



GeoNetwork 4

User expectations?
It is all about search ...

WFS Feature indexing

**Remote indexing
& dashboards**

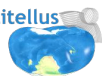
**Level 1
Bolsena
2019**

**Level 2
December
sprint**

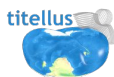
**Level 0
Bolsena
2018**

**Level 1
July sprint**

**Level 3+4
2020**



SOLR POC



April

June

June July

December

January-April

2016

2017

2018

2019

2020

GeoNetwork 4

= GeoNetwork 3.10.3 (release planned tomorrow)

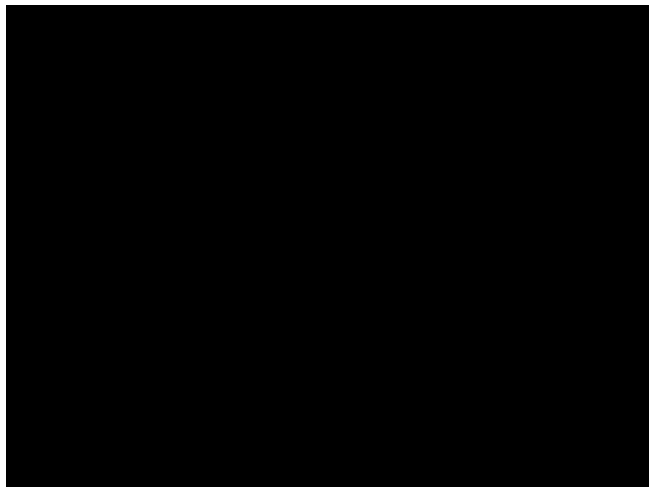
- + Elasticsearch (instead of Lucene)

- Some features are not available

User interface is the same

Database is the same

Is search faster?





Simple scenario

Load search page

3 clicks on facets

- “Datasets”
- Then “BDinfraSIG”
- Then “Grid”



The screenshot displays a search results interface with a left sidebar containing facets and a main content area on the right showing the filtered results.

Facets (Left Sidebar):

- Filtre** (Search icon)
- Déplier / Réduire** (Expand/Collapse buttons)
- TYPE DE RESSOURCE**
 - ☒ Jeu de données (53)
- STANDARDS**
 - ☐ Iso19115-3.2018 (53)
- STATUS**
 - ☐ Finalisé (26)
 - ☐ Mise à jour continue (1)
 - ☐ Non obsolète (53)
- TYPES DE REPRÉSENTATION**
 - ☒ Raster (53)
- INFRASIG**
 - ☒ BDInfraSIG (53)
 - ☐ Extraction_DIG (50)
 - ☐ Open DataNO (31)
 - ☐ PanierTelechargementGeoportail (36)
 - ☐ WalOnMap (40)
 - [5 plus](#)

Results (Right Panel):

- Types de ressource**
 - ☒ Dataset (14)
- Status**
 - ☐ Completed (3)
- Types de représentation**
 - ☐ Vector (66)
 - ☒ Grid (14)
 - ☐ TextTable (2)
- Infra SIG**
 - ☒ BDInfraSIGNO (14)
 - ☐ DGO3_BDREF (2)
 - ☐ DGO3_BDREFNO (6)
 - ☐ DGO3_CIGALENO (6)
 - ☐ Extraction_DIG (5)
 - ☐ Extraction_DIGNO (8)
 - ☐ INSPIRE Priority Dataset (2)
 - ☐ Open DataNO (12)
 - ☐ PanierTelechargementGeoportail (5)
 - ☐ PanierTelechargementGeoportailNO (9)
 - ☐ Reporting INSPIRE (6)
 - ☐ Reporting INSPIRENO (8)
 - ☐ WalOnMap (8)
 - ☐ WalOnMapNO (5)

Search sequence =

Search is

minimum **10** time faster

Response size is

10 time smaller

<input type="checkbox"/> qi?_content_type=json&bucket=08176...	832 B	323 ms
<input type="checkbox"/> qi?_content_type=json&bucket=e101&...	318 KB	659 ms
<input type="checkbox"/> qi?_content_type=json&bucket=00452...	202 KB	815 ms
<input type="checkbox"/> qi?_content_type=json&bucket=05135...	152 KB	891 ms
<input type="checkbox"/> qi?_content_type=json&summaryOnly...	25.7 KB	807 ms
<input type="checkbox"/> q?_content_type=json&bucket=e101&...	332 KB	832 ms
<input type="checkbox"/> q?_content_type=json&bucket=e101&...	335 KB	840 ms
<input type="checkbox"/> q?_content_type=json&bucket=e101&...	320 KB	670 ms
<input type="checkbox"/> q?_content_type=json&bucket=e101&...	309 KB	946 ms

<input type="checkbox"/> _search?bucket=008735893266612926	903 B	26 ms
<input type="checkbox"/> _search?bucket=008735893266612926	693 B	12 ms
<input type="checkbox"/> _search?bucket=07228283844204451	12.9 KB	30 ms
<input type="checkbox"/> _search?bucket=04330258078642846	12.9 KB	44 ms
<input type="checkbox"/> _search?bucket=s101	12.7 KB	25 ms
<input type="checkbox"/> _search?bucket=07561061874015653	903 B	14 ms
<input type="checkbox"/> _search?bucket=s101	19.3 KB	42 ms
<input type="checkbox"/> _search?bucket=s101	19.8 KB	20 ms
<input type="checkbox"/> _search?bucket=s101	26.9 KB	32 ms
<input type="checkbox"/> _search?bucket=s101	22.0 KB	27 ms

Search is fast ... but rendering is still “slow”

- Related records
- Angular one time binding
- Watchers
- Facet tree

More about that in
the UX/UI session

The screenshot displays a web application interface for searching and viewing geospatial data. On the left, a facet tree is visible under the heading "Panier vide". It includes sections for "Types de ressource" (Dataset (52)), "Status" (Completed (26), OnGoing (1)), "Types de representation" (Vector (1.44), Grid (52)), and "Infra SIG" (BDInfraSIG (52), DDW (3), DGO3_BDREF (9), DGO3_BDREFNO (7), DGO3_CIGALE (10), DGO3_CIGALENO (7), Extraction_DIG (51), Extraction_DIGNO (1), Open DataNO (32), Open data (18), PanierTelechargementGeoportail (35), PanierTelechargementGeoportailNO (17), Reporting INSPIRE (22), Reporting INSPIRENO (29), WalOnMap (40)).

