manages multiple facilities, a blue drop-down selector will also appear on the right-hand side of the page. As the facility overview is designed to give a snapshot of recently uploaded datasets, older data is not immediately accessible; MyTardis’ [search feature](#) is better suited to this.

In addition to simply listing the most recent datasets, the datasets can be grouped by instrument or by owner, and filtered by username, experiment name and instrument name. Note that while filters are active, it may appear as though no new pages are loaded by clicking “Load more”, since the additional datasets fetched from the server might not match the active filters.

## 11.3 Development

### 11.3.1 Architecture

This page describes the architecture of MyTardis.

MyTardis is built on the Django web framework, which itself is built on Python, thus MyTardis follows the architectural model of Django.

### Component Architecture

**Web Server** MyTardis is typically deployed with the standard [Nginx + Gunicorn + Django + Python](#) stack.

**RDBMS** Ideally, use PostgreSQL. MySQL or MariaDB may be usable but it is not as well tested.

**Data Storage** Local disk, network mounted disks as well as S3 and SFTP are supported.

**Ingestion** Ingestion is normally site specific. A desktop application is available (MyData).

### Functional Architecture

MyTardis follows the standard Django architecture.

The major functional modules in MyTardis are:

**API** A RESTful API provides anonymous and authenticated access to most of the stored data.

**Auth** Authentication and Authorisation.

**Download** Data download functionality.

**Filters** Processing of metadata as data is uploaded, e.g. extract EXIF metadata from JPEG files.

**Management** Additional commands for the Django CLI. The backup utility is implemented as a Django command.

**Migrations** Database migration code.

**Publish** RIF-CS metadata publication.

**Search** Provides a searchable and authorisation enabled index for quickly finding data.

**SFTP server** Provides read access to data in MyTardis via the SFTP protocol

Information on the individual modules is available from the modindex.

### Scalability Model

At the component / module level, performance and Scalability within MyTardis is achieved by:

- Allowing long lived or compute intensive operations to be hosted on separate machines from the main web server.
  - E.g. by running multiple web servers and sending long lived operations, such as ingestion, to a server reserved for such operations.
- Performance and Scalability of the database is achieved by a combination of 1) optimising the SQL requests issued by MyTardis, and 2) database specific scalability, please refer to the appropriate database documentation.
- Performance and Scalability of the web server is provided through the normal mechanisms for nginx / wsgi hosted python applications, e.g.:
  - Increasing individual Server capability
    - \* Individual Server performance / utilization may be managed by controlling the number of python (django) processes active at any one time.
  - Deploying multiple web servers

- \* Multiple web servers may be deployed using standard mechanisms, e.g. load balancers. State (session) information is distributed using Django's standard session model.
- The Data Archive is a normal file system, e.g. NFS, SAMBA, etc., with performance and scalability dependent on the implementation and deployment.
- Extraction and formatting of metadata for ingestion is up to the client and may be distributed across any number of machines.

## SQL Scalability Notes

The datafileparameter table is expected to be the single largest table by an order of magnitude, in the hundreds of millions of records (at the Australian Synchrotron).

For Postgres, this will probably be addressed by table partitioning. In this case using a date field to partition is often recommended. Dates may be introduced as part of the support for annotations, raw data, versioned data and derived data.

## Persistance and Data Architecture

Django provides an Object-Relational-Model that maps Django Models to the underlying relational database.

The Django Models are defined in `tardis.tardis_portal.models`.

## Security Model

### Authentication

Access to data catalogued by MyTardis may be either public, i.e. anonymous access allowed, or private, requiring authentication. The Authentication Framework is documented in `ref-authframework`.

### Authorisation

MyTardis includes an extensible authorisation engine, documented in `ref-authframework` and `authorisation`.

## Class Diagram

Unless the application has a very rich business model (which MyTardis does not), a class diagram doesn't convey much information in Django applications (it ends up being a flat list of classes). To understand the context in which the MyTardis classes are created, please refer to the Django documentation, <http://docs.djangoproject.com/> on the responsibilities of models, views, managers and templates.

## Source Code

This section describes the top level layout of the source code in the GitHub repository.

- `docs`
  - MyTardis User and Administrative documentation
- `tardis`
  - `apps`

- \* **Contains all the optional functionality and installation specific** functionality. Examples include the optional ANDS Register (ands\_register) and Related Info (related\_info) tabs, and the ANSTO (mecat-ansto) and Australian Synchrotron (mecat-as) installation specific modules.
- \* **Some applications are part of the main code base, others can be added** at installation time.
  - search
    - \* Search related code
  - tardis\_portal
    - \* This is the main django application that contains most of the core MyTardis functionality

### 11.3.2 Authorisation Framework

#### Django Authorisation

Django has a built-in authorisation/permission mechanism that is in use by default. It is enabled in MyTardis in `default_settings.py` together with the custom object level permission framework described below.

```
AUTHENTICATION_BACKENDS = (
    'django.contrib.auth.backends.ModelBackend',
    'tardis.tardis_portal.auth.authorisation.ACIAwareBackend',
)
```

The Django default permissions are automatically available for each Model. The verbs are add, change, delete, and they can be queried on the user object as follows:

```
user.has_perm('tardis_portal.add_experiment')
user.has_perm('tardis_portal.add_dataset')
user.has_perm('tardis_portal.change_experiment')
user.has_perm('tardis_portal.delete_datasetparameterset')
```

There is a function in `tardis.tardis_portal.auth.authservice` called `_set_user_from_dict` that adds the following permissions for each new user created using custom methods:

```
'add_experiment'
'change_experiment'
'change_group'
'change_userauthentication'
'change_experimentacl'
```

These permissions apply in general and are augmented by ACLs

#### Object Level Permissions and Access Control Lists

The main purpose of the ACL system is to manage per experiment permissions. The architecture allows for future expansion to more fine grained permission management. However, at this stage only the Experiment level is supported by the user interface.

Permissions are applied with a few predefined roles:

**read** read permission allows individuals and groups access to view an experiment.

**write** write permissions cover addition of new datasets and datafiles and also deletion of datafile.

**delete** delete permission allows deletion of datasets and experiments.

Roles are applied through the web using the *Control Panel* and can be applied to either users or groups.

To make an experiment public requires an explicit publish action.

The ACL permissions can be queried on the user object just like standard permissions, however, with the addition of the object in question:

```
user.has_perm('tardis_acls.change_experiment', experiment)
```

Verbs currently available are change, view, delete, owns, share.

The translation of ACLs to has\_perm verbs is defined in a function in tardis.tardis\_portal.auth.authorization.

To allow for querying on any object related to experiments, extra logic was added to some of the models. To support the logic, in addition to ACLs, has\_perm calls model functions named \_has\_VERB\_perm, which allows model-specific permission logic.

The current policy is that if those functions return True or False then that result is returned without further checking. If they return an object, permissions will be checked for this object thereby allowing delegation.

### 11.3.3 RESTful API for MyTardis

The data and metadata stored in MyTardis instances is made accessible through a RESTful API.

Not all functionality has been exposed via the API at this time. This documentation reflects what is available and tested.

The API version v1 is built on the Tastypie framework.

The RESTful API can also be explored via the automatically generated Swagger documentation at <http://mytardis-example.com/api/v1/swagger/>.

See [swagger.io](https://swagger.io) for details on the Swagger standard.

#### API accessible models

- Experiment
- ExperimentParameterSet
- ExperimentParameter
- 
- Dataset
- DatasetParameterSet
- DatasetParameter
- 
- DataFile
- DatafileParameterSet
- DatafileParameter
- 
- StorageBox
- StorageBoxOption

- StorageBoxAttribute

- 

- Schema

- ParameterName

- 

- User

- Group

- 

- Facility

- Instrument

- 

- ObjectACL

## Authentication

Currently implemented are Basic Auth, to be used via HTTPS only, and SessionAuth which queries Django sessions.

Due to our desire to provide information to users without any login, eg. for public data, the Basic Auth mechanism is slightly non-standard.

The standard sends an anonymous request, awaits a WWW-Authenticate header, then sends authentication credentials. Instead, this API sends public data for anonymous requests.

Using `curl` or the `requests` library this poses no problem. However, using `urllib2` or web browser without a Django session is not going to work out of the box.

Here is a snippet (found here: <http://stackoverflow.com/questions/4628610/does-urllib2-support-preemptive-authentication-authentication>) that makes `urllib2` work, should you want to use this library:

```
class PreemptiveBasicAuthHandler(urllib2.BaseHandler):  
  
    def __init__(self, password_mgr=None):  
        if password_mgr is None:  
            password_mgr = urllib2.HTTPPasswordMgrWithDefaultRealm()  
        self.passwd = password_mgr  
        self.add_password = self.passwd.add_password  
  
    def http_request(self, req):  
        uri = req.get_full_url()  
        user, pw = self.passwd.find_user_password(None, uri)  
        if pw is None:  
            return req  
  
        raw = "%s:%s" % (user, pw)  
        auth = 'Basic %s' % base64.b64encode(raw).strip()  
        req.add_unredirected_header('Authorization', auth)  
        return req  
  
auth_handler = PreemptiveBasicAuthHandler()  
auth_handler.add_password(realm=None,
```

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```

        uri=url,
        user='mytardis',
        passwd='mytardis')
opener = urllib2.build_opener(auth_handler)
# ...and install it globally so it can be used with urlopen.
urllib2.install_opener(opener)

```

## Querying the database (GET)

All endpoints support querying lists and individual records via GET requests. Some support more complex queries via GET parameters as well.

## Creating objects, adding files (POST)

The creation of Experiments, Datasets and Dataset\_Files via POSTs with the option to include metadata/parametersets has been implemented and tested.

The following examples demonstrate how to go about it.

In all except the file attachment case the POST data should be a JSON string, the Content-Type header needs to be set to application/json and the Accept header as well. Other response formats may be made available in the future.

In all cases the URI of the created object is returned in the Location header of the response.

## Experiments

Example JSON input

```
{
    "title": "API-created Experiment #1",
    "description": "Wow, all automatic!",
    "institution_name": "Monash University",
    "parameter_sets": [
        {
            "schema": "http://institution.com/my/schema",
            "parameters": [
                {
                    "name": "important_parameter_1",
                    "value": "Test16"
                },
                {
                    "name": "important_parameter_3",
                    "value": "57.136"
                }
            ]
        },
        {
            "schema": "http://company.com/some/other/schema",
            "parameters": [
                {
                    "name": "meaningful_name",
                    "value": "Test17"
                }
            ]
        }
    ]
}
```

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```
        },
        {
            "name": "meaningless_name",
            "value": "1234"
        }
    ]
}
]
```

This creates an experiment with two parametersets with two parameters each.

Alternative to Schema namespaces and Parameter names, you can also specify the URIs to each. Until the querying of Schemas and Parameters is documented this is discouraged.

## Datasets

Example JSON input:

```
{
    "description": "API-created Dataset",
    "experiments": [
        "/api/v1/experiment/1/",
        "/api/v1/experiment/2/"
    ],
    "immutable": false,
    "parameter_sets": [
        {
            "parameters": [
                {
                    "name": "obscure-instrument-setting-52",
                    "value": "awesome dataset api POST"
                },
                {
                    "name": "temperature",
                    "value": "301"
                }
            ],
            "schema": "http://datasets.com/need/schemas/too"
        },
        {
            "parameters": [
                {
                    "name": "someotherparameter",
                    "value": "some other value"
                }
            ],
            "schema": "http://better-datasets.com/offers/better/schemas"
        }
    ]
}
```

## DataFiles

There are three ways to add a file to MyTardis via the API.

### Via multipart form POST

This works for single files at the moment.

The key is to send a multipart-form instead of ‘application/json’. This can be accomplished with the requests library as shown in the following example.

To use requests you need to install it first, eg. pip install requests.

Also, for this to work, the POST data needs to be sent with the JSON string called ‘json\_data’ and the file called ‘attached\_file’.

Example JSON input:

```
{
    "dataset": "/api/v1/dataset/1/",
    "filename": "mytestfile.txt",
    "md5sum": "c858d6319609d6db3c091b09783c479c",
    "size": "12",
    "mimetype": "text/plain",
    "parameter_sets": [
        {
            "schema": "http://datafileshop.com/fileinfo/v1",
            "parameters": [
                {
                    "name": "fileparameter1",
                    "value": "123"
                },
                {
                    "name": "fileparameter2",
                    "value": "1234"
                }
            ]
        }
    ]
}
```

Example requests script:

```
import requests
from requests.auth import HTTPBasicAuth

url = "http://localhost:8000/api/v1/dataset_file/"
headers = {'Accept': 'application/json'}
response = requests.post(url, data={"json_data": data}, headers=headers,
                         files={'attached_file': open(filename, 'rb')},
                         auth=HTTPBasicAuth(username, password)
)
```

### Via staging location

Another way to add a file is to create the database entry first without providing a storage location. This will return back a location on the server that you are assumed to have access to. Once the file appears there, for example when you copy it there, it will be moved to its permanent storage location managed by MyTardis.

The full file path that you should copy/move the file to is returned as the content of the response.

Example JSON input:

```
{  
    "dataset": "/api/v1/dataset/1/",  
    "filename": "mytestfile.txt",  
    "md5sum": "c858d6319609d6db3c091b09783c479c",  
    "size": "12",  
    "mimetype": "text/plain",  
    "parameter_sets": [{  
        "schema": "http://datafileshop.com/fileinfo/v1",  
        "parameters": [{  
            "name": "fileparameter1",  
            "value": "123"  
        },  
        {  
            "name": "fileparameter2",  
            "value": "1234"  
        }]  
    }]  
}
```

### Via shared permanent storage location

This method assumes that there exists a storage that is shared between MyTardis and you. The registered file will remain in this location.

For this to work you need to get a Location (internal MyTardis settings) name to submit with your metadata.

Examples JSON:

```
{  
    "dataset": "/api/v1/dataset/1/",  
    "filename": "mytestfile.txt",  
    "md5sum": "c858d6319609d6db3c091b09783c479c",  
    "size": "12",  
    "mimetype": "text/plain",  
    "replicas": [{  
        "url": "mytestfile.txt",  
        "location": "local",  
        "protocol": "file"  
    }],  
    "parameter_sets": [{  
        "schema": "http://datafileshop.com/fileinfo/2",  
        "parameters": [{  
            "name": "fileparameter1",  
            "value": "123"  
        },  
        {  
            "name": "fileparameter2",  
            "value": "1234"  
        }]  
    }]  
}
```

## urllib2 POST example script

Replace MODEL with one of the available model names in lower case. data is the JSON as a string.

```
import urllib2
url = "http://localhost:8000/api/v1/MODEL/"
headers = {'Accept': 'application/json',
           'Content-Type': 'application/json'}
auth_handler = urllib2.HTTPBasicAuthHandler()
auth_handler.add_password(realms="django-tastypie",
                           uri=url,
                           user=username,
                           passwd=password)
opener = urllib2.build_opener(auth_handler)
urllib2.install_opener(opener)
myrequest = urllib2.Request(url=url, data=data,
                            headers=headers)
myrequest.get_method = lambda: 'POST'
output = "error"
output = urllib2.urlopen(myrequest)
print output.headers["Location"]
```

### 11.3.4 Tests

#### Running the Test Suite

Run this command to run the unit tests:

```
./test.py
```

If you want to specify any options or specific tests to run, the test argument is required first:

```
./test.py test --some-argument
```

You can choose to run the test suite with different options (e.g. with coverage, with different verbosity, etc.). To see the full list of options, run the same command with the –help flag.

#### Running Individual Unit Tests

The unit tests reside in the tardis/tardis\_portal/tests directory. To run the unit tests individually, you can use this command:

```
./test.py test <test_module_name_here>
```

Note that the test module name argument should be the relative file path with “.” as folder separator. For example, if you want to run the test “test\_authentication.py”, then your command to execute this test would be:

```
./test.py test tardis.tardis_portal.tests.test_authentication
```

#### Other options

You can choose to include different options when running the unit tests (e.g. run in verbose mode, print out a traceback, etc.). Run the test or django test command with –help flag to see the the full list of options:

```
./test.py test --help
```

### Running BDD tests

To run BDD tests with the default settings and a headless browser, call:

```
./test.py behave
```

To use another browser, e.g. Chrome, follow the steps to install “chromedriver” in <http://splinter.readthedocs.io/en/latest/drivers/chrome.html> and then call:

```
./test.py behave -D browser=chrome
```

## 11.3.5 tardis

### tardis package

#### Subpackages

##### tardis.analytics package

#### Submodules

##### tardis.analytics.apps module

```
class tardis.analytics.apps.AnalyticsConfig(app_name, app_module)
    Bases: django.apps.config.AppConfig
    name = 'tardis.analytics'
    verbose_name = 'Analytics framework'
```

##### tardis.analytics.ga module

Google analytics tracking

```
tardis.analytics.ga.track_download(label, session_id, ip, user, total_size=None,
                                     num_files=None, ua=None)
tardis.analytics.ga.track_login(label, session_id, ip, user)
tardis.analytics.ga.track_logout(label, session_id, ip, user)
```

##### tardis.analytics.tracker module

Generic tracking and analytics interface Supports Google Analytics through ga.py, others may follow

```
class tardis.analytics.tracker.IteratorTracker(iterator, tracker_data=None)
    Bases: object
    wraps file iterator to track successful and incomplete downloads
```

```
close()
next()

tardis.analytics.tracker.service = <module 'tardis.analytics.ga' from '/home/docs/checkouts
This can become a setting to other service in the future
```

## Module contents

### tardis.apps package

#### Subpackages

##### tardis.apps.anzsrc\_codes package

#### Subpackages

##### tardis.apps.anzsrc\_codes.tests package

#### Submodules

##### tardis.apps.anzsrc\_codes.tests.test\_oaipmh module

```
class tardis.apps.anzsrc_codes.tests.test_oaipmh.RifCSTestCase(methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

testExistsInOaipmh()
```

##### tardis.apps.anzsrc\_codes.tests.tests module

```
class tardis.apps.anzsrc_codes.tests.tests.TabTestCase(methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

testAccessWithReadPerms()
testAccessWithoutReadPerms()
```

## Module contents

### Submodules

#### [tardis.apps.anzsrc\\_codes.forms module](#)

```
class tardis.apps.anzsrc_codes.forms.FoRCodeForm(data=None, files=None,
auto_id=u'id_%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=None, empty_permitted=False)
Bases: django.forms.Form
base_fields = {'code': <django.forms.fields.CharField object at 0x7fb9e8340e10>, 'name'
declared_fields = {'code': <django.forms.fields.CharField object at 0x7fb9e8340e10>, 'media'}
```

#### [tardis.apps.anzsrc\\_codes.models module](#)

#### [tardis.apps.anzsrc\\_codes.settings module](#)

#### [tardis.apps.anzsrc\\_codes.urls module](#)

#### [tardis.apps.anzsrc\\_codes.views module](#)

## Module contents

### [tardis.apps.deep\\_storage\\_download\\_mapper package](#)

#### Submodules

#### [tardis.apps.deep\\_storage\\_download\\_mapper.mapper module](#)

File mapper that works for files stored in deep directory structures. It recreates the structure as stored in the datafile directory

```
tardis.apps.deep_storage_download_mapper.mapper.deep_storage_mapper(obj,
root-
dir=None)
```

If rootdir is None, just return a filesystem-safe representation of the object, e.g. “DatasetDescription\_123” or “strange %2F filename.txt”

For now, only DataFiles are supported when rootdir is not None.

#### Parameters

- **obj** (`DataFile`, `Dataset` or `Experiment`) – The model instance (`DataFile`, `Dataset` or `Experiment`) to generate a path for.
- **rootdir** (`basestring`) – The top-level directory name, or None

**Returns** Filesystem-safe path for the object in the archive or SFTP view.

**Return type** basestring

**Raises**

- `Exception` –
- `NotImplementedError` –

## tardis.apps.deep\_storage\_download\_mapper.urls module

**Module contents**

### tardis.apps.dl\_mapper\_df\_dir\_only package

**Submodules**

#### tardis.apps.dl\_mapper\_df\_dir\_only.mapper module

File mapper that works for files stored in deep directory structures. It recreates the structure as stored in the datafile directory

`tardis.apps.dl_mapper_df_dir_only.mapper.df_dir_only(datafile, roottdir)`

#### tardis.apps.dl\_mapper\_df\_dir\_only.urls module

**Module contents**

### tardis.apps.equipment package

**Subpackages**

#### tardis.apps.equipment.migrations package

**Submodules**

#### tardis.apps.equipment.migrations.0001\_initial module

```
class tardis.apps.equipment.migrations.0001_initial.Migration(name, app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0002_auto_20150528_1128')]
    operations = [CreateModel(fields=[(u'id', AutoField), (u'key', CharField(max_length=255))])]
```

## Module contents

**tardis.apps.equipment.south\_migrations package**

### Submodules

**tardis.apps.equipment.south\_migrations.0001\_initial module**

#### Module contents

##### Submodules

**tardis.apps.equipment.admin module**

**tardis.apps.equipment.forms module**

```
class tardis.apps.equipment.forms.EquipmentSearchForm(data=None, files=None,
    auto_id=u'id_%s', prefix=None, initial=None,
    error_class=<class 'django.forms.utils.ErrorList'>,
    label_suffix=None,
    empty_permitted=False)

Bases: django.forms.Form

base_fields = {'description': <django.forms.fields.CharField object at 0x7fb9e807a590>}
declared_fields = {'description': <django.forms.fields.CharField object at 0x7fb9e807a590>}
media
```

**tardis.apps.equipment.models module**

```
class tardis.apps.equipment.models.Equipment (id, key, description, make, model, type, serial, comm, decomm, url)
    Bases: django.db.models.base.Model

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

dataset
objects = <django.db.models.manager.Manager object>
```

**tardis.apps.equipment.tests module**

tests.py <http://docs.djangoproject.com/en/dev/topics/testing/>

```
class tardis.apps.equipment.tests.EquipmentTestCase (methodName='runTest')
    Bases: django.test.testcases.TestCase
```

```
fixtures = ['initial_data.json']

setUp()
    Hook method for setting up the test fixture before exercising it.

testEquipmentDetail()
testEquipmentList()
testSearchEquipmentForm()
testSearchEquipmentResult()

tardis.apps.equipment.tests.suite()
```

## tardis.apps.equipment.urls module

### tardis.apps.equipment.views module

```
tardis.apps.equipment.views.index(request)
tardis.apps.equipment.views.search(request)
tardis.apps.equipment.views.view_id(request, object_id)
tardis.apps.equipment.views.view_key(request, object_key)
```

## Module contents

### tardis.apps.filepicker package

#### Submodules

##### tardis.apps.filepicker.filepicker\_settings module

##### tardis.apps.filepicker.urls module

##### tardis.apps.filepicker.utils module

taken from [https://raw.github.com/Filepicker/django-filepicker/master/django\\_filepicker/utils.py](https://raw.github.com/Filepicker/django-filepicker/master/django_filepicker/utils.py) on 11 Apr 2013

```
class tardis.apps.filepicker.utils.FilepickerFile(url)
    Bases: object

    cleanup()
        Removes any downloaded objects and closes open files.

    filepicker_url_regex = <_sre.SRE_Pattern object>
    get_file()
        Downloads the file from filepicker.io and returns a Django File wrapper object
```

### tardis.apps.filepicker.views module

Filepicker.io button view and upload handler

## Module contents

### tardis.apps.mx\_views package

#### Submodules

##### tardis.apps.mx\_views.urls module

##### tardis.apps.mx\_views.views module

## Module contents

### tardis.apps.oaipmh package

#### Subpackages

##### tardis.apps.oaipmh.provider package

#### Submodules

##### tardis.apps.oaipmh.provider.base module

```
class tardis.apps.oaipmh.provider.base.BaseProvider(site)
Bases: oaipmh.interfaces.IOAI, object
```

A base provider which roughly implements the PyOAI interface for OAI-PMH servers.

Extend this if you're writing your own provider for a new type or a different metadata format.

**getRecord**(*metadataPrefix*, *identifier*)

Get a record for a metadataPrefix and identifier.

#### Parameters

- **metadataPrefix**(*string*) – identifies metadata set to retrieve
- **identifier**(*string*) –
  - repository-unique identifier of record

#### Raises

- **oaipmh.error.CannotDisseminateFormatError** – if metadataPrefix is unknown or not supported by identifier.
- **oaipmh.error.IdDoesNotExistError** – if identifier is unknown or illegal.

**Returns** a header, metadata, about tuple describing the record.

**identify()**

Retrieve information about the repository.

Returns an Identify object describing the repository.

**listIdentifiers**(*metadataPrefix*, *set=None*, *from\_=None*, *until=None*)

Get a list of header information on records.

#### Parameters

- **metadataPrefix** (*string*) – identifies metadata set to retrieve
- **set** (*string*) – set identifier; only return headers in set
- **from** (*datetime*) – only retrieve headers from **from\_** date forward (in naive UTC)
- **until** (*datetime*) – only retrieve headers with dates up to and including until date (in naive UTC)

**Raises**

- **error.CannotDisseminateFormatError** – if metadataPrefix is not supported by the repository.
- **error.NoSetHierarchyError** – if the repository does not support sets.

**Returns** an iterable of headers.**listMetadataFormats** (*identifier=None*)

List metadata formats supported by repository or record.

**Parameters** **identifier** (*string*) – identify record for which we want to know all supported metadata formats. If absent, list all metadata formats supported by repository.**Raises**

- **error.IdDoesNotExistError** – if record with identifier does not exist.
- **error.NoMetadataFormatsError** – if no formats are available for the indicated record.

**Returns** an iterable of metadataPrefix, schema, metadataNamespace tuples (each entry in the tuple is a string).**listRecords** (*metadataPrefix, set=None, from\_=None, until=None*)

Get a list of header, metadata and about information on records.

**Parameters**

- **metadataPrefix** (*string*) – identifies metadata set to retrieve
- **set** (*string*) – set identifier; only return records in set
- **from** (*datetime*) – only retrieve records from **from\_** date forward (in naive UTC)
- **until** (*datetime*) – only retrieve records with dates up to and including until date (in naive UTC)

**Raises**

- **oaipmh.error.CannotDisseminateFormatError** – if metadataPrefix is not supported by the repository.
- **oaipmh.error.NoSetHierarchyError** – if the repository does not support sets.

**Returns** an iterable of header, metadata, about tuples.**listSets** ()

Get a list of sets in the repository.

**Raises** **error.NoSetHierarchyError** – if the repository does not support sets.**Returns** an iterable of setSpec, setName tuples (strings).**writeMetadata** (*element, metadata*)

Create XML elements under the given element, using the provided metadata.

Should avoid doing any model-lookups, as they should be done when creating the metadata.

