



Web Map Printing in GeoExt

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Printing?

Doesn't my browser have a PRINT button?



Yes, but ...

... some old, but still widely spread
browsers don't do a good job
printing stacked images/layers



Yes, but ...

... what if you want an A0 plot?



Yes, but ...

... what if you don't want to print
your map north up?



Cross browser PDF printing with GeoExt

featuring MapFish Print



MapFish Print?

A server side component?



I am an OpenGeo Suite user.

Then you have it already:

<http://path/to/geoserver:8080/pdf/info.json>



I am a MapFish user.

Then you have it already:
<http://path/to/mapfish/print/info.json>



I am a GeoServer user.

Get it here:

<http://docs.geoserver.org/stable/en/user/community/printing/>



None of the above?

Get it here:

<http://www.mapfish.org/doc/print/>



Preparation on the server

Edit config.yaml to set up your layouts
(not covered here)



Getting Started the Easy Way

GeoExt Extensions



PrintPreview ux

Print Preview window á la GYM

PrintPreview using GeoExt.data.PrintProvider

This example shows how to use `GeoExt.data.PrintProvider` to talk to the [Mapfish print module](#), which allows you to print the map. Use the "Print" button from the bottom toolbar of the map to open the print dialog.

Note that this example uses GET requests to communicate with the print servlet (provided by the OpenLayers print module). For production use, the POST method is preferred (due to URL length in Internet Explorer, and character encoding issues).

See [PrintPreview.js](#) for the source code.

Tasmania Water Bodies

Tasmania State Boundaries

Print...

Print

Paper size: A4 Resolution: 75 dpi Print

GeoExt Printing Demo Include legend?

Enter comments here.

100 km 100 mi 1:4,096,000



SimplePrint ux

Print configuration á la MapFish

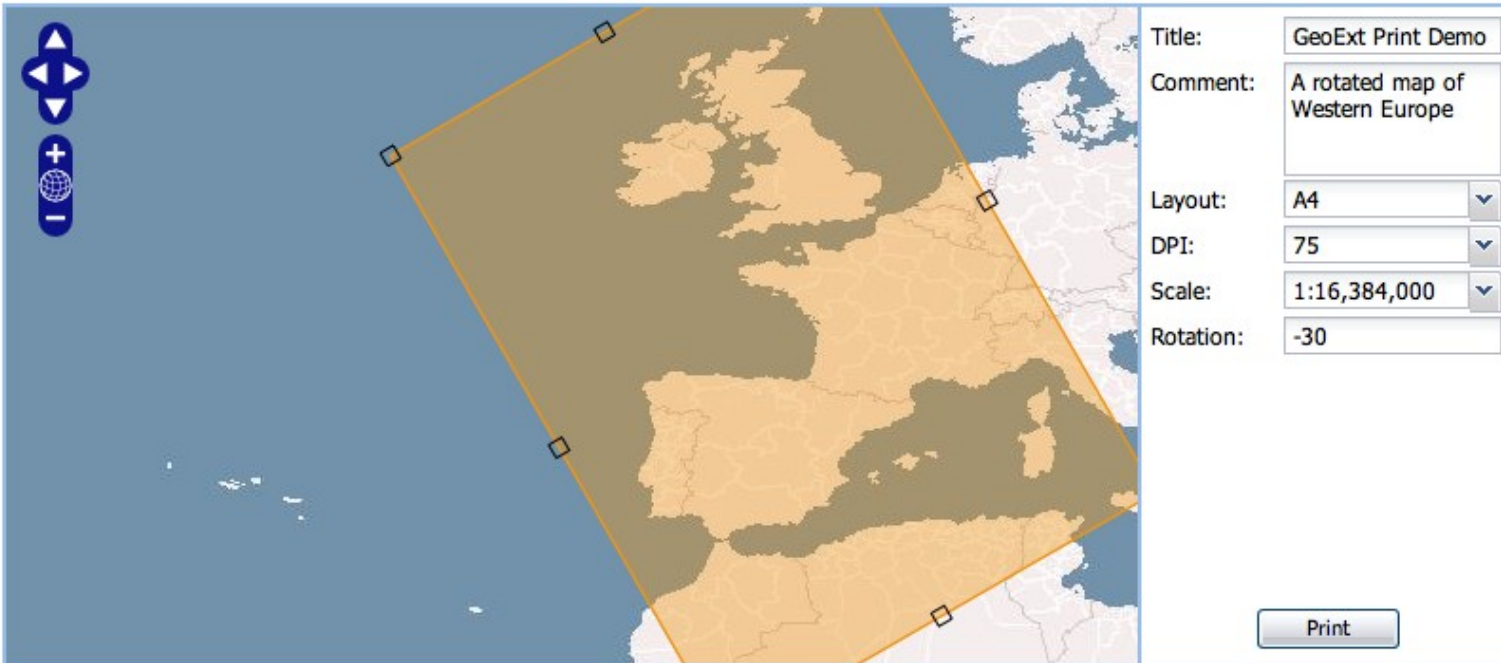
SimplePrint Form using GeoExt.data.PrintProvider