The main area shows search results for "Rechercher ...". The results are displayed in a grid of four map tiles, each with a title, a thumbnail image, and a description. The tiles are:

- Orthophotos 2009-2010**: Imagerie orthorectifiée et mosaïquée couvrant l'entiereté du territoire wallon à une résolution de 25 cm. Les prises de vue ont été faites entre le 23 mai 2009 et le 7 juillet 2010. Leur but initial était de servir de base au contrôles liés à la mise en oeuvre de la Politique Agricole Commune (PAC). Quatre bandes spectrales.
- Infrarouge des orthophotos 2016**: Cette couche de données est une représentation de la mosaïque d'orthos 2016 en infrarouge fausses couleurs sur l'entiereté du territoire wallon. Cette couche de données constitue la représentation cartographique en infrarouge fausses couleurs de la mosaïque des orthos 2016 à une résolution de 25cm. Il s'agit
- Relief de la Wallonie – Modèle Numérique des Pentes 2013-2014**: Cette couche de données représente une carte des pentes issues du Modèle Numérique de Terrain LiDAR 2013-2014 d'une résolution d'un mètre. Ce modèle numérique de pente "moyenne" correspond à la variation de hauteur d'un point à un autre de la grille d'entrée. Il s'agit d'une représentation de l'inclinaison.
- Images satellites Pléiades - Bundle (P+MS) - 2013**: Images satellites pléiades à très haute résolution couvrant complètement la Belgique. Ce jeu de données est constitué d'une série de couples d'images panchromatiques et multispectrales livrées séparément (Produit Bundle) et acquises en été 2013 à l'exception de l'extrême sud de la Belgique acquis fin

Each tile includes a thumbnail image and a set of interactive controls (pan, zoom, etc.) at the bottom.

Why is the response size smaller?



In GeoNetwork 3, search response size is always the same while searching with the main search page or searching a contact in the directory in the editor ...

Only option to limit the response is to define: facet or facet & results.

JSON format is mapped from legacy XML responses and is verbose.



In Elasticsearch API the request defined which elements are returned in the response

Eg. we only need the title for making a list of record when picking up a parent record in the associated panel

Associer une fiche parent

Rechercher

1012 Enregistrement(s)

- Données de hauteur d'eau et de débits sur les cours d'eau non navigables.
- Localisation des écoles en Wallonie
- Accidents de circulation sur voiries régionales (2009 - 2013) - FXP
- Arbres et haies remarquables (AHREM) - Série
- Zones de prévention arrêtée ou à l'enquête publique autour des captages
- Aménagement foncier - Communes préemptables
- Orthophotos 2009-2010
- INSPIRE - Sites protégés en Wallonie (BE) - Service de téléchargement
- Epicerie et Restaurants Sociaux Agréés de Wallonie
- Carte interactive - Industrie : principales entreprises

« < 1 - 10 sur 1012 > »

Associer un parent

Display similar records?



In GeoNetwork 3, users are encoding lots of relations eg. dataset/service, parents, sources

It would be interesting to also display similar records based on thematic, geographical and temporal similarities

More like this

The proximity is computed on the field you configured

Here title and keywords.

Projet Informatique de Cartographie Continue, version destinée aux "partenaires WALTOPO" (PICC-vTOPO)

Le "PICC-vTOPO" est une version spécialisée du PICC à destination des partenaires Waltoys. Il contient tous les objets du PICC ainsi que, localement, des objets et des attributs supplémentaires, tous de niveau 1.

Projet Informatique de Cartographie Continue (PICC) - Service de visualisation WMS

Projet Informatique de Cartographie Continue (PICC) - Service de visualisation REST

Projet Informatique de Cartographie Continue (PICC)

Projet Informatique de Cartographie Continue (PICC - Ancien modèle) - DONNEE OBSOLETE

ICAR - Points d'adresses

WalStat - portail d'informations statistiques locales sur la Wallonie

Application ICAR

CARBIOGOL - Incertitudes des stocks en Carbone organique total - période 2005-2014

Projet Informatique de Cartographie Continue (PICC) - Service de visualisation WMS

Projet Informatique de Cartographie Continue (PICC) - Service de visualisation REST

Projet Informatique de Cartographie Continue (PICC)

Projet Informatique de Cartographie Continue (PICC - Ancien modèle) - DONNEE OBSOLETE

ICAR - Points d'adresses

WalStat - portail d'informations statistiques locales sur la Wallonie

Application ICAR

CARBIOGOL - Incertitudes des stocks en Carbone organique total - période 2005-2014

Autocomplete has unexpected results



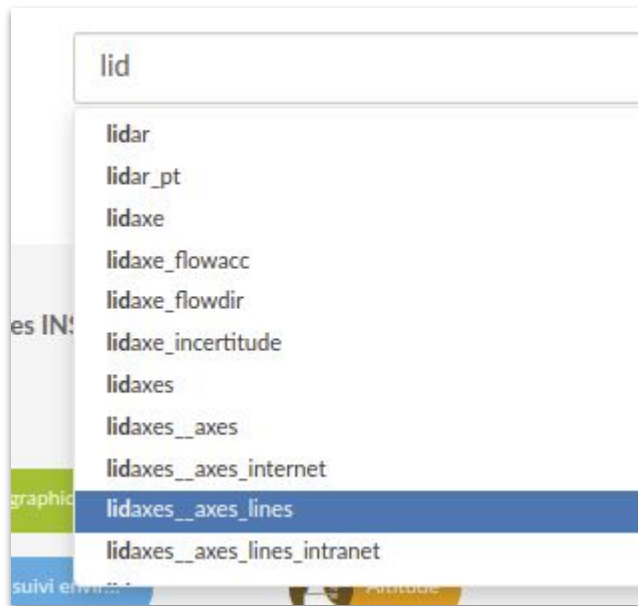
In GeoNetwork 3, suggestions search on field value and if none found, search for title.

Suggestion does not take privileges into account.

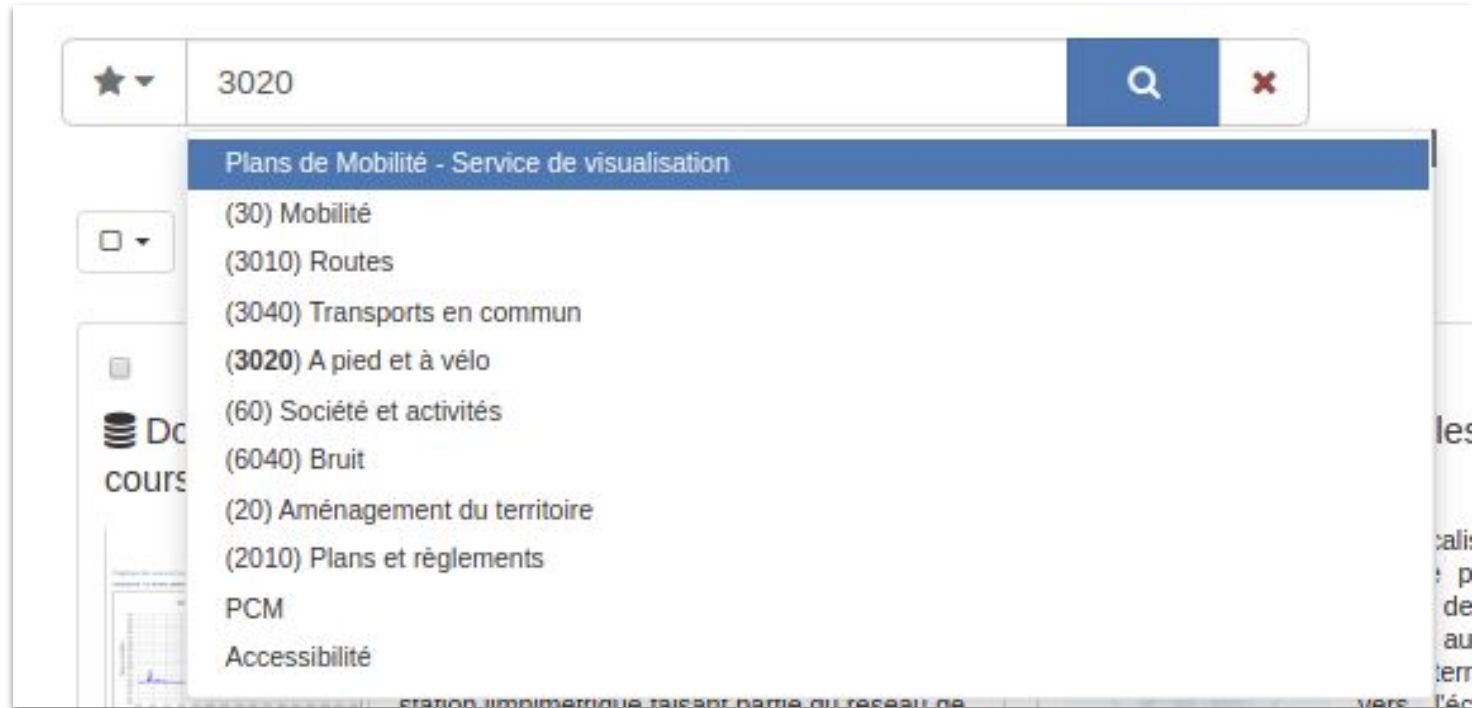
Suggestion on more than one work does not work.