## Parameters

- **element** (`lxml.etree.Element`) – element to put all content under (as SubElements)
- **metadata** (`oaipmh.common.Metadata`) – metadata to turn into XML

## tardis.apps.oaipmh.provider.experiment module

### Module contents

#### tardis.apps.oaipmh.tests package

##### Subpackages

##### tardis.apps.oaipmh.tests.provider package

##### Submodules

##### tardis.apps.oaipmh.tests.provider.test\_base module

```
class tardis.apps.oaipmh.tests.provider.test_base.BaseProviderTestCase(methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    tearDown()
        Hook method for deconstructing the test fixture after testing it.

    testGetRecord()
        Default behaviour should be to not handle the identifier.

    testIdentify()
        There can be only one provider that responds. By default, don't.

    testListIdentifiers()
        By default a provider cannot handle the given metadata prefix.

    testListMetadataFormats()
        By default a provider handles no metadata formats.

    testListRecords()
        By default a provider cannot handle the given metadata prefix.

    testListSets()
        By default a provider does not implement sets.
```

## tardis.apps.oaipmh.tests.provider.test\_experiment module

### Module contents

#### Submodules

##### tardis.apps.oaipmh.tests.test\_oai module

```
class tardis.apps.oaipmh.tests.test_oai.EndpointTestCase (methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    tearDown()
        Hook method for deconstructing the test fixture after testing it.

    testGetRecord()
    testIdentify()
    testListIdentifiers()
    testListMetadataFormats()
    testListRecords()
```

### Module contents

#### Submodules

##### tardis.apps.oaipmh.models module

##### tardis.apps.oaipmh.server module

```
class tardis.apps.oaipmh.server.ProxyingMetadataRegistry (providers)
    Bases: oaipmh.metadata.MetadataRegistry

    A registry that only writes, and does so by proxying to Providers.

    hasReader (metadata_prefix)
    hasWriter (metadata_prefix)

    readMetadata (metadata_prefix, element)
        Turn XML into metadata object.

        element - element to read in
        returns - metadata object

    registerReader (metadata_prefix, reader)
    registerWriter (metadata_prefix, writer)

    writeMetadata (metadata_prefix, element, metadata)
        Write metadata as XML.

        element - ElementTree element to write under metadata - metadata object to write
```

```
class tardis.apps.oaipmh.server.ProxyingServer(providers)
```

Bases: oaipmh.interfaces.IOAI

```
getRecord(metadataPrefix, identifier)
```

Get a record for a metadataPrefix and identifier.

**Raises**

- **oaipmh.error.CannotDisseminateFormatError** – if no provider returns a result, but at least one provider responds with `oaipmh.error.CannotDisseminateFormatError` (meaning the identifier exists)
- **oaipmh.error.IdDoesNotExistError** – if all providers fail with `oaipmh.error.IdDoesNotExistError`

**Returns** first successful provider response

**Return type** response

```
identify()
```

Retrieve information about the repository.

**Returns** an `oaipmh.common.Identify` object describing the repository.

**Return type** `oaipmh.common.Identify`

```
listIdentifiers(metadataPrefix, **kwargs)
```

Lists identifiers from all providers as a single set.

**Raises**

- **error.CannotDisseminateFormatError** – if metadataPrefix is not supported by the repository.
- **error.NoSetHierarchyError** – if a set is provided, as the repository does not support sets.

**Returns** a `set`.Set of headers.

**Return type** `set`

```
listMetadataFormats(**kwargs)
```

List metadata formats from all providers in a single set.

**Raises**

- **error.IdDoesNotExistError** – if record with identifier does not exist.
- **error.NoMetadataFormatsError** – if no formats are available for the indicated record, but it does exist.

**Returns** a *frozense*t of metadataPrefix, schema, metadataNamespace tuples (each entry in the tuple is a string).

**Return type** `frozense`t

```
listRecords(metadataPrefix, **kwargs)
```

Lists records from all providers as a single set.

**Raises**

- **error.CannotDisseminateFormatError** – if metadataPrefix is not supported by the repository.
- **error.NoSetHierarchyError** – if a set is provided, as the repository does not support sets.

**Returns** a set. Set of header, metadata, about tuples.

**Return type** set

**listSets()**

List sets.

**Raises** `oaipmh.error.NoSetHierarchyError` – because set hierarchies are currently not implemented

`tardis.apps.oaipmh.server.get_server(current_site)`

## **tardis.apps.oaipmh.urls module**

### **tardis.apps.oaipmh.views module**

`tardis.apps.oaipmh.views.endpoint(request)`

## **Module contents**

### **tardis.apps.publication\_forms package**

#### **Subpackages**

#### **tardis.apps.publication\_forms.tests package**

##### **Submodules**

#### **tardis.apps.publication\_forms.tests.test\_email\_templates module**

```
class tardis.apps.publication_forms.tests.test_email_templates.EmailTemplates(methodName='run')
    Bases: django.test.testcases.TestCase

    test_pub_approved_template()
    test_pub_awaiting_approval_template()
    test_pub_rejected_template()
    test_pub_released_template()
    test_pub_requires_authorisation_template()
    test_pub_reverted_to_draft_template()
```

## **Module contents**

#### **Submodules**

#### **tardis.apps.publication\_forms.default\_settings module**

default settings for publication app override in main settings

## tardis.apps.publication\_forms.doi module

```
class tardis.apps.publication_forms.doi.DOI(doi=None)

    activate(doi=None)
    deactivate(doi=None)
    mint(experiment_id, uri, publisher='Monash University')
```

## tardis.apps.publication\_forms.email\_text module

```
tardis.apps.publication_forms.email_text.email_pub_approved(pub_title, pub_url,
                                                               doi=None, mes-
                                                               sage=None)
tardis.apps.publication_forms.email_text.email_pub_awaiting_approval(pub_title)
tardis.apps.publication_forms.email_text.email_pub_rejected(pub_title, mes-
                                                               sage=None)
tardis.apps.publication_forms.email_text.email_pub_released(pub_title,
                                                               doi=None)
tardis.apps.publication_forms.email_text.email_pub_requires_authorisation(user_name,
                                                               pub_url,
                                                               ap-
                                                               provals_url)
tardis.apps.publication_forms.email_text.email_pub_reverted_to_draft(pub_title,
                                                               mes-
                                                               sage=None)
tardis.apps.publication_forms.email_text.interpolate_template(template_name,
                                                               **kwargs)
```

## tardis.apps.publication\_forms.pub\_form\_config module

Set up publication form schemas

```
class tardis.apps.publication_forms.pub_form_config.PubFormConfig

    do_setup(force=False)
```

## tardis.apps.publication\_forms.tasks module

```
tardis.apps.publication_forms.tasks.get_release_date(publication)
tardis.apps.publication_forms.tasks.has_pdb_embargo(publication)
tardis.apps.publication_forms.tasks.populate_pdb_pub_records(*args, **kwargs)
tardis.apps.publication_forms.tasks.process_embargos(*args, **kwargs)
```

**tardis.apps.publication\_forms.urls module****tardis.apps.publication\_forms.utils module**

```
class tardis.apps.publication_forms.utils.CifHelper(cif_url)
    Bases: object

    as_list(obj)

    get_cif_file_object()

class tardis.apps.publication_forms.utils.PDBCifHelper(pdb_id)
    Bases: tardis.apps.publication_forms.utils.CifHelper

    get_citations()
    get_free_r_value()
    get_obs_r_value()
    get_pdb_id()
    get_pdb_title()
    get_pdb_url()
    get_resolution()
    get_sequence_info()
    get_spacegroup()
    get_unit_cell()

tardis.apps.publication_forms.utils.check_pdb_status(pdb_id)
tardis.apps.publication_forms.utils.get_pub_admin_email_addresses()
tardis.apps.publication_forms.utils.get_site_admin_email()
tardis.apps.publication_forms.utils.get_unreleased_pdb_info(pdb_id)
tardis.apps.publication_forms.utils.send_mail_to_authors(publication,
    subject,
    message,
    fail_silently=False)
```

**tardis.apps.publication\_forms.views module**

```
tardis.apps.publication_forms.views.approval_ajax(request)
tardis.apps.publication_forms.views.approval_view(request, *args, **kwargs)
tardis.apps.publication_forms.views.approve_publication(*args, **kwargs)
tardis.apps.publication_forms.views.clear_publication_metadata(publication)
tardis.apps.publication_forms.views.create_draft_publication(user,
    publication_title,
    publication_description)
tardis.apps.publication_forms.views.fetch_experiments_and_datasets(request,
    *args,
    **kwargs)
tardis.apps.publication_forms.views.get_draft_publication(user, publication_id)
```

```
tardis.apps.publication_forms.views.get_licenses()
tardis.apps.publication_forms.views.get_publications_awaiting_approval()
tardis.apps.publication_forms.views.index(request, *args, **kwargs)
tardis.apps.publication_forms.views.map_form_to_schemas(extraInfo, publication)
tardis.apps.publication_forms.views.pdb_helper(request, pdb_id)
tardis.apps.publication_forms.views.process_form(request, *args, **kwargs)
tardis.apps.publication_forms.views.reject_publication(publication,           mes-
                                                       sage=None)
tardis.apps.publication_forms.views.remove_draft_status(publication)
tardis.apps.publication_forms.views.require_publication_admin(f)
tardis.apps.publication_forms.views.revert_publication_to_draft(publication,   mes-
                                                               sage=None)
tardis.apps.publication_forms.views.select_forms(datasets)
tardis.apps.publication_forms.views.set_embargo_release_date(publication,     re-
                                                               lease_date)
tardis.apps.publication_forms.views.set_publication_authors(author_list, publica-
                                                               tion)
tardis.apps.publication_forms.views.synchrotron_search_epn(publication)
```

### Module contents

[tardis.apps.push\\_to package](#)

#### Subpackages

[tardis.apps.push\\_to.migrations package](#)

#### Submodules

[tardis.apps.push\\_to.migrations.0001\\_initial module](#)

```
class tardis.apps.push_to.migrations.0001_initial.Migration(name, app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'auth', u'__first__'), (u'auth', u'0006_require_contenttypes_0002')]
    operations = [CreateModel fields=[(u'id', AutoField)], (u'key', CharField(max_length=100))]
```

[tardis.apps.push\\_to.migrations.0002\\_auto\\_20160518\\_1953 module](#)

```
class tardis.apps.push_to.migrations.0002_auto_20160518_1953.Migration(name,
                                                                     app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'push_to', u'0001_initial')]
```

```
operations = [AlterField field=<django.db.models.fields.CharField>, name=u'key_type',
```

## Module contents

### tardis.apps.push\_to.tests package

#### Submodules

##### tardis.apps.push\_to.tests.test\_models module

```
class tardis.apps.push_to.tests.test_models.ModelsTestCase(methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    test_credential_generation()
    test_get_allowed_signing_services()
    test_keys_from_private_key_only()
    test_pkey_to_credential()
```

## Module contents

#### Submodules

##### tardis.apps.push\_to.apps module

```
class tardis.apps.push_to.apps.PushToConfig(app_name, app_module)
    Bases: tardis.app_config.AbstractTardisAppConfig

    name = 'tardis.apps.push_to'
    verbose_name = 'Push To'
```

##### tardis.apps.push\_to.exceptions module

```
exception tardis.apps.push_to.exceptions.NoSuitableCredential
    Bases: exceptions.Exception
```

This exception is thrown when attempting to find a suitable credential for a remote host but none is found

##### tardis.apps.push\_to.models module

```
class tardis.apps.push_to.models.Credential(*args, **kwargs)
    Bases: tardis.apps.push_to.models.KeyPair
```

A credential that may contain a password and/or key. The auth method chosen depends on the credentials available, allowed auth methods, and priorities defined by the SSH client.

```
exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

static generate_keypair_credential(tardis_user,      remote_user,      remote_hosts,
                                    bit_length=2048)
    Generates and saves an RSA key pair credential. Credentials returned by this method are intended to be registered on remote systems before being used. @type tardis_user: User @type remote_user: str @type bit_length: int @type remote_hosts: list[RemoteHost] :return: the generated credential :rtype: object

get_client_for_host(remote_host)
    Attempts to establish a connection with the remote_host using this credential object. The remote_host may be any host, but only those in the remote_hosts field are expected to work. @type remote_host: .RemoteHost :return: a connected SSH client :rtype: SSHClient

static get_suitable_credential(tardis_user, remote_host, remote_user=None)
objects = <django.db.models.manager.Manager object>

remote_hosts

user

verify_remote_access(remote_host=None)
    @type remote_host: RemoteHost

class tardis.apps.push_to.models.CredentialAdmin(model, admin_site)
    Bases: django.contrib.admin.options.ModelAdmin

form
    alias of CredentialForm

media

class tardis.apps.push_to.models.CredentialForm(data=None,           files=None,
                                                 auto_id=u'id_%s',   prefix=None,
                                                 initial=None,       error_class=<class
                                                 'django.forms.utils.ErrorList'>,
                                                 label_suffix=None,
                                                 empty_permitted=False,   instance=None)
    Bases: django.forms.models.ModelForm

class Meta

    fields = '__all__'

model
    alias of Credential

widgets = {'password': <django.forms.widgets.PasswordInput object at 0x7fb9eaffd99>,
           }

base_fields = {'key_type': <django.forms.fields.CharField object at 0x7fb9ec2f54d0>,}

declared_fields = {}

media

class tardis.apps.push_to.models.DBHostKeyPolicy
Bases: paramiko.client.MissingHostKeyPolicy

Host key verification policy based on the host key stored in the database.
```

```
missing_host_key (client, hostname, key)
    @type key: PKey

class tardis.apps.push_to.models.KeyPair (*args, **kwargs)
Bases: django.db.models.base.Model

A key pair

class Meta

    abstract = False

key

    Returns a subclass of PKey of the appropriate key type

    Return type PKey

    Raises ValidationError –

    save (*args, **kwargs)

class tardis.apps.push_to.models.OAuthSSHCertSigningService (*args, **kwargs)
Bases: django.db.models.base.Model

Connection parameters for an OAuth2 SSH certificate signing service. Supports certificate signing server available here: https://github.com/monash-merc/ssh-authz

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

allowed_groups

allowed_remote_hosts

allowed_users

static get_available_signing_services (user)
    Gets all SSH cert signing services available for a given user :param User user: User :return: allowed signing services :rtype: User

static get_oauth_service (user, service_id)
    @type user: User @type service_id: int

objects = <django.db.models.manager.Manager object>

class tardis.apps.push_to.models.RemoteHost (*args, **kwargs)
Bases: tardis.apps.push_to.models.KeyPair

A remote host that may be connected to via SSH

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

administrator

credential_set

oauthsshcryptsigningservice_set
```

```
objects = <django.db.models.manager.Manager object>
class tardis.apps.push_to.models.RemoteHostAdmin(model, admin_site)
Bases: django.contrib.admin.options.ModelAdmin
Hides the private key field, which is not necessary for host keys
fields = ['nickname', 'administrator', 'host_name', 'port', 'key_type', 'public_key',
media
```

### tardis.apps.push\_to.oauth\_tokens module

```
tardis.apps.push_to.oauth_tokens.get_token(request, oauth_service)
```

Returns the OAuth2 token from the current session :param Request request: django session object :param OAuthSSHCertSigningService oauth\_service: an

OAuthSSHCertSigningService object

#### Returns

**Return type** string

```
tardis.apps.push_to.oauth_tokens.get_token_data(oauth_service, token)
```

Gets the OAuth2 user attributes using the supplied token :param OAuthSSHCertSigningService oauth\_service: an

OAuthSSHCertSigningService object

**Parameters** **token** (basestring) – an OAuth2 token

**Returns** a json object of user attributes

**Return type** dict

```
tardis.apps.push_to.oauth_tokens.set_token(request, oauth_service, token)
```

Stores the OAuth2 token in the current session :param Request request: django request object :param OAuthSSHCertSigningService oauth\_service: an

OAuthSSHCertSigningService object

**Parameters** **token** (basestring) – the OAuth2 token

### tardis.apps.push\_to.ssh\_authz module

```
tardis.apps.push_to.ssh_authz.sign_certificate(credential, token, url)
```

An interface to the OAuth2 SSH certificate signing service @type credential: models.Credential

### tardis.apps.push\_to.tasks module

### tardis.apps.push\_to.urls module

### tardis.apps.push\_to.utils module

```
tardis.apps.push_to.utils.bytes_available(ssh_client, path)
```

```
tardis.apps.push_to.utils.can_copy(ssh_client, object_type, object_id, path)
tardis.apps.push_to.utils.get_default_push_location(sftp_client)
tardis.apps.push_to.utils.get_object_size(type, id)
tardis.apps.push_to.utils.is_directory(sftp_client, path)
tardis.apps.push_to.utils.list_subdirectories(sftp_client, path, show_hidden=False)
tardis.apps.push_to.utils.shell_escape(s)
```

## tardis.apps.push\_to.views module

### Module contents

## tardis.apps.related\_info package

### Subpackages

## tardis.apps.related\_info.tests package

### Submodules

## tardis.apps.related\_info.tests.test\_oaipmh module

```
class tardis.apps.related_info.tests.test_oaipmh.RifCSTestCase(methodName='runTest')
    Bases: django.test.testcases.TransactionTestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    testExistsInOaipmh()
```

## tardis.apps.related\_info.tests.tests module

```
class tardis.apps.related_info.tests.tests.CreateTestCase(methodName='runTest')
    Bases: django.test.testcases.TransactionTestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    testCanCreate()
    testDetectsBadInput()
    testMustHaveWrite()

class tardis.apps.related_info.tests.tests.DeleteTestCase(methodName='runTest')
    Bases: django.test.testcases.TransactionTestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    testCanDelete()
    testMustHaveWrite()
```

```
class tardis.apps.related_info.tests.tests.GetTestCase (methodName='runTest')
Bases: django.test.testcases.TransactionTestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

testHandlesFound()

testHandlesNotFound()

class tardis.apps.related_info.tests.tests.ListTestCase (methodName='runTest')
Bases: django.test.testcases.TransactionTestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

testHandlesEmptySet()

testHandlesMultipleEntries()

testHandlesSingleEntry()

class tardis.apps.related_info.tests.tests.TabTestCase (methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

testAccessWithReadPerms()

testAccessWithoutReadPerms()

class tardis.apps.related_info.tests.tests.UpdateTestCase (methodName='runTest')
Bases: django.test.testcases.TransactionTestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

testDetectsBadInput()

testMustHaveWrite()
```

### Module contents

#### Submodules

##### tardis.apps.related\_info.forms module

```
class tardis.apps.related_info.forms.RelatedInfoForm (data=None, files=None,
    auto_id=u'id_%s', prefix=None, initial=None,
    error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=None,
    empty_permitted=False)
Bases: django.forms.forms.Form

base_fields = {'identifier': <django.forms.fields.URLField object at 0x7fb9e5175d10>,
declared_fields = {'identifier': <django.forms.fields.URLField object at 0x7fb9e5175d10>
media
```

[tardis.apps.related\\_info.models module](#)

[tardis.apps.related\\_info.settings module](#)

[tardis.apps.related\\_info.urls module](#)

[tardis.apps.related\\_info.views module](#)

**Module contents**

[tardis.apps.slideshow\\_view package](#)

**Submodules**

[tardis.apps.slideshow\\_view.urls module](#)

[tardis.apps.slideshow\\_view.views module](#)

**Module contents**

**Module contents**

[tardis.default\\_settings package](#)

**Submodules**

[tardis.default\\_settings.admins module](#)

[tardis.default\\_settings.analytics module](#)

[tardis.default\\_settings.apps module](#)

[tardis.default\\_settings.auth module](#)

`tardis.default_settings.auth.AUTOGENERATE_API_KEY = False`

Generate a tastypie API key with user post\_save (tardis/tardis\_portal/models/hooks.py)

`tardis.default_settings.auth.REGISTRATION_OPEN = True`

Enable/disable the self-registration link and form in the UI. Note - this does not actually disable the URL endpoints for registration. You must also remove the *registration* app from `INSTALLED_APPS` to disable registration.

[tardis.default\\_settings.caches module](#)

`tardis.default_settings.caches.CACHES = {'celery-locks': {'LOCATION': 'celery_lock_cache'}}`

change the CACHES setting to memcached if you prefer. Requires additional dependencies.

### tardis.default\_settings.celery module

```
tardis.default_settings.celery.BROKER_URL = 'django://'
```

use django:, add kombu.transport.django to INSTALLED\_APPS or use redis: install redis separately and add the following to a custom buildout.cfg:

```
django-celery-with-redis redis hiredis
```

### tardis.default\_settings.custom\_views module

```
tardis.default_settings.custom_views.DATASET_VIEWS = []
```

Dataset view overrides ('contextual views') are specified as tuples mapping a Schema namespace to a class-based view (or view function). See: [https://mytardis.readthedocs.org/en/develop/contextual\\_views.html#dataset-and-experiment-views](https://mytardis.readthedocs.org/en/develop/contextual_views.html#dataset-and-experiment-views)

eg:

```
DATASET_VIEWS = [
    ('http://example.org/schemas/dataset/my_awesome_schema',
     'tardis.apps.my_awesome_app.views.CustomDatasetViewSubclass'),
]
```

```
tardis.default_settings.custom_views.EXPERIMENT_VIEWS = []
```

Experiment view overrides ('contextual views') are specified as tuples mapping a Schema namespace to a class-based view (or view function). See: [https://mytardis.readthedocs.org/en/develop/contextual\\_views.html#dataset-and-experiment-views](https://mytardis.readthedocs.org/en/develop/contextual_views.html#dataset-and-experiment-views)

eg:

```
EXPERIMENT_VIEWS = [
    ('http://example.org/schemas/expt/my_awesome_schema',
     'tardis.apps.my_awesome_app.views.CustomExptViewSubclass'),
]
```

```
tardis.default_settings.custom_views.INDEX_VIEWS = {}
```

A custom index page override is defined in as dictionary mapping a class-based view (or view function) to a Django Site, specified by SITE\_ID (an integer) or the domain name of the incoming request. See: [https://mytardis.readthedocs.org/en/develop/contextual\\_views.html#custom-index-view](https://mytardis.readthedocs.org/en/develop/contextual_views.html#custom-index-view)

eg:

```
INDEX_VIEWS = {
    1: 'tardis.apps.my_custom_app.views.MyCustomIndexSubclass',
    'store.example.com': 'tardis.apps.myapp.AnotherCustomIndexSubclass'
}
```

### tardis.default\_settings.database module

#### tardis.default\_settings.debug module

```
tardis.default_settings.debug.ALLOWED_HOSTS = ['*']
```

For security reasons this needs to be set to your hostname and/or IP address in production.

```
tardis.default_settings.debug.DEBUG = True
```

Set to false for production use

```
tardis.default_settings.debug.INTERNAL_IPS = ('127.0.0.1',)
```

A list of IP addresses, as strings, that: Allow the debug() context processor to add some variables to the template context.

### **tardis.default\_settings.downloads module**

```
tardis.default_settings.downloads.DEFAULT_ARCHIVE_FORMATS = ['tar']
```

Site's preferred archive types, with the most preferred first other available option: 'tgz'. Add to list if desired

### **tardis.default\_settings.email module**

### **tardis.default\_settings.filters module**

### **tardis.default\_settings.frontend module**

```
tardis.default_settings.frontend.BLEACH_ALLOWED_ATTRIBUTES = {'a': ['href', 'title'], 'ab
```

These are the default bleach values and shown here as an example.

```
tardis.default_settings.frontend.BLEACH_ALLOWED_TAGS = ['a', 'abbr', 'acronym', 'b', 'blockc
```

These are the default bleach values and shown here as an example.

### **tardis.default\_settings.i18n module**

### **tardis.default\_settings.localisation module**

### **tardis.default\_settings.logging module**

### **tardis.default\_settings.middlewares module**

### **tardis.default\_settings.publication module**

### **tardis.default\_settings.search module**

### **tardis.default\_settings.sftp module**

```
tardis.default_settings.sftp.SFTP_USERNAME_ATTRIBUTE = 'email'
```

The attribute from the User model ('email' or 'username') used to generate the SFTP login example on the sftp\_access help page.

### **tardis.default\_settings.sharing module**

### **tardis.default\_settings.site\_customisations module**

```
tardis.default_settings.site_customisations.SITE_TITLE = 'MyTardis'
```

customise the title of your site

```
tardis.default_settings.site_customisations.SPONSORED_TEXT = None
```

add text to the footer to acknowledge someone

## tardis.default\_settings.staging module

### tardis.default\_settings.static\_files module

```
tardis.default_settings.static_files.get_admin_media_path()
```

## tardis.default\_settings.storage module

```
tardis.default_settings.storage.METADATA_STORE_PATH = '/home/docs/checkouts/readthedocs.org/storage'
```

storage path for image paths stored in parameters. Better to set to another location if possible

## tardis.default\_settings.templates module

## tardis.default\_settings.uploads module

```
tardis.default_settings.uploads.UPLOAD_METHOD = False
```

Old version: UPLOAD\_METHOD = “uploadify”. This can be changed to an app that provides an upload\_button function, eg. “tardis.apps.filepicker.views.upload\_button” to use a fancy commercial uploader. To use filepicker, please also get an API key at <http://filepicker.io>

## tardis.default\_settings.urls module

### Module contents

```
tardis.default_settings.get_git_version()
```

## tardis.search package

### Submodules

## tardis.search.forms module

```
class tardis.search.forms.GroupedSearchForm(*args, **kwargs)
    Bases: haystack.forms.ModelSearchForm

    base_fields = {'q': <django.forms.fields.CharField object at 0x7fb9e84d2810>}
    declared_fields = {'q': <django.forms.fields.CharField object at 0x7fb9e84d2810>}
    media
    search(*args, **kwargs)
```

## tardis.search.search\_indexes module

search indexes for single search

```
class tardis.search.search_indexes.DataFileIndex
    Bases: haystack.indexes.SearchIndex, haystack.constants.Indexable
```

```
datafile_filename = <haystack.fields.CharField object>
dataset_id_stored = <haystack.fields.IntegerField object>
experiment_id_stored = <haystack.fields.MultiValueField object>
fields = {'datafile_filename': <haystack.fields.CharField object at 0x7fb9e5007750>,
get_model()

objects = <haystack.manager.SearchIndexManager object>
prepare_experiment_id_stored(obj)
prepare_text(obj)

text = <haystack.fields.CharField object>

class tardis.search.search_indexes.DatasetIndex
Bases: haystack.indexes.SearchIndex, haystack.constants.Indexable

dataset_description = <haystack.fields.CharField object>
dataset_id_stored = <haystack.fields.IntegerField object>
experiment_id_stored = <haystack.fields.MultiValueField object>
fields = {'dataset_description': <haystack.fields.CharField object at 0x7fb9e5007690>
get_model()

objects = <haystack.manager.SearchIndexManager object>
prepare_experiment_id_stored(obj)
prepare_text(obj)

text = <haystack.fields.CharField object>

class tardis.search.search_indexes.ExperimentIndex
Bases: haystack.indexes.SearchIndex, haystack.constants.Indexable

experiment_author = <haystack.fields.MultiValueField object>
experiment_created_time = <haystack.fields.DateTimeField object>
experiment_creator = <haystack.fields.CharField object>
experiment_description = <haystack.fields.CharField object>
experiment_end_time = <haystack.fields.DateTimeField object>
experiment_id_stored = <haystack.fields.IntegerField object>
experiment_institution_name = <haystack.fields.CharField object>
experiment_start_time = <haystack.fields.DateTimeField object>
experiment_title = <haystack.fields.CharField object>
experiment_update_time = <haystack.fields.DateTimeField object>
fields = {'experiment_author': <haystack.fields.MultiValueField object at 0x7fb9e5007
get_model()

index_queryset (using=None)
Used when the entire index for model is updated.

objects = <haystack.manager.SearchIndexManager object>
```

```
prepare_experimentauthor (obj)
prepare_text (obj)
text = <haystack.fields.CharField object>
```

## tardis.search.urls module

### tardis.search.utils module

```
class tardis.search.utils.SearchQueryString(query_string)
Bases: object
```

Class to manage switching between space separated search queries and ‘+’ separated search queries (for addition to urls)

TODO This would probably be better handled with filters

```
query_string()
url_safe_query()
```

## tardis.search.views module

### Module contents

#### tardis.tardis\_portal package

##### Subpackages

##### tardis.tardis\_portal.auth package

###### Submodules

###### tardis.tardis\_portal.auth.authentication module

A module containing helper methods for the manage\_auth\_methods function in views.py.

```
tardis.tardis_portal.auth.authentication.add_auth_method(request)
```

Add a new authentication method to request.user’s existing list of authentication methods. This method will ask for a confirmation if the user wants to merge two accounts if the authentication method he provided already exists as a method for another user.

