OSGeoLive
Your Open Source Geospatial Toolkit

Astrid Emde - OSGeoLive Team - FOSDEM 2021
What is OSGeoLive?
Components on OSGeoLive

- 50+ Open Source Geospatial Applications
- Sample Datasets
- Consistent Overviews & Quickstarts
- Translations
DVD / USB / Virtual Machine
Quality Criteria

- Established, stable, working software
- Active community
- Metrics
Production & Marketing
Downloads
What is new in 14.0

- Updated to Lubuntu 20.04 LTS
- Updated core packages based on DebianGIS
- Updated packages contributed back to UbuntuGIS
- QGIS 3.10.13, GDAL 3.2.1, PROJ 7.2.1, PostGIS 3.1.0, GRASS 7.8.5, GeoServer 2.18.0, MapServer 7.6.1 and many more…
- New projects added: GeoStyler, Re3gistry
- Download OSGeoLive ISO or VMDK (with even more software)
- Documentation updates, new command line tutorial
- OpenStreetMap data for Buenos Aires
- Full changelog
Open Source Geospatial Foundation

Not-for-profit organization for the geospatial community, fostering:

- Free and Open Source Software
- Open Standards
- Open Education
- Open Research
- Open Data
An Open Source Geospatial GNU/Linux Distribution
OGC Standards

- Interoperability
- Future Proof
- Return on Investment
Desktop GIS

General GIS viewing, editing and analysis on the desktop

QGIS
GRASS GIS
gvSIG Desktop
uDig
OpenJUMP GIS
SAGA
QGIS
GRASS GIS
gvSIG Desktop
uDig
OpenJUMP GIS
## Browser Facing GIS

General GIS viewing, editing and analysis in the browser

<table>
<thead>
<tr>
<th>OpenLayers</th>
<th>Leaflet</th>
<th>Cesium</th>
<th>GeoStyler</th>
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<tbody>
<tr>
<td>Mapbender</td>
<td>GeoExt</td>
<td>GeoMoose</td>
<td>GeoNode</td>
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Cesium
Mapbender
GeoExt

Overview

Layers of the application
- Aimag
- OSM WMS (terrains)
- OpenStreetMap

Centers of Mongolian Aimag

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GeoMoose
Welcome

GeoNode is an open source platform for sharing geospatial data and maps. If you have any questions about the software or service, join our mailing list.

Get Started

Search for Data.

Search

Advanced Search

Discover the available datasets.

- Boundaries
- Buildings
- Climate
- Elevation
- Geology
- Health
Web Services

Publishing spatial data to the internet

GeoServer  MapServer  MapCache  deegree

ncWMS  EOxServer  GeoNetwork  pycsw
Web Services

PyWPS
MapProxy
QGIS Server
istSOS

52 North SOS
52 North WPS
Zoo Project
t-rex

pygeoapi
GeoServer
MapCache
EOxServer
GeoNetwork
PyWPS
MapProxy

any WMS or tile server
MapServer, GeoServer, ArcGIS Server, etc.

MapProxy

(cache (optional))

every GIS client
Desktop/Web (WMS), OpenLayers, GoogleMaps, etc.
QGIS Server
52° North SOS Test Client

Choose a request from the examples or write your own to test the SOS.

Examples

NOTE: Requests use example values and are not dynamically generated from values in this SOS. Construct valid requests by changing request values to match values in the Capabilities response.

NOTE: For security reasons, the transactional SOS open is not allowed (IPs 127.0.0.0). The transactional operations can be found in the Transactional Security tab of the settings.

SOS

Load a example request ...

Service URL

http://localhost:8080/52nSOS/service

Request

POST  application/json

```json
{
  "request": "GetCapabilities",
  "service": "SOS",
  "sections": []
}
```
This is the welcome site for the 52°North Web Processing Service 1.0.0 implementation.

Usage

Requests

- GetCapabilities request using HTTP GET

Clients

- 52°North WPS form client can be used to submit XML-based requests this WPS instance manually.
- R Image Rendering demonstrates a simple client for mobile devices using an R process to render images.