This example shows how to use GeoExt.ux.SimplePrint to talk to the [Mapfish print module](#), which also runs inside the [GeoServer printing module](#).

The rectangle and handles on the map can be used to change center, scale and rotation. Dragging one of the handles will change the scale. Dragging the corner handles on their edges will rotate the extent, if supported by the layout. Holding the SHIFT key will constrain rotation to 45° steps.

Note that this example uses GET requests to communicate with the print servlet (provided by the OpenGeo demo server). This saves us a proxy, but has limitations (URL length in Internet Explorer, and character encoding issues). For production use, the POST method is recommended.

See [SimplePrint.js](#) for the source code.



The screenshot displays a web-based map interface. On the left, there is a vertical toolbar with navigation and zoom controls. The main map area shows a map of Western Europe with a semi-transparent orange rectangle overlaid, indicating the print extent. This rectangle is rotated counter-clockwise. Small square handles are placed at the corners and midpoints of the rectangle's edges. To the right of the map is a configuration panel with the following fields:

- Title: GeoExt Print Demo
- Comment: A rotated map of Western Europe
- Layout: A4
- DPI: 75
- Scale: 1:16,384,000
- Rotation: -30

A "Print" button is located at the bottom right of the configuration panel.



Introducing the Architecture

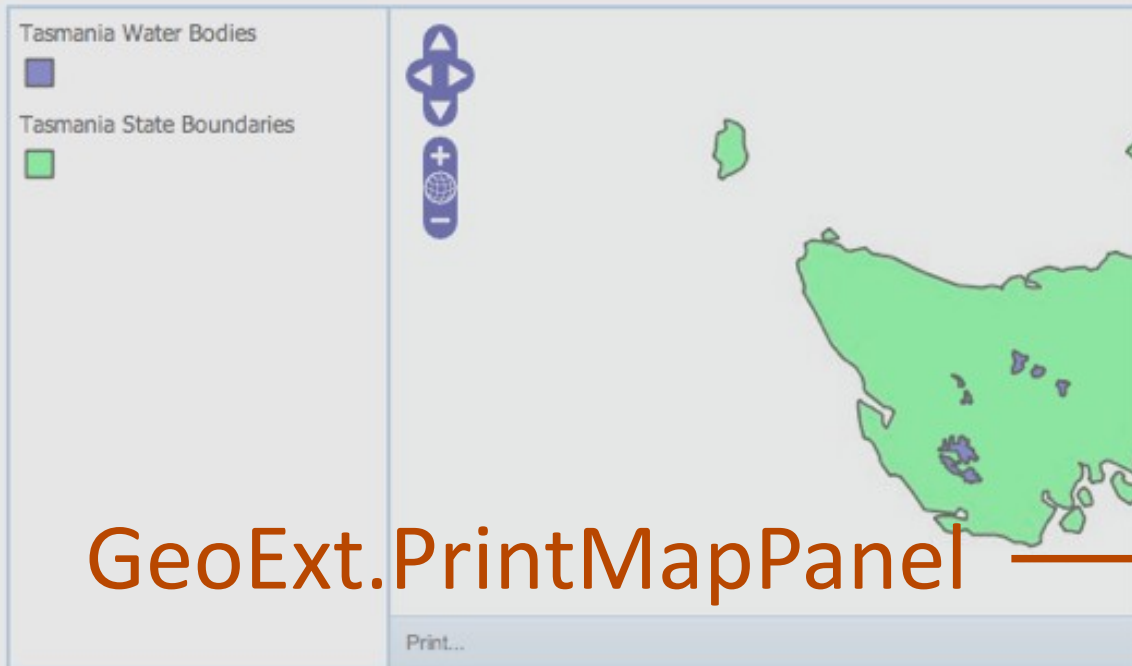
#1 UI components

PrintPreview using GeoExt.data.PrintProvider

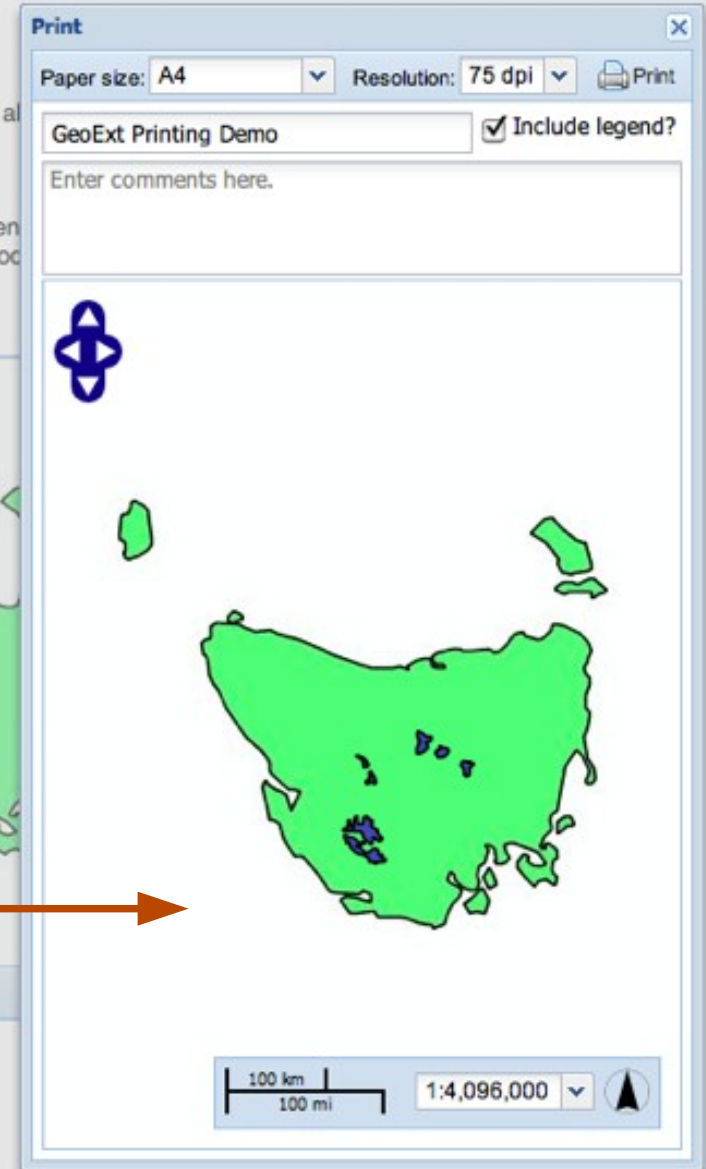
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GeoExt.PrintMapPanel →



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Note that this example uses GET requests to communicate with the print servlet (provided by the OpenGeo demo server). This saves us a proxy, but has limitations (URL length in Internet Explorer, and character encoding issues). For production use, the POST method is recommended.

See [SimplePrint.js](#) for the source code.



The screenshot displays a web-based map interface. On the left, there are navigation controls including a compass and zoom in/out buttons. The main map area shows a map of Western Europe with a semi-transparent orange rectangle overlaid, representing the print extent. This rectangle is rotated counter-clockwise. Small square handles are placed at the corners and midpoints of the rectangle's edges. To the right of the map is a configuration panel with the following fields:

- Title: GeoExt Print Demo
- Comment: A rotated map of Western Europe
- Layout: A4
- DPI: 75
- Scale: 1:16,384,000
- Rotation: -30

At the bottom right of the configuration panel is a "Print" button. The text "GeoExt.plugins.PrintExtent" is overlaid in large orange font across the bottom half of the map area.