**Parameters** `request` (`Request`) – the HTTP request object

**Returns** The `HttpResponse` which contains `request.user`’s new list of authentication methods

**Return type** `HttpResponse`

```
tardis.tardis_portal.auth.authentication.edit_auth_method(request)
```

Change the local DB (Django) password for `request.user`.

```
tardis.tardis_portal.auth.authentication.list_auth_methods(request)
```

Generate a list of authentication methods that `request.user` uses to authenticate to the system and send it back in a `HttpResponse`.

**Parameters** `request` (`Request`) – the HTTP request object

**Returns** The `HttpResponse` which contains `request.user`'s list of authentication methods

**Return type** `HttpResponse`

`tardis.tardis_portal.auth.authentication.merge_auth_method(request)`

Merge the account that the user is logged in as and the account that he provided in the Authentication Form. Merging accounts involve relinking the `UserAuthentication` table entries, transferring ObjectACL entries to the merged account, changing the Group memberships and deleting the unneeded account.

**Parameters** `request` (`Request`) – the HTTP request object

**Returns** The `HttpResponse` which contains `request.user`'s new list of authentication methods

**Return type** `HttpResponse`

`tardis.tardis_portal.auth.authentication.remove_auth_method(request)`

Removes the non-local DB auth method from the `UserAuthentication` model.

**Parameters** `request` (`Request`) – the HTTP request object

**Returns** The `HttpResponse` which contains `request.user`'s new list of authentication methods

**Return type** `HttpResponse`

## [tardis.tardis\\_portal.auth.authorization module](#)

Object-level authorisation backend

```
class tardis.tardis_portal.auth.authorization.ACIAwareBackend
    Bases: object

    app_label = 'tardis_acls'

    authenticate(username, password)
        do not use this backend for authentication

    get_perm_bool(verb)
        relates ACLs to permissions

    has_perm(user_obj, perm, obj=None)
        main method, calls other methods based on permission type queried

    supports_anonymous_user = True
    supports_object_permissions = True
```

## [tardis.tardis\\_portal.auth.authservice module](#)

models.py

```
class tardis.tardis_portal.auth.authservice.AuthService(settings=<django.conf.LazySettings
    object>)
```

The AuthService provides an interface for querying the auth(nlz) framework within MyTardis. The auth service works by reading the class path to plugins from the settings file.

**Parameters** `settings` (`django.conf.settings`) – the settings object that contains the list of user and group plugins.

### **authenticate** (*authMethod*, \*\**credentials*)

Try and authenticate the user using the auth type he/she specified to use and if authentication didn't work using that

#### **Parameters**

- **authMethod** (*string*) – the shortname of the auth method.
- **credentials** (*kwargs*) – the credentials as expected by the auth plugin

**Returns** authenticated User or None

**Return type** User or None

### **getGroups** (*user*)

**Parameters** **user** (*User*) – User

**Returns** a list of tuples containing pluginname and group id

**Return type** list

### **getGroupsForEntity** (*entity*)

Return a list of the groups an entity belongs to

**Parameters** **entity** (*string*) – the entity to search for, user or group.

**Returns** groups

**Return type** Group

The groups will be returned as a list similar to:

```
[{'name': 'Group 456', 'id': '2'},  
 {'name': 'Group 123', 'id': '1'}]
```

### **getUser** (*authMethod*, *user\_id*, *force\_user\_create=False*)

Return a user model based on the given auth method and user id.

This function is responsible for creating the user within the Django DB and returning the resulting user model.

### **getUsernameByEmail** (*authMethod*, *email*)

Return a username given the auth method and email address of a user.

### **get\_or\_create\_user** (*user\_obj\_or\_dict*, *authMethod=None*)

refactored out for external use by AAF and possibly others

### **searchEntities** (*filter*)

Return a list of users and/or groups

### **searchGroups** (\*\**kw*)

basestring *id*: the value of the id to search for basestring *name*: the value of the displayname to search for int *max\_results*: the maximum number of elements to return basestring *sort\_by*: the attribute the users should be sorted on basestring *plugin*: restrict the search to the specific group

provider

returns a list of users and/or groups rtype list

### **searchUsers** (*filter*)

Return a list of users and/or groups

## tardis.tardis\_portal.auth.decorators module

```
tardis.tardis_portal.auth.decorators.datafile_access_required(f)
tardis.tardis_portal.auth.decorators.dataset_access_required(f)
tardis.tardis_portal.auth.decorators.dataset_download_required(f)
tardis.tardis_portal.auth.decorators.dataset_write_permissions_required(f)
tardis.tardis_portal.auth.decorators.delete_permissions_required(f)
tardis.tardis_portal.auth.decorators.experiment_access_required(f)
tardis.tardis_portal.auth.decorators.experiment_download_required(f)
tardis.tardis_portal.auth.decorators.experiment_ownership_required(f)
```

A decorator for Django views that validates if a user is an owner of an experiment or ‘superuser’ prior to further processing the request. Unauthenticated requests are redirected to the login page. If the user making the request satisfies none of these criteria, an error response is returned.

**Parameters** `f` (`types.FunctionType`) – A Django view function

**Returns** A Django view function

**Return type** `types.FunctionType`

```
tardis.tardis_portal.auth.decorators.get_accessible_datafiles_for_user(request)
tardis.tardis_portal.auth.decorators.get_accessible_experiments(request)
tardis.tardis_portal.auth.decorators.get_accessible_experiments_for_dataset(request,
    dataset_id)
tardis.tardis_portal.auth.decorators.get_owned_experiments(request)
tardis.tardis_portal.auth.decorators.get_shared_experiments(request)
tardis.tardis_portal.auth.decorators.group_ownership_required(f)
```

A decorator for Django views that validates if a user is a group admin or ‘superuser’ prior to further processing the request. Unauthenticated requests are redirected to the login page. If the user making the request satisfies none of these criteria, an error response is returned.

**Parameters** `f` (`types.FunctionType`) – A Django view function

**Returns** A Django view function

**Return type** `types.FunctionType`

```
tardis.tardis_portal.auth.decorators.has_datafile_access(request, datafile_id)
tardis.tardis_portal.auth.decorators.has_datafile_download_access(request,
    datafile_id)
tardis.tardis_portal.auth.decorators.has_dataset_access(request, dataset_id)
tardis.tardis_portal.auth.decorators.has_dataset_download_access(request,
    dataset_id)
tardis.tardis_portal.auth.decorators.has_dataset_ownership(request, dataset_id)
tardis.tardis_portal.auth.decorators.has_dataset_write(request, dataset_id)
tardis.tardis_portal.auth.decorators.has_delete_permissions(request,
    experiment_id)
tardis.tardis_portal.auth.decorators.has_experiment_access(request,
    experiment_id)
```

```
tardis.tardis_portal.auth.decorators.has_experiment_download_access(request,  
                                experi-  
                                ment_id)  
tardis.tardis_portal.auth.decorators.has_experiment_ownership(request,   experi-  
                                ment_id)  
tardis.tardis_portal.auth.decorators.has_experiment_write(request,      experi-  
                                ment_id)  
tardis.tardis_portal.auth.decorators.has_read_or_owner_ACL(request,      experi-  
                                ment_id)
```

Check whether the user has read access to the experiment - this means either they have been granted read access, or that they are the owner.

NOTE: This does not check whether the experiment is public or not, which means even when the experiment is public, this method does not automatically returns true.

As such, this method should NOT be used to check whether the user has general read permission.

```
tardis.tardis_portal.auth.decorators.has_write_permissions(request,      experi-  
                                ment_id)  
tardis.tardis_portal.auth.decorators.is_group_admin(request, *args, **kwargs)  
tardis.tardis_portal.auth.decorators.upload_auth(f)  
tardis.tardis_portal.auth.decorators.write_permissions_required(f)
```

### **tardis.tardis\_portal.auth.fix\_circular module**

```
tardis.tardis_portal.auth.fix_circular.getGroups(user)
```

### **tardis.tardis\_portal.auth.httpbasicendpoint\_auth module**

Created on Dec 15, 2011

@author: uqtdettr

```
class tardis.tardis_portal.auth.httpbasicendpoint_auth.HttpBasicEndpointAuth(openerDirector=<u  
                                in-  
                                stance>,  
                                end-  
                                point=None)
```

Bases: *tardis.tardis\_portal.auth.interfacesAuthProvider*

This class provides authentication against a HTTP resource protected by HTTP Basic authentication. Access is granted based on the user credentials being valid against that resource.

```
class SimplePasswordMgr
```

Bases: *urllib2.HTTPPasswordMgr*

Simple password manager which provides the same credentials, no matter the realm or the uri.

```
add_password(realm, uri, username, password)
```

```
clear()
```

```
find_user_password(realm, authuri)
```

**authenticate (request)**

Authenticate a user, expecting the user will be using form-based auth and the *username* and *password* will be passed in url-encoded form **POST** variables.

**Parameters** **request** (`django.http.HttpRequest`) – a HTTP Request instance

**Returns** authenticated user

**Return type** User

**get\_user (user\_id)****tardis.tardis\_portal.auth.interfaces module****class tardis.tardis\_portal.auth.interfaces.AuthProvider****authenticate (request)**

from a request authenticate try to authenticate the user. return a user dict if successful.

**getUsernameByEmail (email)**

returns the username (format string) from the auth domain

Implementing this function is optional- it is needed for resolving experiment owner email addresses to usernames during ingestion.

**get\_user (user\_id)****class tardis.tardis\_portal.auth.interfaces.GroupProvider****getGroupById (id)**

return the group associated with the id

**getGroups (user)**

return an iteration of the available groups.

**getGroupsForEntity (id)**

return a list of groups associated with a particular entity id

**searchGroups (\*\*filter)**

return a list of groups that match the filter

**class tardis.tardis\_portal.auth.interfaces.UserProvider****getUserById (id)**

return the user dictionary in the format of:

```
{ "id": 123,
  "first_name": "John",
  "last_name": "Smith",
  "email": "john@example.com" }
```

**getUsernameByEmail (email)**

returns the username (format string) from the auth domain needed for resolving experiment owners during ingestion

**searchUsers (\*\*filter)**

return a list of user descriptions from the auth domain.

each user is in the format of:

```
{"id": 123,  
"first_name": "John",  
"last_name": "Smith",  
"email": "john@example.com"}
```

### [tardis.tardis\\_portal.auth.ldap\\_auth module](#)

### [tardis.tardis\\_portal.auth.localdb\\_auth module](#)

Local DB Authentication module.

**class** `tardis.tardis_portal.auth.localdb_auth.DjangoAuthBackend`  
Bases: `tardis.tardis_portal.auth.interfacesAuthProvider`

Authenticate against Django's Model Backend.

**authenticate** (`request`)

authenticate a user, this expect the user will be using form based auth and the `username` and `password` will be passed in as **POST** variables.

**Parameters** `request` (`django.http.HttpRequest`) – a HTTP Request instance

**Returns** authenticated User

**Return type** User

**get\_user** (`user_id`)

**class** `tardis.tardis_portal.auth.localdb_auth.DjangoGroupProvider`  
Bases: `tardis.tardis_portal.auth.interfaces.GroupProvider`

**getGroupById** (`id`)

return the group associated with the id:

```
{"id": 123,
```

“display”: “Group Name”,}

**getGroups** (`user`)

return an iteration of the available groups.

`name = u'django_group'`

**searchGroups** (\*\*filter)

**class** `tardis.tardis_portal.auth.localdb_auth.DjangoUserProvider`  
Bases: `tardis.tardis_portal.auth.interfaces.UserProvider`

**getUserById** (`id`)

return the user dictionary in the format of:

```
{"id": 123,  
"first_name": "John",  
"last_name": "Smith",  
"email": "john@example.com"}
```

`name = u'django_user'`

## tardis.tardis\_portal.auth.token\_auth module

token authentication module

```
class tardis.tardis_portal.auth.token_auth.TokenAuthMiddleware
    Bases: object

    adds tokens to the user object and the session from a GET query

    process_request(request)

class tardis.tardis_portal.auth.token_auth.TokenGroupProvider
    Bases: tardis.tardis_portal.auth.interfaces.GroupProvider

    Transforms tokens into auth groups

    getGroups(user)
        name = u'token_group'

    searchGroups(**kwargs)
        return nothing because these are not groups in the standard sense
```

## tardis.tardis\_portal.auth.utils module

Created on 15/03/2011

@author: gerson

```
tardis.tardis_portal.auth.utils.configure_user(user)
    Configure a user account that has just been created by adding the user to the default groups and creating a
    UserProfile.
```

**Parameters** `user` (`User`) – the User instance for the newly created account

**Returns** User profile for user

**Return type** `UserProfile`

```
tardis.tardis_portal.auth.utils.create_user(auth_method, user_id, email=')
```

```
tardis.tardis_portal.auth.utils.get_or_create_user(auth_method, user_id, email=')
```

## Module contents

### tardis.tardis\_portal.filters package

#### Submodules

##### tardis.tardis\_portal.filters.diffractionimage module

diffractionimage.py

```
class tardis.tardis_portal.filters.diffractionimage.DiffractionImageFilter(name,
    schema,
    diff-
    dump_path,
    diff2jpeg_path,
    tagsToFind=[],
    tagsToEx-
    clude=[])
```

Bases: object

This filter runs the CCP4 diffdump binary on a diffraction image and collects its output into the trddatafile schema

If a white list is specified then it takes precedence and all other tags will be ignored.

param name: the short name of the schema. type name: string param schema: the name of the schema to load the EXIF data into. type schema: string param tagsToFind: a list of the tags to include. type tagsToFind: list of strings param tagsToExclude: a list of the tags to exclude. type tagsToExclude: list of strings

**getDiffractionImageMetadata** (filename)

Return a dictionary of the metadata.

**getDiffractionPreviewImage** (filename)

Return a base64 encoded preview image.

**getParameters** (schema, metadata)

Return a list of the parameters that will be saved.

**getSchema** ()

Return the schema object that the paramater set will use.

**output\_beamcenter** (term, value)

**output\_detectordistance** (term, value)

**output\_exposuretime** (term, value)

**output\_imagesize** (term, value)

**output\_metadata** (term, value)

**output\_oscillation** (term, value)

**output\_pixelsize** (term, value)

**output\_twtheta** (term, value)

**output\_wavelength** (term, value)

**parse\_output** (output)

**parse\_term** (line)

**parse\_value** (line)

**run\_diff2jpeg** (filename)

**run\_diffdump** (file\_path)

**saveDiffractionImageMetadata** (instance, schema, metadata)

Save all the metadata to a DataFiles parameter set.

**split\_oscillation** (terms, value)

**split\_output** (terms, value, strip)

```
tardis.tardis_portal.filters.diffractionimage.make_filter(name=", schema=",
tagsToFind=[], tagsToExclude=[])
```

This filter runs the CCP4 diffdump binary on a diffraction image and collects its output into the trddatafile schema

If a white list is specified then it takes precedence and all other tags will be ignored.

param name: the short name of the schema. type name: string param schema: the name of the schema to load the EXIF data into. type schema: string param tagsToFind: a list of the tags to include. type tagsToFind: list of strings param tagsToExclude: a list of the tags to exclude. type tagsToExclude: list of strings

## **tardis.tardis\_portal.filters.jeolsem module**

```
class tardis.tardis_portal.filters.jeolsem.JEOLSEMFilter
Bases: object
```

This filter collects metadata from JEOL SEM text files.

param name: the short name of the schema. type name: string param schema: the name of the schema to load the EXIF data into. type schema: string

```
ATTR_PREFIXES = ('$CM_', '$$SM_')
SCHEMA = 'http://www.jeol.com/#jeol-sem-schema'
get_file_contents(datafile)
get_metadata(schema, filedata)
is_already_processed(datafile)
is_jeol_sem_metadata(filedata)
is_text_file(datafile)
save_metadata(datafile, schema, metadata)
```

## **Module contents**

```
__init__.py
```

```
class tardis.tardis_portal.filters.FilterInitMiddleware(filters=None)
Bases: object
```

## **tardis.tardis\_portal.management package**

### **Subpackages**

#### **tardis.tardis\_portal.management.commands package**

##### **Submodules**

##### **tardis.tardis\_portal.management.commands.backupdb module**

Command for backup database

```
class tardis.tardis_portal.management.commands.backupdb.Command(stdout=None,
                                                               stderr=None,
                                                               no_color=False)
Bases: django.core.management.base.BaseCommand

backup()
do_mysql_backup(outfile)
do_mysql_restore(infile)
do_postgresql_backup(outfile)
do_postgresql_restore(infile)
handle(*args, **options)
help = 'Backup database. Only Mysql and Postgresql engines are implemented'
option_list = (<Option at 0x7fb9e1a3a9e0: -r/--restore>, <Option at 0x7fb9e1a3a950:>
               restore(infile)
```

### tardis.tardis\_portal.management.commands.checkhashes module

Management utility to create a token user

```
exception tardis.tardis_portal.management.commands.checkhashes.AlgorithmNotSupported
Bases: exceptions.Exception

class tardis.tardis_portal.management.commands.checkhashes.Command(stdout=None,
                                                               stderr=None,
                                                               no_color=False)
Bases: django.core.management.base.BaseCommand

handle(*args, **options)
help = 'Used to check file hashes against actual files.'
exception tardis.tardis_portal.management.commands.checkhashes.NoHashAvailable
Bases: exceptions.Exception
exception tardis.tardis_portal.management.commands.checkhashes.ValidationFailed
Bases: exceptions.Exception
tardis.tardis_portal.management.commands.checkhashes.validate_digest(algorithm,
                                                               datafile)
```

### tardis.tardis\_portal.management.commands.chownexperiment module

Management command to change the owner of some experiments

```
class tardis.tardis_portal.management.commands.chownexperiment.Command(stdout=None,
                                                               stderr=None,
                                                               no_color=False)
Bases: django.core.management.base.BaseCommand

args = '<user> <experiment id>...'
handle(*args, **options)
help = 'Change the owner of the experiments.'
```

```
option_list = (<Option at 0x7fb9e1689c68: -n/--dryRun>, <Option at 0x7fb9e1689290: --
```

### tardis.tardis\_portal.management.commands.cleanuptokens module

Management utility to clean up tokens

```
class tardis.tardis_portal.management.commands.cleanuptokens.Command(stdout=None,
                                                                stderr=None,
                                                                no_color=False)

Bases: django.core.management.base.BaseCommand

handle(*args, **options)
help = 'Deletes unused tokens and optionally their ACLs'
option_list = (<Option at 0x7fb9e1689758: --keep-acls>,)
```

### tardis.tardis\_portal.management.commands.createmysuperuser module

Management utility to create superusers.

```
class tardis.tardis_portal.management.commands.createmysuperuser.Command(stdout=None,
                                                                stderr=None,
                                                                no_color=False)

Bases: django.core.management.base.BaseCommand

handle(*args, **options)
help = 'Used to create a MyTardis superuser.'
option_list = (<Option at 0x7fb9e1a6a638: --username>, <Option at 0x7fb9e1aa5248: --
```

tardis.tardis\_portal.management.commands.createmysuperuser.is\_valid\_email (value)

### tardis.tardis\_portal.management.commands.createtokenuser module

Management utility to create a token user

```
class tardis.tardis_portal.management.commands.createtokenuser.Command(stdout=None,
                                                                stderr=None,
                                                                no_color=False)

Bases: django.core.management.base.BaseCommand

handle(*args, **options)
help = 'Used to create a MyTardis tokenuser.'
option_list = (<Option at 0x7fb9e1a7cc68: --username>,)
```

### tardis.tardis\_portal.management.commands.createuser module

Management utility to create regular users.

```
class tardis.tardis_portal.management.commands.createuser.Command(stdout=None,
                                                                stderr=None,
                                                                no_color=False)

Bases: django.core.management.base.BaseCommand

handle(*args, **options)
```

```
    help = 'Used to create a MyTardis user.'
    option_list = (<Option at 0x7fb9e1ac17a0: --username>, <Option at 0x7fb9e1ac1518: --
tardis.tardis_portal.management.commands.createuser.is_valid_email(value)
```

### tardis.tardis\_portal.management.commands.dumpschemas module

Command for dumping soft schema definitions

```
class tardis.tardis_portal.management.commands.dumpschemas.Command(stdout=None,
                                                               stderr=None,
                                                               no_color=False)
Bases: django.core.management.base.BaseCommand
args = '[namespace...]'
handle(*args, **options)
help = 'Dump soft schema definitions. No namespace = dump all schemas'
option_list = (<Option at 0x7fb9e1bff1b8: --format>, <Option at 0x7fb9e1bff098: --da
```

### tardis.tardis\_portal.management.commands.loadschemas module

Command for loading soft schema definitions

```
class tardis.tardis_portal.management.commands.loadschemas.Command(stdout=None,
                                                               stderr=None,
                                                               no_color=False)
Bases: django.core.management.base.BaseCommand
args = 'schema [schema ...]'
handle(*args, **options)
help = 'Load soft schema definitions'
option_list = (<Option at 0x7fb9e1645638: --database>, <Option at 0x7fb9e1c3ccb0: --
```

### tardis.tardis\_portal.management.commands.rmxperiment module

Management command to delete the specified experiment and its associated datasets, datafiles and parameters.

The operation is atomic, either the entire experiment is deleted, or nothing.

rmxperiment was introduced due to the Oracle DISTINCT workaround causing sql delete cascading to fail. The current implementation of rmxperiment still relies on some cascading.

```
class tardis.tardis_portal.management.commands.rmxperiment.Command(stdout=None,
                                                               stderr=None,
                                                               no_color=False)
Bases: django.core.management.base.BaseCommand
args = '<MyTardis Exp ID>'
handle(*args, **options)
help = 'Delete the supplied MyTardis Experiment ID'
option_list = (<Option at 0x7fb9e1b31830: --list>, <Option at 0x7fb9e1b31b00: --conf
```

## tardis.tardis\_portal.management.commands.runfilters module

Management command to (re-)run the ingestion filters by hand.

```
class tardis.tardis_portal.management.commands.runfilters.Command(stdout=None,
stderr=None,
no_color=False)
Bases: django.core.management.base.BaseCommand
args = ' [<filter-no>] ...'
handle(*args, **options)
help = "Run selected ingestion filters on all Datafiles.\nNote that a typical ingestion..."
instantiateFilters(filterIds)
listFilters()
option_list = (<Option at 0x7fb9e1b22128: -n/--dryRun>, <Option at 0x7fb9e1b22ef0: -r/>)
runFilters(filters, dryRun=False)
```

## tardis.tardis\_portal.management.commands.sftpd module

### Module contents

### Module contents

## tardis.tardis\_portal.migrations package

### Submodules

#### tardis.tardis\_portal.migrations.0001\_initial module

```
class tardis.tardis_portal.migrations.0001_initial.Migration(name, app_label)
Bases: django.db.migrations.migration.Migration
dependencies = [(u'contenttypes', u'0002_remove_content_type_name'), (u'auth', u'__first__')]
operations = [<CreateModel fields=[(u'id', <django.db.models.fields.AutoField>), (u'file', <django.db.models.fields.CharField>), (u'path', <django.db.models.fields.CharField>), (u'checksum', <django.db.models.fields.CharField>), (u'created_at', <django.db.models.fields.DateTimeField>), (u'updated_at', <django.db.models.fields.DateTimeField>)]]
```

#### tardis.tardis\_portal.migrations.0001\_squashed\_0011\_auto\_20160505\_1643 module

```
class tardis.tardis_portal.migrations.0001_squashed_0011_auto_20160505_1643.Migration(name, app_label)
Bases: django.db.migrations.migration.Migration
dependencies = [(u'contenttypes', u'0002_remove_content_type_name'), (u'auth', u'__first__')]
operations = [<CreateModel fields=[(u'id', <django.db.models.fields.AutoField>), (u'file', <django.db.models.fields.CharField>), (u'path', <django.db.models.fields.CharField>), (u'checksum', <django.db.models.fields.CharField>), (u'created_at', <django.db.models.fields.DateTimeField>), (u'updated_at', <django.db.models.fields.DateTimeField>)]]
replaces = [('tardis_portal', u'0001_initial'), ('tardis_portal', u'0002_auto_20150528_1253')]
tardis.tardis_portal.migrations.0001_squashed_0011_auto_20160505_1643.cast_string_to_integer = True
```

### tardis.tardis\_portal.migrations.0002\_auto\_20150528\_1128 module

```
class tardis.tardis_portal.migrations.0002_auto_20150528_1128.Migration(name,
                                                                     app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0001_initial')]
    operations = [AlterField field=<django.db.models.fields.related.OneToOneField>, name=u'data_type', ...]
```

### tardis.tardis\_portal.migrations.0003\_auto\_20150907\_1315 module

```
class tardis.tardis_portal.migrations.0003_auto_20150907_1315.Migration(name,
                                                                     app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0002_auto_20150528_1128')]
    operations = [AlterField field=<django.db.models.fields.IntegerField>, name=u'data_type', ...]
```

### tardis.tardis\_portal.migrations.0004\_storageboxoption\_value\_type module

```
class tardis.tardis_portal.migrations.0004_storageboxoption_value_type.Migration(name,
                                                                     app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0003_auto_20150907_1315')]
    operations = [AddField field=<django.db.models.fields.CharField>, name=u'value_type', ...]
```

### tardis.tardis\_portal.migrations.0005\_datafile\_add\_size\_int\_column module

```
class tardis.tardis_portal.migrations.0005_datafile_add_size_int_column.Migration(name,
                                                                     app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0004_storageboxoption_value_type')]
    operations = [AddField field=<django.db.models.fields.BigIntegerField>, name=u'_size', ...]
tardis.tardis_portal.migrations.0005_datafile_add_size_int_column.cast_string_to_integer(ap...sc
```

### tardis.tardis\_portal.migrations.0006\_datafile\_remove\_size\_string\_column module

```
class tardis.tardis_portal.migrations.0006_datafile_remove_size_string_column.Migration(name,
                                                                     app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0005_datafile_add_size_int_column')]
    operations = [RemoveField name=u'_size', model_name=u'datafile', <RenameField new_name=...>, ...]
```

**tardis.tardis\_portal.migrations.0007\_remove\_parameter\_string\_value\_index module**

```
class tardis.tardis_portal.migrations.0007_remove_parameter_string_value_index.Migration(name, app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0006_datafile_remove_size_string_column')]
    operations = [<AlterField field=<django.db.models.fields.TextField>, name=u'string_value']
```

**tardis.tardis\_portal.migrations.0008\_string\_value\_partial\_index\_postgres module**

```
class tardis.tardis_portal.migrations.0008_string_value_partial_index_postgres.Migration(name, app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0007_remove_parameter_string_value_index')]
    operations = []
```

**tardis.tardis\_portal.migrations.0009\_auto\_20160128\_1119 module**

```
class tardis.tardis_portal.migrations.0009_auto_20160128_1119.Migration(name, app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0008_string_value_partial_index_postgres')]
    operations = [<AlterUniqueTogether unique_together=set([(u'name', u'facility')]), name='unique_name_facility']
```

**tardis.tardis\_portal.migrations.0010\_auto\_20160503\_1443 module**

```
class tardis.tardis_portal.migrations.0010_auto_20160503_1443.Migration(name, app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0009_auto_20160128_1119')]
    operations = [<AlterField field=<django.db.models.fields.CharField>, name=u'mimetype', name='mimetype']
```

**tardis.tardis\_portal.migrations.0011\_auto\_20160505\_1643 module**

```
class tardis.tardis_portal.migrations.0011_auto_20160505_1643.Migration(name, app_label)
    Bases: django.db.migrations.migration.Migration
    dependencies = [(u'tardis_portal', u'0010_auto_20160503_1443')]
    operations = [<AlterField field=<django.db.models.fields.CharField>, name=u'directory', name='directory']
```

## Module contents

### tardis.tardis\_portal.models package

#### Submodules

##### tardis.tardis\_portal.models.access\_control module

```
class tardis.tardis_portal.models.access_control.GroupAdmin (*args, **kwargs)
Bases: django.db.models.base.Model
```

GroupAdmin links the Django User and Group tables for group administrators

**Attribute user** a foreign key to the django.contrib.auth.models.User

**Attribute group** a foreign key to the django.contrib.auth.models.Group

**exception DoesNotExist**

Bases: django.core.exceptions.ObjectDoesNotExist

**exception MultipleObjectsReturned**

Bases: django.core.exceptions.MultipleObjectsReturned

**group**

**objects** = <django.db.models.manager.Manager object>

**user**

```
class tardis.tardis_portal.models.access_control.ObjectACL (*args, **kwargs)
Bases: django.db.models.base.Model
```

The ObjectACL (formerly ExperimentACL) table is the core of the Tardis Authorisation framework

**Attribute pluginId** the name of the auth plugin being used

**Attribute entityId** a foreign key to auth plugins

**Attribute object\_type** a foreign key to ContentType

**Attribute object\_id** the primary key/id of the object\_type

**Attribute canRead** gives the user read access

**Attribute canWrite** gives the user write access

**Attribute canDelete** gives the user delete permission

**Attribute isOwner** the experiment owner flag.

**Attribute effectiveDate** the date when access takes into effect

**Attribute expiryDate** the date when access ceases

**Attribute aclOwnershipType** system-owned or user-owned.

System-owned ACLs will prevent users from removing or editing ACL entries to a particular experiment they own. User-owned ACLs will allow experiment owners to remove/add/edit ACL entries to the experiments they own.

