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**TBC\_SRI**

# Problem:

Daily SRI report is taking up 5 person hours daily. The data is stored as a spreadsheet and shared via email/sharepoint/public folder. Compiled report is emailed to TBC/FDSI daily. Not clear if the 315 data is incorporated into the report but suspecting they are not. There is now an idea to download the Pipeline report from GLN, create an Excel macro to generate a pseudo “SRI Report” which will then be updated by ABA6 operators and then uploaded back into the GLN. This data will then be sent to FDSI as 315. If it works, the plan is to negotiate with FDSI to terminate SRI report.

1. Because it is macro based, it is still managing data on a spread sheet than a central DB, i.e., multiple version of the “fact”.
2. Being a spot solution, it will be hard to integrate with any other tasks to create a “flow”.

# Objective:

Create a DB that will hold the tracking data at the container level. Should be the central repository for the data where operators can view and update data.

Reports can be generated to share with customers on cargo movement status.

Operators can use this system to look up the status of the cargoes.

Should be manually editable on the table.

Also able to mass upload/update data via CSV file.

<https://www.ibm.com/developerworks/library/wa-django/>

# PRE-REQUISITES:

* Python 2.5+ : I have 3.6.1
* Simplejson:
* Django 1.2.3: 1.11.1 installed

**Install simplejson**

*C:\Users\msugimoto>****pip install simplejson***

*Collecting simplejson*

*Downloading simplejson-3.11.1.tar.gz (78kB)*

*100% |████████████████████████████████| 81kB 750kB/s*

*Installing collected packages: simplejson*

*Running setup.py install for simplejson ... done*

*Successfully installed simplejson-3.11.1*

**Install jquery**

*C:\Users\msugimoto>****pip install django-jquery***

*Collecting django-jquery*

*Downloading django\_jquery-3.1.0-py2.py3-none-any.whl*

*Requirement already satisfied: Django>=1.3 in c:\users\msugimoto\appdata\local\programs\python\python36\lib\site-packages (from django-jquery)*

*Requirement already satisfied: pytz in c:\users\msugimoto\appdata\local\programs\python\python36\lib\site-packages (from Django>=1.3->django-jquery)*

*Installing collected packages: django-jquery*

*Successfully installed django-jquery-3.1.0*

**Install jquery ui**

*C:\Users\msugimoto>****pip install django-jquery-ui***

*Collecting django-jquery-ui*

*Downloading django-jquery-ui-1.11.4.1.tar.gz (1.2MB)*

*100% |████████████████████████████████| 1.2MB 729kB/s*

*Requirement already satisfied: django-jquery>=1.6 in c:\users\msugimoto\appdata\local\programs\python\python36\lib\site-packages (from django-jquery-ui)*

*Requirement already satisfied: Django>=1.3 in c:\users\msugimoto\appdata\local\programs\python\python36\lib\site-packages (from django-jquery>=1.6->django-jquer*

*y-ui)*

*Requirement already satisfied: pytz in c:\users\msugimoto\appdata\local\programs\python\python36\lib\site-packages (from Django>=1.3->django-jquery>=1.6->django*

*-jquery-ui)*

*Installing collected packages: django-jquery-ui*

*Running setup.py install for django-jquery-ui ... done*

*Successfully installed django-jquery-ui-1.11.4.1*

Review (comments) are pretty bad so decided to shift gears and try out jsgrid instead.

<https://github.com/tabalinas/jsgrid#requirement>

Specifically, I went to the Django sub at

<https://github.com/tabalinas/jsgrid-django>

created a requirements.txt file and copy/pasted the contents.