Introducing the Architecture

#2 Form helpers

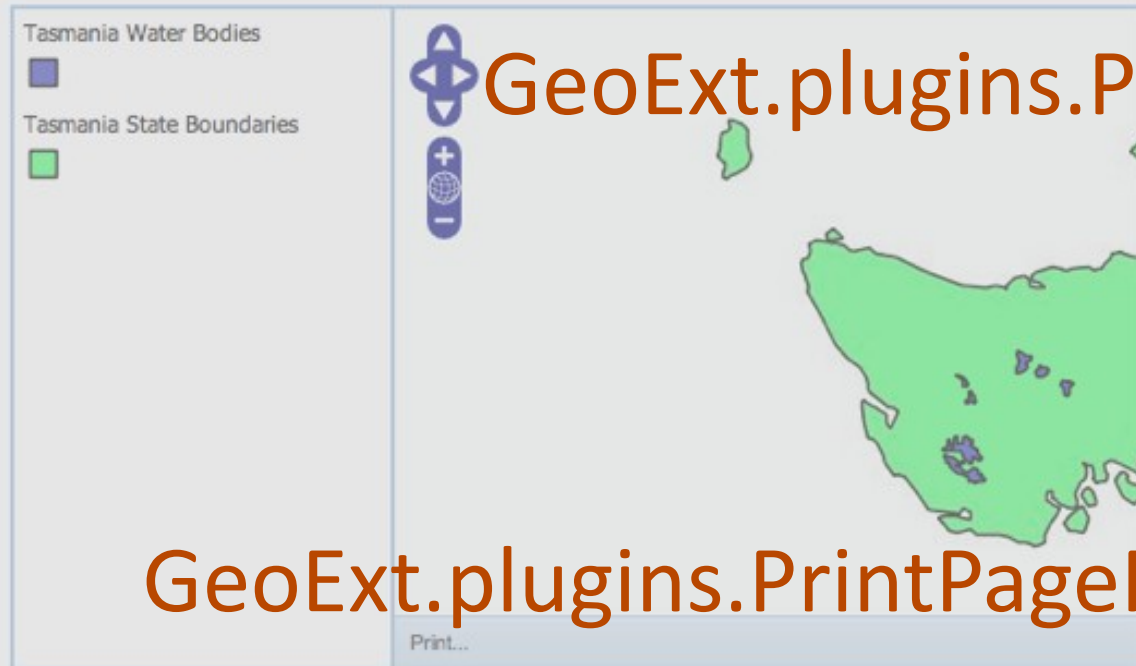
PrintPreview using GeoExt.data.PrintProvider

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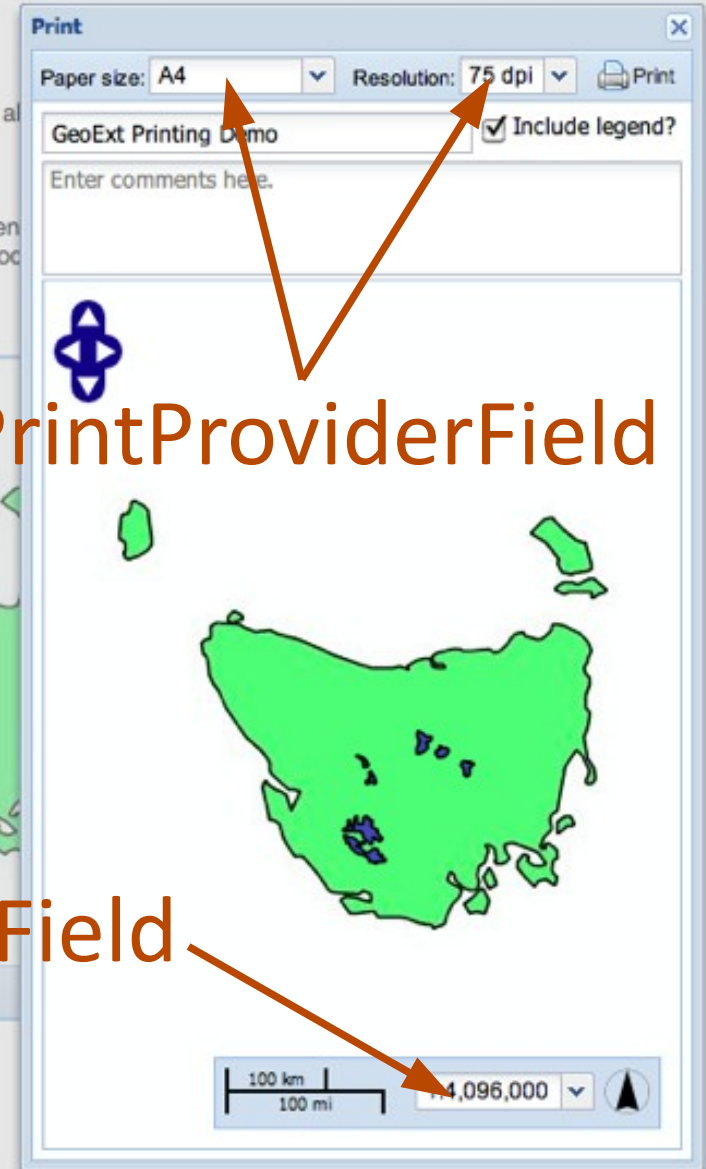
Use the "Print" button from the bottom toolbar of the map to open the print dialog.