GN4 suggest a field (eg. title) searching on all content

(taking privileges into consideration)



Can also suggest multiple field values
(eg. title and keyword)



GN4 support phrase suggestion (ngrams in action)



atlas wallon

Rechercher parmi 798 jeux de données



4



atlas wallon



Cartes / atlas /data CPDT : Atlas des dynamiques territoriales

Atlas des voiries vicinales de 1841 et modifications (version consolidée) - Service de visualisation

Atlas des voiries vicinales de 1841

Atlas des voiries vicinales de 1841 : Plans primitifs (version consolidée)

Atlas des voiries vicinales de 1841 (version consolidée) – Série

Atlas des voiries vicinales de 1841 - Plans primitifs de Namur

Atlas du karst wallon - Service de visualisation REST

Atlas du karst wallon - Service de visualisation WMS

Atlas du karst wallon - Galeries

Atlas du karst wallon - Formations carbonatées

GN4 suggestions are sorted with score



PICC

PICC

- Projet Informatique de Cartographie Continue (PICC - Ancien modèle) - DC
- Projet Informatique de Cartographie Continue (PICC)
- Projet Informatique de Cartographie Continue (PICC) - Service de visualis
- Projet Informatique de Cartographie Continue (PICC) - Service de visualis
- Projet Informatique de Cartographie Continue, version destinée aux "part

58



4



PICC



- LIDAXES - Axes de ruissellement concentré (vecteur) - Version Intranet
- INSPIRE - Points d'adresses en Wallonie (BE) - Service de visualisation WMS
- INSPIRE - Points d'adresses en Wallonie (BE) - Service de téléchargement
- LIDAXES - Axes de ruissellement concentré - Service de visualisation REST
- LIDAXES - Incertitude de positionnement des axes
- LIDAXES - Modèle Numérique de Terrain lissé - Version Intranet**
- LIDAXES - Axes de ruissellement concentré - Service de visualisation WMS
- LIDAXES - Dépressions naturelles
- LIDAXES - Axes de ruissellement concentré et données associées - Série - Version Internet
- Projet Informatique de Cartographie Continue (PICC) - Service de visualisation WMS



Give more importance to the title

ui-autocompleteConfig

```
1- {  
2-   "query": {  
3-     "multi_match": {  
4-       "query": "",  
5-       "type": "bool_prefix",  
6-       "fields": [  
7-         "resourceTitle",  
8-         "anytext",  
9-         "anytext._2gran",  
10-        "anytext._3gran"  
11-       ]  
12-     },  
13-   },  
14-   "source": [  
15-     "resourceTitle"  
16-   ]  
17- }
```



Search results for "PICC":

- Projet Informatique de Cartographie Continue (PICC) - Service de visualisation WMS
- Projet Informatique de Cartographie Continue (PICC) - Service de visualisation REST
- Projet Informatique de Cartographie Continue (PICC)
- Projet Informatique de Cartographie Continue, version destinée aux "partenaires WALTOPO" (PICC-vT)
- Projet Informatique de Cartographie Continue (PICC - Ancien modèle) - DONNEE OBSOLETE
- LIDAXES - Axes de ruissellement concentré (vecteur) - Version Intranet
- INSPIRE - Points d'adresses en Wallonie (BE) - Service de visualisation WMS
- INSPIRE - Points d'adresses en Wallonie (BE) - Service de téléchargement
- LIDAXES - Axes de ruissellement concentré - Service de visualisation REST
- LIDAXES - Incertitude de positionnement des axes

Match on title higher ranking?



In GeoNetwork 3, score is mainly computed on term frequency between searched terms and document terms ...

Relevance can be adjusted based on 2 things

- Fields you are searching on
- Scoring

ui-autocompleteConfig

```
1 * {  
2 *   "query": {  
3 *     "multi_match": {  
4 *       "query": "",  
5 *       "type": "bool_prefix",  
6 *       "fields": [  
7 *         "resourceTitle", |  
8 *         "anytext",  
9 *         "anytext._2gran",  
10 *        "anytext._3gran"  
11 *      ]  
11 }
```

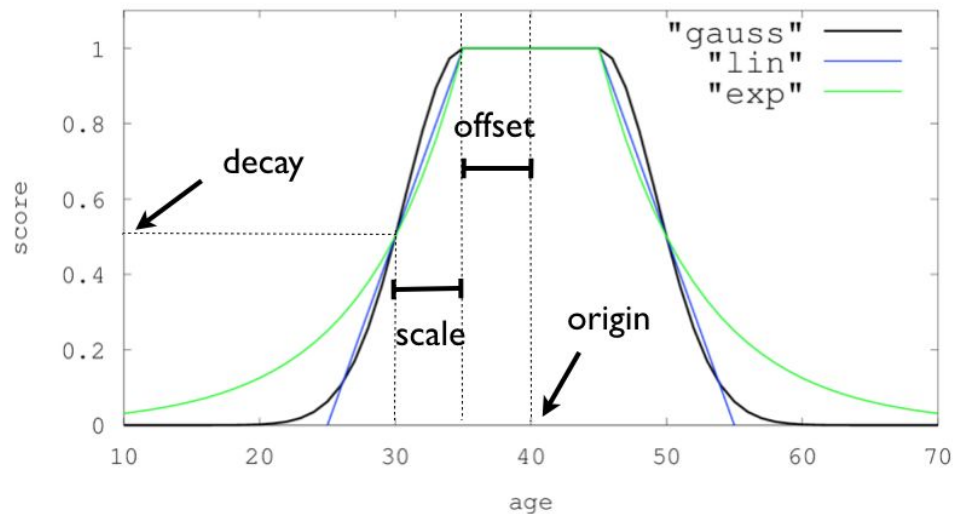
GN4 allows configuration of scoring

Default is

Search result score configuration

```
1 {  
2   "script_score" : {  
3     "script" : {  
4       "source": "_score"  
5     }  
6   }  
7 }
```

Adjust score based on datestamp



Search result score configuration

```
1 {  
2  
3  
4   "gauss": {  
5     "dateStamp": {  
6       "scale": "200d"  
7     }  
8   }
```

Score based on a function? Eg. promote those with higher rating?

