

State of GeoNode 2.10

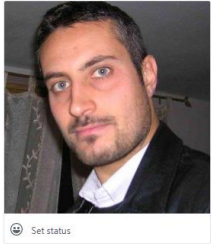
Torino
2020-02-19



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TORINO 2020

This presentation is brought to you by



Alessio Fabiani
afabiani

Co-founder and Senior SW Engineer @GeoSolutions, involved on GIS related Open Source projects since 2004. PSC member of GeoServer, PSC and OSGEO Project Officer of GeoNode.



Francesco Bartoli
francbartoli

Security and spatial IT geek with an opinionated mind to openness. Hugely addicted to rock and mountain climbing. GeoNode PSC member.



Simone Dalmasso
simod

Technical project officer at European Commission JRC in charge of the Copernicus EMS Rapid Mapping. Father of 1.5 children, former chef and GeoNode PSC member.



Dr. Amedeo Fadini (Research Fellow)
amefad

Work experience in computer science the field of Geographic Information Systems (GIS) planning and cartography, especially in the Public Sector. Works as GIS Analyst and developer at CNR-ISMAR designing and managing Geonode based geoportals.



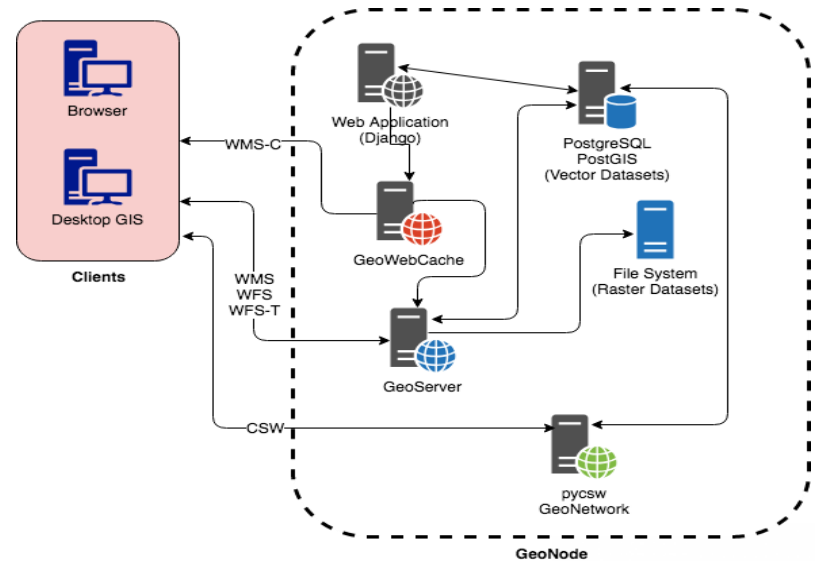
GeoNode at a Glance

A web framework based on Python and Django to allow people to upload, describe, share and use their geospatial data.

We usually define GeoNode as a geospatial-CMS.

Core Components

- **Django**
- **SQLite/PostgreSQL-PostGIS**
- **GeoServer/QGIS Server**
- **GeoWebCache**
- **pycsw / GeoNetwork**
- **(MapStore)**



Capabilities

- **Upload** geospatial datasets (by default shapefiles and GeoTIFFs)
- User with appropriate permissions can **edit layer metadata**, which are exposed by OGC CSW and REST, to provide search/discovery capability
- Create **thematic maps** accessible to general public
- Users with appropriate permissions can **edit layer styles** and features (for vector layers)
- **Granular permission systems**: viewing, downloading, metadata editing, styles and feature editing for a layer can be restricted to users or groups
- GeoNode exposes a number of **standards** for each layer: **OGC (WMS, WMS-C, WFS, WFS-T, WCS, CSW)** and mass market search standards (OAI-PMH, SRU, OpenSearch)

Release History

- **February 2020, GeoNode 2.10.2 (Django 1.11.29, GeoServer 2.15.4, pycsw 2.4.2)**
- June 2019, **GeoNode 2.10** (Django 1.11.20, GeoServer 2.14, pycsw 2.2.0)
- *April 2018, **GeoNode 2.8*** (Django 1.8.19, GeoServer 2.12.2, pycsw 2.0.2, group moderation and resources publication workflow, SLD upload, metadata wizard)
- *May 2017, **GeoNode 2.6*** (Django 1.8.7, GeoServer 2.9, pycsw 2.0.2, React client, QGIS server backend, ansible and docker setup, Ubuntu 16.04 support)
- *November 2015, **GeoNode 2.4*** (Django 1.6.11, GeoServer 2.7, pycsw 1.10.5, django-guardian, groups, remote services, responsive template, Ubuntu 14.04 support)
- *April 2014, **GeoNode 2.0*** (Django 1.5.5, GeoServer 2.5, pycsw 1.8.6, django-polymorphic, bootstrap, Ubuntu 12.04 support)
- *October 2012, **GeoNode 1.2*** (Django 1.4, GeoServer 2.3, South migrations, django-taggit, social features, comments and ratings, find/add layers widget)
- *May 2012, **GeoNode 1.1.1*** (Ubuntu 10.04 and 11.04 installer)
- *December 2010, **GeoNode 1.0***, with major contributions from OpenGeo, the World Bank, GFDRR, UNISDR, and GEM
- *August 2010, **GeoNode 1.0-beta***

Summits and code sprints

- **GeoNode Summit 2020**: Brunswick, Germany | 12 - 14 May, 2020 (hosted by THÜNEN INSTITUTE)
- **GeoNode Summit 2019**: Viareggio, Italy (hosted by GeoSolutions)
- **GeoNode Summit 2018**: Turin, Italy (hosted by ITHACA)
- **GeoNode Code Sprint 2016**: Bonn, Germany and New Orleans, LA, USA
- **GeoNode Summit 2016**: Rome, Italy (hosted by UN WFP)
- **GeoNode Code Sprint 2015**: New Orleans, LA, USA and Turin, Italy
- **GeoNode Summit 2012**: Cambridge, MA, USA (hosted by Harvard University)
- **GeoNode Summit 2011**: Washington DC (hosted by World Bank)

Community growth and adoption

UN, The World Bank, OpenGeo, Resilience Academy (University of Turku), Australia Indonesia Facility for Disaster Reduction (AIFDR), MapStory, Global Earthquake Model (GEM) Foundation, Harvard WorldMap, ROGUE (US Army Corps of Engineers), South Pacific Applied Geoscience Commission (SOPAC), SERVIR (US National Aeronautics and Space Administration / NASA), Regional Centre for Mapping of Resources for Development (RCMRD, Kenya), Information Technology for Humanitarian Assistance Cooperation and Action (ITHACA, Italy), UN World Food Programme (WFP), Comision Permanente de Contingencias (COPECO, Honduras), Humanitarian Information Unit (HIU, US State Department), Marine Civil Information Management System (MARCIMS, US Marine Corps), National Geospatial-Intelligence Agency (US NGA), Office of Secretary of Defense (US), Pacific Disaster Center, Central Asian Institute for Applied Geosciences (CAIAG, Kyrgyzstan), National Research Council, Institute of Marine Sciences (Italy), European Commission Joint Research Centre (JRC), World Agroforestry Centre (ICRAF), Massachusetts Institute of Technology (MIT, US), National Oceanic and Atmospheric Administration Center for Weather and Climate Prediction (NOAA NCWCP, US Department of Commerce), Politecnico di Milano (Italy), Humanitarian Data Exchange (HDX, United Nations Office for the Coordination of Humanitarian Affairs), Agency for International Development (US AID), HABAKA Innovation Hub (Madagascar), GESP (Gestione Elaborazione Studio Pianificazione, Italy), Zhejiang University (China), Ritsumeika University (Japan), Intergovernmental Authority on Development (IGAD), (MapStand Ltd), (UNESCO IHP-WINS), Consiglio Nazionale delle Ricerche (CNR Italy), Uganda Bureau of Statistics – Uganda Boureau Of Statistics (UBOS), Istituto Superiore per la Protezione e la Ricerca Ambientale - (ISPRA Italy), Skeena Knowledge Trust - (SKT Canada) ...

