

State and future of GeoNetwork

A brief introduction - Virtual workshop Geodata Discoverability

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GEONETWORK
ENTERPRISE

Commercial product support as expected by professional customers + the value of FOSS



GEOSERVER
ENTERPRISE

Utility to simplify the publishing process from the desktop



BRIDGE
ONE CLICK DATA PUBLISHING

Fully managed SDI in the cloud



LIVE
SERVER

Table of contents

- Introduction to GeoNetwork
- Two versions - transition phase
- Towards a microservices architecture
- Harvester and Link checker components
(Developments for the INSPIRE Geoportals)
- Some other developments



GeoNetwork
opensource

data
jump metadata open standard
infrastructure
meta-data policy spatial information share geospatial
like go data sharing meta data ogc
database

Project History

- Started in 2000 at Food and Agriculture Organization (UN) by me (Jeroen Ticheler)
- Code and issues on github
- ~1000 downloads per month
- ~85% of the current national INSPIRE end-points
- Active global developer and user community

GeoNetwork: Search and Discovery

Catalog to manage and expose spatially referenced resources.

- Share, organize and categorize resources.
- Made for records that describe geospatial data, geospatial services, and related resources.
- Facilitate discovery of spatial resources (datasets/services) in any spatial data infrastructure.
- Supports a wide variety of metadata standards.

GeoNetwork Technology

- Free Software (GPL)
- Standards Based
 - CSW Service and other OGC standards
 - ISO19139, HNAP, DCAT, INSPIRE metadata profiles

Browser: nationaalgeoregister.nl

Nationaal georegister

NGR Nationaal Georegister

Contact Help

Home Zoeken Kaart Voor ontwikkelaars Over NGR Actueel Inloggen

Home / Zoeken / BRT Achtergrondkaart

Terug naar zoeken < Vorig Volgende >

Download Weergave

BRT Achtergrondkaart

Brontype: Dataset

De BRT Achtergrondkaart is afgeleid uit TOP10NL uit de Basisregistratie Topografie (BRT). De BRT Achtergrondkaart is beschikbaar in vier verschillende thema's: standaard, grijs, pastel en water. Vanaf april 2021 wordt het buitenland transparant weergegeven. Hierdoor is het mogelijk om een andere, internationale kaartlaag naar keuze 'onder' de BRT Achtergrondkaart te leggen waardoor het kaartbeeld over de grens doorloopt. De BRT Achtergrondkaart wordt ontsloten in de projecties: EPSG 28992 (RD), EPSG 25831 (ETRS89 UTM zone 31N) en EPSG 3857 (WGS84 WebMercator).

Beschrijving Contact gegevens Downloads, views en links

Downloads, views en links

WMTS view service BRT achtergrondkaart, alle varianten Voeg aan kaart toe

Deze dataset is gepubliceerd in de view service (WMTS) https://service.pdok.nl/brt/achtergrondkaart/wmts/v2_0?request=getcapabilities&service=wmts met identificatie WMTS view service BRT achtergrondkaart, alle varianten.

WMTS view service BRT achtergrondkaart, alle varianten. Deze viewservice wordt in oktober 2021 uitgefaseerd en tot die tijd niet meer bijgewerkt. Voeg aan kaart toe

Deze dataset is gepubliceerd in de view service (WMTS) <https://geodata.nationaalgeoregister.nl/tiles/service/wmts?request=GetCapabilities> met identificatie WMTS view service BRT achtergrondkaart, alle varianten. Deze viewservice wordt in oktober 2021 uitgefaseerd en tot die tijd niet meer bijgewerkt..

Downloads, views en links

BRT achtergrondkaart Grijs WMTS Gerelateerde service

De achtergrondkaart PDOK is de kaartlaag waarop locatiegebonden content wordt afgebeeld. De achtergrondkaart moet ervoor zorgen dat de eindgebruiker zich kan oriënteren tijdens het gebruik van geografische applicaties. Data automatisch gegeneraliseerd op basis van TOP10NL.... meer...