**exception DoesNotExist**

Bases: django.core.exceptions.ObjectDoesNotExist

**exception MultipleObjectsReturned**

Bases: django.core.exceptions.MultipleObjectsReturned

```

OWNER_OWNED = 1
SYSTEM_OWNED = 2

content_object
    Provides a generic relation to any object through content-type/object-id fields.

content_type

get_aclOwnershipType_display(**morekwargs)

classmethod get_effective_query()

get_related_object()
    If possible, resolve the pluginId/entityId combination to a user or group object.

get_related_object_group()
    If possible, resolve the pluginId/entityId combination to a user or group object.

objects = <django.db.models.manager.Manager object>

class tardis.tardis_portal.models.access_control.UserAuthentication(id, user-  
Profile, user-  
name, authen-  
tication-  
Method)
Bases: django.db.models.base.Model

CHOICES = ()

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

getAuthMethodDescription()

objects = <django.db.models.manager.Manager object>

userProfile

class tardis.tardis_portal.models.access_control.UserProfile(*args, **kwargs)
Bases: django.db.models.base.Model

UserProfile class is an extension to the Django standard user model.

    Attribute isDjangoAccount is the user a local DB user

    Attribute user a foreign key to the django.contrib.auth.models.User

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

ext_groups

getUserAuthentications()

isValidPublicContact()
    Checks if there's enough information on the user for it to be used as a public contact.

    Note: Last name can't be required, because people don't necessarily have a last (or family) name.

```

```
objects = <django.db.models.manager.Manager object>
user
userauthentication_set

tardis.tardis_portal.models.access_control.create_user_api_key(sender,
                                                               **kwargs)
    Auto-create ApiKey objects using Tastypie's create_api_key

tardis.tardis_portal.models.access_control.create_user_profile(sender,     in-
                                                               tance, created,
                                                               **kwargs)
```

## tardis.tardis\_portal.models.datafile module

```
class tardis.tardis_portal.models.datafile.DataFile(*args, **kwargs)
Bases: django.db.models.base.Model
```

Class to store meta-data about a file. The physical copies of a file are described by distinct DataFileObject instances.

**Attribute dataset** the foreign key to the tardis.tardis\_portal.models.Dataset the file belongs to.

**Attribute filename** the name of the file, excluding the path.

**Attribute size** the size of the file.

**Attribute created\_time** time the file was added to tardis

**Attribute modification\_time** last modification time of the file

**Attribute mimetype** for example ‘application/pdf’

**Attribute md5sum** digest of length 32, containing only hexadecimal digits

**Attribute sha512sum** digest of length 128, containing only hexadecimal digits

**exception DoesNotExist**

Bases: django.core.exceptions.ObjectDoesNotExist

**exception MultipleObjectsReturned**

Bases: django.core.exceptions.MultipleObjectsReturned

**cache\_file()**

**datafileparameterset\_set**

**dataset**

**file\_object**

**file\_objects**

**getParameterSets (schemaType=None)**

Return datafile parametersets associated with this datafile.

**get\_absolute\_filepath()**

**get\_as\_temporary\_file (\*\*kwds)**

Returns a traditional file-system-based file object that is a copy of the original data. The file is deleted when the context is destroyed. :param basestring directory: the directory in which to create the temp

file

**Returns** the temporary file object  
**Return type** NamedTemporaryFile

**get\_default\_storage\_box()**  
try to guess appropriate box from files, dataset or experiment

**get\_download\_url()**

**get\_file** (*verified\_only=True*)  
Returns the file as a readable file-like object from the best available storage box.  
If *verified\_only=False*, the return of files without a verified checksum is allowed, otherwise None is returned for unverified files.

**Parameters** **verified\_only** (*bool*) – if False return files without verified checksums

**Returns** Python file object  
**Return type** Python File object

**get\_image\_data()**

**get\_mimetype()**

**get\_preferred\_dfo** (*verified\_only=True*)

**get\_receiving\_storage\_box()**

**get\_size()**

**get\_view\_url()**

**has\_image()**

**is\_image()**  
returns True if it's an image and not an x-icon and not an img the image/img mimetype is made up though and may need revisiting if there is an official img mimetype that does not refer to diffraction images

**is\_local()**

**is\_online**  
return False if a file is on tape. At this stage it checks it returns true for no file objects, because those files are offline through other checks

**is\_public()**

**objects** = <*djangodb.models.manager.Manager object*>

**save** (\*args, \*\*kwargs)

**status**  
returns information about the status of the file. States are defined in StorageBox

**classmethod sum\_sizes** (*datafiles*)  
Takes a query set of datafiles and returns their total size.

**update\_mimetype** (*mimetype=None, force=False, save=True*)

**verified**

**verify** (*reverify=False*)

**class** *tardis.tardis\_portal.models.datafile.DataFileObject* (\*args, \*\*kwargs)  
Bases: *djangodb.models.base.Model*  
holds one copy of the data for a datafile

```

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

cache_file()

copy_file(dest_box=None, verify=True)
    copies verified file to new storage box checks for existing copy triggers async verification if not disabled
    :param StorageBox dest_box: StorageBox instance :param bool verify: :returns: DataFileObject of copy
    :rtype: DataFileObject

create_set_uri(force=False, save=False)
    sets the uri as well as building it :param bool force: :param book save: :return: :rtype: basestring

datafile

delete_data()

file_object
    A set of accessor functions that convert the file information to a standard Python file object for reading and
    copy the contents of an existing file_object into the storage backend.

        Returns a file object

        Return type Python File object

get_full_path()

get_next_by_created_time(**morekwargs)

get_previous_by_created_time(**morekwargs)

modified_time

move_file(dest_box=None)
    moves a file copies first, then synchronously verifies deletes file if copy is true copy and has been verified

        Parameters dest_box (StorageBox) – StorageBox instance

        Returns moved file dfo

        Return type DataFileObject

objects = <django.db.models.manager.Manager object>

save(*args, **kwargs)

storage_box

storage_type

        Returns storage_box type

        Return type StorageBox type constant

verify(add_checksums=True, add_size=True)

tardis.tardis_portal.models.datafile.compute_checksums(file_object,          com-
                                                pute_md5=True,           com-
                                                pute_sha512=True,         close_file=True)
                                                close_file=True)

    Computes checksums for a python file object

Parameters

    • file_object (object) – Python File object

```

- `compute_md5 (bool)` – whether to compute md5 default=True
- `compute_sha512 (bool)` – whether to compute sha512, default=True
- `close_file (bool)` – whether to close the file\_object, default=True

**Returns** the checksums as {‘md5sum’: result, ‘sha512sum’: result}

**Return type** dict

`tardis.tardis_portal.models.datafile.delete_dfo (sender, instance, **kwargs)`  
Deletes the actual file / object, before deleting the database record

## tardis.tardis\_portal.models.dataset module

```
class tardis.tardis_portal.models.dataset.Dataset (*args, **kwargs)
Bases: django.db.models.base.Model

Class to link datasets to experiments

    Attribute experiment a foreign key to the tardis.tardis_portal.models.Experiment
    Attribute facility the foreign key to the facility that generated this data
    Attribute instrument the foreign key to the instrument that generated this data
    Attribute description description of this dataset

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

datafile_set
datasetparameterset_set
equipment_set
experiments

getParameterSets (schemaType=None)
    Return the dataset parametersets associated with this experiment.

get_absolute_url (**kwargs)
    Return the absolute url to the current Dataset

get_all_storage_boxes_used ()
get_datafiles ()
get_download_urls ()
get_edit_url (**kwargs)
    Return the absolute url to the edit view of the current Dataset

get_first_experiment ()
get_images ()
get_path ()
get_size ()
get_thumbnail_url ()
```

```
image
instrument
is_online
objects = <tardis.tardis_portal.managers.OracleSafeManager object>
```

## tardis.tardis\_portal.models.experiment module

```
class tardis.tardis_portal.models.experiment.Experiment(*args, **kwargs)
Bases: django.db.models.base.Model
```

The Experiment model inherits from django.db.models.Model

**Attribute url** Undocumented

**Attribute approved** Undocumented

**Attribute title** the title of the experiment.

**Attribute institution\_name** the name of the institution who created the dataset.

**Attribute start\_time** Undocumented

**Attribute end\_time** Undocumented

**Attribute created\_time** Undocumented

**Attribute handle** Undocumented

**Attribute public** Undocumented

**Attribute objects** default model manager

**Attribute safe** ACL aware model manager

**exception DoesNotExist**

Bases: django.core.exceptions.ObjectDoesNotExist

**exception MultipleObjectsReturned**

Bases: django.core.exceptions.MultipleObjectsReturned

```
PUBLICATION_DETAILS_SCHEMA = 'http://www.tardis.edu.au/schemas/publication/details/'
```

```
PUBLICATION_DRAFT_SCHEMA = 'http://www.tardis.edu.au/schemas/publication/draft/'
```

```
PUBLICATION_SCHEMA_ROOT = 'http://www.tardis.edu.au/schemas/publication/'
```

```
PUBLIC_ACCESS_CHOICES = ((1, 'No public access (hidden)'), (25, 'Ready to be released'))
```

```
PUBLIC_ACCESS_EMBARGO = 25
```

```
PUBLIC_ACCESS_FULL = 100
```

```
PUBLIC_ACCESS_METADATA = 50
```

```
PUBLIC_ACCESS_NONE = 1
```

**created\_by**

**datasets**

**experimentauthor\_set**

**experimentparameterset\_set**

```
getParameterSets (schemaType=None)
    Return the experiment parametersets associated with this experiment.

get_absolute_url (**kwargs)
    Return the absolute url to the current Experiment

get_create_token_url (**kwargs)
    Return the absolute url to the create token view of the current Experiment

get_ct ()
get_datafiles ()
get_download_urls ()
get_edit_url (**kwargs)
    Return the absolute url to the edit view of the current Experiment

get_groups ()
get_images ()
get_next_by_created_time (**morekwargs)
get_next_by_update_time (**morekwargs)
get_or_create_directory ()
get_owners ()
get_previous_by_created_time (**morekwargs)
get_previous_by_update_time (**morekwargs)
get_public_access_display (**morekwargs)
get_size ()
is_publication ()
is_publication_draft ()
license
objectacls
    This class provides the functionality that makes the related-object managers available as attributes on a model class, for fields that have multiple “remote” values and have a GenericRelation defined in their model (rather than having another model pointed at them). In the example “article.publications”, the publications attribute is a ReverseGenericRelatedObjectsDescriptor instance.

objects = <tardis.tardis_portal.managers.OracleSafeManager object>
classmethod public_access_implies_distribution (public_access_level)
    Determines if a level of public access implies that distribution should be allowed, or alternately if it should not be allowed. Used to prevent free-distribution licences for essentially private data, and overly-restrictive licences for public data.

public_download_allowed()
    instance method version of ‘public_access_implies_distribution’

safe = <tardis.tardis_portal.managers.ExperimentManager object>
save (*args, **kwargs)
token_set
```

```
class tardis.tardis_portal.models.experiment.ExperimentAuthor(id, experiment,
                                                               author, institution, email, order,
                                                               url)
Bases: django.db.models.base.Model

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

experiment
objects = <django.db.models.manager.Manager object>
save (*args, **kwargs)
```

### tardis.tardis\_portal.models.facility module

```
class tardis.tardis_portal.models.facility.Facility(*args, **kwargs)
Bases: django.db.models.base.Model

Represents a facility that produces data

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

instrument_set
manager_group
objects = <django.db.models.manager.Manager object>

tardis.tardis_portal.models.facility.facilities_managed_by(user)
Returns a list of facilities managed by a user

tardis.tardis_portal.models.facility.is_facility_manager(user)
Returns true if the user manages one or more facilities
```

### tardis.tardis\_portal.models.hooks module

```
tardis.tardis_portal.models.hooks.ensure_doi_exists(sender, **kwargs)
tardis.tardis_portal.models.hooks.post_save_experiment(sender, **kwargs)
tardis.tardis_portal.models.hooks.post_save_experiment_parameter(sender,
                                                               **kwargs)
tardis.tardis_portal.models.hooks.post_save_experimentauthor(sender, **kwargs)
tardis.tardis_portal.models.hooks.publish_public_expt_rifcs(experiment)
```

### tardis.tardis\_portal.models.instrument module

```
class tardis.tardis_portal.models.instrument.Instrument(*args, **kwargs)
Bases: django.db.models.base.Model
```

Represents an instrument belonging to a facility that produces data

**exception DoesNotExist**  
Bases: django.core.exceptions.ObjectDoesNotExist

**exception MultipleObjectsReturned**  
Bases: django.core.exceptions.MultipleObjectsReturned

**dataset\_set**

**facility**

**getParameterSets** (*schemaType=None*)  
Return the instrument parametersets associated with this instrument.

**instrumentparameterset\_set**

**objects** = <django.db.models.manager.Manager object>

## tardis.tardis\_portal.models.jti module

**class** tardis.tardis\_portal.models.jti.JTI (*id, jti, created\_time*)  
Bases: django.db.models.base.Model

**exception DoesNotExist**  
Bases: django.core.exceptions.ObjectDoesNotExist

**exception MultipleObjectsReturned**  
Bases: django.core.exceptions.MultipleObjectsReturned

**get\_next\_by\_created\_time** (\*\*morekwargs)

**get\_previous\_by\_created\_time** (\*\*morekwargs)

**objects** = <django.db.models.manager.Manager object>

## tardis.tardis\_portal.models.license module

**class** tardis.tardis\_portal.models.license.License (\*args, \*\*kwargs)  
Bases: django.db.models.base.Model

Represents a licence for experiment content.

Instances should provide enough detail for both researchers to select the licence, and for the users of their data to divine correct usage of experiment content.

(Non-US developers: We're using US spelling in the code.)

**exception DoesNotExist**  
Bases: django.core.exceptions.ObjectDoesNotExist

**exception MultipleObjectsReturned**  
Bases: django.core.exceptions.MultipleObjectsReturned

**experiment\_set**

**classmethod get\_none\_option\_license()**

**classmethod get\_suitable\_licenses** (*public\_access\_method=None*)

**objects** = <django.db.models.manager.Manager object>

**tardis.tardis\_portal.models.parameters module**

```
class tardis.tardis_portal.models.parameters.DatafileParameter(id, name,
                                                               string_value,
                                                               numeri-
                                                               cal_value,
                                                               datetime_value,
                                                               link_id, link_ct,
                                                               parameterset)

Bases: tardis.tardis_portal.models.parameters.Parameter

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

link_ct
link_gfk
    Provides a generic relation to any object through content-type/object-id fields.

name
objects = <tardis.tardis_portal.managers.OracleSafeManager object>
parameter_type = 'Datafile'
parameterset

class tardis.tardis_portal.models.parameters.DatafileParameterSet(id, schema,
                                                                  datafile)
Bases: tardis.tardis_portal.models.parameters.ParameterSet

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

datafile
datafileparameter_set
objects = <django.db.models.manager.Manager object>
parameter_class
    alias of DatafileParameter

schema
storage_box

class tardis.tardis_portal.models.parameters.DatasetParameter(id, name,
                                                               string_value,
                                                               numerical_value,
                                                               datetime_value,
                                                               link_id, link_ct,
                                                               parameterset)

Bases: tardis.tardis_portal.models.parameters.Parameter

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist
```

```
exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

link_ct
link_gfk
    Provides a generic relation to any object through content-type/object-id fields.

name
objects = <tardis.tardis_portal.managers.OracleSafeManager object>
parameter_type = 'Dataset'
parameterset

class tardis.tardis_portal.models.parameters.DatasetParameterSet(id, schema,
                                                               dataset)
    Bases: tardis.tardis_portal.models.parameters.ParameterSet

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

dataset
datasetparameter_set
objects = <django.db.models.manager.Manager object>
parameter_class
    alias of DatasetParameter

schema
storage_box

class tardis.tardis_portal.models.parameters.ExperimentParameter(id, name,
                                                               string_value,
                                                               numeri-
                                                               cal_value,
                                                               date-
                                                               time_value,
                                                               link_id,
                                                               link_ct, pa-
                                                               rameterset)
    Bases: tardis.tardis_portal.models.parameters.Parameter

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

link_ct
link_gfk
    Provides a generic relation to any object through content-type/object-id fields.

name
objects = <tardis.tardis_portal.managers.OracleSafeManager object>
parameter_type = 'Experiment'
```

```
parameterset
save (*args, **kwargs)

class tardis.tardis_portal.models.parameters.ExperimentParameterSet (id,
                                                                     schema,
                                                                     experi-
                                                                     ment)
Bases: tardis.tardis_portal.models.parameters.ParameterSet

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

experiment
experimentparameter_set
objects = <django.db.models.manager.Manager object>
parameter_class
    alias of ExperimentParameter

schema
storage_box

class tardis.tardis_portal.models.parameters.FreeTextSearchField (id, parame-
                                                                  ter_name)
Bases: django.db.models.base.Model

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

objects = <django.db.models.manager.Manager object>
parameter_name

class tardis.tardis_portal.models.parameters.InstrumentParameter (id,      name,
                                                               string_value,
                                                               numeri-
                                                               cal_value,
                                                               date-
                                                               time_value,
                                                               link_id,
                                                               link_ct,   pa-
                                                               rameterset)
Bases: tardis.tardis_portal.models.parameters.Parameter

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

link_ct
link_gfk
    Provides a generic relation to any object through content-type/object-id fields.
```

```
name

objects = <tardis.tardis_portal.managers.OracleSafeManager object>
parameter_type = 'Instrument'

parameterset

class tardis.tardis_portal.models.parameters.InstrumentParameterSet (id,
                                                                     schema,
                                                                     instrument)

Bases: tardis.tardis_portal.models.parameters.ParameterSet

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

instrument

instrumentparameter_set

objects = <django.db.models.manager.Manager object>

parameter_class
    alias of InstrumentParameter

schema

storage_box

class tardis.tardis_portal.models.parameters.Parameter (*args, **kwargs)
Bases: django.db.models.base.Model

class Meta

    abstract = False
    app_label = 'tardis_portal'
    ordering = ['name']

get()
link_ct
link_gfk
    Provides a generic relation to any object through content-type/object-id fields.

link_url
name
objects
parameter_type = 'Abstract'

set_value (value)
    Sets the parameter value, converting into the appropriate data type. Deals with date/time strings that are timezone naive or aware, based on the USE_TZ setting.

    Parameters value (basestring) – a string (or string-like) repr of the value

    Raises SuspiciousOperation –
```

```
class tardis.tardis_portal.models.parameters.ParameterName(id, schema, name,
    full_name, units,
    data_type, immutable,
    comparison_type,
    is_searchable,
    choices, order)

Bases: django.db.models.base.Model

CONTAINS_COMPARISON = 8

DATETIME = 6

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

EXACT_VALUE_COMPARISON = 1

FILENAME = 5

GREATER_THAN_COMPARISON = 4

GREATER_THAN_EQUAL_COMPARISON = 5

JSON = 8

LESS_THAN_COMPARISON = 6

LESS_THAN_EQUAL_COMPARISON = 7

LINK = 4

LONGSTRING = 7

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

NOT_EQUAL_COMPARISON = 2

NUMERIC = 1

RANGE_COMPARISON = 3

STRING = 2

URL = 3

datafileparameter_set
datasetparameter_set
experimentparameter_set
freetextsearchfield_set
getUniqueShortName()
get_comparison_type_display(**morekwargs)
get_data_type_display(**morekwargs)
instrumentparameter_set
isDateTime()
isFilename()
isLink()
isLongString()
```

```

isNumeric()
isString()
isURL()
is_json()
natural_key()

objects = <tardis.tardis_portal.managers.ParameterNameManager object>
schema

class tardis.tardis_portal.models.parameters.ParameterSet (*args, **kwargs)
Bases: django.db.models.base.Model, tardis.tardis_portal.models.parameters.ParameterSetManagerMixin

class Meta

    abstract = False
    app_label = 'tardis_portal'
    ordering = ['id']
    parameter_class = None
    save (*args, **kwargs)
    schema
    storage_box

class tardis.tardis_portal.models.parameters.ParameterSetManagerMixin (parameterset=None,
    par-
    en-
    tOb-
    ject=None,
    schema=None)
Bases: tardis.tardis_portal.ParameterSetManager.ParameterSetManager

for clarity's sake and for future extension this class makes ParameterSetManager local to this file. At the moment its only function is increasing the line count

class tardis.tardis_portal.models.parameters.Schema (id, namespace, name, type, sub-
    type, immutable, hidden)
Bases: django.db.models.base.Model

DATAFILE = 3
DATASET = 2

exception DoesNotExist
Bases: django.core.exceptions.ObjectDoesNotExist

EXPERIMENT = 1
INSTRUMENT = 5

exception MultipleObjectsReturned
Bases: django.core.exceptions.MultipleObjectsReturned

NONE = 4

```

```
exception UnsupportedType (msg)
    Bases: exceptions.Exception

datafileparameterset_set
datasetparameterset_set
experimentparameterset_set

classmethod getNamespaces (type_, subtype=None)
    Return the list of namespaces for equipment, sample, and experiment schemas.

classmethod getSubTypes ()
classmethod get_internal_schema (schema_type)
classmethod get_schema_type_name (schema_type, short=False)
get_type_display (**morekwargs)

instrumentparameterset_set
natural_key ()

objects = <tardis.tardis_portal.managers.SchemaManager object>
parametername_set
```

## tardis.tardis\_portal.models.storage module

```
class tardis.tardis_portal.models.storage.StorageBox (*args, **kwargs)
    Bases: django.db.models.base.Model

    table that holds storage boxes of any type. to extend to new types, add fields if necessary

        Attribute max_size max size in bytes

        BUNDLE = 6
        CACHE = 3
        DISK = 1

        exception DoesNotExist
            Bases: django.core.exceptions.ObjectDoesNotExist

        exception MultipleObjectsReturned
            Bases: django.core.exceptions.MultipleObjectsReturned

        TAPE = 2
        TEMPORARY = 4

        TYPES = { 'bundle': 6, 'cache': 3, 'disk': 1, 'receiving': 4, 'tape': 2 }
        TYPE_UNKNOWN = 5

        attributes

        autocache
            Whether to automatically copy data into faster storage

            Returns True if data should be automatically cached

            Return type bool
```

**cache\_box**

Get cache box if set up

**cache\_files()**

Copy all files to faster storage.

This can be used to copy data from a Vault cache (containing data which will soon be pushed to tape) to Object Storage, so that the data can always be accessed quickly from Object Storage, and the Vault can be used for disaster recovery if necessary.

**child\_boxes****copy\_files(dest\_box=None)****copy\_to\_master()****classmethod create\_local\_box(location=None)****datafileparametersets****datasetparametersets****experimentparametersets****file\_objects****classmethod get\_default\_storage(location=None, user=None)**

gets default storage box or get local storage box with given base location or create one if it doesn't exist.

policies: Have a StorageBoxAttribute: key='default', value=True find a storage box where location is DEFAULT\_STORAGE\_BASE\_DIR create a default storage box at DEFAULT\_STORAGE\_BASE\_DIR lowest id storage box is default no storage box defined, use hard coded default for now TODO: consider removing this

Would be nice: get largest free space one, test for authorisation

**get\_initialised\_storage\_instance()****get\_options\_as\_dict()****instrumentparametersets****master\_box****move\_files(dest\_box=None)****move\_to\_master()****objects = <django.db.models.manager.Manager object>****offline\_types = [2]****online\_types = [3, 1, 4, 6]****options****storage\_type****type\_order = [3, 6, 1, 2, 4, 5]****class tardis.tardis\_portal.models.storage.StorageBoxAttribute(\*args, \*\*kwargs)**

Bases: django.db.models.base.Model

can hold attributes/metadata about different storage locations.

built-ins: key values description type receiving holds files temporarily for ingestion only

permanent permanent location (assumed by default) cache holds files for fast access

```
exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

objects = <django.db.models.manager.Manager object>
storage_box

class tardis.tardis_portal.models.storage.StorageBoxOption(*args, **kwargs)
Bases: django.db.models.base.Model

holds the options passed to the storage class defined in StorageBox. key->value store with support for typed
values through pickling when value_type is set to 'pickle'

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

PICKLE = 'pickle'
STRING = 'string'

TYPE_CHOICES = (('string', 'String value'), ('pickle', 'Pickled value'))
get_value_type_display(**morekwargs)

objects = <django.db.models.manager.Manager object>
storage_box
unpickled_value
```

## tardis.tardis\_portal.models.token module

```
class tardis.tardis_portal.models.token.Token(id, token, experiment, expiry_date, user)
Bases: django.db.models.base.Model

exception DoesNotExist
    Bases: django.core.exceptions.ObjectDoesNotExist

exception MultipleObjectsReturned
    Bases: django.core.exceptions.MultipleObjectsReturned

experiment
get_absolute_url(**kwargs)
get_next_by_expiry_date(**morekwargs)
get_previous_by_expiry_date(**morekwargs)
get_session_expiry()
    A token login should expire at the earlier of a) tomorrow at 4am b) the (end of) the token's expiry date
    It is the responsibility of token_auth to set the session expiry

is_expired()
objects = <tardis.tardis_portal.managers.OracleSafeManager object>
save_with_random_token()
```

`user`

## Module contents

`models/__init__.py`

## `tardis.tardis_portal.publish` package

### Subpackages

#### `tardis.tardis_portal.publish.provider` package

### Submodules

#### `tardis.tardis_portal.publish.provider.rifcsprovider` module

```
class tardis.tardis_portal.publish.provider.rifcsprovider.RifCsProvider
    Bases: object

    can_publish(experiment)
    get_rifcs_context(experiment)
    get_template(experiment)
    is_schema_valid(experiment)
```

#### `tardis.tardis_portal.publish.provider.schemarifcsprovider` module

### Module contents

### Submodules

#### `tardis.tardis_portal.publish.publishservice` module

```
class tardis.tardis_portal.publish.publishservice.PublishService(providers, experiment)
    get_context()
    get_template()
    manage_rifcs(oaipath)
```

## Module contents

### tardis.tardis\_portal.storage package

#### Submodules

##### tardis.tardis\_portal.storage.file\_system module

```
class tardis.tardis_portal.storage.file_system.MyTardisLocalFileSystemStorage(location=None,  
                                base_url=None)  
Bases: django.core.files.storage.FileSystemStorage
```

Simply changes the FileSystemStorage default store location to the MyTardis file store location. Makes it easier to migrate 2.5 installations.