Community and infrastructure

- Official **PSC** elected by the community and composed today by 5 members
- ~20 active core **committers** across several organizations
- ~500 members on the **users** list
- ~120 members on the **developers** list
- Mailing list traffic growing steadily
- Successfully onboarding new developers and contributing organizations
- ~350 **Pull Requests** Merged in the last year
- Continuous Integration + Automated Builds
- Working toward a regular release cycle

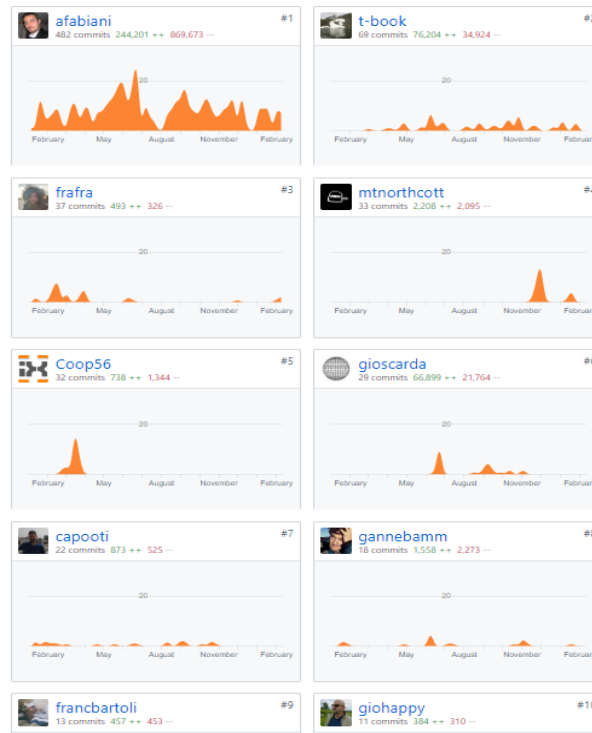
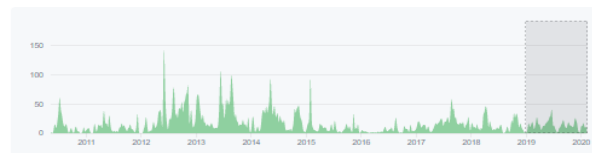
Active contributors

- World Bank
- GeoSolutions
- Catalyst
- Harvard University
- NINA - Norsk institutt for naturforskning
- GeoBeyond
- Terranodo
- Boundless
- Joint Research Centre
- UN WFP
- ITHACA
- MapStory
- The Pacific Community
- CSGIS
- CartoLogic

Jan 1, 2019 – Feb 13, 2020

Contributions: Commits

Contributions to master, excluding merge commits



Active contributors

CoderStats(GeoNode)

GitHub user name

Get Stats

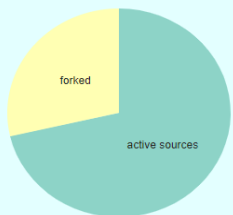
GeoNode Development Team



Joined GitHub 29 Sep 2009

- GeoNode
- geonode.org
- Global

Repo types



Pushed to repos

49

Main languages

8

Total issues

220

Total forks

1222

Total stars

1039

Followers

0

Following

0

Summary

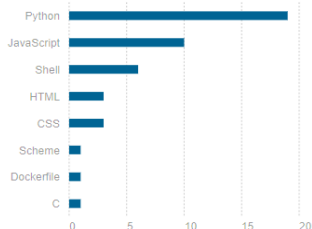
GeoNode Development Team has 50 repositories on GitHub, the latest 50 with user activity were loaded from GitHub's web service for this evaluation. GeoNode Development Team has pushed to **49** of these repositories. This is a high ratio congratulations!

8 different main languages were identified across all repos pushed to. The main language is the one with the largest amount of code in a given repository, as identified by GitHub's [linguist](#). Assuming a basic level of proficiency in all these languages GeoNode Development Team can be considered hyperpolyglot in the world of computer languages. **Python** occurs most frequently – 19 times – as the main repo language.

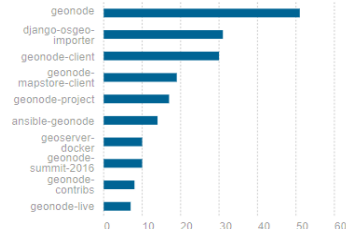
The total number of forks across all pushed to repositories indicates that the GitHub projects GeoNode Development Team contributes to are actually used by other people.

Rankings

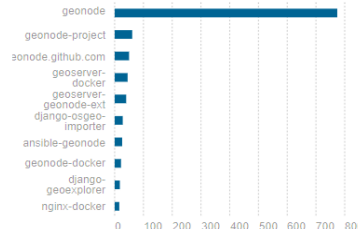
Languages



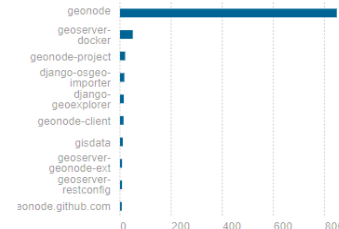
Issues



Forks



Stars



GeoNode 2019/20

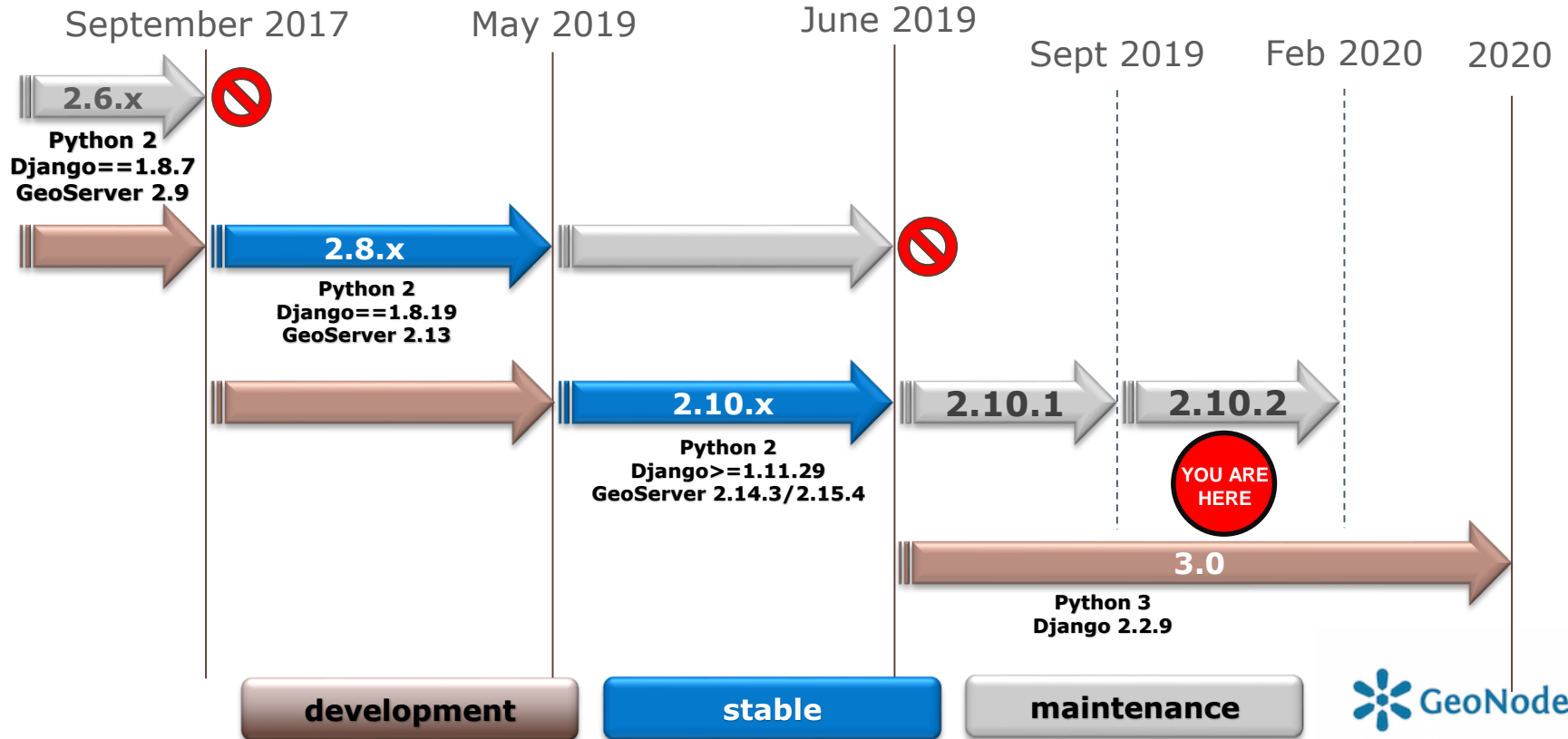
What's in a year?



