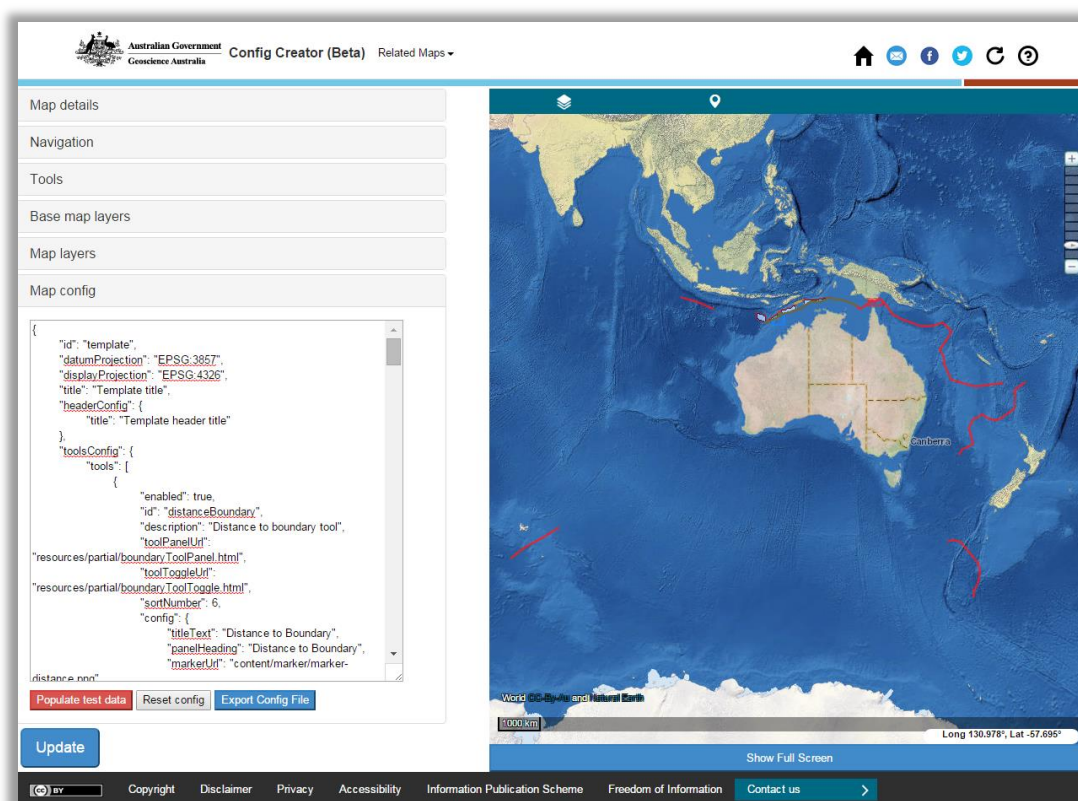


# Interactive Map configCreator

## Exercise Book



Written by Steven Ackerly

NOT AN OFFICIAL PRODUCT OF GEOSCIENCE AUSTRALIA

This book teaches some basic configuration features of Interactive Maps (IM) using the configCreator. The exercises can be practiced at any time; they will enable the user to compile a simple configuration that can be submitted to the IM application. These exercises do not cover all of the features of IM, but enable users to understand how a configuration is put together.

## How to use the exercises

Each exercise is numbered; the steps in the exercises are alphabetized. When there is a reference to a button or text box on the web page; the feature name will be underlined and italicized, such as *Config ID*. The text notes in the grey boxes are for reference, they do not follow though the exercise.

### 1) Exercise: Adding a layer, setting an extent and exporting the config

- a. Open the URL for the training template in configCreator

<http://np.ga.gov.au/interactive-maps/#/configCreator/theme/samples/map/template>

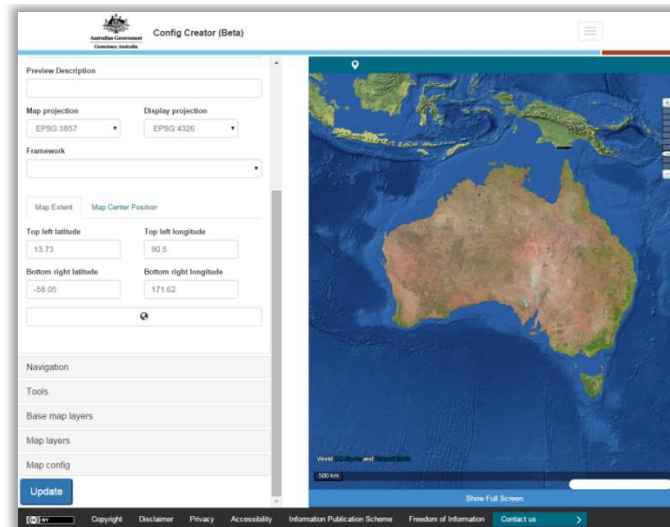
As an example; to start from a blank (or empty) configuration, use the following URL.