##### tardis.tardis\_portal.storage.squashfs module

#### SquashFS Storage Box

setup requirements: user-owned mount root dir mytardis user must have access to files in squashfs file based on immutable permissions set in squashfile. In easy cases, one group owns everything and the mytardis user can be added to that group.

set up autofs to auto-mount squashfiles

```
class tardis.tardis_portal.storage.squashfs.SquashFSSStorage(sq_filename=None,  
                                datafile_id=None,  
                                sq_dir=None)  
Bases: django.core.files.storage.FileSystemStorage
```

Only works for autofs mounted squashfs files Please provide a setting that maps source dir and mount dir, e.g.:  
SQUASHFS\_DIRS = {‘tape’: {‘source’: ‘/my/tape/mount’,  
‘autofs’: ‘/taped-squashfiles’},

‘volume’: {‘source’: ‘/my/volume/storage’, ‘autofs’: ‘/volumed-squashfiles’}}

```
squashfs_dirs = None  
walk(top=‘’, topdown=True, onerror=None, ignore_dotfiles=True)
```

tardis.tardis\_portal.storage.squashfs.get\_parse\_status(squash\_datafile, ns)

#### Module contents

```
class tardis.tardis_portal.storage.DummyStorage  
Bases: django.core.files.storage.Storage
```

Does nothing except serve as a place holder for Storage classes not implemented yet

```
exception tardis.tardis_portal.storage.MisconfiguredStorageError  
Bases: exceptions.Exception
```

## tardis.tardis\_portal.templatetags package

### Submodules

#### tardis.tardis\_portal.templatetags.basiccomparisonfilters module

`tardis.tardis_portal.templatetags.basiccomparisonfilters.gt (value, arg)`

Returns a boolean of whether the value is greater than the argument.

`tardis.tardis_portal.templatetags.basiccomparisonfilters.gte (value, arg)`

Returns a boolean of whether the value is greater than or equal to the argument.

`tardis.tardis_portal.templatetags.basiccomparisonfilters.length_gt (value, arg)`

Returns a boolean of whether the value's length is greater than the argument.

`tardis.tardis_portal.templatetags.basiccomparisonfilters.length_gte (value, arg)`

Returns a boolean of whether the value's length is greater than or equal to the argument.

`tardis.tardis_portal.templatetags.basiccomparisonfilters.length_lt (value, arg)`

Returns a boolean of whether the value's length is less than the argument.

`tardis.tardis_portal.templatetags.basiccomparisonfilters.length_lte (value, arg)`

Returns a boolean of whether the value's length is less than or equal to the argument.

`tardis.tardis_portal.templatetags.basiccomparisonfilters.lt (value, arg)`

Returns a boolean of whether the value is less than the argument.

`tardis.tardis_portal.templatetags.basiccomparisonfilters.lte (value, arg)`

Returns a boolean of whether the value is less than or equal to the argument.

#### tardis.tardis\_portal.templatetags.bleach\_tag module

`tardis.tardis_portal.templatetags.bleach_tag.bleach_value (value)`

#### tardis.tardis\_portal.templatetags.capture module

`class tardis.tardis_portal.templatetags.capture.CaptureNode (nodelist, varname)`

Bases: django.template.base.Node

`render (context)`

`tardis.tardis_portal.templatetags.capture.capture (parser, token)`

`{% capture as [foo] %}`

#### tardis.tardis\_portal.templatetags.dataset\_tags module

#### tardis.tardis\_portal.templatetags.dynurl module

`class tardis.tardis_portal.templatetags.dynurl.DynUrlNode (*args)`

Bases: django.template.base.Node

`render(context)`

`tardis.tardis_portal.templatetags.dynurl.dynurl(parser, token)`

### **tardis.tardis\_portal.templatetags.experiment\_tags module**

#### **tardis.tardis\_portal.templatetags.experimentstats module**

`tardis.tardis_portal.templatetags.experimentstats.experiment_file_count(value)`

### **tardis.tardis\_portal.templatetags.facility\_tags module**

`tardis.tardis_portal.templatetags.facility_tags.check_if_facility_manager(request)`

Custom template filter to identify whether a user is a facility manager.

### **tardis.tardis\_portal.templatetags.feed module**

`tardis.tardis_portal.templatetags.feed.todatetime(value)`

### **tardis.tardis\_portal.templatetags.formfieldfilters module**

This module holds filters that can be used in postprocessing a form field.

@author: Gerson Galang

`tardis.tardis_portal.templatetags.formfieldfilters.parametername_form(value)`

Removes all values of arg from the given string

`tardis.tardis_portal.templatetags.formfieldfilters.sanitize_html(html,  
bad_tags=['body'])`

Removes identified malicious HTML content from the given string.

`tardis.tardis_portal.templatetags.formfieldfilters.size(value, actualSize)`

Add the size attribute to the text field.

### **tardis.tardis\_portal.templatetags.lookupfilters module**

`tardis.tardis_portal.templatetags.lookupfilters.get_item(dictionary, key)`

Returns a value from a dictionary.

### **tardis.tardis\_portal.templatetags.uploadify\_tags module**

`tardis.tardis_portal.templatetags.uploadify_tags.multi_file_upload(context,  
up-  
load_complete_url,  
dataset_id)`

Displays a Flash-based interface for uploading multiple files. When all files have been uploaded, the given URL is POSTed to. The returned page replaces (AJAX) the upload interface.

- filesUploaded - The total number of files uploaded
- errors - The total number of errors while uploading

- allBytesLoaded - The total number of bytes uploaded
- speed - The average speed of all uploaded files

## tardis.tardis\_portal.templatetags.xmldate module

tardis.tardis\_portal.templatetags.xmldate.**toxmldatetime**(*value*)

### Module contents

## tardis.tardis\_portal.tests package

### Subpackages

#### tardis.tardis\_portal.tests.auth package

### Submodules

#### tardis.tardis\_portal.tests.auth.test\_httpbasicendpoint\_auth module

### Module contents

## tardis.tardis\_portal.tests.filters package

### Submodules

#### tardis.tardis\_portal.tests.filters.test\_jeolsem module

```
class tardis.tardis_portal.tests.filters.test_jeolsem.JEOLSEMTestCase(methodName='runTest')
    Bases: django.test.testcases.TransactionTestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    testJEOLComplex()
    testJEOLSsimple()
```

#### tardis.tardis\_portal.tests.filters.test\_middleware module

```
class tardis.tardis_portal.tests.filters.test_middleware.Filter1

    classmethod getTuples()
        tuples = []

    class tardis.tardis_portal.tests.filters.test_middleware.Filter2

        classmethod getTuples()
```

```
    tuples = []

class tardis.tardis_portal.tests.filters.test_middleware.FilterInitTestCase (methodName='runTe
    Bases: django.test.testcases.TestCase

    setUp ()
        Hook method for setting up the test fixture before exercising it.

    testFiltering ()
```

## Module contents

### Submodules

#### tardis.tardis\_portal.tests.ldap\_ldif module

#### tardis.tardis\_portal.tests.mock\_vbl\_auth module

Created on 24/01/2011

@author: gerson

```
class tardis.tardis_portal.tests.mock_vbl_auth.MockBackend
    Authenticate against the VBL SOAP Webservice. It is assumed that the request object contains the username
    and password to be provided to the VBLgetExpIDs function.

    a new local user is created if it doesn't already exist

    if the authentication succeeds, the session will contain a VBL session key used for downloads as well as the
    user's EPN list

    authenticate (request)
    get_user (user_id)
```

#### tardis.tardis\_portal.tests.mock\_vbl\_download module

```
tardis.tardis_portal.tests.mock_vbl_download.download_datafile (request, *args,
                                                               **kwargs)
```

Dummy view for vbl download tests

#### tardis.tardis\_portal.tests.slapd module

Utilities for starting up a test slapd server and talking to it with ldapsearch/ldapadd.

```
class tardis.tardis_portal.tests.slapd.Slapd
    Controller class for a slapd instance, OpenLDAP's server.
```

This class creates a temporary data store for slapd, runs it on a private port, and initialises it with a top-level dc and the root user.

When a reference to an instance of this class is lost, the slapd server is shut down.

```
PATH_LDAPADD = None
PATH_LDAPSEARCH = None
PATH_SCHEMA_DIR = '/home/docs/checkouts/readthedocs.org/user_builds/mytardis/checkouts'
```

```
PATH_SLAPD = None
PATH_SLAPTEST = None
PATH_TMPDIR = '/tmp/tmpy6PtEf'
TEST_UTILS_DIR = '/home/docs/checkouts/readthedocs.org/user_builds/mytardis/checkouts/'

classmethod check_paths()
    Checks that the configured executable paths look valid. If they don't, then logs warning messages (not errors).

configure(cfg)
    Appends slapd.conf configuration lines to cfg. Also re-initializes any backing storage. Feel free to subclass and override this method.

get_address()
get_dn_suffix()
get_root_dn()
get_root_password()
get_tmpdir()
get_url()

ldapadd(ldif, extra_args=[])
    Runs ldapadd on this slapd instance, passing it the ldif content

ldapsearch(base=None, filter='(objectClass=*)', attrs=[], scope='sub', extra_args=[])
restart()
    Restarts the slapd server; ERASING previous content. Starts the server even if it isn't already running.

set_debug()
set_dn_suffix(dn)
set_port(port)
set_root_cn(cn)
set_root_password(pw)
set_slapd_debug_level(level)
set_tmpdir(path)

start()
    Starts the slapd server process running, and waits for it to come up.

started()
    This method is called when the LDAP server has started up and is empty. By default, this method adds the two initial objects, the domain object and the root user object.

stop()
    Stops the slapd server, and waits for it to terminate

wait()
    Waits for the slapd process to terminate by itself.

tardis.tardis_portal.tests.slapd.delete_directory_content(path)
tardis.tardis_portal.tests.slapd.find_available_tcp_port(host='127.0.0.1')
```

```
tardis.tardis_portal.tests.slapd.makedirs(path)
    Creates the directory path unless it already exists

tardis.tardis_portal.tests.slapd.quote(s)
    Quotes the " and characters in a string and surrounds with "..."

tardis.tardis_portal.tests.slapd.which(executable)
```

### **tardis.tardis\_portal.tests.test\_and\_doi module**

test\_and\_doi.py

```
class tardis.tardis_portal.tests.test_and_doi.ANDSDOITestCase(methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    tearDown()
        Hook method for deconstructing the test fixture after testing it.

    test_get_doi_none()

    test_init()
```

### **tardis.tardis\_portal.tests.test\_api module**

Testing the tastypie-based mytardis api

```
class tardis.tardis_portal.tests.test_api.ACLAutorizationTest(methodName='runTest')
    Bases: django.test.testcases.TestCase

class tardis.tardis_portal.tests.test_api.DataFileResourceTest(methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    test_post_single_file()

    test_shared_fs_many_files()
        tests sending many files with known permanent location (useful for Australian Synchrotron ingestions)

    test_shared_fs_single_file()

class tardis.tardis_portal.tests.test_api.DatafileParameterResourceTest(methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.DatafileParameterSetResourceTest(methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.DatasetParameterResourceTest(methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.DatasetParameterSetResourceTest(methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.DatasetResourceTest(methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase
```

```
setUp()
    Hook method for setting up the test fixture before exercising it.

test_get_dataset_filter_instrument()
test_get_dataset_no_instrument()
test_get_dataset_with_instrument()
test_post_dataset()

class tardis.tardis_portal.tests.test_api.ExperimentParameterResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.ExperimentParameterSetResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.ExperimentResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

test_get_experiment()
test_post_experiment()

class tardis.tardis_portal.tests.test_api.FacilityResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

test_get_facility_by_id()
test_get_facility_by_manager_group_id()
    This type of query can be used to iterate through a user's groups, and use each group's id to determine
    which facilities a user manages, i.e. a way to obtain the functionality implemented by
        tardis.tardis_portal.models.facility.facilities_managed_by
    via the API

test_get_facility_by_name()

class tardis.tardis_portal.tests.test_api.GroupResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

test_get_group_by_id()
test_get_group_by_name()

class tardis.tardis_portal.tests.test_api.InstrumentResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

test_get_instrument_by_id()
test_get_instrument_by_name()
test_post_instrument()
test_rename_instrument()

class tardis.tardis_portal.tests.test_api.LocationResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.MyTardisAuthenticationTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

test_apikey_authentication()
```

```
    test_bad_credentials()

class tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase (methodName='runTest')
    Bases: tastypie.test.ResourceTestCase

    abstract class without tests to combine common settings in one place

    get_apikey_credentials()
    get_credentials()

    setUp()
        Hook method for setting up the test fixture before exercising it.

class tardis.tardis_portal.tests.test_api.ReplicaResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.SchemaResourceTest (methodName='runTest')
    Bases: tardis.tardis_portal.tests.test_api.MyTardisResourceTestCase

class tardis.tardis_portal.tests.test_api.SerializerTest (methodName='runTest')
    Bases: django.test.testcases.TestCase

    test_debug_serializer()
    test_pretty_serializer()
```

### tardis.tardis\_portal.tests.test\_authentication module

Created on 19/01/2011

```
    class tardis.tardis_portal.tests.test_authentication.AuthenticationTestCase (methodName='runTest')
        Bases: django.test.testcases.TestCase

        setUp()
            Hook method for setting up the test fixture before exercising it.

        testCreateNewAccount()
        testManageAuthMethods()
        testSimpleAuthenticate()
        test_djangoauth()
```

### tardis.tardis\_portal.tests.test\_authorisation module

```
    class tardis.tardis_portal.tests.test_authorisation.ObjectACLTestCase (methodName='runTest')
        Bases: django.test.testcases.TestCase

        setUp()
            Hook method for setting up the test fixture before exercising it.

        tearDown()
            Hook method for deconstructing the test fixture after testing it.

        testCantAddTokenUserToGroups()
        testCantEditLockedExperiment()
        testChangeUserPermissions()
        testOwnedExperiments()
```

```
testReadAccess()
testWriteAccess()
urls = 'tardis.urls'
```

### tardis.tardis\_portal.tests.test\_authservice module

```
class tardis.tardis_portal.tests.test_authservice.AuthServiceTestCase (methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

tearDown()
    Hook method for deconstructing the test fixture after testing it.

testAuthenticate()
testGetGroupsForEntity()
testGroupProvider()
testGroupSearch()
testInitialisation()
urls = 'tardis.tardis_portal.tests.urls'

class tardis.tardis_portal.tests.test_authservice.MockAuthProvider

authenticate(request)

class tardis.tardis_portal.tests.test_authservice.MockGroupProvider
Bases: tardis.tardis_portal.auth.interfaces.GroupProvider

getGroupById(id)
getGroups(user)
getGroupsForEntity(id)
searchGroups(**filter)

class tardis.tardis_portal.tests.test_authservice.MockRequest
Bases: django.http.request.HttpRequest

setPost(field, value)

class tardis.tardis_portal.tests.test_authservice.MockSettings
Bases: object
```

### tardis.tardis\_portal.tests.test\_collectstatic module

```
class tardis.tardis_portal.tests.test_collectstatic.CollectstaticTest (methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

tearDown()
    Hook method for deconstructing the test fixture after testing it.
```

```
test_collectstatic()
```

### tardis.tardis\_portal.tests.test\_download module

```
class tardis.tardis_portal.tests.test_download.DownloadTestCase (methodName='runTest')
Bases: django.test.testcases.TestCase
```

```
setUp()
```

Hook method for setting up the test fixture before exercising it.

```
tearDown()
```

Hook method for deconstructing the test fixture after testing it.

```
testDatasetFile()
```

```
testDownload()
```

```
testView()
```

```
tardis.tardis_portal.tests.test_download.get_size_and_sha512sum(testfile)
```

### tardis.tardis\_portal.tests.test\_download\_apikey module

```
class tardis.tardis_portal.tests.test_download_apikey.ApiKeyDownloadTestCase (methodName='runTest')
Bases: tastypie.test.ResourceTestCase
```

```
setUp()
```

Hook method for setting up the test fixture before exercising it.

```
tearDown()
```

Hook method for deconstructing the test fixture after testing it.

```
test_download_apikey()
```

### tardis.tardis\_portal.tests.test\_fetcher module

```
class tardis.tardis_portal.tests.test_fetcher.PrivilegedOpenerTestCase (methodName='runTest')
Bases: django.test.testcases.TestCase
```

```
classmethod setUpClass()
```

Hook method for setting up class fixture before running tests in the class.

```
classmethod tearDownClass()
```

Hook method for deconstructing the class fixture after running all tests in the class.

```
testCredentials()
```

Test that the walker manages credentials.

```
class tardis.tardis_portal.tests.test_fetcher.TestWebServer
```

Utility class for running a test web server with a given handler.

```
class QuietSimpleHTTPRequestHandler (request, client_address, server)
```

Bases: SimpleHTTPServer.SimpleHTTPRequestHandler

Simple subclass that only prints output to STDOUT, not STDERR

```
do_GET()
```

```
log_message (msg, *args)
```

```
class ThreadedTCPServer(server_address, RequestHandlerClass, bind_and_activate=True)
    Bases: SocketServer.ThreadingMixIn, BaseHTTPServer.HTTPServer

    classmethod getPort()
    getUrl()
    start()
    stop()
```

### tardis.tardis\_portal.tests.test\_forms module

test\_models.py <http://docs.djangoproject.com/en/dev/topics/testing/>

```
class tardis.tardis_portal.tests.test_forms.RightsFormTestCase(methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    test_ensures_suitable_license()
    test_needs_confirmation()
```

### tardis.tardis\_portal.tests.test\_iif module

class tardis.tardis\_portal.tests.test\_iif.ExtraTestCases(methodName='runTest')
 Bases: django.test.testcases.TestCase

As per: <http://library.stanford.edu/iiif/image-api/compliance.html>

```
setUp()
    Hook method for setting up the test fixture before exercising it.

testImageCacheControl()
testImageHasEtags()
testInfoHasEtags()
```

class tardis.tardis\_portal.tests.test\_iif.Level0TestCase(methodName='runTest')
 Bases: django.test.testcases.TestCase

As per: <http://library.stanford.edu/iiif/image-api/compliance.html>

```
setUp()
    Hook method for setting up the test fixture before exercising it.

testCanGetInfoAsJSON()
testCanGetInfoAsXML()
testCanGetOriginalImage()
```

class tardis.tardis\_portal.tests.test\_iif.Level1TestCase(methodName='runTest')
 Bases: django.test.testcases.TestCase

As per: <http://library.stanford.edu/iiif/image-api/compliance.html>

```
setUp()
    Hook method for setting up the test fixture before exercising it.
```

```
testCanGetJpegFormat()
testHandleRegions()
testHandleRotation()
testHandleSizing()

class tardis.tardis_portal.tests.test_iiif.Level2TestCase (methodName='runTest')
Bases: django.test.testcases.TestCase

As per: http://library.stanford.edu/iiif/image-api/compliance.html

setUp()
    Hook method for setting up the test fixture before exercising it.

testCanGetRequiredFormats()

testHandleSizing()
```

### tardis.tardis\_portal.tests.test\_ldap module

```
class tardis.tardis_portal.tests.test_ldap.LDAPErrorTest (methodName='runTest')
Bases: django.test.testcases.TestCase

test_search()

class tardis.tardis_portal.tests.test_ldap.LDAPTest (methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

tearDown()
    Hook method for deconstructing the test fixture after testing it.

test_authenticate()
test_getgroupbyid()
test_getgroups()
test_getgroupsforentity()
test_getuserbyid()
test_search()
test_searchgroups()
```

### tardis.tardis\_portal.tests.test\_models module

```
test_models.py http://docs.djangoproject.com/en/dev/topics/testing/

class tardis.tardis_portal.tests.test_models.ModelTestCase (methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

test_authors()
test_create_user Automatically generate api key()
```

```
test_datafile()
test_dataset()
test_deleting_dfo_without_uri()
test_experiment()
test_parameter()
```

### tardis.tardis\_portal.tests.test\_parametersetmanager module

test\_views.py <http://docs.djangoproject.com/en/dev/topics/testing/>

```
class tardis.tardis_portal.tests.test_parametersetmanager.ParameterSetManagerTestCase(methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    tearDown()
        Hook method for deconstructing the test fixture after testing it.

    test_existing_parameterset()
    test_link_parameter_type()
        Test that Parameter.link_gfk (GenericForeignKey) is correctly assigned after using Parameter.set_value(some_url) for a LINK Parameter.

    test_link_parameter_type_extra()
    test_new_parameterset()
    test_tz_aware_date_handling()
        Ensure that dates are handling in a timezone-aware way.

    test_tz_naive_date_handling()
        Ensure that dates are handling in a timezone-aware way.

    test_unresolvable_link_parameter()
        Test that LINK Parameters that can't be resolved to a model (including non-URL values) still work.
```

### tardis.tardis\_portal.tests.test\_publishservice module

```
class tardis.tardis_portal.tests.test_publishservice.MockRifCsProvider
    Bases: tardis.tardis_portal.publish.provider.rifcsprovider.RifCsProvider

    get_beamline(experiment)
    get_license_uri(experiment)
    get_rifcs_context(experiment)
    get_template(experiment)
    is_schema_valid(experiment)

class tardis.tardis_portal.tests.test_publishservice.PublishServiceTestCase(methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.
```

```
testContext()
testInitialisation()
testInitialisationNoProvider()
testManageRifCsCheckContent()
testManageRifCsCreateAndRemove()
```

### tardis.tardis\_portal.tests.test\_rmexperiment module

```
class tardis.tardis_portal.tests.test_rmexperiment.RmExperimentTestCase (methodName='runTest')
    Bases: django.test.testcases.TestCase

    testList()
    testRemove()
```

### tardis.tardis\_portal.tests.test\_staging module

test\_views.py <http://docs.djangoproject.com/en/dev/topics/testing/>

```
class tardis.tardis_portal.tests.test_staging.TestStagingFiles (methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    tearDown()
        Hook method for deconstructing the test fixture after testing it.

    test_stage_replica()
```

### tardis.tardis\_portal.tests.test\_storage module

test\_storage.py <http://docs.djangoproject.com/en/dev/topics/testing/>

```
class tardis.tardis_portal.tests.test_storage.ModelTestCase (methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.

    tearDown()
        Hook method for deconstructing the test fixture after testing it.

    test_storageboxoption()
```

### tardis.tardis\_portal.tests.test\_tar\_download module

```
class tardis.tardis_portal.tests.test_tar_download.TarDownloadTestCase (methodName='runTest')
    Bases: django.test.testcases.TestCase

    setUp()
        Hook method for setting up the test fixture before exercising it.
```

```
tearDown()
    Hook method for deconstructing the test fixture after testing it.

test_tar_experiment_download()
```

### tardis.tardis\_portal.tests.test\_tasks module

```
class tardis.tardis_portal.tests.test_tasks.BackgroundTaskTestCase (methodName='runTest')
    Bases: django.test.testcases.TestCase

    As per: http://library.stanford.edu/iiif/image-api/compliance.html

setUp()
    Hook method for setting up the test fixture before exercising it.

testLocalFile()

test_wrong_size_verification()
```

### tardis.tardis\_portal.tests.test\_tokens module

```
test_tokens.py

class tardis.tardis_portal.tests.test_tokens.FrozenTime (*args, **kwargs)
```

```
    classmethod freeze_time (time)

    classmethod now()

class tardis.tardis_portal.tests.test_tokens.TokenTestCase (methodName='runTest')
    Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

tearDown()
    Hook method for deconstructing the test fixture after testing it.

test_default_expiry()

test_get_session_expiry()

test_get_session_expiry_expired_token()

test_get_session_expiry_near_expiry()

test_is_expired()

test_save_with_random_token()

test_save_with_random_token_failures()

test_save_with_random_token_gives_up()

urls = 'tardis.tardis_portal.tests.urls'
```

## tardis.tardis\_portal.tests.test\_views module

### tardis.tardis\_portal.tests.tests module

tests.py <http://docs.djangoproject.com/en/dev/topics/testing/>

```
class tardis.tardis_portal.tests.tests.SearchTestCase (methodName='runTest')
Bases: django.test.testcases.TestCase

setUp()
    Hook method for setting up the test fixture before exercising it.

tearDown()
    Hook method for deconstructing the test fixture after testing it.

testSearchDatafileAuthentication (**kwargs)
testSearchDatafileForm (**kwargs)
testSearchExperimentAuthentication (**kwargs)
testSearchExperimentForm (**kwargs)
testSearchExperimentResults (**kwargs)

class tardis.tardis_portal.tests.tests.UserInterfaceTestCase (methodName='runTest')
Bases: django.test.testcases.TestCase

test_login()
test_root()
test_search_urls (**kwargs)
test_urls()
test_urls_with_some_content()

tardis.tardis_portal.tests.tests.suite()
```

[tardis.tardis\\_portal.tests.urls module](#)[Module contents](#)[tardis.tardis\\_portal.views package](#)[Submodules](#)[tardis.tardis\\_portal.views.ajax\\_actions module](#)[tardis.tardis\\_portal.views.ajax\\_json module](#)[tardis.tardis\\_portal.views.ajax\\_pages module](#)[tardis.tardis\\_portal.views.authentication module](#)[tardis.tardis\\_portal.views.authorisation module](#)[tardis.tardis\\_portal.views.facilities module](#)[tardis.tardis\\_portal.views.images module](#)[tardis.tardis\\_portal.views.machine module](#)[tardis.tardis\\_portal.views.pages module](#)[tardis.tardis\\_portal.views.parameters module](#)[tardis.tardis\\_portal.views.upload module](#)[tardis.tardis\\_portal.views.utils module](#)[Module contents](#)[Submodules](#)[tardis.tardis\\_portal.MultiPartForm module](#)

```
class tardis.tardis_portal.MultiPartForm.MultiPartForm
Bases: object
```

Accumulate the data to be used when posting a form.

**add\_field**(name, value)

Add a simple field to the form data.

**add\_file**(fieldname, filename, fileHandle, mimetype=None)

Add a file to be uploaded.