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Releases covered by this presentation



Are you using a older version? Upgrade!

- User/Developer lists and Gitter typically covers only supported versions
 - Today it means 2.10.x and 3.0.x
 - From 2021 it will mean 3.0.x
- Security fixes and installation support on new OSs being added to supported versions only!
- Moving data from old versions will be much harder if not impossible
- Web interfaces and GIS clients will be much different. No one will be able to backport fixes or improvements to the old ones.
- Please upgrade your GeoNode installations!!!

What's new?



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Upgrade? What's in it for me?

- Let's check what's new in 2.10.2 / 3.0 upcoming release
- Check the bottom of each slide to see who sponsored a certain feature, who implemented it, and what version contains it

Sponsor

Author

Version



Upgrade to Python3 and Django 2.2 (GeoNode 3)

- Important Security and performance fixes
- Support Python 3.5+ and Django 2.2.9

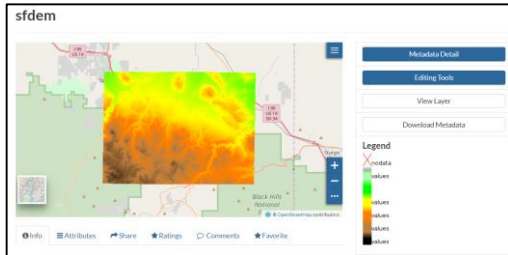
Upgrade to GeoServer 2.15.4

- Important Security and performance fixes
- Updated versions of community modules:
 - ✓ *Backup & Restore*
 - ✓ *OAuth2*
 - ✓ *GeoFence*
 - ✓ *GeoWebCache*
- Support for more styles and improved compatibility with QGIS SLD export
- Support 2.15.x and 2.16.x

Remote Services Improvements

Remote Services Register a new Service		
Title	URL	Type
GeoServer Web Map Service ²	https://demo.geo-solutions.it/geoserver/wms	Web Map Service
World Imagery ¹	http://server.arcgisonline.com/arcgis/rest/services/World_Imagery/MapServer	ArcGIS REST MapServer

- Import Legends and as much as metadata fields as possible
- Allows remote resource filtering and exposure to the catalogue



- Improved stability on harvesting
- Support for more endpoints, WMS, ArcGIS REST, GeoNode OWS APIs

Import resources			Manage
httpserverarcgisonlinecomarcgisrestservicesworld_imagerymapserver			Service rescanned Re-scan Service for new Resources
5 resources can be imported			
Id	Name	Description	
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/> 0	World Imagery	World Imagery	
<input type="checkbox"/> 1	Low Resolution 15m Imagery	Low Resolution 15m Imagery	
<input type="checkbox"/> 2	High Resolution 60cm Imagery	High Resolution 60cm Imagery	
<input type="checkbox"/> 3	High Resolution 30cm Imagery	High Resolution 30cm Imagery	
<input type="checkbox"/> 4	Citations	Citations	
Clear Filter Back to service details Import Resources			

Support to Temporal Series

boxes_with_date

ESRI Shapefile

- boxes_with_date.dbf Remove
- boxes_with_date.prj Remove
- boxes_with_date.qix Remove
- boxes_with_date.shp Remove
- boxes_with_date.shx Remove

Files are ready to be ingested! A temporal dimension may be added to this Layer. [Continue](#)



Inspect data for "boxes_with_date"

Configure as Time-Series: On ?

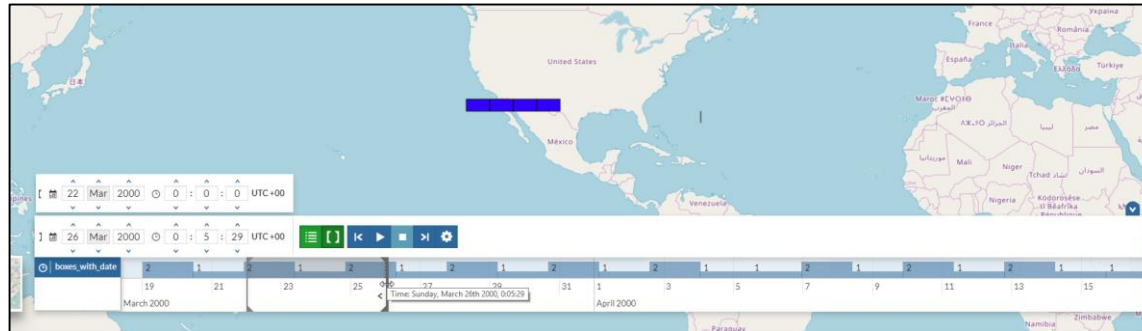
Search

* Date	Id
2000/03/01	0
2000/03/02	1
2000/03/03	2
2000/03/04	3
2000/03/05	4
2000/03/06	5
2000/03/07	6
2000/03/08	7
2000/03/09	8
2000/03/10	9

Showing 1 to 10 of 100 rows rows per page

...

Advanced Options



IGAD
UNESCO

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Improvements to Uploaders and data formats

- **SLDs** and metadata **XML** can be included directly on a **ZIP** file
- Supports: **CSV, KML, KMZ (Ground Overlays), JSON**

iwa_city_charges_test_wins
Comma Separated Value

• iwa_city_charges_test_wins.csv Remove

Select the charset or leave default

UTF-8/Unicode

Clear Upload files

Upload Layers

Geospatial Data "iwa_city_charges_test_wins"

Please indicate which attributes contain the latitude and longitude coordinates in the CSV data.

With this data, GeoNode was able to guess which attributes contain the latitude and longitude coordinates below.

Latitude latitude

Longitude longitude

Select an attribute
fixech
latitude
longitude

Cancel Next

Upload Layers Explore Layers

Provide CRS for "iwa_city_charges_test_wins"

Coordinate Reference System

EPSG Code (Source SRS):

Select a Source SRS

Select a Source SRS

(4326) WGS 84

(3785 DEPRECATED) Popular Visualisation CRS / Mercator

(3857) WGS 84 / Pseudo-Mercator

(32647) WGS 84 / UTM zone 47N

(32736) WGS 84 / UTM zone 36S

Advanced Options:

Target SRS

Additional Help



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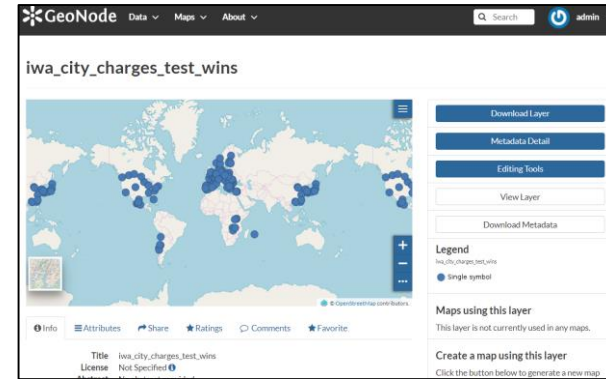
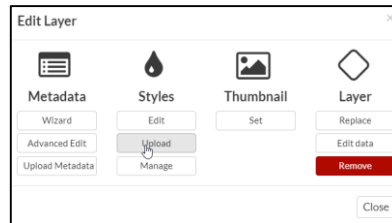
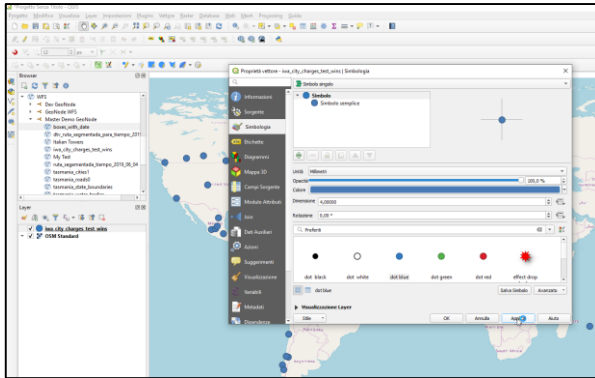
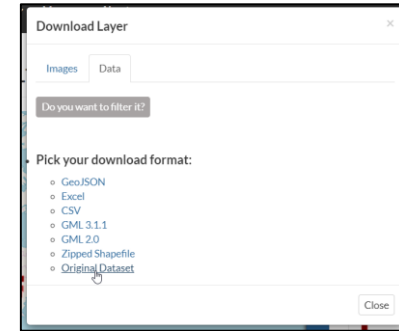
SLD Export and Upload

- Direct download of available styles and original dataset
- Still needs work and improvements; for the moment supports well only simple styles

Styles

The following styles are associated with this layer. Choose a style to view it in the preview map.