<http://np.ga.gov.au/interactive-maps/#/configCreator>

The template from the first URL will be used for training purposes; it will lay out the configuration so it is a little easier to read during the exercises. This template is also a good place to start in general.

The left pane is the *Config Pane* and contains the details that will be placed in the configuration; the right pane is the *Map Pane* and will show the configuration results. If needed, scroll the left *Config Pane* to the bottom of the page using the mouse wheel or use the scroll bar.

- b. Click the *Preview* button. Note that the *Preview* button switches to *Update*, this is because any changes from the first click of the button are updates to the configuration. Note that this button is always viewed even with all the tabs closed.



- c. Click the Map details tab and type the following

Config ID

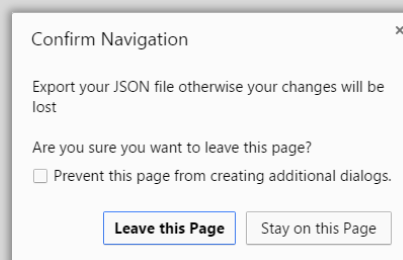
exercise1

This will become the name of the Javascript Object Notation (JSON) config file exported later.

- d. Click on the Map config tab.

Note the text in the box, it is the initial configuration template written in Javascript Object Notation (JSON). This config file is read by the application to generate the different map interfaces. The text box can be dragged bigger from the right corner. There will be more on the JSON format later.

If the browser window or tab is shut during an Update, the browser will confirm that changes have been made and the user should consider exporting the changes to a JSON file.



- e. Scroll the Config Pane back to the top of the page and click open the Map layers tab, this pane allows the user to add additional layers to the map.

The pane is divided into six sections, each collapsible in the pane. The six sections are Map Details, Navigation, Tools, Base map layers, Map layers and Map config.

- f. Type “Papua New Guinea” into the Search interface, note the variety layers that are listed during typing.

- g. Select the Papua New Guinea Torres Strait Protected Zone AMB 2014 layer.

The details of the layer are automatically added the form details. These layers have been already added to the Interactive Maps master-layer-list.

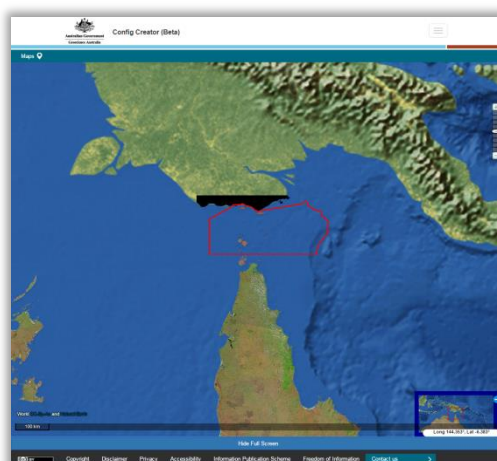
To see the full list as JSON, click on this URL.

<http://np.ga.gov.au/interactive-maps/api/config/master-layer-list.json>

- h. Click the Add layer map button. Notice the Papua New Guinea Torres Strait Protected Zone AMB 2014 is automatically added to the map.

Also note that the layer is added under the Added map layers list.

- i. Click the Show Full Screen button in the Map Pane
- j. Zoom in to the treaties area (holding down the shift key will allow a box to be dragged over the area).



- k. Click the Hide Full screen button to bring back the Config Pane.
- l. Click open the Map details tab, click the globe button under the Map Extent tab. This will keep the map config centred on the treaty area.

- m. Click close the Map details tab.
- n. Click open the Map config tab. Examine the config generated in the text box. Note the text box can be dragged bigger from the right corner.
- o. Click the Export Config File button and open the downloads folder in to examine the JSON config text file.

Introducing JSON

<http://www.json.org/>

## 2) Exercise: Add a WMS manually

- a. Open Exercise 2 config (or continue from exercise 1)

<http://np.ga.gov.au/interactive-maps/#/configCreator/theme/samples/map/exercise2>

- b. Click the Map details tab and ensure the following.

Config ID

exersise2

A WMS request can be manually entered and added the configuration

- c. Type in (or click on) the GetCapabilites for the following URL

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS)

What is the name of the layer in this WMS, (hint, there is only one)?

What is a WMS?

“A Web Map Service (WMS) is a standard protocol for serving (over the Internet) georeferenced map images which a map server generates using data from a GIS database.”

[https://en.wikipedia.org/wiki/Web\\_Map\\_Service](https://en.wikipedia.org/wiki/Web_Map_Service)

<http://docs.geoserver.org/stable/en/user/services/wms/reference.html>

### Basic WMS Get Capabilities

Returns the capabilities of the service, not all services have all the same capabilities by default.

