

Adding time enabled layers to Geoserver

Introduction

This page is a brief work description about enabling visualisation in time through geoserver in combination with the Delta Data Viewer. This Delta Data viewer (DDV) is a product of Deltares for dissemination of georelated data. The DDV works with Openlayers and has several features of which the ability to show time enabled data through Geoserver. Actually when working with geoserver the only settings necessary are those in Geoserver. This work description is a description on how to visualise data from a PostgreSQL/PostGIS database.

Prerequisites for vector data

The only prerequisites is a layer with time enabled information (basically a column with datatype date or timestamp).

Geoserver settings

In geoserver proceed with the normal workflow, i.e. create a workspace (if there is no one to add your information to), create a datastore (which is the connection between database and geoserver) and add a layer. When publishing the data via geoserver follow the normal procedures (give coordinate system, add some abstract, add a link to the metadata and add legend) and as addition publish the layer with time enabled. You can find this under the tab Dimensions. The picture below is an example of the settings in geoserver 2.4.4 (in newer versions the options are extended).

In case of the mentioned layer the attribute timestamp can be used to visualise the yearly averaged boundary of Lake Mingachevir (derived from Remote Sensing via Google Earth Engine). In this case presentation is done via a list.

Edit Layer

Edit layer data and publishing

Lake:mingachevirreservoir_surfacearea_yearly_1983_1989

Configure the resource and publishing information for the current layer

Data	Publishing	Dimensions	Tile Caching
Time			
<input checked="" type="checkbox"/> Enabled			
Attribute			
timestamp ▼			
End Attribute (Optional)			
Choose One ▼			
Presentation			
List ▼			
Elevation			
<input type="checkbox"/> Enabled			
<input type="button" value="Save"/> <input type="button" value="Cancel"/>			

Prerequisites for raster data (GTIFF)

A list of GTIFF raster imagery with the following naming convention is needed:

<name>_<date>.tif where <date is in yyyyymmdd> or YYYY-MM-DD (this example is tested with the first dateformat

Geoserver settings

Step wise

1. Create or choose a workspace.
2. create a ImageMosaic data source, where you choose the directory where the data is located.
during this step a series of files is created of which a shape file with the same name as the title of the layer
3. check if this shape file has the column ingestion, if not, then read it into a GIS packages and create this column (timestamp) using for instance the following update query (in QGIS format).
to_date(concat(substr("location" , 14, 4),'-',substr("location" , 18, 2),'-',substr("location" , 20, 2))). The column location is the list of names of imagery with a timestamp.

More information can be retrieved from the geoserver manual. Check this [link](#).