- (default style) [iwa_city_charges_test_wins](#)



Metadata Improvements and Batch Update

The screenshot shows the metadata editor for the layer 'iwa_city_charges_test_wins'. The interface is divided into four sections: 1. Basic Metadata (Thumbnail, Title, Abstract), 2. Location and Licenses, 3. Optional Metadata (Features, Date type, Date, Category, Group), and 4. Dataset Attributes. A progress bar at the top indicates a 75% completeness score. The 'Features' field is set to 'iwa_city_charges_test_wins' and the 'Date' is '2019-06-07 06:00'.

The 'Select layer to change' dialog box shows a search bar and a table of layers. The 'Action' dropdown is set to 'Metadata batch edit'. The table lists 14 layers, with 4 selected (ID 91, 90, 87, 86). The selected layers are highlighted in yellow.

ID	TITLE [EN]
91	geonode:iwa_city_charges_test_wins
90	geonode:dtv_ruta_segmentada_para_tiempo_2019_03_27
87	geonode:ruta_segementada_tiempo_2019_06_04
86	geonode:catastro

The 'Batch Edit' dialog box shows fields for Group, Owner, and Category. The 'Category' dropdown is open, showing a list of categories including Environment, Biota, Boundaries, climatologyMeteorologyAtmosphere, Climatology Meteorology Atmosphere, Economy, Elevation, Environment (highlighted), Farming, and Geoscientific Information.

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Menu Management



Django administration

Home · Base · Menus · Test Menu

✓ The menu "Test Menu" was changed successfully. You may edit it again below.

Change menu

Title:



Placeholder:  

Order:



Change menu item

Title:

Menu:  

Order:



Blank target

Url:



Add menu item

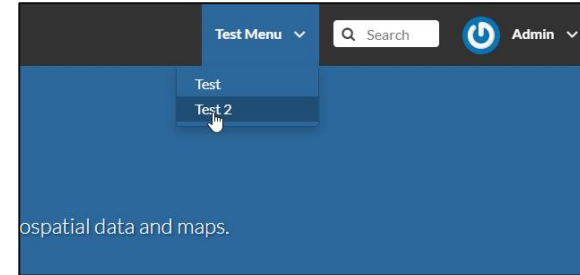
Title:

Menu:  

Order:

Blank target

Url:



Theme and Privacy Policy Management

GeoNode Themes Library administration

GEONODE THEMES LIBRARY

Partners [+ Add](#) [Change](#)

Themes [+ Add](#) [Change](#)

Is enabled
Enabling this theme will disable the current enabled theme (if any)

Logo: logo_GeoSol.

Jumbotron background: geospatial.png

Hide text in the jumbotron
Check this if the jumbotron background image already contains text

Jumbotron title:

Jumbotron content:

Copyright:

Copyright color:

Cookies Law Info Bar

Cookie law info bar head:

Cookie law info bar text:

Test GeoNode Instance

This is a test instance!!!

Get Started >

Search for Data.

Search

Explore all datasets

Our Partners

Geo Solutions

Data
Layers
Documents
Remote Services

Maps
Explore Maps
Create Map

About
People
Groups
Announcements

Powered by GeoNode version 2.10rc5
Developers | About

English

IGAD

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Social Account Login

Add social application

Provider:

Name:

Client id:
App ID, or consumer key

Secret key:
API secret, client secret, or consumer secret

Key:

Sites: +


Hold down "Control", or "Com




Account Connections

You currently have no social network accounts connected to this account.

Add a 3rd Party Account


 Connect with LinkedIn


 Connect with Facebook



About Test

Sign in ×

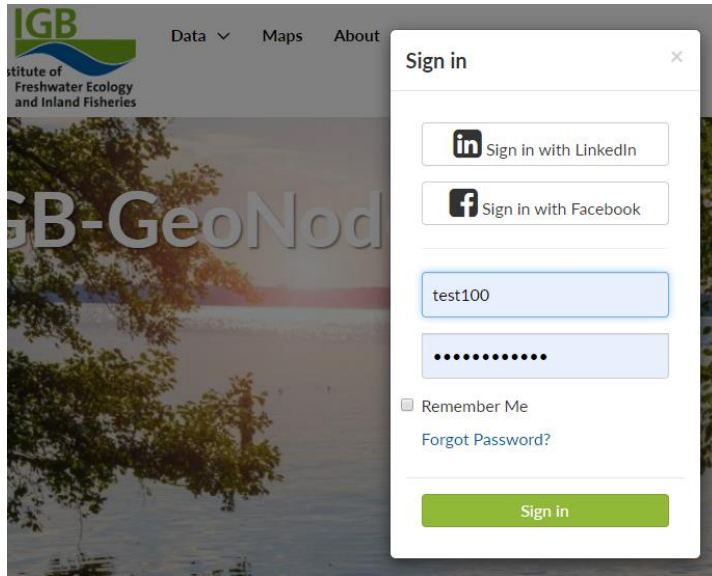
 Sign in with LinkedIn

 Sign in with Facebook

Remember Me

Search

LDAP Authentication



- LDAP login
- Sync LDAP Group Membership

Test User (test100)

Position	Not provided.
Organization	Not provided.
Location	Not provided.
Voice	Not provided.
Fax	Not provided.
Description	Not provided.
Keywords	ldap

Explore Groups

Total: 6

SEARCH

Search by name

GROUP CATEGORIES

- abt1
Abteilung 1
5 Members 1 Manager
- abt2
Abteilung 2
6 Members 1 Manager
- abt3
Abteilung 3
1 Member 1 Manager
- abt4
Abteilung 4
1 Member 1 Manager
- abt5



Data Upload Advanced Workflow

```
# Each uploaded Layer must be approved by an Admin before becoming visible
ADMIN_MODERATE_UPLOADS = ast.literal_eval(os.environ.get('ADMIN_MODERATE_UPLOADS'))

# option to enable/disable resource unpublishing for administrators
RESOURCE_PUBLISHING = ast.literal_eval(os.getenv('RESOURCE_PUBLISHING'))

# If this option is enabled, Resources belonging to a Group won't be
# visible by others
GROUP_PRIVATE_RESOURCES = ast.literal_eval(os.environ.get('GROUP_PRIVATE_RESOURCES'))

# If this option is enabled, Groups will become strictly Mandatory on
# Metadata Wizard
GROUP_MANDATORY_RESOURCES = ast.literal_eval(os.environ.get('GROUP_MANDATORY_RESOURCES'))
```



GeoNode Data Maps About Test Menu Search Admin

Search by text

KEYWORDS

TYPE

- Vector Temporal Series (2)
- Raster Layers (2)
- Vector Layers (11)