Then following instructions ran the pip install

*C:\DjangoLab\TBC\_SRI\jsgrid>****pip install -r requirements.txt***

*Collecting certifi==2017.4.17 (from -r requirements.txt (line 1))*

*Using cached certifi-2017.4.17-py2.py3-none-any.whl*

*Collecting chardet==3.0.4 (from -r requirements.txt (line 2))*

*Downloading chardet-3.0.4-py2.py3-none-any.whl (133kB)*

*100% |████████████████████████████████| 143kB 1.3MB/s*

*Collecting Django==1.8 (from -r requirements.txt (line 3))*

*Downloading Django-1.8-py2.py3-none-any.whl (6.2MB)*

*100% |████████████████████████████████| 6.2MB 211kB/s*

*Collecting django-simple-rest==1.4.1 (from -r requirements.txt (line 4))*

*Downloading django-simple-rest-1.4.1.tar.gz*

*Collecting idna==2.5 (from -r requirements.txt (line 5))*

*Using cached idna-2.5-py2.py3-none-any.whl*

*Collecting mimeparse==0.1.3 (from -r requirements.txt (line 6))*

*Downloading mimeparse-0.1.3.tar.gz*

*Collecting requests==2.17.3 (from -r requirements.txt (line 7))*

*Using cached requests-2.17.3-py2.py3-none-any.whl*

*Collecting urllib3==1.21.1 (from -r requirements.txt (line 8))*

*Using cached urllib3-1.21.1-py2.py3-none-any.whl*

*Collecting wheel==0.24.0 (from -r requirements.txt (line 9))*

*Downloading wheel-0.24.0-py2.py3-none-any.whl (63kB)*

*100% |████████████████████████████████| 71kB 2.3MB/s*

*Requirement already satisfied: setuptools in c:\users\msugimoto\appdata\local\programs\python\python36\lib\site-packages (from django-simple-rest==1.4.1->-r req*

*uirements.txt (line 4))*

*Installing collected packages: certifi, chardet, Django, mimeparse, django-simple-rest, idna, urllib3, requests, wheel*

*Found existing installation: Django 1.11.1*

*Uninstalling Django-1.11.1:*

*Successfully uninstalled Django-1.11.1*

*Running setup.py install for mimeparse ... done*

*Running setup.py install for django-simple-rest ... done*

*Successfully installed Django-1.8 certifi-2017.4.17 chardet-3.0.4 django-simple-rest-1.4.1 idna-2.5 mimeparse-0.1.3 requests-2.17.3 urllib3-1.21.1 wheel-0.24.0*

# SETUP

## Create virtual env

*C:\DjangoLab\TBC\_SRI>****virtualenv tbc\_sri\_env***

*Using base prefix 'c:\\users\\msugimoto\\appdata\\local\\programs\\python\\python36'*

*New python executable in C:\DjangoLab\TBC\_SRI\tbc\_sri\_env\Scripts\python.exe*

*Installing setuptools, pip, wheel...done.*

*C:\DjangoLab\TBC\_SRI>****cd tbc\_sri\_env***

*C:\DjangoLab\TBC\_SRI\tbc\_sri\_env>****scripts\activate.bat***

## Install pre-requisites

Will reuse the requirements.txt from step 0.

*(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env>****cd C:\DjangoLab\TBC\_SRI\jsgrid***

*(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\jsgrid>****pip install -r requirements.txt***

*Collecting certifi==2017.4.17 (from -r requirements.txt (line 1))*

*Using cached certifi-2017.4.17-py2.py3-none-any.whl*

*Collecting chardet==3.0.4 (from -r requirements.txt (line 2))*

*Using cached chardet-3.0.4-py2.py3-none-any.whl*

*Collecting Django==1.8 (from -r requirements.txt (line 3))*

*Using cached Django-1.8-py2.py3-none-any.whl*

*Collecting django-simple-rest==1.4.1 (from -r requirements.txt (line 4))*

*Using cached django-simple-rest-1.4.1.tar.gz*

*Collecting idna==2.5 (from -r requirements.txt (line 5))*

*Using cached idna-2.5-py2.py3-none-any.whl*

*Collecting mimeparse==0.1.3 (from -r requirements.txt (line 6))*

*Using cached mimeparse-0.1.3.tar.gz*

*Collecting requests==2.17.3 (from -r requirements.txt (line 7))*

*Using cached requests-2.17.3-py2.py3-none-any.whl*

*Collecting urllib3==1.21.1 (from -r requirements.txt (line 8))*

*Using cached urllib3-1.21.1-py2.py3-none-any.whl*

*Collecting wheel==0.24.0 (from -r requirements.txt (line 9))*

*Using cached wheel-0.24.0-py2.py3-none-any.whl*

*Requirement already satisfied: setuptools in c:\djangolab\tbc\_sri\tbc\_sri\_env\lib\site-packages (from django-simple-rest==1.4.1->-r requirements.txt (line 4))*