Search result score configuration

```
1 {  
2   "script_score" : {  
3     "script" : {  
4       "source": "Math.log(2 + doc['rating'].value)"  
5     }  
6   }  
7 }
```

And much more see [API](#)

Ideas : decrease score for obsolete records, for records member of a serie, ...

Spatial search works ?



GeoNetwork 3 has a post process to manage spatial filters. It searches based on criteria and then applies with AND the spatial filter.

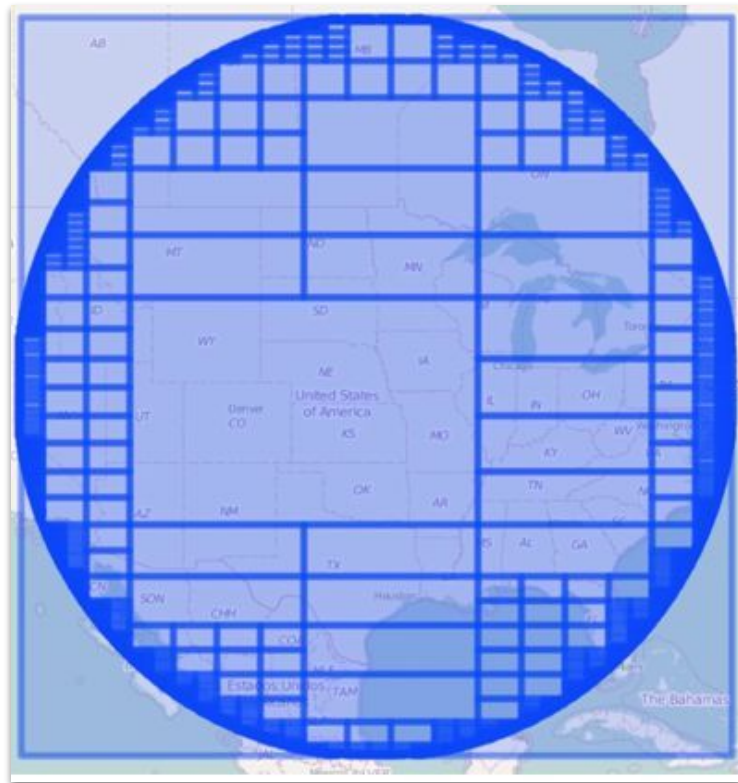
Spatial index is independant, managed by GeoTools

Embedded spatial search

Elasticsearch introduces spatial index and search capabilities

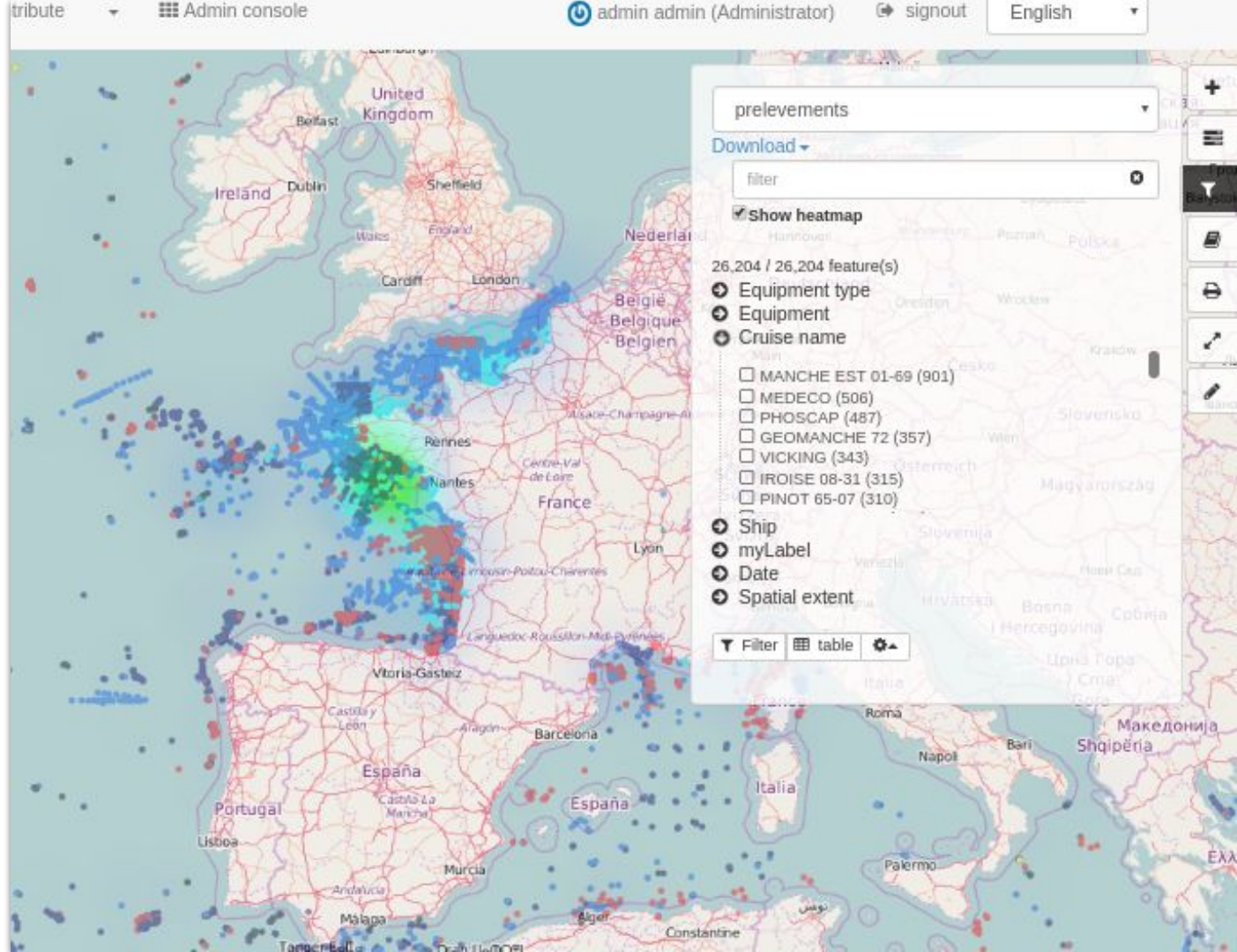
Introduces capability to combine spatial and attribute filters (required by OGC compliance)

Polygons are not indexed yet in GN4.



Spatial
aggregations are
also available (for
points)

eg. used for
heatmap on WFS
harvested features



Facets are still there?



In GeoNetwork 3, different types of facets are available : simple terms list, tree view eg. GEMET.

Only predefined set of facets are available - one for search, one for editor board.

Facets are thematic aggregations of search results, to further filter the search.

Aggregations with OR

Select multiple facet-values to be included in results.