CATEGORIES

OWNERS

DATE

REGIONS

EXTENT

IMAGERY BASE MAPS EARTH COVER

states

UNPUBLISHED

No abstract provided

tasmania_water_bodies

PENDING APPROVAL

No abstract provided

NE_GRAY_HR_SR_OB_DR_tiled

PENDING APPROVAL

No abstract provided

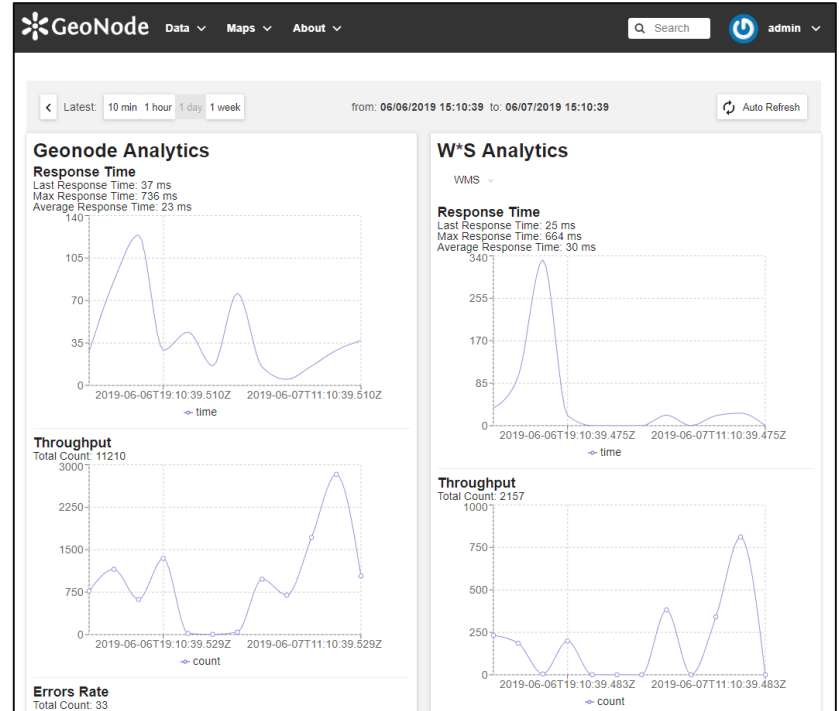
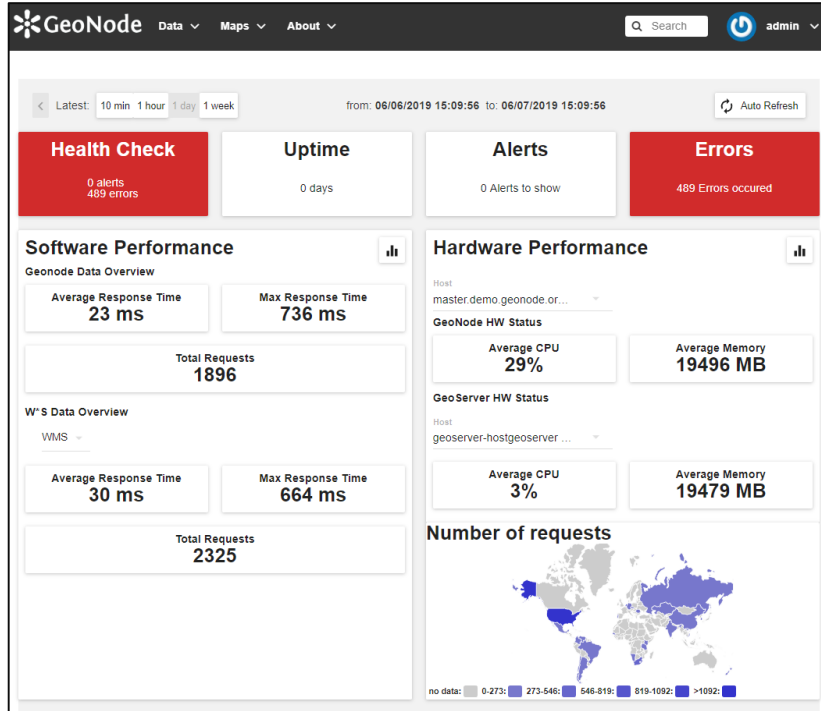
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GeoNode Integrated Monitoring



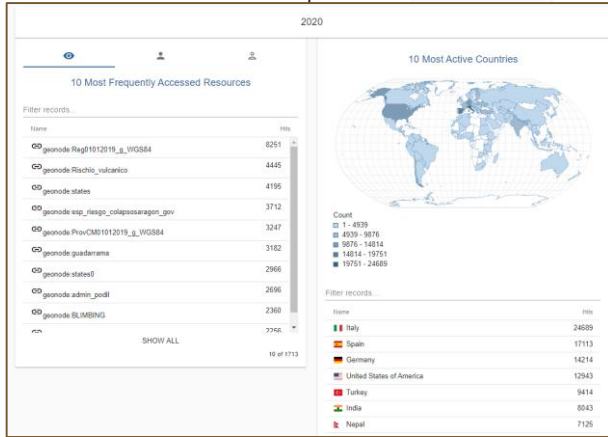
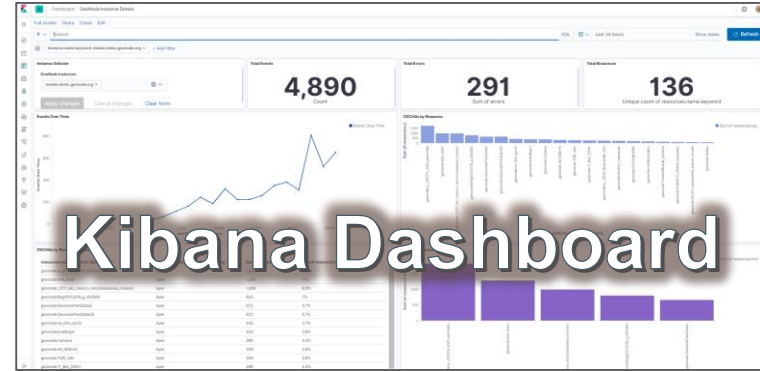
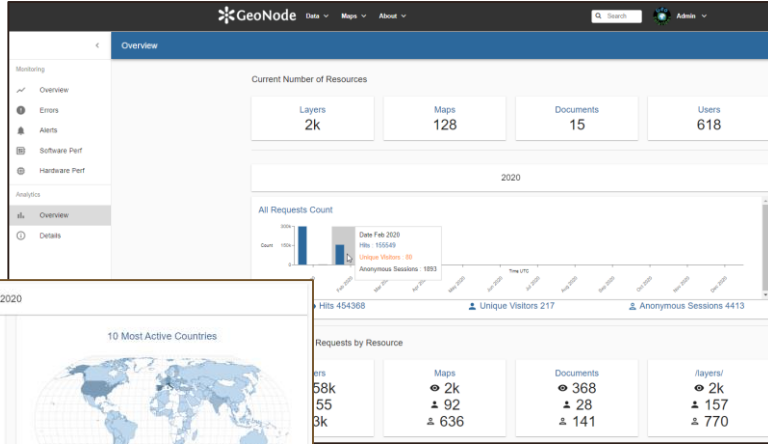
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GeoNode Analytics and Centralized Dashboard



Logstash Async

Select centralized server to change

Action: [dropdown] [Go] 0 of 1 selected

HOST	PORT	INTERVAL	LAST SUCCESSFUL DELIVER	NEXT SCHEDULED DELIVER
logstash-wb-centralized.geo-solutions.it	443	3600	Feb 14, 2020, 2:49 a.m.	Feb 14, 2020, 3:49 a.m.

1 centralized server

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GeoNode GIS-Client Hooksets

- GIS Clients (maps and layer details) can be plugged in as external libraries thanks to the **CLIENT HOOKSETS**

```
GEONODE_CLIENT_LAYER_PREVIEW_LIBRARY = os.getenv('GEONODE_CLIENT_LAYER_PREVIEW_LIBRARY')

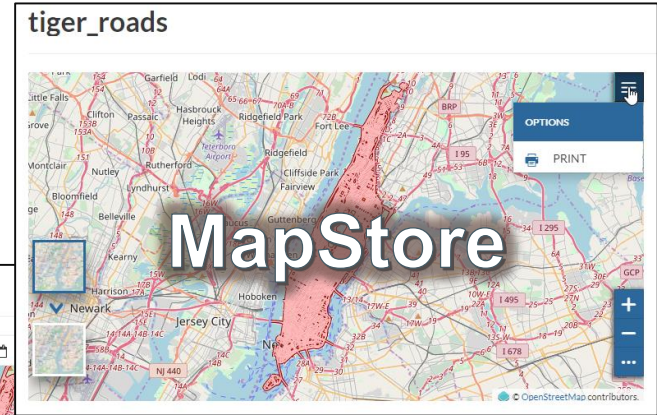
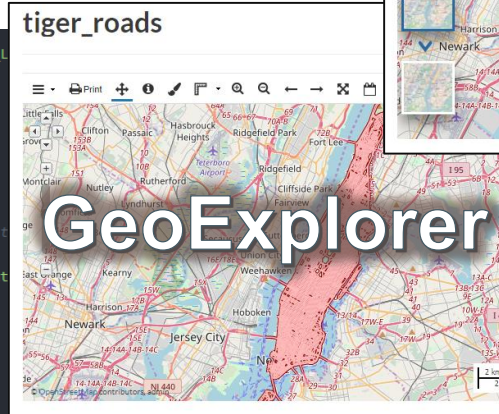
.....

To enable the GeoExt based Client:
1. pip install django-geoexplorer==4.0.42
2. add 'geoexplorer' to INSTALLED_APPS
3. enable those:
.....

# GEONODE_CLIENT_LAYER_PREVIEW_LIBRARY = 'geoext' # DEPRECATED use HOOKSET instead
if GEONODE_CLIENT_LAYER_PREVIEW_LIBRARY == 'geoext':
    GEONODE_CLIENT_HOOKSET = os.getenv('GEONODE_CLIENT_HOOKSET', 'geonode.client')

    if 'geoexplorer' not in INSTALLED_APPS:
        INSTALLED_APPS += ('geoexplorer', )

# MAP_BASELAYERS += [
# [
```