**get\_content\_type**()

**tardis.tardis\_portal.ParameterSetManager module**

```
class tardis.tardis_portal.ParameterSetManager(ParameterSetManager(parameterset=None,
                                                               parentObject=None,
                                                               schema=None))
Bases: object

blank_param = None
delete_all_params()
delete_params(parname)
get_param(parname, value=False)
get_params(parname, value=False)
get_schema()
new_param(parname, value, fullparname=None)
parameters = None
parameterset = None
set_param(parname, value, fullparname=None, example_value=None)
set_param_list(parname, value_list, fullparname=None)
set_params_from_dict(dict)
```

**tardis.tardis\_portal.admin module**

```
class tardis.tardis_portal.admin.DataFileObjectInline(parent_model, admin_site)
Bases: django.contrib.admin.options.TabularInline

extra = 0
form
    alias of DataFileObjectInlineForm
media
model
    alias of tardis.tardis_portal.models.datafile.DataFileObject
class tardis.tardis_portal.admin.DataFileObjectInlineForm(data=None, files=None,
                                                          auto_id=u'id_%s', prefix=None, initial=None,
                                                          error_class=<class 'django.forms.utils.ErrorList'>,
                                                          label_suffix=None,
                                                          empty_permitted=False,
                                                          instance=None)
Bases: django.forms.models.ModelForm

class Meta

fields = '__all__'
```

```
model
    alias of tardis.tardis_portal.models.datafile.DataFileObject

    widgets = {'uri': <django.forms.widgets.TextInput object at 0x7fb9eafb4d50>}

base_fields = {'datafile': <django.forms.models.ModelChoiceField object at 0x7fb9eaf4f440>}

declared_fields = {}

media

class tardis.tardis_portal.admin.DatafileAdmin(model, admin_site)
Bases: django.contrib.admin.options.ModelAdmin

form
    alias of DatafileAdminForm

inlines = [<class 'tardis.tardis_portal.admin.DataFileObjectInline'>]

media

search_fields = ['filename', 'id']

class tardis.tardis_portal.admin.DatafileAdminForm(data=None, files=None,
auto_id=u'id_%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=None, empty_permitted=False, instance=None)
Bases: django.forms.models.ModelForm

class Meta

    fields = '__all__'

model
    alias of tardis.tardis_portal.models.datafile.DataFile

    widgets = {'directory': <django.forms.widgets.TextInput object at 0x7fb9eaf434d0>}

base_fields = {'created_time': <django.forms.fields.DateTimeField object at 0x7fb9eaf434d0>}

declared_fields = {}

media

class tardis.tardis_portal.admin.DatasetAdmin(model, admin_site)
Bases: django.contrib.admin.options.ModelAdmin

media

search_fields = ['description', 'id']

class tardis.tardis_portal.admin.ExperimentAdmin(model, admin_site)
Bases: django.contrib.admin.options.ModelAdmin

inlines = [<class 'tardis.tardis_portal.admin.ObjectACLInline'>]

media

search_fields = ['title', 'id']

class tardis.tardis_portal.admin.ExperimentParameterInline(parent_model, admin_site)
Bases: django.contrib.admin.options.TabularInline
```

```
extra = 0

formfield_overrides = {<class 'django.db.models.fields.TextField'>: {'widget': <class

media

model
    alias of tardis.tardis_portal.models.parameters.ExperimentParameter

class tardis.tardis_portal.admin.ExperimentParameterSetAdmin(model, min_site)
    Bases: django.contrib.admin.options.ModelAdmin

inlines = [<class 'tardis.tardis_portal.admin.ExperimentParameterInline'>]

media

class tardis.tardis_portal.admin.FreeTextSearchFieldAdmin(model, admin_site)
    Bases: django.contrib.admin.options.ModelAdmin

media

class tardis.tardis_portal.admin.InstrumentParameterInline(parent_model, min_site)
    Bases: django.contrib.admin.options.TabularInline

extra = 0

media

model
    alias of tardis.tardis_portal.models.parameters.InstrumentParameter

class tardis.tardis_portal.admin.InstrumentParameterSetAdmin(model, min_site)
    Bases: django.contrib.admin.options.ModelAdmin

inlines = [<class 'tardis.tardis_portal.admin.InstrumentParameterInline'>]

media

class tardis.tardis_portal.admin.ObjectACLAdmin(model, admin_site)
    Bases: django.contrib.admin.options.ModelAdmin

list_display = ['__unicode__', 'pluginId', 'entityId', 'canRead', 'canWrite', 'canDelete']

media

search_fields = ['content_type', 'object_id']

class tardis.tardis_portal.admin.ObjectACLInline(parent_model, admin_site)
    Bases: django.contrib.contenttypes.admin.GenericTabularInline

extra = 0

media

model
    alias of tardis.tardis_portal.models.access_control.ObjectACL

class tardis.tardis_portal.admin.ParameterNameAdmin(model, admin_site)
    Bases: django.contrib.admin.options.ModelAdmin

media

search_fields = ['name', 'schema_id']
```

```

class tardis.tardis_portal.admin.ParameterNameInline(parent_model, admin_site)
Bases: django.contrib.admin.options.TabularInline

    extra = 0

    media

    model
        alias of tardis.tardis_portal.models.parameters.ParameterName

class tardis.tardis_portal.admin.SchemaAdmin(model, admin_site)
Bases: django.contrib.admin.options.ModelAdmin

    inlines = [<class 'tardis.tardis_portal.admin.ParameterNameInline'>]

    media

    search_fields = ['name', 'namespace']

class tardis.tardis_portal.admin.StorageBoxAdmin(model, admin_site)
Bases: django.contrib.admin.options.ModelAdmin

    form
        alias of StorageBoxForm

    inlines = [<class 'tardis.tardis_portal.admin.StorageBoxOptionInline'>, <class 'tardis
    media

class tardis.tardis_portal.admin.StorageBoxAttributeInline(parent_model,      ad-
    min_site)
Bases: django.contrib.admin.options.TabularInline

    extra = 0

    form
        alias of StorageBoxAttributeInlineForm

    media

    model
        alias of tardis.tardis_portal.models.storage.StorageBoxAttribute

class tardis.tardis_portal.admin.StorageBoxAttributeInlineForm(data=None,
    files=None,
    auto_id=u'id_%s',
    pre-
    fix=None,    ini-
    tial=None,    er-
    ror_class=<class
        'django.forms.utils.ErrorList'>,
    la-
    bel_suffix=None,
    empty_permitted=False,
    in-
    stance=None)

Bases: django.forms.models.ModelForm

class Meta

    fields = '__all__'

```

```
model
    alias of tardis.tardis_portal.models.storage.StorageBoxAttribute

widgets = {'key': <django.forms.widgets.TextInput object at 0x7fb9eafb4210>, 'value':
base_fields = {'key': <django.forms.fields.CharField object at 0x7fb9eafb46d0>, 'storage_type': 'StorageBox'}
declared_fields = {}

media

class tardis.tardis_portal.admin.StorageBoxForm(data=None, files=None,
                                                auto_id=u'id_%s', prefix=None,
                                                initial=None, error_class=<class 'django.forms.utils.ErrorList'>,
                                                label_suffix=None,
                                                empty_permitted=False, instance=None)
Bases: django.forms.models.ModelForm

class Meta

    fields = '__all__'

model
    alias of tardis.tardis_portal.models.storage.StorageBox

widgets = {'description': <django.forms.widgets.TextInput object at 0x7fb9eafb4c50>}
base_fields = {'description': <django.forms.fields.CharField object at 0x7fb9eafb43150>}
declared_fields = {}

media

class tardis.tardis_portal.admin.StorageBoxOptionInline(parent_model, min_site)
Bases: django.contrib.admin.options.TabularInline
extra = 0

form
    alias of StorageBoxOptionInlineForm

media

model
    alias of tardis.tardis_portal.models.storage.StorageBoxOption

class tardis.tardis_portal.admin.StorageBoxOptionInlineForm(data=None, files=None,
                                                            auto_id=u'id_%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>,
                                                            label_suffix=None,
                                                            empty_permitted=False, instance=None)
Bases: django.forms.models.ModelForm

class Meta
```

```
    fields = '__all__'

    model
        alias of tardis.tardis_portal.models.storage.StorageBoxOption

    widgets = {'key': <django.forms.widgets.TextInput object at 0x7fb9eafb44d0>, 'value': <django.forms.widgets.Textarea object at 0x7fb9eafb44f0>}

    base_fields = {'key': <django.forms.fields.CharField object at 0x7fb9eafb4ad0>, 'value': <django.forms.fields.TextArea object at 0x7fb9eafb4af0>}

    declared_fields = {}

    media
```

## tardis.tardis\_portal.ands\_doi module

ands\_doi.py

```
class tardis.tardis_portal.ands_doi.DOIService(experiment)
Bases: object

Mints DOIs using ANDS' Cite My Data service POSTs DataCite XML to a web services endpoint

get_doi()

    Returns DOI or None

    Return type string

get_or_mint_doi(url)

    Parameters url (string) – the URL the DOI will resolve to

    Returns the DOI string

    Return type string

class tardis.tardis_portal.ands_doi.DOIXMLProvider(experiment)
Bases: object

provides datacite XML metadata for a given experiment

datacite_xml()

    Returns datacite XML for self.experiment

    Return type string
```

## tardis.tardis\_portal.api module

RESTful API for MyTardis models and data. Implemented with Tastypie.

```
class tardis.tardis_portal.api.ACIAuthorization
Bases: tastypie.authorization.Authorization

Authorisation class for Tastypie.

create_detail(object_list, bundle)
create_list(object_list, bundle)
delete_detail(object_list, bundle)
delete_list(object_list, bundle)
read_detail(object_list, bundle)
```

```
read_list (object_list, bundle)
update_detail (object_list, bundle)
update_list (object_list, bundle)

class tardis.tardis_portal.api.DataFileResource (api_name=None)
Bases: tardis.tardis_portal.api.MyTardisModelResource

class Meta
    Bases: tardis.tardis_portal.api.Meta

    filtering = {'dataset': 2, 'directory': ('exact', 'startswith'), 'filename': ('exact', 'startswith')}
    object_class
        alias of tardis.tardis_portal.models.datafile.DataFile
    ordering = ['filename', 'modification_time']
    queryset
    resource_name = 'dataset_file'

base_fields = {'created_time': <tastypie.fields.DateTimeField object at 0x7fb9e8500b1>,
declared_fields = {'datafile': <tastypie.fields.FileField object at 0x7fb9e8500750>,
deserialize (request, data, format=None)
    from https://github.com/toastdriven/django-tastypie/issues/42 modified to deserialize json sent via POST.
    Would fail if data is sent in a different format. uses a hack to get back pure json from request.POST

download_file (request, **kwargs)
    curl needs the -J switch to get the filename right auth needs to be added manually here

hydrate (bundle)

obj_create (bundle, **kwargs)
    Creates a new DataFile object from the provided bundle.data dict.
    If a duplicate key error occurs, responds with HTTP Error 409: CONFLICT

post_list (request, **kwargs)
prepend_urls ()

put_detail (request, **kwargs)
    from https://github.com/toastdriven/django-tastypie/issues/42

temp_url = None

verify_file (request, **kwargs)
    triggers verification of file, e.g. after non-POST upload complete

class tardis.tardis_portal.api.DatafileParameterResource (api_name=None)
Bases: tardis.tardis_portal.api.ParameterResource

class Meta
    Bases: tardis.tardis_portal.api.Meta

    object_class
        alias of tardis.tardis_portal.models.parameters.DatafileParameter
    queryset

base_fields = {'datetime_value': <tastypie.fields.DateTimeField object at 0x7fb9e850a6d>,
declared_fields = {'parameterset': <tastypie.fields.ForeignKey object at 0x7fb9e8500f9>}
```

```

class tardis.tardis_portal.api.DatafileParameterSetResource (api_name=None)
    Bases: tardis.tardis_portal.api.ParameterSetResource

        class Meta
            Bases: tardis.tardis_portal.api.Meta

                object_class
                    alias of tardis.tardis_portal.models.parameters.DatafileParameterSet

                queryset

                base_fields = {'datafile': <tastypie.fields.ForeignKey object at 0x7fb9e8500950>, u'is_labeled'}
                declared_fields = {'datafile': <tastypie.fields.ForeignKey object at 0x7fb9e8500950>}

class tardis.tardis_portal.api.DatasetParameterResource (api_name=None)
    Bases: tardis.tardis_portal.api.ParameterResource

        class Meta
            Bases: tardis.tardis_portal.api.Meta

                object_class
                    alias of tardis.tardis_portal.models.parameters.DatasetParameter

                queryset

                base_fields = {'datetime_value': <tastypie.fields.DateTimeField object at 0x7fb9e8577d60>}
                declared_fields = {'parameterset': <tastypie.fields.ForeignKey object at 0x7fb9e856db0>}

class tardis.tardis_portal.api.DatasetParameterSetResource (api_name=None)
    Bases: tardis.tardis_portal.api.ParameterSetResource

        class Meta
            Bases: tardis.tardis_portal.api.Meta

                object_class
                    alias of tardis.tardis_portal.models.parameters.DatasetParameterSet

                queryset

                base_fields = {'dataset': <tastypie.fields.ForeignKey object at 0x7fb9e856d690>, u'id'}
                declared_fields = {'dataset': <tastypie.fields.ForeignKey object at 0x7fb9e856d690>}

class tardis.tardis_portal.api.DatasetResource (api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

        class Meta
            Bases: tardis.tardis_portal.api.Meta

                always_return_data = True
                filtering = {'description': ('exact',), 'directory': ('exact',), 'experiments': ('exact',)}
                object_class
                    alias of tardis.tardis_portal.models.dataset.Dataset
                ordering = ['description']
                queryset

                base_fields = {'description': <tastypie.fields.CharField object at 0x7fb9e8500650>, 'directory': <tastypie.fields.CharField object at 0x7fb9e8500650>, 'experiments': <tastypie.fields.ManyToManyField object at 0x7fb9e8500110>}
                declared_fields = {'experiments': <tastypie.fieldsToManyField object at 0x7fb9e8500110>}
                get_datafiles(request, **kwargs)

```

```
prepend_urls()

class tardis.tardis_portal.api.ExperimentParameterResource(api_name=None)
    Bases: tardis.tardis_portal.api.ParameterResource

    class Meta
        Bases: tardis.tardis_portal.api.Meta

        object_class
            alias of tardis.tardis_portal.models.parameters.ExperimentParameter

        queryset

        base_fields = {'datetime_value': <tastypie.fields.DateTimeField object at 0x7fb9e856d...>,
                       ...}
        declared_fields = {'parameterset': <tastypie.fields.ForeignKey object at 0x7fb9e8565e...>}

    class tardis.tardis_portal.api.ExperimentParameterSetResource(api_name=None)
        Bases: tardis.tardis_portal.api.ParameterSetResource

        API for ExperimentParameterSets

        class Meta
            Bases: tardis.tardis_portal.api.Meta

            object_class
                alias of tardis.tardis_portal.models.parameters.ExperimentParameterSet

            queryset

            base_fields = {'experiment': <tastypie.fields.ForeignKey object at 0x7fb9e8565ad0>, ...}
            declared_fields = {'experiment': <tastypie.fields.ForeignKey object at 0x7fb9e8565ad0>,...}

    class tardis.tardis_portal.api.ExperimentResource(api_name=None)
        Bases: tardis.tardis_portal.api.MyTardisModelResource

        API for Experiments also creates a default ACL and allows ExperimentParameterSets to be read and written.

        TODO: catch duplicate schema submissions for parameter sets

        class Meta
            Bases: tardis.tardis_portal.api.Meta

            always_return_data = True

            filtering = {'id': ('exact',), 'title': ('exact',)}

            object_class
                alias of tardis.tardis_portal.models.experiment.Experiment

            ordering = ['title', 'created_time', 'update_time']

            queryset

            base_fields = {'approved': <tastypie.fields.BooleanField object at 0x7fb9e856d750>, ...}
            declared_fields = {'created_by': <tastypie.fields.ForeignKey object at 0x7fb9e856d150...>}

            dehydrate(bundle)

            hydrate_m2m(bundle)
                create ACL before any related objects are created in order to use ACL permissions for those objects.

            obj_create(bundle, **kwargs)
                experiments need at least one ACL to be available through the ExperimentManager (Experiment.safe)
                Currently not tested for failed db transactions as sqlite does not enforce limits.
```

```

obj_get_list(bundle, **kwargs)
    responds to EPN query for Australian Synchrotron

class tardis.tardis_portal.api.FacilityResource(api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

    class Meta
        Bases: tardis.tardis_portal.api.Meta

        always_return_data = True

        filtering = {'id': ('exact',), 'manager_group': 2, 'name': ('exact',)}

        object_class
            alias of tardis.tardis_portal.models.facility.Facility

        queryset

        base_fields = {u'id': <tastypie.fields.IntegerField object at 0x7fb9e8577ed0>, 'manag...}

        declared_fields = {'manager_group': <tastypie.fields.ForeignKey object at 0x7fb9e85777...}

    class tardis.tardis_portal.api.GroupResource(api_name=None)
    Bases: tastypie.resources.ModelResource

    class Meta

        authentication = <tardis.tardis_portal.api.MyTardisAuthentication object>

        authorization
            Authorisation class for Tastypie.

        filtering = {'id': ('exact',), 'name': ('exact',)}

        object_class
            alias of django.contrib.auth.models.Group

        queryset

        base_fields = {u'id': <tastypie.fields.IntegerField object at 0x7fb9e93a76d0>, 'name': ...}

        declared_fields = {}

    class tardis.tardis_portal.api.InstrumentResource(api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

    class Meta
        Bases: tardis.tardis_portal.api.Meta

        always_return_data = True

        filtering = {'facility': 2, 'id': ('exact',), 'name': ('exact',)}

        object_class
            alias of tardis.tardis_portal.models.instrument.Instrument

        queryset

        base_fields = {'facility': <tastypie.fields.ForeignKey object at 0x7fb9e8577e50>, u'i...}

        declared_fields = {'facility': <tastypie.fields.ForeignKey object at 0x7fb9e8577e50>}

    class tardis.tardis_portal.api.LocationResource(api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

```

```
class Meta
    Bases: tardis.tardis_portal.api.Meta

    object_class
        alias of tardis.tardis_portal.models.storage.StorageBox

    queryset

    base_fields = {'description': <tastypie.fields.CharField object at 0x7fb9e850a850>, '}

    declared_fields = {}

class tardis.tardis_portal.api.MyTardisAuthentication
    Bases: object

    custom tastypie authentication that works with both anonymous use and a number of available auth mechanisms.

    get_identifier(request)

    is_authenticated(request, **kwargs)
        handles backends explicitly so that it can return False when credentials are given but wrong and return
        Anonymous User when credentials are not given or the session has expired (web use).

class tardis.tardis_portal.api.MyTardisModelResource(api_name=None)
    Bases: tastypie.resources.ModelResource

    class Meta

        authentication = <tardis.tardis_portal.api.MyTardisAuthentication object>
        authorization
            Authorisation class for Tastypie.
        serializer = <tardis.tardis_portal.api.PrettyJSONSerializer object>
        base_fields = {u'resource_uri': <tastypie.fields.CharField object at 0x7fb9e85cd10>}
        declared_fields = {}

        lookup_kwargs_with_identifiers(bundle, kwargs)

class tardis.tardis_portal.api.ObjectACLResource(api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

    class Meta

        authentication = <tardis.tardis_portal.api.MyTardisAuthentication object>
        authorization
            Authorisation class for Tastypie.
        filtering = {'entityId': ('exact',), 'pluginId': ('exact',)}
        object_class
            alias of tardis.tardis_portal.models.access_control.ObjectACL
        queryset

        base_fields = {'aclOwnershipType': <tastypie.fields.IntegerField object at 0x7fb9e8511000>,
        declared_fields = {'content_object': <tastypie.contrib.contenttypes.fields.GenericForeignKey object at 0x7fb9e8511000>,
        hydrate(bundle)
```

```

class tardis.tardis_portal.api.ParameterNameResource (api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

    class Meta
        Bases: tardis.tardis_portal.api.Meta

        filtering = {'schema': 2}

        object_class
            alias of tardis.tardis_portal.models.parameters.ParameterName

        queryset

        base_fields = {'choices': <tastypie.fields.CharField object at 0x7fb9e9491810>, 'comp...'}
        declared_fields = {'schema': <tastypie.fields.ForeignKey object at 0x7fb9e85cda50>}

class tardis.tardis_portal.api.ParameterResource (api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

    base_fields = {'name': <tastypie.fields.ForeignKey object at 0x7fb9e9491a90>, u'resou...'}
    declared_fields = {'name': <tastypie.fields.ForeignKey object at 0x7fb9e9491a90>, 'va...'}

    hydrate (bundle)
        sets the parametername by uri or name if untyped value is given, set value via parameter method, otherwise
        use modelresource automatisms

class tardis.tardis_portal.api.ParameterSetResource (api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

    base_fields = {u'resource_uri': <tastypie.fields.CharField object at 0x7fb9e8565b50>,
    declared_fields = {'schema': <tastypie.fields.ForeignKey object at 0x7fb9e8565990>}

    hydrate_schema (bundle)

class tardis.tardis_portal.api.PrettyJSONSerializer (formats=None, content_types=None, date_time_formatting=None)
    Bases: tastypie.serializers.Serializer

    json_indent = 2

    to_json (data, options=None)

class tardis.tardis_portal.api.ReplicaResource (api_name=None)
    Bases: tardis.tardis_portal.api.MyTardisModelResource

    class Meta
        Bases: tardis.tardis_portal.api.Meta

        filtering = {'url': ('exact', 'startswith'), 'verified': ('exact',)}

        object_class
            alias of tardis.tardis_portal.models.datafile.DataFileObject

        queryset

        base_fields = {'created_time': <tastypie.fields.DateTimeField object at 0x7fb9e850ab9...'}
        declared_fields = {'datafile': <tastypie.fields.ForeignKey object at 0x7fb9e850a690>}

        dehydrate (bundle)
        hydrate (bundle)

```

```
class tardis.tardis_portal.api.SchemaResource(api_name=None)
Bases: tardis.tardis_portal.api.MyTardisModelResource

class Meta
    Bases: tardis.tardis_portal.api.Meta

    filtering = {'id': ('exact',), 'namespace': ('exact',)}

    object_class
        alias of tardis.tardis_portal.models.parameters.Schema

    queryset

    base_fields = {'hidden': <tastypie.fields.BooleanField object at 0x7fb9e85cd750>, 'id': <tastypie.fields.IntegerField object at 0x7fb9e85cd750>}

    declared_fields = {}

    lookup_kwargs_with_identifiers(bundle, kwargs)

class tardis.tardis_portal.api.StorageBoxAttributeResource(api_name=None)
Bases: tardis.tardis_portal.api.MyTardisModelResource

class Meta
    Bases: tardis.tardis_portal.api.Meta

    object_class
        alias of tardis.tardis_portal.models.storage.StorageBoxAttribute

    queryset

    base_fields = {u'id': <tastypie.fields.IntegerField object at 0x7fb9e8577b90>, 'key': <tastypie.fields.CharField object at 0x7fb9e8577b90>}

    declared_fields = {'storage_box': <tastypie.fields.ForeignKey object at 0x7fb9e8577790>}

class tardis.tardis_portal.api.StorageBoxOptionResource(api_name=None)
Bases: tardis.tardis_portal.api.MyTardisModelResource

class Meta
    Bases: tardis.tardis_portal.api.Meta

    object_class
        alias of tardis.tardis_portal.models.storage.StorageBoxOption

    queryset

    accessible_keys = ['location']

    base_fields = {u'id': <tastypie.fields.IntegerField object at 0x7fb9e8577810>, 'key': <tastypie.fields.CharField object at 0x7fb9e8577810>}

    declared_fields = {'storage_box': <tastypie.fields.ForeignKey object at 0x7fb9e8577390>}

class tardis.tardis_portal.api.StorageBoxResource(api_name=None)
Bases: tardis.tardis_portal.api.MyTardisModelResource

class Meta
    Bases: tardis.tardis_portal.api.Meta

    object_class
        alias of tardis.tardis_portal.models.storage.StorageBox

    queryset

    base_fields = {'attributes': <tastypie.fieldsToManyField object at 0x7fb9e8577150>}

    declared_fields = {'attributes': <tastypie.fieldsToManyField object at 0x7fb9e8577150>}
```

```

class tardis.tardis_portal.api.UserResource(api_name=None)
    Bases: tastypie.resources.ModelResource

    class Meta

        allowed_methods = ['get']

        authentication = <tardis.tardis_portal.api.MyTardisAuthentication object>

        authorization
            Authorisation class for Tastypie.

        fields = ['username', 'first_name', 'last_name', 'email']

        filtering = {'email': ('iexact',), 'username': ('exact',)}

        object_class
            alias of django.contrib.auth.models.User

        queryset

        serializer = <tardis.tardis_portal.api.PrettyJSONSerializer object>

        base_fields = {'email': <tastypie.fields.CharField object at 0x7fb9e85cdd90>, 'first_...'}
        declared_fields = {'groups': <tastypie.fields.ManyToManyField object at 0x7fb9e93a7b90>}

        dehydrate(bundle)
            use cases: public user:
                anonymous: name, uri, email, id
                authenticated:
                    other user: name, uri, email, id [, username if facility manager]
                    same user: name, uri, email, id, username

            private user:
                anonymous: none
                authenticated:
                    other user: name, uri, id [, username, email if facility manager]
                    same user: name, uri, email, id, username

tardis.tardis_portal.api.lookup_by_unique_id_only(resource)
    returns custom lookup function. initialise with resource type

```

## tardis.tardis\_portal.constants module

constants.py

@author: Gerson Galang

## tardis.tardis\_portal.context\_processors module

tardis.tardis\_portal.context\_processors.global\_contexts(*request*)

```
tardis.tardis_portal.context_processors.google_analytics(request)
    adds context for portal_template.html

tardis.tardis_portal.context_processors.manage_account_processor(request)
tardis.tardis_portal.context_processors.registration_processor(request)
tardis.tardis_portal.context_processors.single_search_processor(request)
tardis.tardis_portal.context_processors.tokenuser_processor(request)
tardis.tardis_portal.context_processors.user_details_processor(request)
```

### tardis.tardis\_portal.creativecommonshandler module

Creative Commons Handler

A wrapper for creative commons interactions on a ParameterSet

```
class tardis.tardis_portal.creativecommonshandler.CreativeCommonsHandler(experiment_id=None,
                                                                      create=True)

    experiment_id = None

    get_or_create_cc_parameterset(create=True)
        Gets the creative commons parameterset for the experiment :param create: If true, creates a new parameterset object to hold the cc license if one doesn't exist :type create: boolean :return: The parameterset manager for the cc parameterset :rtype: tardis.tardis_portal.ParameterSetManager.
        ParameterSetManager

    has_cc_license()
        Returns True if there's a cc license parameterset for the experiment
        Return type boolean

    psm = None

    save_license(request)
        Saves a license parameterset with the POST variables from the creative commons form :param request: a
        HTTP Request instance :type request: django.http.HttpRequest

    schema = 'http://www.tardis.edu.au/schemas/creative_commons/2011/05/17'
```

### tardis.tardis\_portal.deprecations module

Deprecation warnings

```
exception tardis.tardis_portal.deprecations.RemovedInMyTardis40Warning
    Bases: exceptions.DeprecationWarning

    Used to raise warnings about deprecated functionality.

    Usage:

    import warnings

    warnings.warn("This method will be removed in MyTardis 4.0. " "Please use method2 instead.", Removed-
                  InMyTardis40Warning
    )
```

## tardis.tardis\_portal.download module

### tardis.tardis\_portal.email module

```
tardis.tardis_portal.email.build_template_html(template_filename, context)
```

```
tardis.tardis_portal.email.build_template_text(template_filename, context)
```

```
tardis.tardis_portal.email.email_user(subject, template_filename, context, user)
```

### tardis.tardis\_portal.errors module

Created on 02/09/2010

```
exception tardis.tardis_portal.errors.ParameterChoicesFormatError(msg)
    Bases: exceptions.Exception
```

```
exception tardis.tardis_portal.errors.SearchQueryTypeUnprovidedError(msg)
    Bases: exceptions.Exception
```

```
exception tardis.tardis_portal.errors.UnsupportedSearchQueryTypeError(msg)
    Bases: exceptions.Exception
```

### tardis.tardis\_portal.fetcher module

```
tardis.tardis_portal.fetcher.get_credential_handler()
```

```
tardis.tardis_portal.fetcher.get_privileged_opener()
```

### tardis.tardis\_portal.fields module

```
class tardis.tardis_portal.fields.MultiValueCommaSeparatedField(fields=(),
    *args,
    **kwargs)
Bases: django.forms.fields.MultiValueField
compress(data_list)
```

### tardis.tardis\_portal.forms module

forms module

```
class tardis.tardis_portal.forms.AddGroupPermissionsForm(data=None, files=None,
    auto_id=u'id_%s', prefix=None, initial=None,
    error_class=<class 'django.forms.utils.ErrorList'>,
    label_suffix=None,
    empty_permitted=False)
Bases: django.forms.Form
base_fields = {'addgroup': <django.forms.fields.CharField object at 0x7fb9e84eea50>,
declared_fields = {'addgroup': <django.forms.fields.CharField object at 0x7fb9e84eea50>}
```

```
media

class tardis.tardis_portal.forms.AddUserPermissionsForm(data=None, files=None,
                                                       auto_id=u'id_%s', prefix=None,
                                                       initial=None,
                                                       error_class=<class
                                                       'django.forms.utils.ErrorList'>,
                                                       label_suffix=None,
                                                       empty_permitted=False)
Bases: django.forms.Form

base_fields = {'authMethod': <django.forms.fields.CharField object at 0x7fb9e84ee790>}
declared_fields = {'authMethod': <django.forms.fields.CharField object at 0x7fb9e84ee790>}
media

class tardis.tardis_portal.forms.ChangeGroupPermissionsForm(data=None,
                                                               files=None,
                                                               auto_id=u'id_%s',
                                                               prefix=None, initial=None,
                                                               error_class=<class
                                                               'django.forms.utils.ErrorList'>,
                                                               label_suffix=None,
                                                               empty_permitted=False)
Bases: django.forms.Form

class SelectDateWidget(attrs=None, years=None, months=None, empty_label=None)
Bases: django.forms.widgets.Widget

A Widget that splits date input into three <select> boxes.

This also serves as an example of a Widget that has more than one HTML element and hence implements
value_from_datadict.

create_select (name, field, value, val, choices, none_value)
day_field = u'%s_day'
id_for_label (id_)
media
month_field = u'%s_month'
none_value = (0, u'---')
render (name, value, attrs=None)
value_from_datadict (data, files, name)
year_field = u'%s_year'
base_fields = {'canDelete': <django.forms.fields.BooleanField object at 0x7fb9e84ee41>}
declared_fields = {'canDelete': <django.forms.fields.BooleanField object at 0x7fb9e84ee41>}
media
```

```
class tardis.tardis_portal.forms.ChangeUserPermissionsForm(data=None,
                                                               files=None,
                                                               auto_id=u'id_%s',
                                                               prefix=None,      initial=None,      error_class=<class 'django.forms.utils.ErrorList'>,
                                                               label_suffix=None, empty_permitted=False,
                                                               instance=None)
```

Bases: django.forms.models.ModelForm

### class Meta

```
class ObjectACL(*args, **kwargs)
```

Bases: django.db.models.base.Model

The ObjectACL (formerly ExperimentACL) table is the core of the Tardis Authorisation framework

**Attribute pluginId** the name of the auth plugin being used

**Attribute entityId** a foreign key to auth plugins

**Attribute object\_type** a foreign key to ContentType

**Attribute object\_id** the primary key/id of the object\_type

**Attribute canRead** gives the user read access

**Attribute canWrite** gives the user write access

**Attribute canDelete** gives the user delete permission

**Attribute isOwner** the experiment owner flag.

**Attribute effectiveDate** the date when access takes into effect

**Attribute expiryDate** the date when access ceases

**Attribute aclOwnershipType** system-owned or user-owned.

System-owned ACLs will prevent users from removing or editing ACL entries to a particular experiment they own. User-owned ACLs will allow experiment owners to remove/add/edit ACL entries to the experiments they own.