Documentation

- To learn more about the specification visit the OGC website.
- To learn more about this implementation visit the 52°North Geoprocessing Community website.
- This is an open source project on GitHub
- Find developer documentation in the 52° North Wiki

Administration

52°North WPS webAdmin console
Zoo Project

ZOO-Project OSGeoLiveDVD Examples

This is the ZOO-Project examples section. Simple to advanced ZOO-Services are demonstrated here through various example WPS client applications. Check the source and get inspired!

Examples

OGR spatial tools
CGAL triangulations
OTB applications

Credits

WPS Server: ZOO-Kernel and friends
WPS Client: ZOO-Client
t-rex
Actinia
The INSPIRE infrastructure involves a number of items, which require clear descriptions and the possibility to be referenced through unique identifiers. Examples for such items include INSPIRE themes, code lists, application schemas or discovery services. Registers provide a means to assign identifiers to items and their labels, definitions and descriptions (in different languages). The INSPIRE registry provides a central access point to a number of centrally managed INSPIRE registers. The content of these registers are based on the INSPIRE Directive, Implementing Rules and Technical Guidelines.
pygeoapi
Data Stores

Storing spatial data

PostGIS  SpatiaLite  Rasdaman  pgRouting
PostGIS
SpatiaLite
Rasdaman

Open source.
Open standards.
Flexible and scalable.
Cost saving.
Fast.

www.rasdam
pgRouting

LINE 8:  directed => false

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(13 rows)
Navigation and Maps

- GpsPrune
- Marble
- OpenStreetMap
- iD editor
- JOSM
- OpenCPN
GpsPrune
Marble
iD editor
Spatial Tools
Specific analysis tools

GMT
OTB
R
Mapnik
Jupyter Notebook
OTB - ORFEO Toolbox
Mapnik
Jupyter Notebook
Domain Specific GIS

Applications targeted at a specific domain

XyGrib
XyGrib
Data
Spatial data sets

Natural Earth
North Carolina USA Educational dataset
OpenStreetMap
NetCDF Data Set
North Carolina USA Educational dataset
OpenStreetMap
NetCDF Data Set

txxETCCDI_yr_MIROC5_historical_r2i1p1_1850-2012.nc

Annual Maximum of Daily Maximum Temperature
Geospatial Libraries

- GDAL/OGR
- GeoTools
- GEOS
- PROJ
- JTS Topology Suite
- JTS
GDAL/OGR

Get your own GDAL T-Shirt!
GeoTools

INTERFACE
- API
- JTS
- OpenGIS

IMPLEMENTATION
- cql
- render
- xml
- main
- jdbc
- data
- coverage
- metadata
- referencing

PLUGINS
- xsd-wms
- postgis
- shape
- epsg-hsql
Central meridian selected by mapmaker touches cylinder if the cylinder is tangent.

Can show whole Earth, but the directions, distances, and areas are reasonably accurate only within 15 degrees of the central meridian.

No straight rhumb lines.
JTS
Credits

- Developers and project maintainers
- Authors and reviewers of the documentation
- Translators
Credits

Project Steering Committee

- Angelos Tzotsos (Chair)
- Brian M Hamlin
- Cameron Shorter
- Alex Mandel
- Johan Van de Wauw
- Bas Couwenberg
- Massimo De Stefano
- Astrid Emde
- Nicolas Roelandt
- Vicky Vergara
Sponsors

OSGeo   UCD ICE   NTUA
DebianGIS   okeanos
Georepublic
How can you get involved?

Become a member of our team

• Join our Mailing List and introduce yourself
• Take part in our weekly IRC meetings (channel #osgeolive on Freenode)
• There are several ways to get involved
  ▪ Help improve OSGeoLive website and documentation
  ▪ Submit new projects
  ▪ Help with the translation
Translation on Transifex
Join us at the next OSGeo community sprint
17.-19. February 2021