- You can add your ones

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MapStore2 Client Hookset

The screenshot displays the MapStore2 client interface. On the left, a sidebar shows the 'Layers' panel with 'ne_10m_admin_0_sov...' selected. The main map area shows a world map with administrative boundaries. A 'Population Estimate' chart is overlaid on the map, showing a bar chart with a significant peak for India. A 'Style Selection' dialog is open, showing various style templates like 'Fill', 'Border', 'Dashed Border', 'Simple', 'Line Pattern', 'Dot Pattern', 'Marker', 'Fill Pattern', 'Section', 'Random Dots', 'Label', and 'Label & Marker'. The 'Label' and 'Label & Marker' options are highlighted. A 'Data Table' is also visible, showing a list of administrative boundaries with columns for 'id', 'featurecla', 'scalerrank', 'LABELRANK', 'SOVEREIGNT', 'SOV_A3', 'ADMO_DIF', 'LEVEL', and 'TYPE'. The table contains 4 rows of data, with the first row highlighted.

id	featurecla	scalerrank	LABELRANK	SOVEREIGNT	SOV_A3	ADMO_DIF	LEVEL	TYPE
1	Admin-0 sovereignty	5	2	Indonesia	IDN	0	2	Sovereign country
2	Admin-0 sovereignty	5	3	Malaysia	MYS	0	2	Sovereign country
3	Admin-0 sovereignty	6	2	Chile	CHL	0	2	Sovereign country
4	Admin-0 sovereignty	0	3	Bolivia	BOL	0	2	Sovereign country

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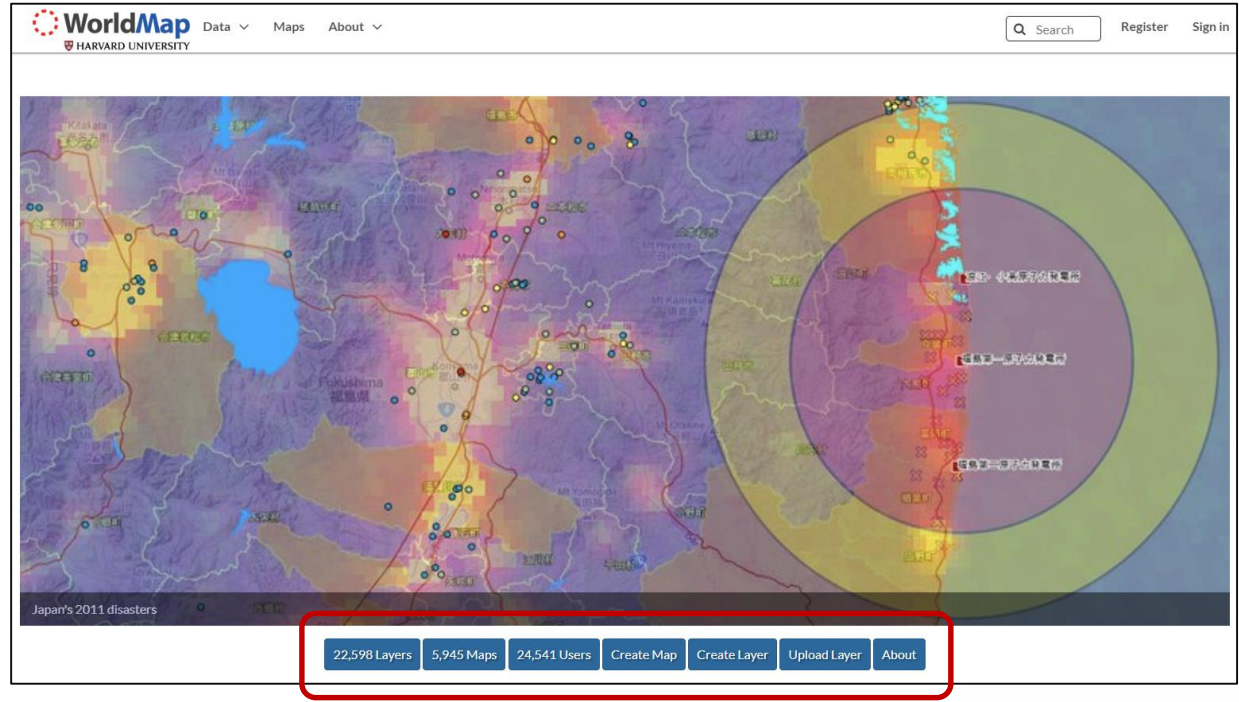
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2.10.2 – 3.0



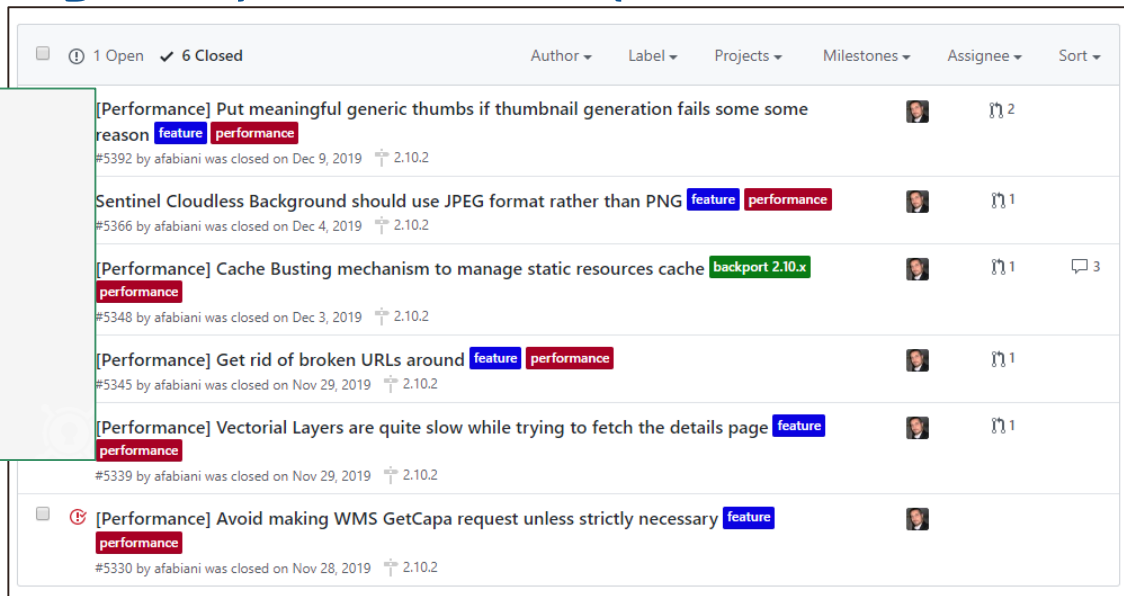
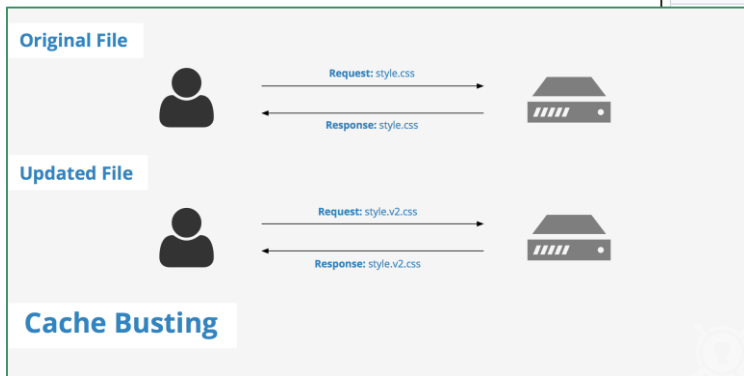
GeoNode and GeoFence Performance Optimizations