KEYWORDS_TREE ▾

- ☒ Biology (76)
- ☒ Environmental policy (76)
 - ☒ Environmental data (72)
 - ☒ Land cover (72)
 - ☒ Land use (60)
 - ☒ Resource utilisation (60)

Exclude a value

Click “+” to add, click “-” to “exclude”



Tree based on hierarchy or by nesting fields

KEYWORDS_TREE ▼

- ☒ Natural areas, landscape, ecosystem
 - ☒ Ecological parameter (19)
 - ☐ Land cover (16)
 - ☐ Land cover (16)
 - ☒ Land (14)
 - ☐ Land use (12)
 - ☐ Landscape alteration (12)
 - ☐ Natural area (12)
 - ☐ Land setup (10)
- ☒ Environmental policy (36)
- ☒ Geography (31)
 - ☒ Geo-referenced data (18)
 - ☐ Land cover (16)
 - ☒ Land (14)
 - ☐ EEA39 (30)

RESOURCE TYPE ▼

- ☒ Dataset (297)
 - ☐ SHP (165)
 - ☐ Unknown (53)
 - ☐ GTiff (33)
 - ☐ FGeo (13)
 - ☐ AIG (7)
 - ☐ PGeo (7)
 - ☐ AAIGrid (5)
 - ☐ SQLite (4)
 - ☐ Spatialite (3)
 - ☐ Geopackage (2)
 - ☐ Service (7)

Flexibility with filter aggregations

Available in ▼


☐ Download service(2921)

☐ View service(7558)

```
GET /gn-records/_search
{
  "aggs": {
    "messages": {
      "filters": {
        "filters": {
          "availableInViewService": {
            "query_string": {
              "query": "+linkProtocol:/OGC:WMS.*/"
            }
          },
          "availableInDownloadService": {
            "query_string": {
              "query": "+linkProtocol:/OGC:WFS.*/"
            }
          }
        }
      }
    }
  },
  "query": {
    "match_all": {}
  }
}
```



Aggregations with paging

In  3 only a fixed number of values is returned

Keep clicking “more results” until end of set

CREATIONYEARFORRESOURCE ▼

☐ 2011 (150)

☐ 2018 (75)

☐ 2016 (67)

☐ 2017 (61)

☐ 2012 (56)

[load more results...](#)

TAG ▼

☐ Reporting INSPIRENO (189)

☐ Geographical grid systems (134)

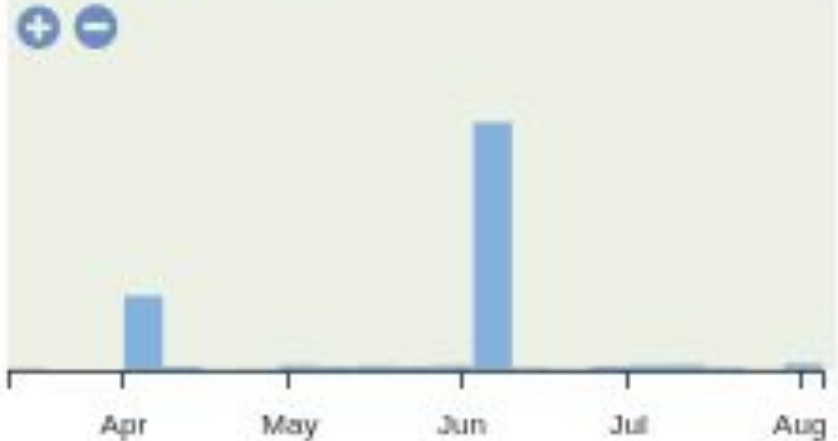
☐ Land cover (124)

Histogram aggregations ...

Échelles ▾

- ☐ 0-10000(81)
- ☐ 10000-20000(188)
- ☐ 20000-40000(49)
- ☐ 40000-50000(2)
- ☐ 50000-100000(23)
- ☐ 100000-250000(9)
- ☐ 250000-500000(2)
- ☐ 500000-650000(1)
- ☐ 650000-1000000(1)
- ☐ 1000000-1750000(1)
- ☐ 1750000-*(1)

DATESTAMP ▾



11-03-2019

to

05-08-2019

All is configurable in the web admin

Configuration is based on Elasticsearch
API

E.g.

- [Facet list](#)
- Autocomplete mode

Needs alternative “dummy mode”?

Needs validation option & preview

Liste des facettes

```
1+ [
2+   "resourceType": {
3+     "terms": {
4+       "field": "resourceType",
5+       "size": 10
6+     }
7+   },
8+   "codelist_status": {
9+     "terms": {
10+      "field": "codelist_status",
11+      "size": 20
12+    }
13+  },
14+  "codelist_spatialRepresentationType": {
15+    "terms": {
16+      "field": "codelist_spatialRepresentationType",
17+      "size": 20
18+    }
19+  },
20+  "thesaurus_geonetworkthesauruslocalthemeinfraSIG": {
21+    "terms": {
22+      "field": "thesaurus_geonetworkthesauruslocalthemeinfraSIG",
23+      "size": 20,
24+      "order": {
25+        "_key": "asc"