*Building wheels for collected packages: django-simple-rest, mimeparse*

*Running setup.py bdist\_wheel for django-simple-rest ... done*

*Stored in directory: C:\Users\msugimoto\AppData\Local\pip\Cache\wheels\41\ba\c3\5a979a30223fad2e1236ccdceedda59d7eff9ab38a6b86b5b2*

*Running setup.py bdist\_wheel for mimeparse ... done*

*Stored in directory: C:\Users\msugimoto\AppData\Local\pip\Cache\wheels\cb\83\03\ec75acce6afbbecd7aaf161c59554eb64c04fc3bfdeb117a44*

*Successfully built django-simple-rest mimeparse*

*Installing collected packages: certifi, chardet, Django, mimeparse, django-simple-rest, idna, urllib3, requests, wheel*

*Found existing installation: Django 1.11.6*

*Uninstalling Django-1.11.6:*

*Successfully uninstalled Django-1.11.6*

*Found existing installation: wheel 0.30.0*

*Uninstalling wheel-0.30.0:*

*Successfully uninstalled wheel-0.30.0*

*Successfully installed Django-1.8 certifi-2017.4.17 chardet-3.0.4 django-simple-rest-1.4.1 idna-2.5 mimeparse-0.1.3 requests-2.17.3 urllib3-1.21.1 wheel-0.24.0*

## Create Django project

*(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env>****mkdir my\_source***

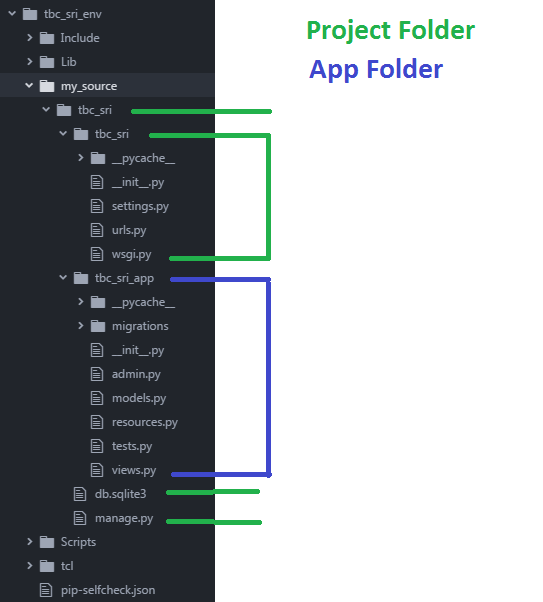
*(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env>****cd my\_source***

*(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env\my\_source>****django-admin.py startproject tbc\_sri***

## Create Django app

(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env\my\_source>***cd tbc\_sri***

(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env\my\_source\tbc\_sri>***django-admin.py startapp tbc\_sri\_app***

******

### Ilust1.Initial folder structure

## Add app to settings.py

INSTALLED\_APPS = (

…

***'tbc\_sri\_app',***

)

## Create super user (admin/admin123)

*(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env\my\_source\tbc\_sri>****python manage.py createsuperuser***

## Start the server and check the site so far

***python manage.py runserver***

<http://127.0.0.1:8000/admin>

So far so good…

# MODEL

## Create model

***python manage.py makemigrations***

***python manage.py migrate***

## Update admin.py with the new model

***from .models import lnos\_statusPipeLine***

***admin.site.register(lnos\_statusPipeLine)***

## Add import\_export

*(tbc\_sri\_env) C:\DjangoLab\TBC\_SRI\tbc\_sri\_env\Scripts>****pip install django\_import\_export***

## Update settings.py for import\_export module

*INSTALLED\_APPS = [*

*…*

*'import\_export',*

*]*

*…*

*IMPORT\_EXPORT\_USE\_TRANSACTIONS = True*

## Define Resource/ModelResource:

Create a “Resource” file, ***tbc\_sri\_app/resource.py***, which defines how objects are mapped to their import/export representations and handle importing/exporting data.