- Performance improvements and hardening to support a huge number of resources and maps, 10k+ layers!
- The possibility to activate **DELAYED SECURITY** signals in order to allow GeoNode and GeoFence align asynchronously



GeoNode GUI/Caching Performance Optimizations

- Cache Busting



- Broken links / images checks

- Get rid of un-useful GeoServer calls

The World Bank

GeoSolutions

2.10.2 – 3.0



Docker Improvements / SPCgeonode Compose

- Docker Compose installation has been simplified a lot, both on GeoNode core and GeoNode-Project
- SPCgeonode is a setup for Geonode deployment at SPC. It makes it easy to deploy a production ready Geonode. The setup aims for simplicity over flexibility, so that it will only apply for typical small scale Geonode installations.
- The setup is also usable for Geonode development or customization.
- <https://github.com/GeoNode/geonode/tree/master/scripts/spcgeonode>

GeoBeyond
SPC

GeoBeyond
SPC

2.10.2 – 3.0



Security and Hardening - MIDDLEWAREs

- GeoNode 2.10 is based on Django framework v.1.11. The framework offers a strong and battle-tested security mechanism inherited and extended by GeoNode's own security layer and integrations. The general security features of Django are well described in its own documents: <https://docs.djangoproject.com/en/1.11/topics/security>
- ✓ **LockDown Middleware** (GeoNode) a Middleware class which forces authentication for every non-authorized URL
- ✓ **SessionControl Middleware** (GeoNode) a Middleware class looking for Token expiration and session validity. Accordingly to the settings, it will either force the user to log in again or refresh/extend the token validity.
- ✓ **Cors Middleware** A Django App that adds CORS (Cross-Origin Resource Sharing) headers to responses. Although JSON-P is useful, it is strictly limited to GET requests. CORS builds on top of XmlHttpRequest to allow developers to make cross-domain requests, similar to same-domain requests. <http://www.html5rocks.com/en/tutorials/cors>
- ✓ **CsrfView Middleware** ref. <https://docs.djangoproject.com/en/2.2/ref/csrf>
- ✓ **XFrameOptions Middleware** ref. <https://docs.djangoproject.com/en/2.2/ref/clickjacking>
- ✓ **Security Middleware** ref. <https://django-secure.readthedocs.io/en/latest/middleware.html>
- ✓ **OAuth2Token Middleware** ref. https://django-oauth-toolkit.readthedocs.io/en/latest/tutorial/tutorial_03.html

Security and Hardening – OWS Internal Proxy

- Fixed users dangerous privileges escalation; internally requests to the backend were always done as “ADMIN”
- GeoNode Proxied OWS Endpoints
- ✓ *The proxy automatically searches for the user OAuth2 Token and injects the correct BEARER AUTH Headers transparently*
- ✓ ***/gs/ows** Accepts BASIC AUTH headers but still allows anonymous users to fetch OWS documents*
- ✓ ***/gs/w*s** Forces the users to perform BASIC AUTH first*

Fixes and Improvements

- Well known 2.6/2.8 issues:
 - ✓ *Thumbnails generation*
 - ✓ *Wrong BBOX coordinates on Download Links*
 - ✓ *Wrong BBOX coordinates for projections different from WGS84 or EPSG:3857*
 - ✓ *Glitches on Map Zoom levels*
 - ✓ *Errors on Metadata Editor, especially after updating an existing resource*
 - ✓ *Upload Encoding errors on input data*
 - ✓ *Misbehavior on GeoServer data-store creation*
 - ✓ *Filtering errors on Vectorial Data Download*
 - ✓ *and many more...*

Contrib Apps Promotion

- Most of the “contrib apps” have been ported to core
- “contribs” have now their own repository with dedicated docs

<https://github.com/GeoNode/contribs>

Branch: master | contribs / geo/node / contrib / datastore_shards /

afabian [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... Latest commit 2d725d9 11 days ago

- img [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- migrations [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- README.md [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- util.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- tests.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago

Use datastore shards in GeoNode

Many organizations have hundreds of layers uploaded to GeoNode. In such a case using the default GeoNode configuration, with just one PostGIS database and one GeoServer PostGIS store for all of the layers has several limitations, such as:

- Layer upload and creation time become very large
- Layer upload and creation time tends to become very large when the PostGIS database starts containing many layers. We have seen cases where even 4/5 minutes were needed for uploading a small sized shapefile.
- This issue is caused by the actual implementation of the PostgresSQL JDBC driver and has been reported in details in GeoServer bug GEOS-7533: <https://osgeo-org.atlassian.net/browse/GEOS-7533>
- Large backups

Branch: master | contribs / geo/node / contrib / worldmap /

afabian [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... Latest commit 2d725d9 11 days ago

- gazetteer [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- imgnotes [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- templates/worldmap [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- wm_extra [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- README.md [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- util.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- hookssets.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- requirements.txt [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago

WorldMap

By using the WorldMap optional application, GeoNode is extended with the following additional features:

- a customized GeoExplorer viewer
 - the table of contents is hierarchical with layer categories. When a layer is added a new category containing the layer is added to the table of contents. If the category is already in the table of contents, then the layer is added to it. By default the category is the same as the layer's topic category, but that can be renamed by right clicking on it
 - the "Add Layers" dialog comes with a "Search" tab which uses Hypermap Registry (Hypermap) as a catalogue of remote and local layers. Hypermap is a application when using the WorldMap contrib application
- a gazetteer application: it is possible to add a given layer to a gazetteer. The gazetteer can be checked using the map

Branch: master | contribs / geo/node / contrib / geosites /

afabian [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... Latest commit 2d725d9 11 days ago

- img [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- models.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- populate_sites_data.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- post_settings.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- pre_settings.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- tests.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- urls.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago
- views.py [Ref #4311] GNP: Contrib apps cleanup on GeoNode / database_shards... 11 days ago

GeoSites: Multi-Tenancy GeoNode

GeoSites is a contrib module to GeoNode starting with 2.4. The GeoSites app is a way to run multiple websites with a single instance of GeoNode. Each GeoSite can have different templates, applications, and data permissions but share a single database, web mapping service (GeoServer), and CSW (pycsw). This is useful when multiple websites are desired to support different sets of users, but with a similar set of data and overall look and feel of the sites. Users can be given permission to access multiple sites if needed, which also allows administrative groups can be set up to support all sites with one account.

A GeoSites installation uses a "master" GeoNode website that has access to all users, groups, and data. Through the Django admin page, Layers, Maps, Documents, Users, and Groups can be added and removed from all sites. Users can be given access to any number of sites, and data may appear on only a single site, or all of them. The master site need not be accessible from the outside so that it can be used as an internal tool to the organization. Users created on a site are created with access to just that site (but not the master site). Data uploaded to a site is given permission on that site as well as the master site.

GeoSites Contrib App

Community

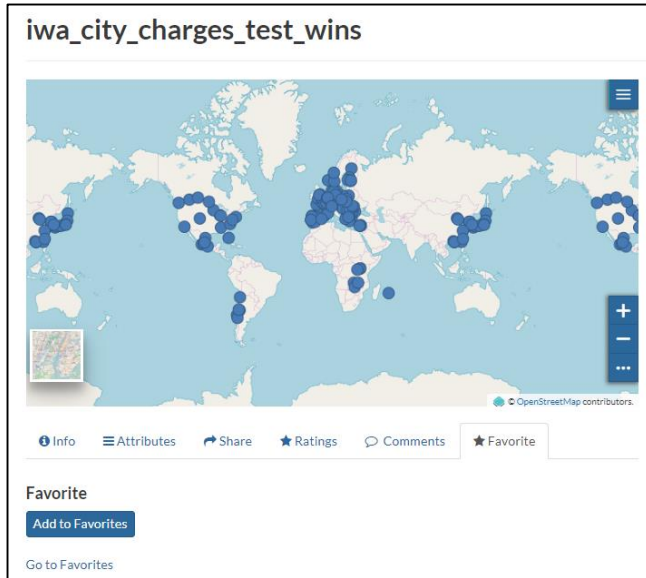
Community

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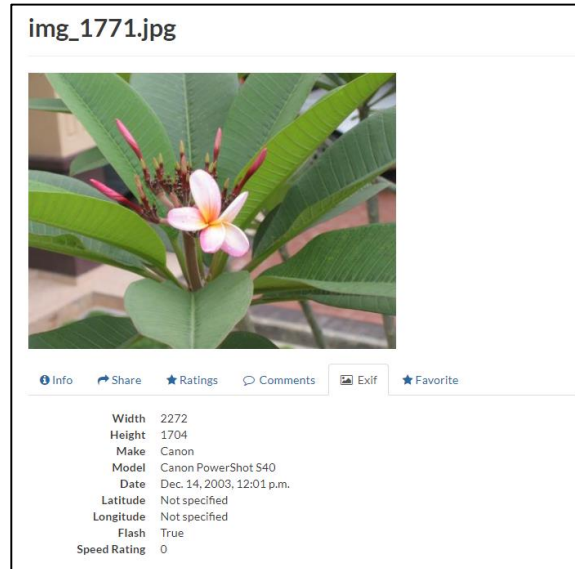