```


Nom des champs d'index de la liste à afficher dans la recherche

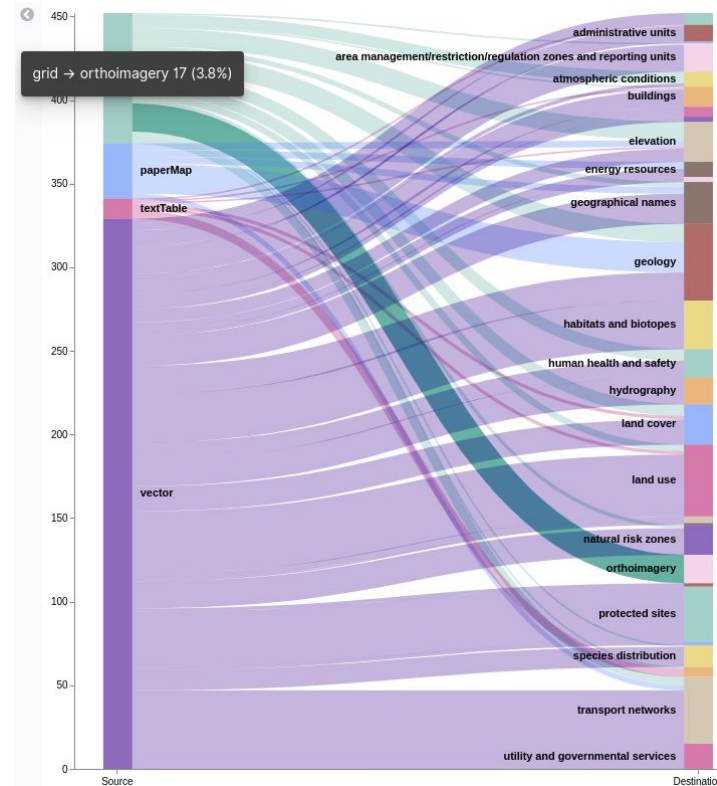
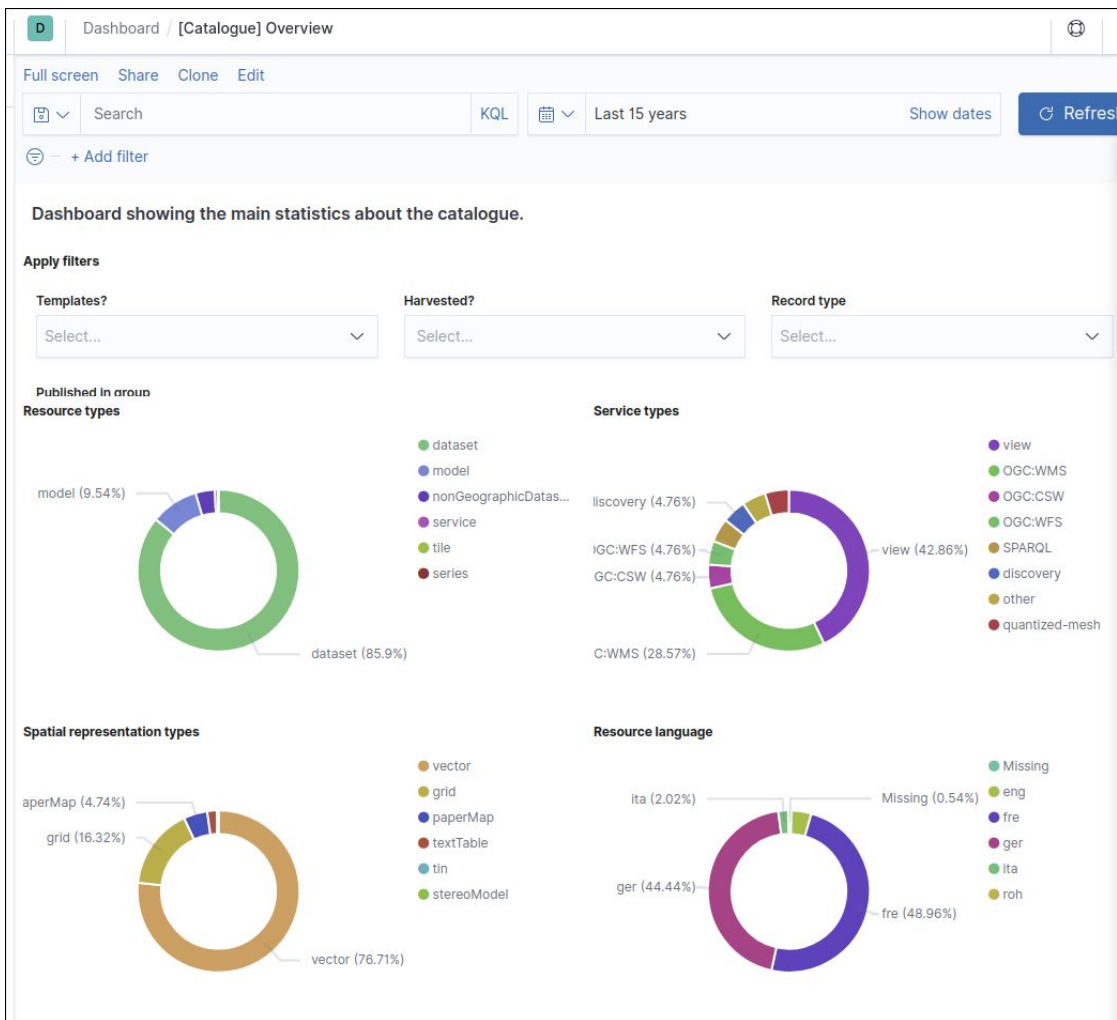
Other usages of
facets?

Dashboards

[+ Create dashboard](#)

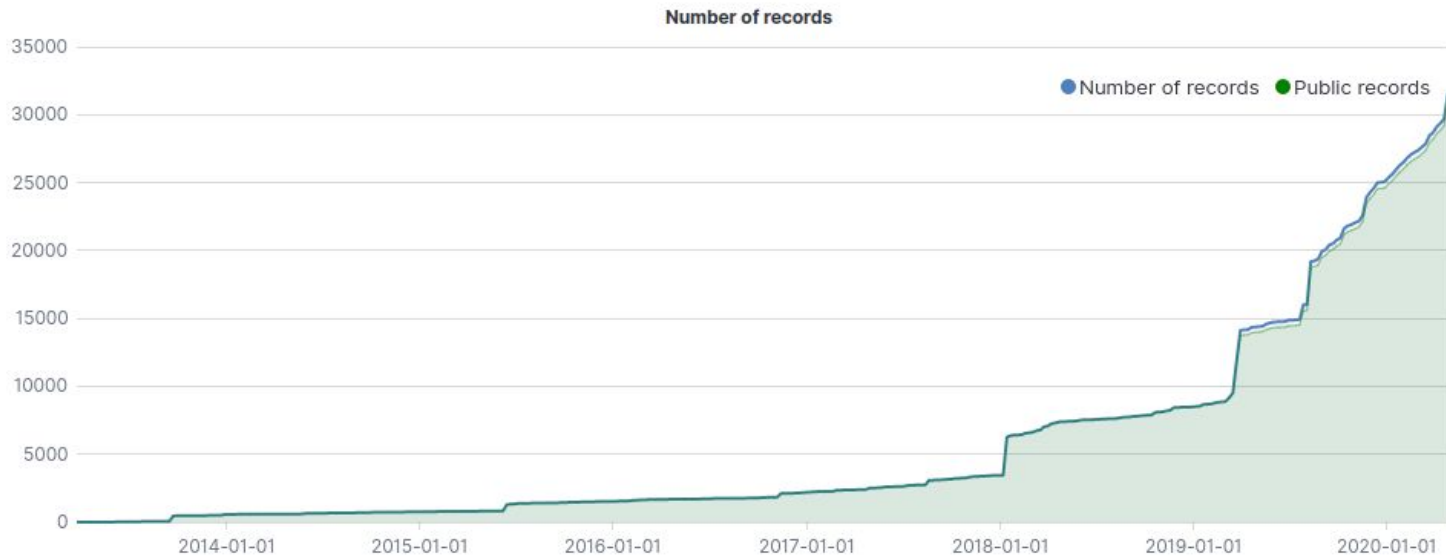
<input type="checkbox"/> Title	Description	Actions
<input type="checkbox"/> Admin overview	History, group & user statistics ...	
<input type="checkbox"/> Overview	Dashboard showing the main statistics about the catalog	
<input type="checkbox"/> Quality	Analyse catalog content, track errors and improve consistency	
<input type="checkbox"/> Search	This is a simple dashboard to search records	
<input type="checkbox"/> Spatial features statistics	Analyze the features harvested from WFS services	