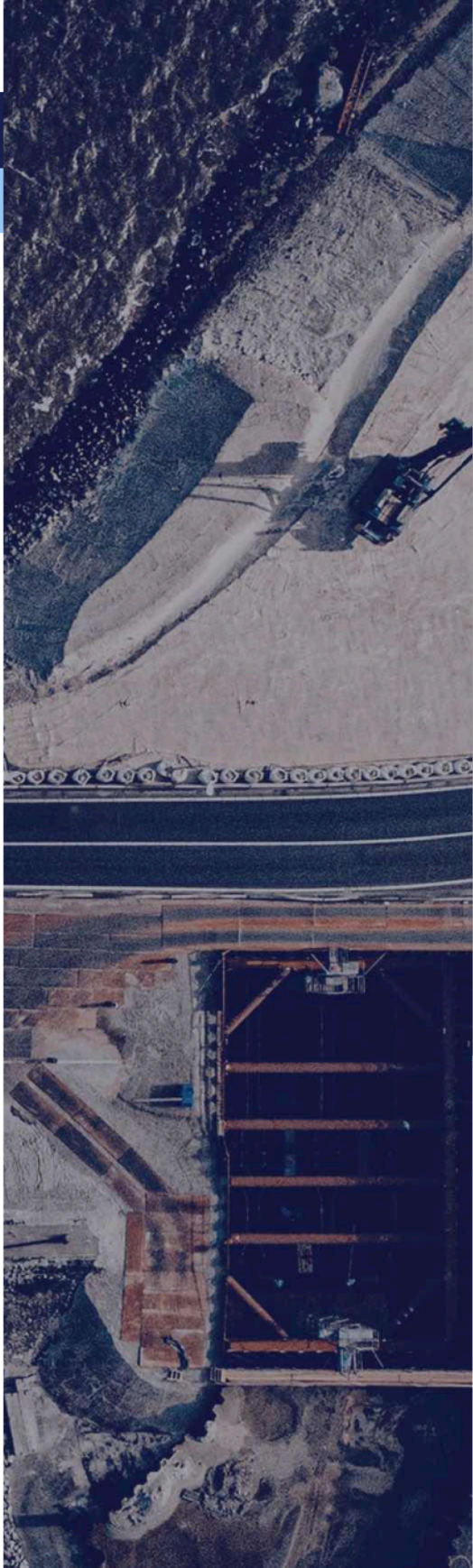
BRT achtergrondkaart Pastel WMTS Gerelateerde service

Overzicht

large_thumbnail

thumbnail

Ruimtelijke dekking




Powerful Metadata Editor

Tiendwegen Categories ▾ Group ▾ Validate Cancel Save & close Save metadata

Validation

Overview



Choose or drop an image here

Associated resources

+ Add ▾

Online resources

Sort by Protocol ▲ Url Title

- OGC:WMS <https://services.rce.gevoorziening.nl/landschap/tiendwegen>
- OGC:WFS <https://services.rce.gevoorziening.nl/landschap/tiendwegen>

Identification info

Title *

Date *

Citation identifier

Code *

Abstract *

Purpose

Status

Point of contact

Organisation name	Individual name	Electronic mail address	Role
-------------------	-----------------	-------------------------	------

Administrative Interface

The screenshot displays the Geonetwork Enterprise Administrative Interface. At the top left is the Geonetwork Enterprise logo. The top navigation bar includes links for Search, Map, Contribute, and Admin console (which is currently selected). On the top right, the user is identified as 'admin admin ADMINISTRATOR' and the language is set to 'English'.

The main dashboard area features a row of eight icons representing different administrative functions: Metadata and templates, Users and groups, Harvesting, Statistics and status, Reports, Classification systems, Settings, and Tools. Below this row are several summary cards showing counts for different categories:

- Dataset: 32
- Service: 7
- service-download: 4
- service-view: 2
- Feature catalog: 1
- service-OGC:WMS: 1

Below the 'Service' card, there is a green highlighted card for 'records in the catalog' with a count of 41. To the left of this card is another card for 'RI_623' with a count of 1.

A left-hand sidebar contains a list of navigation items: Summary (highlighted), Metadata and templates, Users and groups, Harvesting, Statistics and status, Reports, Classification systems, Settings, and Tools.