### exception DoesNotExist

Bases: django.core.exceptions.ObjectDoesNotExist

### exception MultipleObjectsReturned

Bases: django.core.exceptions.MultipleObjectsReturned

**OWNER\_OWNED** = 1

**SYSTEM\_OWNED** = 2

### content\_object

Provides a generic relation to any object through content-type/object-id fields.

### content\_type

```
get_aclOwnershipType_display(**morekwargs)
```

```
classmethod get_effective_query()
```

```
get_related_object()
```

If possible, resolve the pluginId/entityId combination to a user or group object.

```
get_related_object_group()
```

If possible, resolve the pluginId/entityId combination to a user or group object.

```
objects = <django.db.models.manager.Manager object>
```

```
class SelectDateWidget(attrs=None, years=None, months=None, empty_label=None)
Bases: django.forms.widgets.Widget

A Widget that splits date input into three <select> boxes.

This also serves as an example of a Widget that has more than one HTML element and hence implements value_from_datadict.

    create_select(name, field, value, val, choices, none_value)
    day_field = u'%s_day'
    id_for_label(id_)
    media
    month_field = u'%s_month'
    none_value = (0, u'---')
    render(name, value, attrs=None)
    value_from_datadict(data, files, name)
    year_field = u'%s_year'

    fields = ['canDelete', 'canRead', 'canWrite', 'effectiveDate', 'expiryDate', 'isOwn']
    model
        alias of tardis.tardis_portal.models.access_control.ObjectACL

    widgets = {'effectiveDate': <django.forms.extras.widgets.SelectDateWidget object at 0x7fb9e84ee1d>,
    base_fields = {'canDelete': <django.forms.fields.BooleanField object at 0x7fb9e84eec50>,
    declared_fields = {}
    media

class tardis.tardis_portal.forms.CreateGroupPermissionsForm(data=None,
                                                               files=None,
                                                               auto_id=u'id_%s',
                                                               prefix=None,      ini-
                                                               tial=None,       er-
                                                               ror_class=<class
                                                               'django.forms.utils.ErrorList'>,
                                                               label_suffix=None,
                                                               empty_permitted=False)
Bases: django.forms.forms.Form

base_fields = {'addgroup': <django.forms.fields.CharField object at 0x7fb9e84eec50>,
declared_fields = {'addgroup': <django.forms.fields.CharField object at 0x7fb9e84eec50>,
media

class tardis.tardis_portal.forms.CreateUserPermissionsForm(data=None,
                                                               files=None,
                                                               auto_id=u'id_%s',
                                                               prefix=None,      ini-
                                                               tial=None,       er-
                                                               ror_class=<class
                                                               'django.forms.utils.ErrorList'>,
                                                               label_suffix=None,
                                                               empty_permitted=False)
```

```
Bases: tardis.tardis_portal.forms.RegistrationForm
base_fields = {'authMethod': <django.forms.fields.CharField object at 0x7fb9e84fb250>
declared_fields = {'authMethod': <django.forms.fields.CharField object at 0x7fb9e84fb250>
media

class tardis.tardis_portal.forms.DatafileSearchForm(data=None, files=None,
auto_id=u'id_%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=None, empty_permitted=False)
Bases: django.forms.forms.Form
base_fields = {'filename': <django.forms.fields.CharField object at 0x7fb9e84fb310>}
declared_fields = {'filename': <django.forms.fields.CharField object at 0x7fb9e84fb310>
media

class tardis.tardis_portal.forms.DatasetForm(data=None, files=None,
auto_id=u'id_%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=None, empty_permitted=False, instance=None)
Bases: django.forms.models.ModelForm
class Meta

    fields = ['description', 'directory', 'instrument']
    model
        alias of tardis.tardis_portal.models.dataset.Dataset
base_fields = {'description': <django.forms.fields.CharField object at 0x7fb9e84843d0>
declared_fields = {'description': <django.forms.fields.CharField object at 0x7fb9e84843d0>
media

class tardis.tardis_portal.forms.ExperimentAuthor(data=None, files=None,
auto_id=u'id_%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=None, empty_permitted=False, instance=None)
Bases: django.forms.models.ModelForm
class Meta

    fields = ['author', 'institution', 'email', 'order', 'url']
    model
        alias of tardis.tardis_portal.models.experiment.ExperimentAuthor
base_fields = {'author': <django.forms.fields.CharField object at 0x7fb9e84845d0>, 'en
declared_fields = {}
```

**media**

```
class tardis.tardis_portal.forms.ExperimentForm(data=None, files=None,
                                                auto_id='%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=':', empty_permitted=False, instance=None, extra=0)
```

Bases: django.forms.ModelForm

This handles the complex experiment forms.

All internal datasets forms are prefixed with *dataset\_*, and all internal dataset file fields are prefixed with *file\_*. These are parsed out of the post data and added to the form as internal lists.

**class FullExperiment (\*\*kwargs)**

Bases: UserDict.UserDict

This is a dict wrapper that store the values returned from the *tardis.tardis\_portal.forms.ExperimentForm.save()* function. It provides a convience method for saving the model objects.

**save\_m2m()**

```
{'experiment': experiment, 'experiment_authors': experiment_authors, 'authors': authors, 'datasets': datasets, 'datafiles': datafiles}
```

**class Meta**

**fields** = ('title', 'institution\_name', 'description')

**model**

alias of *tardis.tardis\_portal.models.experiment.Experiment*

**base\_fields** = {'description': <django.forms.fields.CharField object at 0x7fb9e848e1d0>}

**declared\_fields** = {'url': <django.forms.fields.CharField object at 0x7fb9e8484dd0>}

**is\_valid()**

Test the validity of the form, the form may be invalid even if the error attribute has no contents. This is because the returnd value is dependent on the validity of the nested forms.

This validity also takes into account forign keys that might be dependent on an unsaved model.

**Returns** validity

**Return type** bool

**media**

**save** (commit=True)

```
class tardis.tardis_portal.forms.IRDatafileSearchForm(data=None, files=None,
                                                       auto_id=u'id_%s', prefix=None, initial=None, error_class=<class 'django.forms.utils.ErrorList'>, label_suffix=None, empty_permitted=False)
```

Bases: *tardis.tardis\_portal.forms.DatafileSearchForm*

```
base_fields = {'filename': <django.forms.fields.CharField object at 0x7fb9e84fb310>}
```

```

declared_fields = {'filename': <django.forms.fields.CharField object at 0x7fb9e84fb31>
media

class tardis.tardis_portal.forms.ImportParamsForm(data=None, files=None,
                                                 auto_id=u'id_%s', prefix=None,
                                                 initial=None, error_class=<class
                                                 'django.forms.utils.ErrorList'>,
                                                 label_suffix=None,
                                                 empty_permitted=False)
Bases: django.forms.forms.Form

base_fields = {'params': <django.forms.fields.FileField object at 0x7fb9e84fbb10>, 'p...'}
declared_fields = {'params': <django.forms.fields.FileField object at 0x7fb9e84fbb10>}
media

class tardis.tardis_portal.forms.LoginForm(*args, **kwargs)
Bases: django.contrib.auth.forms.AuthenticationForm

base_fields = {'password': <django.forms.fields.CharField object at 0x7fb9eb026f50>,
declared_fields = {'password': <django.forms.fields.CharField object at 0x7fb9eb026f50>}
media

class tardis.tardis_portal.forms.MXDatafileSearchForm(data=None, files=None,
                                                       auto_id=u'id_%s', prefix=None,
                                                       initial=None, error_class=<class
                                                       'django.forms.utils.ErrorList'>,
                                                       label_suffix=None,
                                                       empty_permitted=False)
Bases: tardis.tardis_portal.forms.DatafileSearchForm

base_fields = {'crystalName': <django.forms.fields.CharField object at 0x7fb9e84fb5d0>,
declared_fields = {'crystalName': <django.forms.fields.CharField object at 0x7fb9e84fb5d0>}
media

class tardis.tardis_portal.forms.ManageAccountForm(data=None, files=None,
                                                    auto_id=u'id_%s', prefix=None,
                                                    initial=None, error_class=<class
                                                    'django.forms.utils.ErrorList'>,
                                                    label_suffix=None,
                                                    empty_permitted=False, in-
                                                    stance=None)
Bases: django.forms.models.ModelForm

Form for changing account details.

class Meta

    fields = ('first_name', 'last_name', 'email')
    model
        alias of django.contrib.auth.models.User
    base_fields = {'email': <django.forms.fields.EmailField object at 0x7fb9e848ebd0>, 'f...'}
    declared_fields = {}

```

```
media

class tardis.tardis_portal.forms.ManageGroupPermissionsForm(data=None,
                                                               files=None,
                                                               auto_id=u'id_%s',
                                                               prefix=None, initial=None,
                                                               error_class=<class django.forms.utils.ErrorList>,
                                                               label_suffix=None,
                                                               empty_permitted=False)
Bases: django.forms.forms.Form

base_fields = {'adduser': <django.forms.fields.CharField object at 0x7fb9e84eef0>, '}

declared_fields = {'adduser': <django.forms.fields.CharField object at 0x7fb9e84eef0>}

media

class tardis.tardis_portal.forms.NoInput(attrs=None)
Bases: django.forms.widgets.Widget

media

render(name, value, attrs=None)

class tardis.tardis_portal.forms.RawSearchForm(*args, **kwargs)
Bases: haystack.forms.SearchForm

base_fields = {'q': <django.forms.fields.CharField object at 0x7fb9e84d2810>}
declared_fields = {'q': <django.forms.fields.CharField object at 0x7fb9e84d2810>}

media

search()

class tardis.tardis_portal.forms.RegisterExperimentForm(data=None, files=None,
                                                       auto_id=u'id_%s', prefix=None, initial=None,
                                                       error_class=<class django.forms.utils.ErrorList>,
                                                       label_suffix=None,
                                                       empty_permitted=False)
Bases: django.forms.forms.Form

base_fields = {'experiment_owner': <django.forms.fields.CharField object at 0x7fb9e84d2810>}
declared_fields = {'experiment_owner': <django.forms.fields.CharField object at 0x7fb9e84d2810>}

media

class tardis.tardis_portal.forms.RegistrationForm(data=None, files=None,
                                                   auto_id=u'id_%s', prefix=None,
                                                   initial=None, error_class=<class django.forms.utils.ErrorList>,
                                                   label_suffix=None,
                                                   empty_permitted=False)
Bases: django.forms.forms.Form

Form for registering a new user account.

Validates that the requested username is not already in use, and requires the password to be entered twice to catch typos.
```

Subclasses should feel free to add any additional validation they need, but should avoid defining a `save()` method – the actual saving of collected user data is delegated to the active registration backend.

```
base_fields = {'email': <django.forms.fields.EmailField object at 0x7fb9e84e3890>, 'p...'}
clean()
    Verify that the values entered into the two password fields match. Note that an error here will end up in
    non_field_errors() because it doesn't apply to a single field.

clean_username()
    Validate that the username is alphanumeric and is not already in use.

declared_fields = {'email': <django.forms.fields.EmailField object at 0x7fb9e84e3890>...}
media
save(**kwargs)

class tardis.tardis_portal.forms.RightsForm(data=None, files=None,
                                             auto_id=u'id_%s', prefix=None,
                                             initial=None, error_class=<class
                                             'django.forms.utils.ErrorList'>, la-
                                             bel_suffix=None, empty_permitted=False,
                                             instance=None)
Bases: django.forms.models.ModelForm

Form for changing public access and licence.

class Meta

    fields = ('public_access', 'license')
    model
        alias of tardis.tardis\_portal.models.experiment.Experiment
    widgets = {'license': <django.forms.widgets.HiddenInput object at 0x7fb9e848e450>...}
base_fields = {'license': <django.forms.models.ModelChoiceField object at 0x7fb9e848e450>...}
clean()
declared_fields = {}
media

class tardis.tardis_portal.forms.StaticField(required=True, widget=None,
                                              label=None, initial=None,
                                              help_text=u'', error_messages=None,
                                              show_hidden_initial=False, validators=[],
                                              localize=False, label_suffix=None)
Bases: django.forms.fields.Field

clean(value)
widget
    alias of NoInput

tardis.tardis_portal.forms.createLinkedUserAuthenticationForm(authMethods)
Create a LinkedUserAuthenticationForm and use the contents of authMethods to the list of options in the drop-down menu for authenticationMethod.

tardis.tardis_portal.forms.createSearchDatafileForm(searchQueryType)
tardis.tardis_portal.forms.createSearchDatafileSelectionForm(initial=None)
```

```
tardis.tardis_portal.forms.createSearchExperimentForm()
tardis.tardis_portal.forms.create_datafile_add_form(schema, parentObject, request=None)
tardis.tardis_portal.forms.create_parameterset_edit_form(parameterset, request=None)
tardis.tardis_portal.forms.getAuthMethodChoices()
tardis.tardis_portal.forms.save_datafile_add_form(schema, parentObject, request)
tardis.tardis_portal.forms.save_datafile_edit_form(parameterset, request)
```

### tardis.tardis\_portal.hacks module

hacks.py For hacks which should be removed at a later stage

```
tardis.tardis_portal.hacks.oracle_dbops_hack(f)
    affects only oracle - safe for other database engines
```

### tardis.tardis\_portal.iiif module

```
tardis.tardis_portal.iiif.compliance_header(f)
tardis.tardis_portal.iiif.compute_etag(request, datafile_id, *args, **kwargs)
tardis.tardis_portal.iiif.download_image(request, *args, **kwargs)
tardis.tardis_portal.iiif.download_info(request, *args, **kwargs)
```

### tardis.tardis\_portal.logging\_middleware module

```
class tardis.tardis_portal.logging_middleware.LoggingMiddleware
    Bases: object
        process_exception(request, exception)
        process_response(request, response)
```

### tardis.tardis\_portal.managers module

managers.py

```
class tardis.tardis_portal.managers.ExperimentManager
    Bases: tardis.tardis_portal.managers.OracleSafeManager
```

Implements a custom manager for the Experiment model which checks the authorisation rules for the requesting user first

To make this work, the request must be passed to all class functions. The username and the group memberships are then resolved via the user.userprofile.ext\_groups and user objects.

The `tardis.tardis_portal.auth.AuthService` is responsible for filling the `request.groups` object.

```
all(user)
```

Returns all experiments a user - either authenticated or anonymous - is allowed to see and search

**Parameters** `user` (`User`) – a User instance

**Returns** QuerySet of Experiments

**Return type** QuerySet

**external\_users** (*experiment\_id*)

returns a list of groups which have external ACL rules

**Parameters** **experiment\_id** (*int*) – the ID of the experiment to be edited

**Returns** list of groups with external ACLs

**Return type** list

**get** (*user, experiment\_id*)

Returns an experiment under the consideration of the ACL rules Raises PermissionDenied if the user does not have access.

**Parameters**

- **user** (*User*) – a User instance
- **experiment\_id** (*int*) – the ID of the experiment to be edited

**Returns** Experiment

**Return type** *Experiment*

**Raises** **PermissionDenied** –

**group\_acls\_system\_owned** (*experiment\_id*)

Returns a list of ACL rules associated with this experiment.

**Parameters** **experiment\_id** (*int*) – the ID of the experiment

**Returns** QuerySet of system-owned ACLs for experiment

**Return type** QuerySet

**group\_acls\_user\_owned** (*experiment\_id*)

Returns a list of ACL rules associated with this experiment.

**Parameters** **experiment\_id** (*int*) – the ID of the experiment

**Returns** QuerySet of ACLs

**Return type** QuerySet

**owned** (*user*)

Return all experiments which are owned by a particular user, including those shared with a group of which the user is a member.

**Parameters** **user** (*User*) – a User instance

**Returns** QuerySet of Experiments owned by user

**Return type** QuerySet

**owned\_and\_shared** (*user*)

**owned\_by\_group** (*group*)

Return all experiments that are owned by a particular group

**owned\_by\_user** (*user*)

Return all experiments which are owned by a particular user id

**Parameters** **user** (*User*) – a User Object

**Returns** QuerySet of Experiments owned by user

**Return type** QuerySet

**owned\_by\_user\_id**(*userId*)

Return all experiments which are owned by a particular user id

**Parameters** **userId**(*int*) – a User ID

**Returns** QuerySet of Experiments owned by user id

**Return type** QuerySet

**public**()

**shared**(*user*)

**system\_owned\_groups**(*experiment\_id*)

returns a list of system-owned groups which have ACL rules associated with this experiment

**Parameters** **experiment\_id**(*string*) – the ID of the experiment to be edited

**Returns** system owned groups for experiment

**Return type** QuerySet

**user\_acls**(*experiment\_id*)

Returns a list of ACL rules associated with this experiment.

**Parameters** **experiment\_id**(*string*) – the ID of the experiment

**Returns** QuerySet of ACLs

**Return type** QuerySet

**user\_owned\_groups**(*experiment\_id*)

returns a list of user owned-groups which have ACL rules associated with this experiment

**Parameters** **experiment\_id**(*int*) – the ID of the experiment to be edited

**Returns** QuerySet of non system Groups

**Return type** QuerySet

**users**(*experiment\_id*)

Returns a list of users who have ACL rules associated with this experiment.

**Parameters** **experiment\_id**(*int*) – the ID of the experiment

**Returns** QuerySet of Users with experiment access

**Return type** QuerySet

**class** `tardis.tardis_portal.managers.OracleSafeManager`

Bases: `django.db.models.manager.Manager`

Implements a custom manager which automatically defers the retrieval of any TextField fields on calls to `get_queryset`. This is to avoid the known issue that ‘distinct’ calls on query\_sets containing TextFields fail when Oracle is being used as the backend.

**get\_queryset()**

Returns a new QuerySet object. Subclasses can override this method to easily customize the behavior of the Manager.

**class** `tardis.tardis_portal.managers.ParameterNameManager`

Bases: `django.db.models.manager.Manager`

**get\_by\_natural\_key**(*namespace, name*)

```
class tardis.tardis_portal.managers.SchemaManager
Bases: django.db.models.manager.Manager

get_by_natural_key(namespace)
```

## tardis.tardis\_portal.rfc3339 module

The function `rfc3339` formats dates according to the [RFC 3339](#). `rfc3339` tries to have as much as possible sensible defaults.

```
tardis.tardis_portal.rfc3339.rfc3339(date, utc=False, use_system_timezone=True)
```

Return a string formatted according to the [RFC 3339](#). If called with `utc=True`, it normalizes `date` to the UTC date. If `date` does not have any timezone information, uses the local timezone:

```
>>> date = datetime.datetime(2008, 4, 2, 20)
>>> rfc3339(date, utc=True, use_system_timezone=False)
'2008-04-02T20:00:00Z'
>>> rfc3339(date)
'2008-04-02T20:00:00...'
```

If called with `use_system_time=False` don't use the local timezone and consider the offset to UTC to be zero:

```
>>> rfc3339(date, use_system_timezone=False)
'2008-04-02T20:00:00+00:00'
```

`date` must be a a `datetime.datetime`, `datetime.date` or a timestamp as returned by `time.time()`:

```
>>> rfc3339(0, utc=True, use_system_timezone=False)
'1970-01-01T00:00:00Z'
>>> rfc3339(datetime.date(2008, 9, 6), use_system_timezone=False)
'2008-09-06T00:00:00+00:00'
>>> rfc3339('foo bar')
Traceback (most recent call last):
...
TypeError: expected datetime, got str instead
```

## tardis.tardis\_portal.search\_backend module

```
class tardis.tardis_portal.search_backend.HighlightSearchBackend(connection_alias,
                                                               **connection_options)
Bases: haystack.backends.elasticsearch_backend.ElasticsearchSearchBackend

search(query_string, sort_by=None, start_offset=0, end_offset=None, fields='', highlight=False, facets=None, date_facets=None, query_facets=None, narrow_queries=None, spelling_query=None, limit_to_registered_models=None, result_class=None, **kwargs)
```

## tardis.tardis\_portal.search\_query module

search\_backend.py

```
class tardis.tardis_portal.search_query.FacetFixedSearchQuery(using=u'default')
Bases: haystack.backends.elasticsearch_backend.ElasticsearchSearchQuery

get_facet_counts()
```

## tardis.tardis\_portal.sftp module

### tardis.tardis\_portal.shortcuts module

```
class tardis.tardis_portal.shortcuts.RestfulExperimentParameterSet (schema_func,
                                                               form_cls)
```

Bases: `object`

Helper class which enables a Backbone.sync-compatible interface to be created for a ExperimentParameterSet just by specifying a function which provides the schema and a form.

(A function for the schema is required rather than the actual schema, as to run unit tests effectively the object needs to be able to create the schema after instantiation.)

For UI consistency, it's best to make sure the schema has `hidden == true`.

#### `schema`

Use schema function to get the schema.

#### `view_functions`

```
tardis.tardis_portal.shortcuts.get_experiment_referer (request, dataset_id)
```

```
tardis.tardis_portal.shortcuts.render_error_message (request, message, status=400)
```

Render a simple text error message in a generic error page. Any newlines are turned into <br>.

```
tardis.tardis_portal.shortcuts.render_response_index (request, *args, **kwargs)
```

```
tardis.tardis_portal.shortcuts.render_response_search (request, url, c)
```

```
tardis.tardis_portal.shortcuts.render_to_file (template, filename, context)
```

```
tardis.tardis_portal.shortcuts.return_response_error (request)
```

```
tardis.tardis_portal.shortcuts.return_response_error_message (request, redirect_path, context)
```

```
tardis.tardis_portal.shortcuts.return_response_not_found (request)
```

## tardis.tardis\_portal.signals module

### tardis.tardis\_portal.staging module

#### staging.py

```
tardis.tardis_portal.staging.get_dataset_path (dataset)
```

```
tardis.tardis_portal.staging.get_full_staging_path (username)
```

```
tardis.tardis_portal.staging.get_staging_path ()
```

return the path to the staging directory

```
tardis.tardis_portal.staging.get_staging_url_and_size (username, filepath)
```

Returns a `file://` URL and the size of the file.

```
tardis.tardis_portal.staging.get_sync_location ()
```

```
tardis.tardis_portal.staging.get_sync_root (prefix= '')
```

```
tardis.tardis_portal.staging.get_sync_url_and_protocol (sync_path, filepath)
```

```
tardis.tardis_portal.staging.staging_list(pathname='/home/docs/checkouts/readthedocs.org/user_builds/mytardis/branches/3.9.0/staging',
                                             dirname='/home/docs/checkouts/readthedocs.org/user_builds/mytardis/branches/3.9.0/staging',
                                             root=False)
```

```
tardis.tardis_portal.staging.write_uploaded_file_to_dataset(dataset, up-
                                                               loaded_file_post,
                                                               subdir=None)
```

Broken, now that the storagebox takes care of writing files. Writes file POST data to the dataset directory in the file store

## [tardis.tardis\\_portal.tasks module](#)

```
tardis.tardis_portal.tasks.init_filters()
    load filters and avoid circular import
```

## [tardis.tardis\\_portal.util module](#)

### [tardis.tardis\\_portal.widgets module](#)

```
class tardis.tardis_portal.widgets.CommaSeparatedInput(attrs=None)
Bases: django.forms.widgets.TextInput
```

```
media
```

```
render(name, value, attrs=None)
```

```
value_from_datadict(data, files, name)
```

```
class tardis.tardis_portal.widgets.Label(attrs=None)
Bases: django.forms.widgets.Widget
```

```
media
```

```
render(name, value, attrs=None)
```

```
tag = 'label'
```

```
class tardis.tardis_portal.widgets.Span(attrs=None)
Bases: tardis.tardis_portal.widgets.Label
```

```
media
```

```
tag = 'span'
```

## [tardis.tardis\\_portal.xmlwriter module](#)

```
class tardis.tardis_portal.xmlwriter.XMLWriter
```

```
static write_template_to_dir(dest_filename, template_path, context)
```

#### Parameters

- **dest\_dir** (*string*) – The directory to store the resulting document in
- **dest\_filename** (*string*) – The name of the file to be output
- **template\_path** – The relative path to the Django template to be

rendered :type template\_path: string :param context: The Context object (dictionary of variables for template output) :type context: django.template.context.Context :returns: The full path to the created file :rtype: string

**static write\_template\_to\_file**(objectprefix, uniqueid, templatepath, context)

**Parameters** **prefix\_dir** – The subdirectory off of the OAI\_DOCS\_PATH to store

the resulting document in :type prefix\_dir: string :param objectprefix: The name prefix of the resulting file. Files are output in the format prefix-uniqueid.xml :type objectprefix: string :param uniqueid: The unique ID of the file to be output :type uniqueid: string :param templatepath: The relative path to the Django template to be rendered :type templatepath: string :param context: The Context object (dictionary of variables for template output) :type context: django.template.context.Context :returns: The full path to the created file :rtype: string

**static write\_xml\_to\_file**(objectprefix, uniqueid, xmlstring)

**Parameters** **prefix\_dir** – The subdirectory off of the OAI\_DOCS\_PATH to store

the resulting document in :type prefix\_dir: string :param objectprefix: The name prefix of the resulting file. Files are output in the format prefix-uniqueid.xml :type objectprefix: string :param uniqueid: The unique ID of the file to be output :type uniqueid: string :param xmlstring: The relative path to the Django template to be rendered :type xmlstring: string :returns: The full path to the created file :rtype: string

tardis.tardis\_portal.xmlwriter.logger = <celery.utils.log.ProcessAwareLogger object>  
XML Writer

A set of static methods for writing xml files.