Rows per page: 20 < **1** >



Admin overview

Number of records over time



Number of records per groups and users

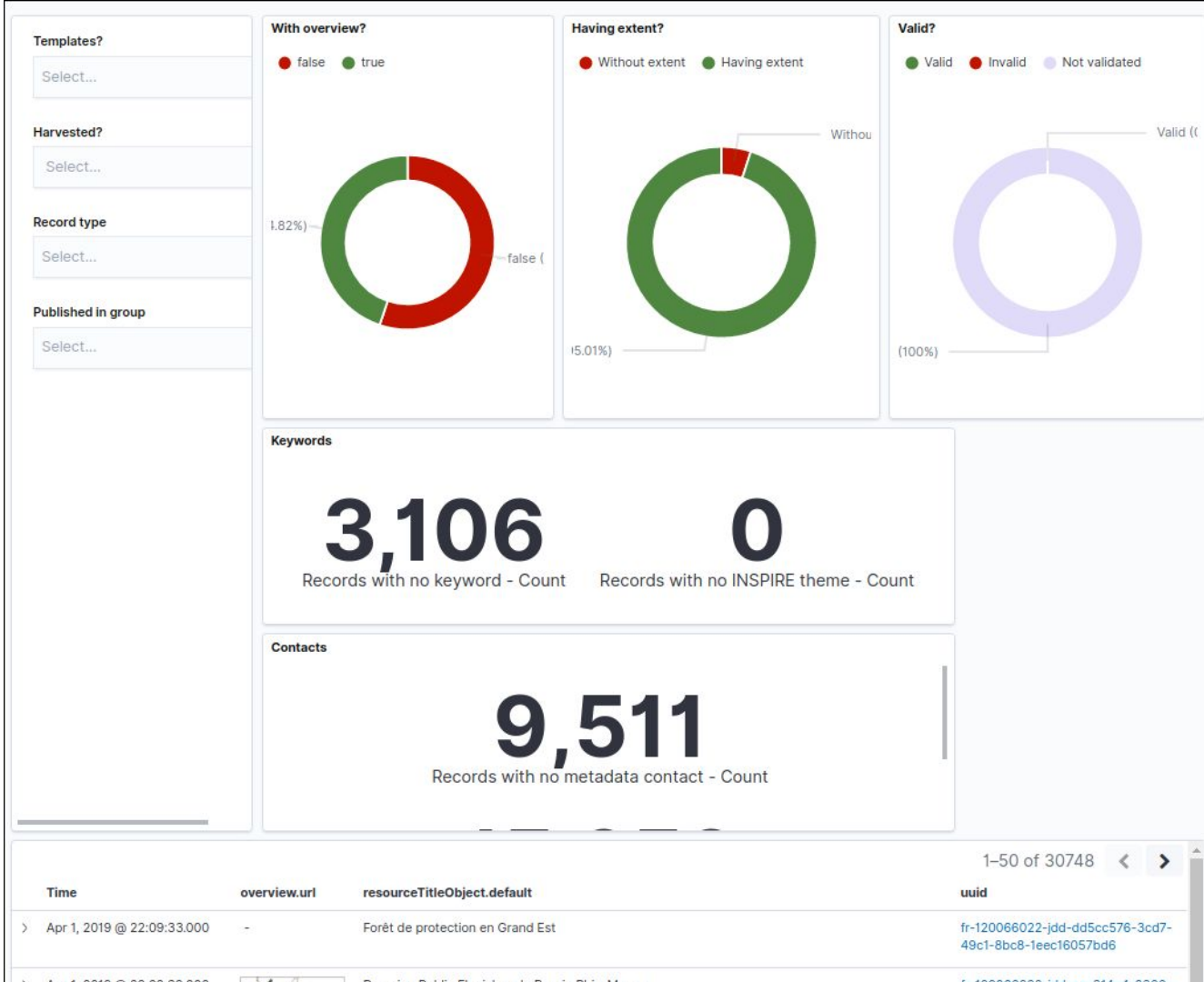
Group	Owner	Count
2582	admin admin	16,401
2	admin admin	12,316
1	admin admin	4

Export: [Raw](#)  [Formatted](#) 

28,206
Public records - Count

515
Private records - Count

Quality checks



What about synonyms?



In GeoNetwork 3, no simple support for synonyms exists

Synonyms are typically defined in thesauri, a keyword has same-as, narrower or broader relations to other concepts.

A query can use these relations to locate a record by matching a synonym of the search term.

Configure index to expand synonyms

```
"french_synonym": {  
  "type": "synonym",  
  "ignore_case": true,  
  "expand": true,  
  "synonyms": [  
    "sig, système d'information géographique, ids, gis, s",  
    "shp, shapefile",  
    "raster, image",  
    "salade, laitue"  
  ]  
},
```


More to experiment

Link to synonyms from thesauri

Synonyms at index time or at query time

Use the Elasticsearch synonyms API

Is the search
engine aware of
language
specific
aspects?



In GeoNetwork 3, Lucene
configuration can load different
Analyzers

Yes. Ongoing experiment for French in Wallonia

```
'filter': {
  'shingle': {
    'type': 'shingle',
    'min_shingle_size': 2,
    'max_shingle_size': 3
  },
  'french_elision': {
    'type': 'elision',
    'articles_case': true,
    'articles': ['l', 'm', 't', 'qu', 'n', 's', 'j', 'd', 'c', 'jus']
  },
  'french_synonym': {
    'type': 'synonym',
    'ignore_case': true,
    'expand': true,
    'synonyms': [
      'sig, systeme d'information géographique, ids, gis, sdi',
      'shp, shapefile',
      'raster, image'
    ]
  },
  'french_stemmer': {
    'type': 'stemmer',
    'language': 'light_french'
```

```
analyzer': {
  'french_heavy': {
    'tokenizer': 'icu_tokenizer',
    'filter': [
      'french_elision',
      'icu_folding',
      'french_synonym',
      'french_stemmer'
    ]
  },
  'french_light': {
    'tokenizer': 'icu_tokenizer',
    'filter': [
      'french_elision',
      'icu_folding'
    ]
  },
}
```

And what are
the benefits?

Eg. Plurals in search

Analyzer per language & stemming

itinéraire

Catalogue(s)

▼ Recherche avancée Réinitialiser

1 - 20 sur 24

☐ PEDIER

itinéraires

Catalogue(s)

▼ Recherche avancée Réinitialiser

1 - 20 sur 70

☐ ITINERAIRES CYCLEVASIONS

itinéraire

Voies cyclables principales

Mobilité de loisirs - Randonnée hivernale

Réseau vtt

Réseau pédestre

Chemins interdits à la pratique du VTT

Itinéraires pédestres - poteaux indicateurs

Points d'accès VTT

Mobilité de loisirs - Ski de fond

Itinéraires VTT

Itinéraires cyclables

Indexation

Document entrée →

Id	Métier
1	Développeuse

Ascii folding →

Developpeuse

Lowercase →

developpeuse

French stemmer →

developeu

Recherche

← Terme recherché

Métier
développeur

developpeur ← Ascii folding

developpeur ← Lowercase

developeu ← French stemmer

Index

Clé	Id document
developeu	1

And multilingual metadata?



In GeoNetwork 3, complex
multilingual support with some
drawbacks

Not yet

But

```
▼ resourceTitleObject: {default: "Leichte Basiskarte (aggregated layers)", langger: "Leichte Basiskarte (aggregated layers)",  
  default: "Leichte Basiskarte (aggregated layers)",  
  langeng: "Light base map (aggregated layers)",  
  langfre: "Carte de base légère (aggregated layers)",  
  langger: "Leichte Basiskarte (aggregated layers)",  
  langita: "Carta di base leggera (aggregated layers)",  
  resourceType: "dataset"}
```

The idea is to use objects to store translations

(instead of one index per language in  3)

Potential Multilingual features

- Display the metadata element in the UI language
- Match keywords from thesauri with their translation in the UI language
- Higher score for matches on elements in the UI language
- Machine translation of metadata content to the UI language

So there is
some more
work needed?