“ModelResource” on the other hand is a Resource subclass for handling Django models

(<http://django-import-export.readthedocs.io/en/latest/api_resources.html>)

***from import\_export import resources***

***from import\_export import fields***

***from import\_export.widgets import ForeignKeyWidget***

***from .models import lnos\_statusPipeLine***

***class Meta:***

***model = lnos\_statusPipeLine***

***skip\_unchanged = True***

***import\_id\_fields = (***

***…***

## Update admin.py

***from .resources import lnos\_statusPipeLineResource***

***from import\_export.admin import ImportExportModelAdmin***

***# Register your models here.***

***from .models import lnos\_statusPipeLine***

***@admin.register(lnos\_statusPipeLine)***

***class lnos\_statusPipeLineAdmin(ImportExportModelAdmin):***

***list\_display = ('mbol', 'hbol', 'container', 'customs\_released', 'eta\_pod', 'unloaded\_from\_vessel')***

***resource\_class = lnos\_statusPipeLineResource***

Try importing test data but got the error

***NOT NULL constraint failed: tbc\_sri\_app\_lnos\_statuspipeline.eta\_placeofdelivery***

All the CharFields were made ***null=True, blank=True*** but did not help.

Turns out I was forgetting to delete the old sql3 file.

# VIEWS.PY and URLS.PY – CREATE A NEW TEST PAGE

Will create a complete TBC shipment table first.

But first, noticed my Django version is 1.8 so need to upgrade to 1.11.6.

***Pip install -U django***

1. Updated tbc\_sri\_app/views.py with some Hello World pages

***from django.http import HttpResponse***

***def detail(request, question\_id):***

***return HttpResponse("You're looking at question %s." % question\_id)***

***def helloWorld(request, namae):***

***return HttpResponse("Hello world %s!" % namae)***

***def index(request):***

***#add code here***

***#https://docs.djangoproject.com/en/1.11/intro/tutorial03/#a-shortcut-render***

***return render(request, 'tbc\_sri\_app/index.html')***

1. Created tbc\_sri\_app/urls.py

to define URL and Views mapping

***from django.conf.urls import include, url***

***from django.contrib import admin***

***#***

***from . import views***

***urlpatterns = [***

***# Examples:***

***# url(r'^$', 'tbc\_sri.views.home', name='home'),***

***# url(r'^blog/', include('blog.urls')),***

***url(r'^admin/', include(admin.site.urls)),***

***url(r'^(?P<question\_id>[0-9]+)/$', views.detail, name='detail'),***

***url(r'^(?P<namae>[^0-9])/$', views.helloWorld, name='helloWorld'),***

***url(r'^$', views.index, name='index'),***

***]***

1. Updated tbc\_sri/urls.py to map with tbc\_sri\_app/urls.py mapping

***#***

***url(r'^tbc\_sri\_app/', include('tbc\_sri\_app.urls')),***

# GRID INTRO

## Grid tool to use

After comparing jsgrid (<http://js-grid.com/demos/>) and jqgrid (<http://www.guriddo.net/demo/guriddojs/>) decided to go with jsgrid. Both have somewhat recent updates and not that great HOWTOs. Just jsgrid looked more pleasant to the eyes. But it may not have CSV download so need to keep an eye on that.