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?request=GetCapabilities&service=WMS)

**<URL>**[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer)**<URL>**

**<Request Type>**request=GetCapabilities**<Request Type>**

**<Service Request>**service=WMS**<Service Request>**

## Basic WMS Get Map

Returns a basic map picture

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?LAYERS=World\\_Heritage\\_Areas\\_Australia&SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&STYLES=&FORMAT=image/jpeg&SRS=EPSG:4326&BBOX=88,-47.5,178,-2.5&WIDTH=512&HEIGHT=256](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?LAYERS=World_Heritage_Areas_Australia&SERVICE=WMS&VERSION=1.1.1&REQUEST=GetMap&STYLES=&FORMAT=image/jpeg&SRS=EPSG:4326&BBOX=88,-47.5,178,-2.5&WIDTH=512&HEIGHT=256)

Note, case sensitivity and order should not matter (besides the URL must be first) Named attributes follow with single “?” and subsequent “&”.

**<URL>**[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer)**</URL>**

**<Layers list=comma delimited >**layers=World\_Heritage\_Areas\_Australia**</Layers>**

**<Service Request>**service=WMS**</Service Request>**

**<Version Number>**version=1.1.1**</Version Number>**

**<Request Type>**request=GetMap**</Request Type>**

**<Map Style>**style=**</Map Style>**

**<Image Format>**format=image/jpeg**</Image Format>**

**<Spatial Reference System>**srs=epsg:4326**</Spatial Reference System>**

**<Bounding Box list=comma delimited >**bbox=88,-47.5,178,-2.5**</Bounding Box>**

**<Width>**width=512**</Width>**

**<Height>**height=256**</Height>**

- d. Open the Map layers tab
- e. Type in the following details.

Map Type:

WMS

Default layer map visibility

Check on

Layer Name:

World Heritage Areas

URL:

[http://www.environment.gov.au/mapping/services/ogc\\_services/World\\_Heritage\\_Areas/MapServer/WMSServer?service=WMS](http://www.environment.gov.au/mapping/services/ogc_services/World_Heritage_Areas/MapServer/WMSServer?service=WMS)

### Layers:

World\_Heritage\_Areas\_Australia

### Opacity default:

1

- f. Click the Add map layer button. Note the layer is added under the Added map layers section.

Layer details

Map type

WMS

☒ Default layer map visibility

Layer name

World Heritage Areas

URL

http://www.environment.gov.au/mapping/services/ogc\_services/World\_Heritage\_Areas/Mz...

Browse...

Layers

World\_Heritage\_Areas\_Australia

Opacity default

1

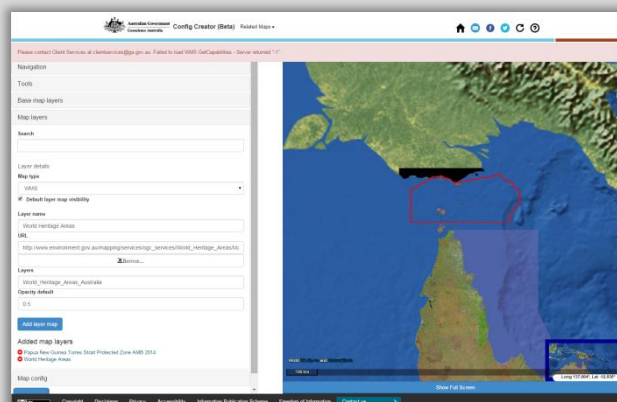
Add layer map

Added map layers

- Papua New Guinea Torres Strait Protected Zone AMB 2014
- World Heritage Areas

When the environment URL is in the box, a click on the browse button will generate an error. This sometimes happens when trying to access a GetCapabilities document. This exercise will give examples how to add WMS services manually even though the application cannot read the GetCapabilities. The WMS will work as a simple request, the GetCapabilities is just a machine readable reference document.

Don't forget to check off the error message (see the end of the pink bar) as they will stack up.



- g. Now click on the  button next to the World Heritage Area layer to remove the layer.



**h.** Change the following value.

Opacity

0.5

Click the Add layer map again to re-add it the to map layer list.

**i.** Click the Papua New Guinea Torres Strait Protected Zone AMB 2014 in the Added map layers list.

Note that the Map layers clicked is temporarily underlined and the form fills with the layers details.

Layer details

Map type  
WMS

☒ Default layer map visibility

Layer name  
Treaties of Australia AMB 2014

URL  
http://www.ga.gov.au/gis/services/legislation/Tn...  
Browse...

Layers  
East\_Timor\_Certain\_Maritime\_Arrangements\_i

Opacity default  
1

Add layer map

Added map layers

- Treaties of Australia AMB 2014
- World Heritage Areas

**j.** Click the Map config tab and select the Export Config File button to save the finished exercise.