Note that this example uses GET requests to communicate with the print servlet (provided by the Open (URL length in Internet Explorer, and character encoding issues). For production use, the POST method

See [PrintPreview.js](#) for the source code.



The screenshot shows a web application interface. On the left, there is a legend with two items: "Tasmania Water Bodies" represented by a blue square and "Tasmania State Boundaries" represented by a green square. The main area contains a map of Tasmania with a green overlay. A vertical toolbar on the left of the map includes a compass, a zoom-in (+) button, a globe icon, and a zoom-out (-) button. At the bottom left of the map area, there is a "Print..." button.



The screenshot shows a "Print" dialog box. At the top, it has "Paper size: A4" and "Resolution: 75 dpi" with dropdown menus and a "Print" button. Below this, there is a text input field containing "GeoExt Printing Demo" and a checked checkbox for "Include legend?". A text area below contains "Enter comments here.". The main part of the dialog is a map preview of Tasmania, identical to the one in the previous screenshot. At the bottom, there is a scale bar showing "100 km" and "100 mi", and a dropdown menu showing "1:4,096,000" with a north arrow icon to its right.

GeoExt.plugins.PrintProviderField

GeoExt.plugins.PrintPageField

SimplePrint Form using GeoExt.data.PrintProvider

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Note that this example uses GET requests to communicate with the print servlet (provided by the OpenGeo demo server). This saves us a proxy, but has limitations (URL length in Internet Explorer, and character encoding issues). For production use, the POST method is recommended.

See [SimplePrint.js](#) for the source code.

GeoExt.plugins.PrintProviderField

The screenshot displays a map of Western Europe with a rotated rectangular print extent. The print form on the right contains the following fields:

Title:	GeoExt Print Demo
Comment:	A rotated map of Western Europe
Layout:	A4
DPI:	75
Scale:	1:16,384,000
Rotation:	-30

Orange arrows point from the text labels **GeoExt.plugins.PrintProviderField** and **GeoExt.plugins.PrintPageField** to the form fields. The **Print** button is located at the bottom right of the form.

GeoExt.plugins.PrintPageField



PrintPage?

PrintProvider?



Introducing the Architecture

#3 The invisible



GeoExt.data.PrintPage

Describes a PDF page
Multi-page printing is possible



GeoExt.data.PrintProvider

Turns the print module's capabilities into Ext data stores



GeoExt.data.PrintProvider

Holds print pages
Describes the PDF document



GeoExt.data.PrintProvider.encoders

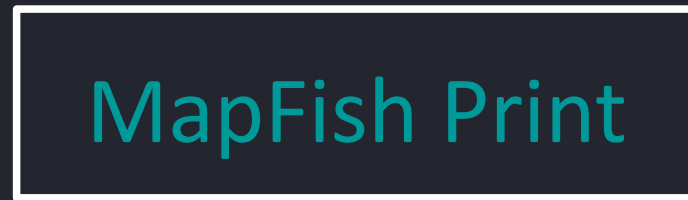
Encodes layers, legends etc. and sends them to the print module



Putting it all together



Server



MapFish Print

Capabilities

Print Request

PDF



PrintProvider

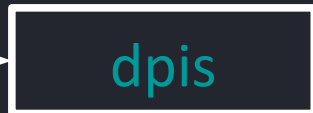
n



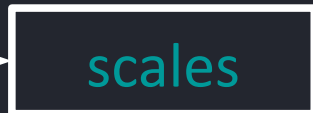
PrintPage



layouts



dpis



scales



PrintProviderField



PrintPageField



PrintMapPanel



PrintExtent

Client



And what about the final PDF?

GeoExt Printing Demo



Tasmania's water bodies - demonstrating web map printing in GeoExt.

- Tasmania Water Bodies
- Tasmania State Boundaries



More information

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<http://opengeo.org/>
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