## Download jsgrid package

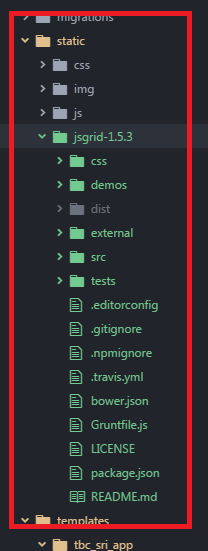
<http://js-grid.com/getting-started/>

Download the **SOURCE** and place in the static folder

<https://stackoverflow.com/questions/1532875/django-javascript-files>

Wasn’t sure of any conventions so simply placed the folder under static

tbc\_sri\_app\static\ jsgrid-1.5.3



### Ilust2. New static folder with JSGrid files

## Check settings.py

<https://scotch.io/tutorials/working-with-django-templates-static-files#toc-settings-for-managing-static-files>

***INSTALLED\_APPS = (***

***…***

***'django.contrib.staticfiles',***

…

***STATIC\_URL = '/static/'***

***STATICFILES\_DIRS = (***

***os.path.join(BASE\_DIR, 'static'),***

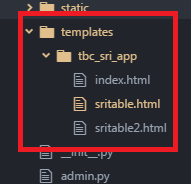
***)***

***STATIC\_ROOT = os.path.join(BASE\_DIR, 'staticfiles')***

Not sure how to check but I believe I have done all I can to include the JSGrid files. Next I will create a test page to start playing with.

## Create a test page

Create a templates/tbc\_sri\_app folder and create sritable.html in it



### Ilust3. Templates folder with index.html

I copied and pasted the jsgrid-1.5.3/demos/basic.html into the sritable.html.

Added reference to the static folder at the top

***{% load static %}***

Changed all the CSS and JS references to the static folder

***href="{% static "jsgrid-1.5.3/demos/demos.css" %}"***

## Update urls.py and views.py with the test pages

**Urls.py**

***url(r'^sritable$', views.sritable, name='sritable'),***

**Views.py**

***def sritable(request):***

***return render(request, 'tbc\_sri\_app/sritable.html')***

Now that I got the demo grid working, the next step is to connect the grid to the model

# CONNECTING THE MODEL AND THE GRID

<http://js-grid.com/docs/#grid-controller>

Trying to figure out how to create a model output object and pass that to the JSGrid.

Following the two videos, decided to create the data dictionary in views.py and pass to HTML

<https://www.youtube.com/watch?v=0HVwUQ0Ok7Y&list=PL6gx4Cwl9DGBlmzzFcLgDhKTTfNLfX1IK&index=14>

<https://www.youtube.com/watch?v=b0d09mYsORs&index=13&list=PL6gx4Cwl9DGBlmzzFcLgDhKTTfNLfX1IK>

Created yet another HTML called sritable3.html and update view.py

***def sritable3(request):***

***#the model query object returning all contents***

***shipments = lnos\_statusPipeLine.objects.all()***

***#load in the template and create a variable as a reference to the template***

***template = loader.get\_template('tbc\_sri\_app/sritable3.html')***

***#dictionary to pass the model data with to the template***

***context = {***

***'shipments': shipments,***

***}***

***#render the template referenced by "context" variable passing it the "context" dictionary with data***

***return HttpResponse(template.render(context, request))***

urls.py also updated

***url(r'^sritable3$', views.sritable3, name='sritable3'),***

Then updated sritable3.html with the JSGrid Basic Scenario html code replacing the controller with my “context” and changing the fields elements with my model. But so far the page is blank and the error says “context” is unknown so I guess it is not being passed to the HTML properly?

# References

## Django 1.11 official Tutorial

<https://docs.djangoproject.com/en/1.11/intro/tutorial01/>

## Django Import\_Export

<http://django-import-export.readthedocs.io/en/latest/api_resources.html>)

## How to serve static files including collectstatics

<https://scotch.io/tutorials/working-with-django-templates-static-files#toc-settings-for-managing-static-files>

<https://stackoverflow.com/questions/12031825/how-to-set-up-django-website-with-jquery>

## JSGrid

<https://github.com/tabalinas/jsgrid#requirement>

<https://github.com/tabalinas/jsgrid-django>

<http://js-grid.com/demos/>

<http://js-grid.com/getting-started/>

## JQGrid

<http://www.guriddo.net/demo/guriddojs/>