So there is
some more
work needed?

Yes. That's why
we are here ;)


What are the
next steps?

Install it, test & report issues



DB

- + webapp
- + Elasticsearch
- + (optional) Kibana

 geonetwork-opensource.org/downloads.html



Download GeoNetwork

Releases

- [v4.0.0-alpha.1](#)
- [v3.10.2 \(Current release\)](#)
- [v3.10.1](#)

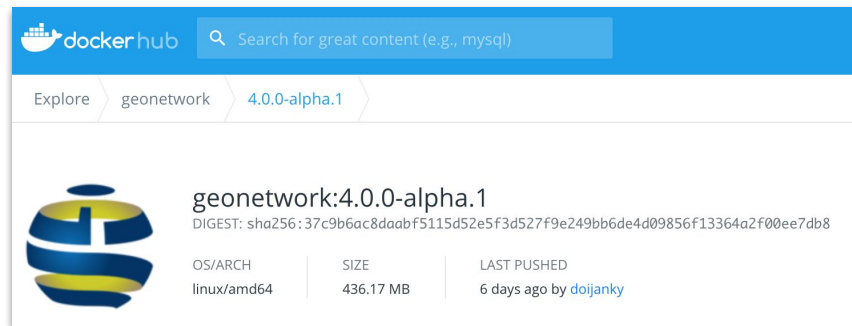
Start it with docker, test & report issues

Run Elasticsearch

```
docker run -p 8080:8080 Geonetwork:4.0.0-alpha
```

And open <http://localhost:8080/geonetwork/>

Or deploy ES+GN+PG+kibana using [docker-compose.yml](#)



Some features
are not there
yet?

Yes,

some even completely removed!

Deprecated features removed

The new generation of GeoNetwork removed some of the previously deprecated functionalities.

Impact on User Interface is minimal, it mostly relates to unavailability/move of deprecated service endpoints.

q search service is removed. Use `/api/search`

- CSW / Virtual CSW is replaced by sub-portal (see [Portal configuration](#))
- CSW / results_with_summary custom GeoNetwork output schema is removed. To retrieve facets use the main search API.
- Deprecated Jeeves services removed (ie. services not used by Angular application like harvester config). Use the swagger API instead (see [GeoNetwork API](#)).
- Metadata notifier manager (can be replaced by event system)
- Overrides mechanism of configuration file

OpenAPI

GeoNetwork 4.0.0 OpenAPI Documentation 4.0.0 OAS3

../srv/api/doc

This is the description of the GeoNetwork OpenAPI. Use this API to manage your catalog.

[GeoNetwork user mailing list - Website](#)

[Send email to GeoNetwork user mailing list](#)

GPL 2.0

[Learn how to access the catalog using the GeoNetwork REST API.](#)

Servers

{catalog}/{portal}/api - My GeoNetwork ▾

Computed URL: `http://localhost:8080/geonetwork/srv/api`

Server variables

catalog

`http://localhost:8080/geonetwork` ▾

portal

`srv` ▾

usersearches User custom searches operations

GET

/usersearches/all Get user custom searches for all users (no paginated)

GET

/usersearches/allpaginated Get user custom searches for all users (paginated)

So what is still
missing?

Which features to add before 4.0.0 release?

See

- <https://github.com/geonetwork/core-geonetwork/issues/4727>
- <https://geonetwork-opensource.org/manuals/4.0.x/en/overview/change-log/version-4.0.0-alpha.1.html#what-is-next>

Elasticsearch migration / List of missing or new features to implement. #4727



txprunayre opened this issue 26 days ago · 0 comments



txprunayre commented 26 days ago · edited ·

Member



Following #2830 some GN3 features are not yet available. This issue is a draft list of what is missing and what could be improved:

Features removed

- CSW / Virtual CSW is replaced by sub-portal (see [Portal configuration](#))
- CSW / results_with_summary custom GeoNetwork output schema is removed. To retrieve facets use the main search API.
- Deprecated Jeeves services removed (ie, services not used by Angular application like harvester config). Use the swagger API instead (see [GeoNetwork API](#)).
- Metadata notifier manager (can be replaced by event system)
- Overrides mechanism of configuration file

Existing features not implemented

UI

- ☐ Home / Icon for facet like topics and resource type (to be defined how to convert label to icon)
- ☐ Search / Active filters

Africa

Active filters

Remove all filters

YEARS 2000

AVAILABLE ACTIONS Viewable

KEYWORD World

FULL TEXT Africa

No results found!

Assignees

No one—assignees

Labels

None yet

Projects

None yet

Milestone

No milestone

Linked pull requests

Successfully close this issue

None yet

Notifications

You're receiving notifications from this issue

You're receiving notifications from this issue

1 participant



Lock conversation

Pin issue

Transfer



GeoNetwork
open source

Mid-day survey to collect your interest

What MUST be in 4.0.0?



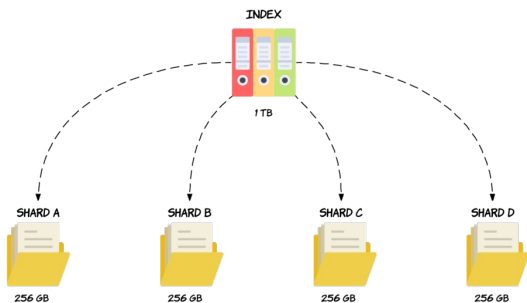
GeoNetwork
open source

Thank you

And we have demo that you can play with <https://apps.titellus.net/geonetwork/>

Scaling and Sharding

- Elastic is a separate process, which by design has scaling and sharding options.
- Any number of GeoNetwork instances can run on top of an Elastic Index.
- Elastic can scale by replicating the index over multiple nodes and load balance the traffic to each of the nodes, while synchronising the content.
- Elastic can split (shard) the index over multiple nodes, a search query is fired to each of the nodes. The partial result sets are then merged.



OGC API Records

Standard currently under design at OGC as an alternative to CSW

- Uses similar technologies as current GeoNetwork API (Open API, JSON, content negotiation)
- Facets will be an extension, we should contribute GeoNetwork experience on this topic

Authorisation

Elastic provides an authorisation mechanism similar to GN, with roles in groups. GeoNetwork could adopt this authorisation model.

This allows third party tooling (such as kibana) to engage with the index directly, while benefiting from the authorisation provided by elastic.

Do we still need a database?

In GN<4 the most important use of the database is to provide a backup for metadata (if the lucene index is corrupted, it can be recompiled from the database), facilitate autorisation and manage spatial filters.

In GN4

- Index can have its own backup mechanism.
- Spatial filters are managed by index
- Authorisation aspects should be included in (or delegated to) index

Other aspects which are stored in the database can be stored in the index, such as user feedback, search statistics. Or in config files, e.g. settings, translations.