Contrib Apps Promotion

✓ Favorites



✓ EXIF support for Document Images



Community

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Contrib Apps Promotion

- ✓ *Create Empty Layer*

Create an empty layer

Layer name

Layer title

Geometry type

[Add Attribute](#)

[Remove](#)

[Remove](#)

[Create](#)

- ✓ *WMS GetCapabilities for single Layers*

[Info](#) [Attributes](#) [Share](#) [Ratings](#) [Comments](#) [Favorite](#)

Title Test Empty Layer
License Not Specified ⓘ
Abstract No abstract provided

Publication Date June 7, 2019, 9:44 a.m.
Type Vector Data
Keywords features , test_1
Regions Global
Owner admin

[More info](#) -

[Layer WMS GetCapabilities document](#)

Contrib Apps Promotion

✓ *Metadata XSL Renderer*

The screenshot shows the metadata page for a dataset named 'iwa_city_charges_test_wins'. At the top right, there is a 'Completeness' indicator showing '75%' and a red 'X' icon with the text 'Check Schema mandatory fields'. Below this are tabs for 'Edit', 'Preview', and 'Settings'. The main content area includes the dataset title, an abstract (stating 'No abstract provided'), a table of metadata fields, a 'WHAT' section with details on resource purpose and keywords, and a 'WHERE' section for geographic location. A small map thumbnail is visible on the right side of the metadata table.

Hierarchy level	dataset
Resource Identifier	
Alternative Title	
Resource Status	completed

WHAT

Resource Purpose	
Spatial Representation Type	
Topic Category	Environment
Keywords	Anomalia Data features iwa_city_charges_test_wins theme Global place

WHERE

GEOGRAPHIC LOCATION

North Bound	South Bound	West Bound	East Bound
-------------	-------------	------------	------------

✓ *Original Dataset Download Link*

The screenshot shows a 'Download Layer' dialog box with two tabs: 'Images' and 'Data'. A grey button asks 'Do you want to filter it?'. Below this, the text 'Pick your download format:' is followed by a list of options: GeoJSON, Excel, CSV, GML 3.1.1, GML 2.0, Zipped Shapefile, and Original Dataset. A 'Close' button is located at the bottom right.

- GeoJSON
- Excel
- CSV
- GML 3.1.1
- GML 2.0
- Zipped Shapefile
- Original Dataset

Community

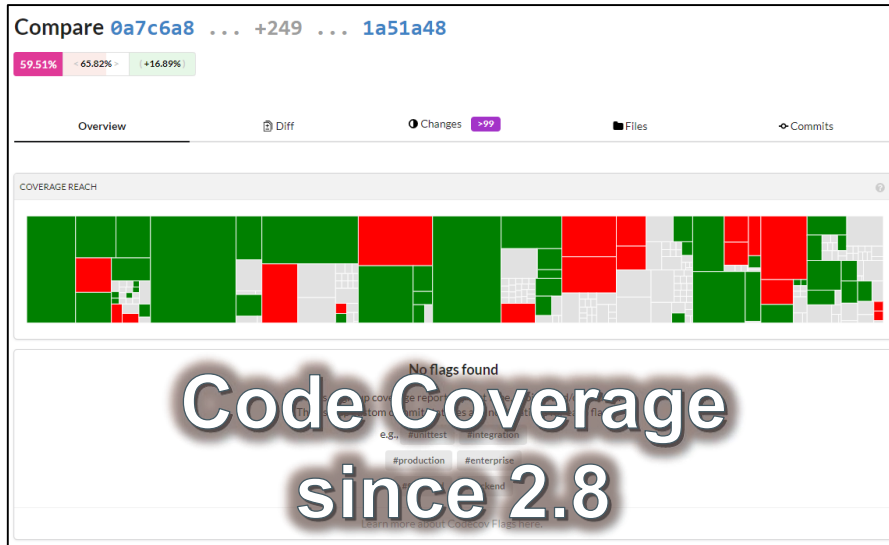
Community

2.10.2 – 3.0



Test Frameworks and Code-coverage

- Test framework on Travis has been completely refactored
- Thanks to NINA we have now also support for “Selenium” tests



Build jobs View config

2.8.x

✓	# 7534.1	Python: 2.7
✓	# 7534.2	Python: 2.7
✓	# 7534.3	Python: 2.7
✓	# 7534.4	Python: 2.7

The figure shows a screenshot of a build job list for version 2.8.x. The table has columns for status (all green checkmarks), job ID (7534.1 to 7534.4), and the environment (Python: 2.7). A large '2.8.x' label is overlaid on the right side of the table.

Continuous Builds

Build jobs View config

2.10.x

✓	# 7621.1	GeoServer-backend Core Modules Smoke Tests
✓	# 7621.2	GeoServer-backend Contrib Apps Smoke Tests
✓	# 7621.3	GeoServer-backend Integration Tests
✓	# 7621.4	GeoServer-backend Integration CSW Tests
✓	# 7621.5	GeoServer-backend Integration BDD Tests
✓	# 7621.6	QGIS Server-backend Core Modules Smoke Tests
✓	# 7621.7	QGIS Server-backend Contrib Apps Smoke Tests
✓	# 7621.8	QGIS Server-backend Integration Tests
✓	# 7621.9	Selenium Integration Tests

The figure shows a screenshot of a build job list for version 2.10.x. The table has columns for status (all green checkmarks), job ID (7621.1 to 7621.9), and the test name. A large '2.10.x' label is overlaid on the right side of the table.

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NINA

NINA
GeoSolutions

2.10.2 – 3.0



Internationalization and Documentation

- Internationalization has been improved, we have almost 90% coverage for 5 main languages
- Completely revised and updated Documentation, preview at

<http://docs.geonode.org/en/new-docs/>

- Help is very welcome here from the community. To participate jump into the following threads

Docs: Rework TOC <https://github.com/GeoNode/geonode/issues/4394>

Docs: Replace Transifex with manual build Instructions

<https://github.com/GeoNode/geonode/issues/4387>

Help us help you



User Lists Participation

- Answering users questions relies on a low number of people
- We lack “testers”; this kind of project would need also a lot of manual testing for all its functionalities on a regular basis
- Developers are very few and Pull Requests often do not respect the contribution policies.

In particular:

- ✓ *There's no GitHub issue describing the problem linked to the Pull Request*
- ✓ *GitHub issues are plain requests often without a good description of the use case and how to reproduce it*
- ✓ *Lack of test cases and documentation*
- ✓ *History of commits is usually messed up*

Steps to get in touch with developers

1. If you need for clarification first of all try to describe the issue as well as possible through the official mailing lists; **IMPORTANT:** always specify
 - ✓ *Which versions of GeoNode and GeoServer you are using*
 - ✓ *Which Operative System and hardware you are using*
 - ✓ *How you installed the framework*
2. If you need to get in touch directly with developers, consider using the official “gitter” chat <https://gitter.im/GeoNode/general>
3. If the issue has been confirmed and there’s no easy or immediate resolution, open a ticket on GitHub <https://github.com/GeoNode/geonode/issues> with steps on how to reproduce the problem and labels

In case you stumble into a vulnerability: Responsible Disclosure

- Keep exploit details out of issue report.
- Mark the issue as a vulnerability.
- Be prepared to work with Project Steering Committee (PSC) on a solution.
- Keep in mind PSC members are volunteers and an extensive fix may require fundraising / resources.

If you are not in position to communicate in public please consider commercial support, contacting a PSC member, or reaching us via the Open Source Geospatial Foundation at info@osgeo.org



Thanks



FOSS4G IT

The FOSS4G IT sub-logos, including a blue horizontal line, a red and white circular icon, and a red and white circular icon.

TORINO 2020