## Module contents

models/\_\_init\_\_.py

## Submodules

### tardis.app\_config module

**class** tardis.app\_config.AbstractTardisAppConfig(app\_name, app\_module)  
Bases: django.apps.config.AppConfig

All MyTardis app configuration classes should extend this abstract class to have their APIs and URLs automatically added to URL routing.

**app\_dependencies** = []

tardis.app\_config.check\_app\_dependencies(app\_configs, \*\*kwargs)

Checks currently installed apps for dependencies required by installed apps as defined by the app\_dependencies attribute of the AppConfig object, if present.

#### Parameters

- **app\_configs** (AppConfig) – a list of app\_configs to check, or None for all apps to be checked
- **kwargs** (list of args) – unknown list of args

**Returns** a list of unsatisfied dependencies

**Return type** list of strings

`tardis.app_config.format_app_name_for_url(name)`

`tardis.app_config.get_tardis_apps()`

Gets a list of tuples where the first element is the app name, and the second is the module path

**Returns** a list of tardis apps

**Return type** list of apps

`tardis.app_config.is_tardis_app(app_config)`

Determines whether the installed app is a MyTardis app

**Parameters** `app_config` (`AppConfig`) – the AppConfig object of an installed app

**Returns** True if the app is a MyTardis app, False otherwise

**Return type** bool

**tardis.manage module**

**tardis.search\_sites module**

**tardis.settings\_changeme module**

**tardis.test\_on\_mysql\_settings module**

**tardis.test\_on\_postgresql\_settings module**

**tardis.test\_settings module**

`tardis.test_settings.get_all_tardis_apps()`

**tardis.urls module**

**tardis.views module**

`tardis.views.error_handler(request, **kwargs)`

## Module contents

models/\_\_init\_\_.py

## 11.4 Documentation for included Apps

### 11.4.1 Apps and Contextual Views

#### Introduction

In order to better represent specific data types and facilities, MyTardis allows apps to override the default views for Experiments, Datasets, DataFile metadata, and the main index page. The following sections detail settings and requirements of apps to make this happen.

### Datafile Views

#### Rationale

By default there exists an option to show the metadata of individual DataFile s in the default Dataset view. Some kinds of files allow for rich and useful visualisation and/or processing. For this purpose there exist contextual views, views that are available depending on the type of file they refer to.

#### User Guide

A default installation has no contextual views. To enable them a few steps are needed:

- an app needs to be installed either in `tardis/apps/`, or the app's configuration must subclass `AbstractTardisAppConfig` thereby enabling autodetection. `AbstractTardisAppConfig` replaces  `AppConfig` as described in these [django docs](#).
- DataFile s need to be manually or automatically tagged with a schema that identifies them as viewable with a particular view. Filters are a convenient way to do this. See below for an example.
- settings need to be added to `settings.py`. A list called `DATAFILE_VIEWS` holds a tuple for each available view. The first entry of the tuple is a schema namespace and is matched against all schemas attached to the DataFile. If a match occurs, a link to the url given as second entry of the tuple is added to the Datafile Detail section of the default Dataset view and loaded via AJAX on demand. Example:

```
DATAFILE_VIEWS = [("http://example.org/schemas/datafile/my_awesome_schema",
                  "/apps/my-awesome-app/view"), ]
```

Currently, the default view is always DataFile metadata. This can be changed, for example, by developing a custom Dataset view, which is explained in the following section.

### Dataset and Experiment Views

#### Rationale

For some specific uses the data available can be presented and/or processed in useful ways. MyTardis allows views for Experiments and Datasets to be overridden by apps on a per-schema basis, allowing custom views for specific data types. The example that this feature was built for are single-image and many-image datasets from the Australian Synchrotron. Single images can be displayed large and for a many-image dataset it is more useful to show a couple of example images taken at regular intervals not from the beginning of the set of files. These different datasets can be detected via their schema namespace and displayed differently.

#### User Guide

Akin to DataFile contextual views, Dataset and Experiment contextual views rely on matching a specific schema namespace in an attached ParameterSet.

Existing schemas can be used, or a special schema intended only for tagging an Experiment or Dataset for contextual view override can be attached (via an otherwise empty ParameterSet).

**Dataset and Experiment contextual views are configured in settings by** associating a schema namespace with a class-based view (or view function).

Unlike DataFile contextual views which inject content into the DOM via an AJAX call, these contextual views override the entire page.

Example:

```
DATASET_VIEWS = [
    ('http://example.org/schemas/dataset/my_awesome_schema',
     'tardis.apps.my_awesome_app.views.CustomDatasetViewSubclass'),
]

EXPERIMENT_VIEWS = [
    ('http://example.org/schemas/expt/my_awesome_schema',
     'tardis.apps.my_awesome_app.views.CustomExptViewSubclass'),
]
```

## Custom Index View

### Rationale

Specific sites or facilities often want to display a custom index page that presents recently ingested experiments in a way which is more meaningful for their particular domain or application. MyTardis support overriding the index page (/) on a per-domain or per-Site basis.

### User Guide

Example:

```
INDEX_VIEWS = {
    1: 'tardis.apps.my_custom_app.views.MyCustomIndexSubclass',
    'facility.example.org': 'tardis.apps.myapp.AnotherCustomIndexSubclass'
}
```

A custom view override is defined in settings as dictionary mapping a class-based view (or view function) to a Django Site. A Site is specified by SITE\_ID (an integer) or the domain name of the incoming request.

Developers creating custom contextual index views are encouraged to subclass `tardis.tardis_portal.views.pages.IndexView`.

### Good practice for app developers

In order to benefit from future bug and security fixes in core MyTardis, app developers are strongly encouraged to override `IndexView`, `DatasetView` and `ExperimentView` (from `tardis.tardis_portal.pages`) when creating custom contextual views.

The default and well-tested `index.html`, `view_dataset.html` and `view_experiment.html` templates can be used as a basis for these custom contextual views.

New versions may change the default templates and view functions. If you copy and paste parts for your application, please check with each upgrade that you are still using up to date code.

## 11.4.2 OAI-PMH Producer

### Using to provide RIF-CS

Minimal providers for Dublin Core and RIF-CS are included in the app.

To enable the app, include `tardis.apps.oaipmh` in `settings.INSTALLED_APPS`.

Your OAI-PMH query endpoint will be on: <http://mytardis-example.com/apps/oaipmh/>

### Implementing your own providers

To allow multiple metadata formats (and types within them) the `tardis.apps.oaipmh.server.ProxyingServer` handles all requests and proxies them to the providers specified in `settings.OAIPMH_PROVIDERS`.

You should extend `tardis.apps.oaipmh.provider.base.BaseProvider` or one of the existing providers if you wish to extend the functionality in a site-specific way.

**class** `tardis.apps.oaipmh.provider.base.BaseProvider(site)`

A base provider which roughly implements the PyOAI interface for OAI-PMH servers.

Extend this if you're writing your own provider for a new type or a different metadata format.

**getRecord(metadataPrefix, identifier)**

Get a record for a metadataPrefix and identifier.

#### Parameters

- **metadataPrefix** (`string`) – identifies metadata set to retrieve
- **identifier** (`string`) –
  - repository-unique identifier of record

#### Raises

- `oaipmh.error.CannotDisseminateFormatError` – if metadataPrefix is unknown or not supported by identifier.
- `oaipmh.error.IdDoesNotExistError` – if identifier is unknown or illegal.

**Returns** a header, metadata, about tuple describing the record.

**identify()**

Retrieve information about the repository.

Returns an Identify object describing the repository.

**listIdentifiers(metadataPrefix, set=None, from\_=None, until=None)**

Get a list of header information on records.

#### Parameters

- **metadataPrefix** (`string`) – identifies metadata set to retrieve
- **set** (`string`) – set identifier; only return headers in set
- **from** (`datetime`) – only retrieve headers from `from_` date forward (in naive UTC)
- **until** (`datetime`) – only retrieve headers with dates up to and including until date (in naive UTC)

#### Raises

- `error.CannotDisseminateFormatError` – if metadataPrefix is not supported by the repository.
- `error.NoSetHierarchyError` – if the repository does not support sets.

**Returns** an iterable of headers.

**listMetadataFormats (identifier=None)**

List metadata formats supported by repository or record.

**Parameters** **identifier** (*string*) – identify record for which we want to know all supported metadata formats. If absent, list all metadata formats supported by repository.

**Raises**

- **error.IdDoesNotExistError** – if record with identifier does not exist.
- **error.NoMetadataFormatsError** – if no formats are available for the indicated record.

**Returns** an iterable of `metadataPrefix`, `schema`, `metadataNamespace` tuples (each entry in the tuple is a string).

**listRecords (metadataPrefix, set=None, from\_=None, until=None)**

Get a list of header, metadata and about information on records.

**Parameters**

- **metadataPrefix** (*string*) – identifies metadata set to retrieve
- **set** (*string*) – set identifier; only return records in set
- **from** (*datetime*) – only retrieve records from `from_` date forward (in naive UTC)
- **until** (*datetime*) – only retrieve records with dates up to and including until date (in naive UTC)

**Raises**

- **oaipmh.error.CannotDisseminateFormatError** – if `metadataPrefix` is not supported by the repository.
- **oaipmh.error.NoSetHierarchyError** – if the repository does not support sets.

**Returns** an iterable of header, metadata, about tuples.

**listSets ()**

Get a list of sets in the repository.

**Raises** **error.NoSetHierarchyError** – if the repository does not support sets.

**Returns** an iterable of `setSpec`, `setName` tuples (strings).

**writeMetadata (element, metadata)**

Create XML elements under the given element, using the provided metadata.

Should avoid doing any model-lookups, as they should be done when creating the metadata.

**Parameters**

- **element** (*lxml.etree.Element*) – element to put all content under (as SubElements)
- **metadata** (*oaipmh.common.Metadata*) – metadata to turn into XML

**class tardis.apps.aoipmh.server.ProxyingServer (providers)****getRecord (metadataPrefix, identifier)**

Get a record for a `metadataPrefix` and `identifier`.

**Raises**

- **oaipmh.error.CannotDisseminateFormatError** – if no provider returns a result, but at least one provider responds with oaipmh.error.CannotDisseminateFormatError (meaning the identifier exists)
- **oaipmh.error.IdDoesNotExistError** – if all providers fail with oaipmh.error.IdDoesNotExistError

**Returns** first successful provider response

**Return type** response

#### **identify()**

Retrieve information about the repository.

**Returns** an oaipmh.common.Identify object describing the repository.

**Return type** oaipmh.common.Identify

#### **listIdentifiers(metadataPrefix, \*\*kwargs)**

Lists identifiers from all providers as a single set.

**Raises**

- **error.CannotDisseminateFormatError** – if metadataPrefix is not supported by the repository.
- **error.NoSetHierarchyError** – if a set is provided, as the repository does not support sets.

**Returns** a set. Set of headers.

**Return type** set

#### **listMetadataFormats(\*\*kwargs)**

List metadata formats from all providers in a single set.

**Raises**

- **error.IdDoesNotExistError** – if record with identifier does not exist.
- **error.NoMetadataFormatsError** – if no formats are available for the indicated record, but it does exist.

**Returns** a *frozense*t of metadataPrefix, schema, metadataNamespace tuples (each entry in the tuple is a string).

**Return type** frozense

#### **listRecords(metadataPrefix, \*\*kwargs)**

Lists records from all providers as a single set.

**Raises**

- **error.CannotDisseminateFormatError** – if metadataPrefix is not supported by the repository.
- **error.NoSetHierarchyError** – if a set is provided, as the repository does not support sets.

**Returns** a set. Set of header, metadata, about tuples.

**Return type** set

#### **listSets()**

List sets.

**Raises `oaipmh.error.NoSetHierarchyError`** – because set hierarchies are currently not implemented

### 11.4.3 Publication Forms

#### Introduction

MyTardis supports a simple, configurable, publication workflow allowing researchers to curate collections of data sets for public release. This workflow represents an alternative to simply setting an experiment to “public access” that encourages researchers to provide a higher standard of metadata and bibliographic information, including authorship and acknowledgements without altering the original experiment. Additional features include embargo support, admin publication approvals, and PDB metadata extraction from the Protein Data Bank. DOI minting is also supported but depends on a third-party DOI minting service. Set up of the minting service is beyond the scope of this document.

The publication workflow is a three-stage process:

1. The user selects data sets to include in the publication, along with a title and description
2. Based on the selected data sets, domain-specific fields are presented
3. Authorship, acknowledgements and embargo information is collected

After stage one is started, the publication remains in draft until it is submitted.

Under the hood, this is achieved by creating a new experiment object that is differentiated from regular experiments by attaching a special publication schema. This new experiment links to the selected data sets, which may be from one or many original experiments. Publication related tasks (e.g. embargo processing) filter based on the publication schema and act accordingly.

#### Basic setup

A minimum setup requires the `tardis.apps.publication_forms` app to be added to `INSTALLED_APPS` and the following settings to be defined:

- `PUBLICATION_DATA_ADMIN` set to the user name of the person responsible for research data management
- `PUBLICATION_NOTIFICATION_SENDER_EMAIL` set to the email from which publication related notifications should be sent
- `PUBLICATION_INTRODUCTION` set to an HTML formatted introductory text that is displayed to the user before begins the publication process
- the `apps.publication_forms.update_publication_records` task should be added to `CELERYBEAT_SCHEDULE` and set to a reasonable interval for embargo processing

To disable the approval workflow and have publications automatically released, `PUBLICATIONS_REQUIRE_APPROVAL` can be set to False (defaults to True).

#### DOI support

These additional settings are required for DOI minting support:

- `MODC_DOI_ENABLED` set to True to enable support
- `MODC_DOI_API_ID` set to the API id assigned to this app by the minting service
- `MODC_DOI_API_PASSWORD` set to the password corresponding to the API id
- `MODC_DOI_MINT_DEFINITION` set to the WSDL file for DOI minting

- MODC\_DOI\_ACTIVATE\_DEFINITION set to the WSDL file for DOI activation
- MODC\_DOI\_DEACTIVATE\_DEFINITION set to the WSDL file for DOI deactivation
- MODC\_DOI\_ENDPOINT set to the API SOAP endpoint
- MODC\_DOI\_MINT\_URL\_ROOT set to the URL root for registered

DOIs, e.g. <http://tardis.example.com/>

### Email configuration

There are a number of different notifications that are sent during the publication process. Very basic templates are pre-configured, but may be overridden by defining the PUBLICATION\_EMAIL\_MESSAGES dictionary in the `settings.py` file. Review the `default_settings.py` file for this app to see defaults. The following keys in the dictionary must be defined if

overriding the defaults:

- `PUBLICATION_DATA_ADMIN['requires_authorisation']`
  - Sent to publication admins to authorise/approve a publication for release
  - `{user_name}`: the submitting user's user name
  - `{pub_url}`: the direct link to the publication for review
  - `{approvals_url}`: the link to the admin approvals page
- `PUBLICATION_DATA_ADMIN['awaiting_approval']`
  - Sent to all authors immediately after submission
  - `{pub_title}`: the title of the publication
- `PUBLICATION_DATA_ADMIN['approved']`
  - Sent to all authors after the publication has been approved but before being released (e.g. by embargo expiry)
  - `{pub_title}`: the title of the publication
  - `{pub_url}`: the direct link to the publication
- `PUBLICATION_DATA_ADMIN['approved_with_doi']`
  - As above, but contains a DOI
  - `{doi}`: the publication's DOI
- `PUBLICATION_DATA_ADMIN['rejected']`
  - Sent to all authors if the publication is rejected
  - `{pub_title}`: the title of the publication
- `PUBLICATION_DATA_ADMIN['reverted_to_draft']`
  - Sent to all authors when the publication requires amendments by the submitting user
  - `{pub_title}`: the title of the publication
- `PUBLICATION_DATA_ADMIN['released']`
  - Sent to all authors when the publication has been released following approval
  - `{pub_title}`: the title of the publication

- `PUBLICATION_DATA_ADMIN['released_with_doi']`
  - As above, but contains a DOI
  - `{doi}`: the publication's DOI

## Domain-specific metadata

Domain-specific metadata is collected in stage two of the publication process. The forms to display are determined by inspecting the attached data set schemas. Schema to form mappings are defined in the `PUBLICATION_FORM_MAPPINGS` setting, an example of which is shown below:

```
PUBLICATION_FORM_MAPPINGS = [
    {'dataset_schema': r'^http://synchrotron.org.au/mx/',
     'publication_schema': PDB_PUBLICATION_SCHEMA_ROOT,
     'form_template': '/static/publication-form/mx-pdb-template.html'},
    {'dataset_schema': r'^http://synchrotron.org.au/mx/',
     'publication_schema': MX_PUBLICATION_DATASET_SCHEMA,
     'form_template':
         '/static/publication-form/mx-dataset-description-template.html'}]
```

`dataset_schema` is a regular expression applied to each schema attached to each data set, and if matched, the corresponding `publication_schema` is added to the resulting publication, and its parameters are provided by the form template. Care could be taken in constructing the `dataset_schema` regex keeping in mind that the expression could match one or more data sets.

Constructing the form template HTML files are somewhat challenging; examples are provided in the `static/publication-form` directory. These forms require special syntax that is defined using *AngularJs*. All forms have access to a `formTemplate` variable, which includes the publication schema name (`formTemplate.name`) a list of affected data sets (`formTemplate.datasets`). Each form will populate `formData.extraInfo[x]` with the user supplied data, where `x` is a unique key.

The forms themselves must be enclosed in a `<tardis-form>` tag, which requires a *my-model* attribute (set to `formData.extraInfo[x]`, and a *schema* (set to `formTemplate.name`). Any form field tags must also include the `tardis-form-field` attribute, in addition to `parameter-name`, which is set to the publication schema's parameter to populate. The value given to `x` as the `formData.extraInfo[x]` key must be unique over all included forms. In our example below, the form and data set indices are concatenated to form this unique key. Each entry in `formData.extraInfo` is given its own parameter set in the final publication metadata.

Here is an example that collects some information for each dataset that matches the `dataset_schema` regex:

```
<div ng-repeat="ds in formTemplate.datasets"
      ng-init="f = $parent.$index; formData.extraInfo[f+'.'+$index]['dataset'] = ds.
      description;">
    <h4>{{ ds.description }}</h4>
    <tardis-form my-model="formData.extraInfo[f+'.'+$index]" schema="formTemplate.
      name">
      <textarea tardis-form-field parameter-name="additional-information"
        rows="3"
        style="width:100%;"
        placeholder="Information about this dataset.">
      </textarea>
    </tardis-form>
</div>
```

The above form works as follows:

1. The code inside the outer `<div>` tag is repeated for each data set, which is provided by `formTemplate.datasets`. The outer `<div>` tag also initialises a form index, `f`, obtained from the parent scope's `$index` variable, which

is used in conjunction with the inner scope's `$index` variable to form the unique key for `formData.extraInfo`; namely, `formData.extraInfo[f+'.'+$index]`.

2. `ng-init` in the outer `<div>` tag also saves a ‘dataset’ field, which is included in `formData.extraInfo`. This functions exactly as a hidden HTML input field would.
3. The corresponding dataset name is displayed to the user in the `<h4>` tag
4. A `<tardis-form>` is started, using `formData.extraInfo[f+'.'+$index]` as its model, linking it to the schema provided by `formTemplate.name`.
5. A `<textarea>` collects a data set description that will be added to the parameter named ‘additional-information’, as defined in the corresponding schema

Please note that it is extremely important to ensure that the `parameter-name` attribute for each form field matches exactly the schema parameter. Any fields that do not match are silently ignored!

## 11.5 Releases

### 11.5.1 3.9

- Added deprecation warnings for functionality which will be removed in 4.0
- Added INTERNAL\_IPS to default settings for template debugging on localhost
- Disabled the old publication forms app in default settings, and ensured that MyTardis didn’t attempt to access its static content when disabled
- Removed apps code from ExperimentView’s `get_context_data` which assumed that each app would provide a views module with an index
- Fixed a bug where creating a group which already existed gave a 500 error
- Fixed a bug where non-ASCII characters in experiment names could break SFTP
- Made dataset thumbnails optional - disabling them can improve page load times
- Fixed a bug which had made it difficult to delete a DataFileObject without a URI from the Django shell
- Fixed a bug which made search indexing fail when there were users with non-ASCII characters in their first or last name

### 11.5.2 3.8.1

- Fix regression in Push To app

### 11.5.3 3.8

- Refactored settings
- Added pagination to My Data view
- BDD tests using behave and phantomjs
- Added download MD5 checksum buttons to Dataset View
- Add `autocaching` task that allows data from a StorageBox to be cached to another StorageBox
- Re-wrote user documentation and switched to hosting docs on RTD

- Switched to using NPM to manage JS deps.
- Facility and instrument are now visible on Experiment and dataset views - thanks @avrljk
- Added setting that allows datasets ordered by id on the Experiment page.
- Added setting to make sha512 checksums optional.

#### 11.5.4 3.7 - 17 March 2016

- DataFile size is now a BigInteger field
- New settings for customisations, contextual view overrides (eg INDEX\_VIEWS).
- A new AbstractTardisAppConfig class that all new tardis apps should subclass
- Third-party tardis app dependency checking
- Removed database index from Parameter.string\_value to allow longer strings in Postgres. Migrations add a Postgres partial index for string\_values shorter than 256 characters.
- Changed constraints on the instrument model; facility and instrument name are now unique together
- changed method tasks to task functions, pre-empting the removal of methods tasks in new celery versions
- RESTful API now supports ordering, e.g. &order\_by=-title, for Experiments, Datasets and DataFiles.
- Allowed groups to be ‘owners’ of an Experiment. Enforce rule in views for web UI requiring every Experiment to have at least one user owner.
- Registration support updated for latest django-registration-redux package
- Speed-ups for dataset view page loading for datasets with large numbers of images. The carousel is now limited to a maximum of 100 preview images.
- Reorganised and updated documentation

#### 11.5.5 3.6 - 16 March 2015

- removed legacy operations files (foreman, apache, uwsgi, etc)
- moved CI from Travis CI to Semaphore app
- removed buildout build system and setup.py dependency management
- build instructions in build.sh, using requirements.txt for dependencies now
- gunicorn instead of uwsgi
- updated Django to version 1.6.10
- removed migrations app
- renamed Dataset\_File to DataFile
- DataFile have a deleted and a version flag, for upcoming support of these features.
- verifying files does not have side-effects anymore
- renamed Author\_Experiment to ExperimentAuthor
- an ExperimentAuthor can now have an email and or a URL
- recoded Replica and Location as DataFileObject with associated StorageBox, based on the Django File API

- API v1 got some additions, largely or fully backwards-compatible
- a publication workflow app, guided publication of data
- download data via SFTP using a built-in SFTP server
- removed most traces of METS
- AAF authentication support
- parameters that can store a generic foreign key (link to any database object)
- new models `Instrument` and `Facility`
- basic support for SquashFS archives as `StorageBox`. Probably requires installation-specific code such as what is used at the [Australian Synchrotron](#).
- error pages are no normal-sized
- new view “Facility Overview”, for facility administrators to have overview over data.
- “MyData” includes owned and shared data
- safely allowing HTML in descriptions now. Achieved by “bleaching” of tags
- stats page faster through DB-server-side aggregation
- layout improvements
- pep8 and pylint improvements
- bug fixes

### 11.5.6 3.5 - 26 August 2013

- REST API
- REST API keys
- Authorisation now supports object-level permissions
- Front page overview
- Contextual views for Datafiles, Datasets and Experiments
- Backwards incompatible database changes
- Replica multi file location support
- Migration of replicas
- Streaming downloads
- Django 1.5
- REDIS option for celery queue
- auto-verify files
- provisional directory support
- Pylint testing on Travis CI
- Some error pages are now functional
- optionally upload comfortably with Filepicker.io
- Experiment view page load speedup

- Removed ancient XML ingest format.

### 11.5.7 3.0 - unreleased

- Twitter Bootstrap
- javascript templates
- backbone.js rendering of datasets
- UI for transferring datasets
- bpython shell
- celery queue

### 11.5.8 2.0 - Unreleased

- Auth/Auth redesign [Gerson, Uli, Russel]
  - Authorisation. Support for several pluggable authorisation plugins (Django internal, LDAP, VBL). The added AuthService middleware provides a mechanism to query all available auth modules to determine what group memberships a users has.
  - Alternative authorisation. Rule based experiment access control engine was implemented with the following access attributes for individual users and groups: canRead, canWrite, canDelete, isOwner. Additionally, a time stamp can be specified for each access rule.

Further information can be found at the wiki: [Authorisation Engine design](#)

- Metadata Editing [Steve, Grischa]
- New METS parser & METS exporter [Gerson]
- Dist/Buildout infrastructure [Russell]
- Through the web creation and editing of experiments [Steve, Russell]
- Through the web upload of files [Steve]
- Download protocol handler [Russel, Uli]
- Logging framework [Uli]
- Django 1.3

### 11.5.9 1.07 - 01/06/2010

- Publish to tardis.edu.au interface created, though not implemented, pending legal text

### 11.5.10 1.06 - 15/03/2010

- Parameter import interface for creation of new parameter/schema definitions
- iPhone Interface

### **11.5.11 1.05 - 01/03/2010**

- Images as parameters supported
- Data / metadata transfer from synchrotron is now ‘threaded’ using asynchronous web service transfers.

### **11.5.12 1.0 - 01/02/2010**

- MyTardis created from existin MyTardis python / django codebase
- Allows private data to be stored
- Open key/value parameter model, replacing current crystallography one
- Internal data store for data
- LDAP Login
- Pagination of files
- Creation of synchrotron-tardis from MyTardis codebase including specific code for the VBL login service and data transfer to MyTardis deployments.
- Web server changed to apache and mod\_wsgi

### **11.5.13 0.5 - 2009**

- Re-wrote federated index (python / django)
- Federated stores are now simple web server based with optional FTP access
- Runs on Jython / Tomcat

### **11.5.14 0.1 - 2007**

- Federated index (php) running on Apache HTTP Server
- Crystallography data deposition and packaging tools for Fedora Commons (java swing desktop)
- Search Interface via web

# CHAPTER 12

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## Indices and tables

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- genindex
- modindex
- search



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## Python Module Index

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