Two versions - transition phase



GeoNetwork v3

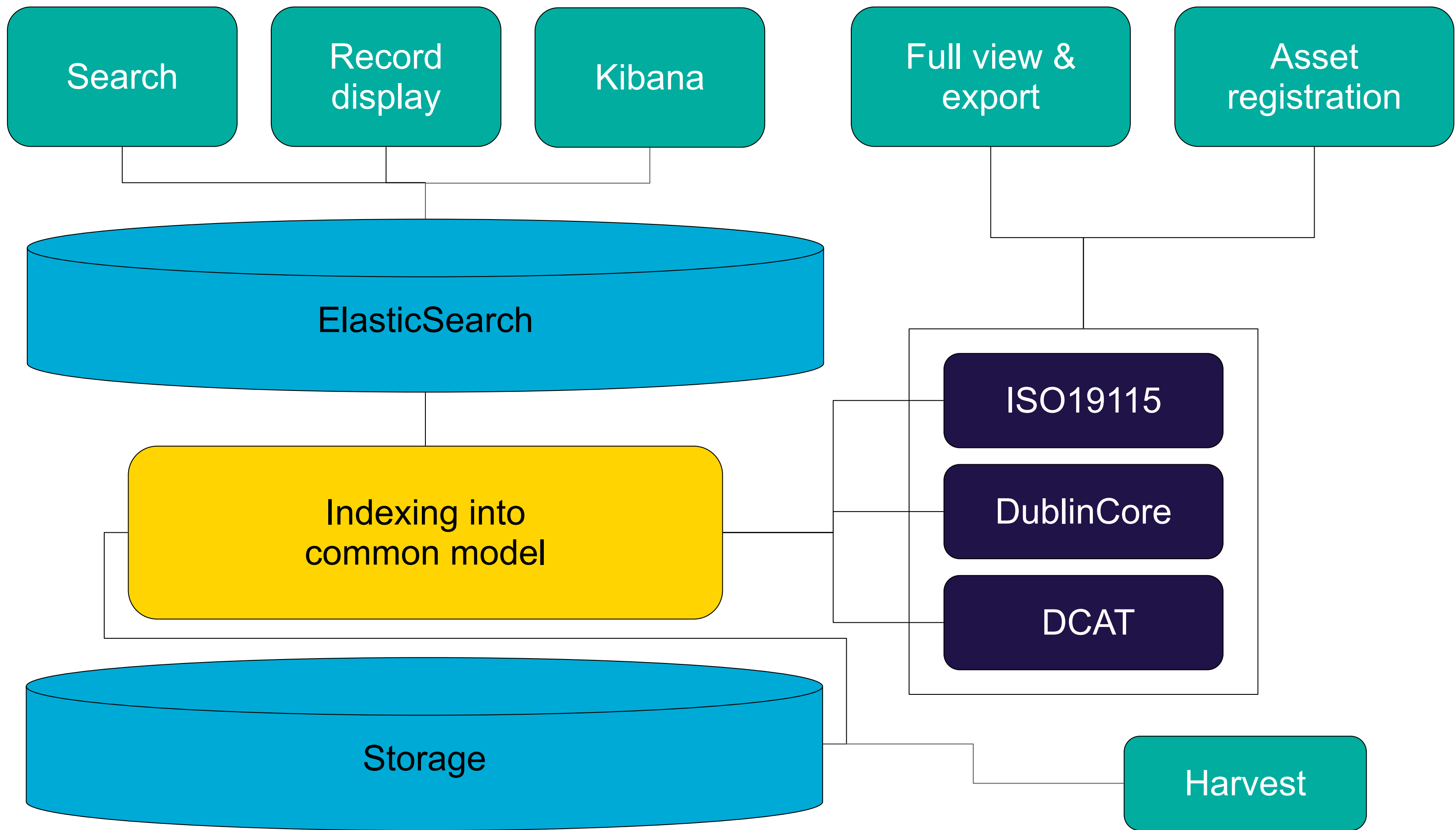


GeoNetwork v3

- Multilingual metadata support
- Stable application
- Frequent patch releases with limited new functionality

GeoNetwork v4





Benefits: Search, search, search

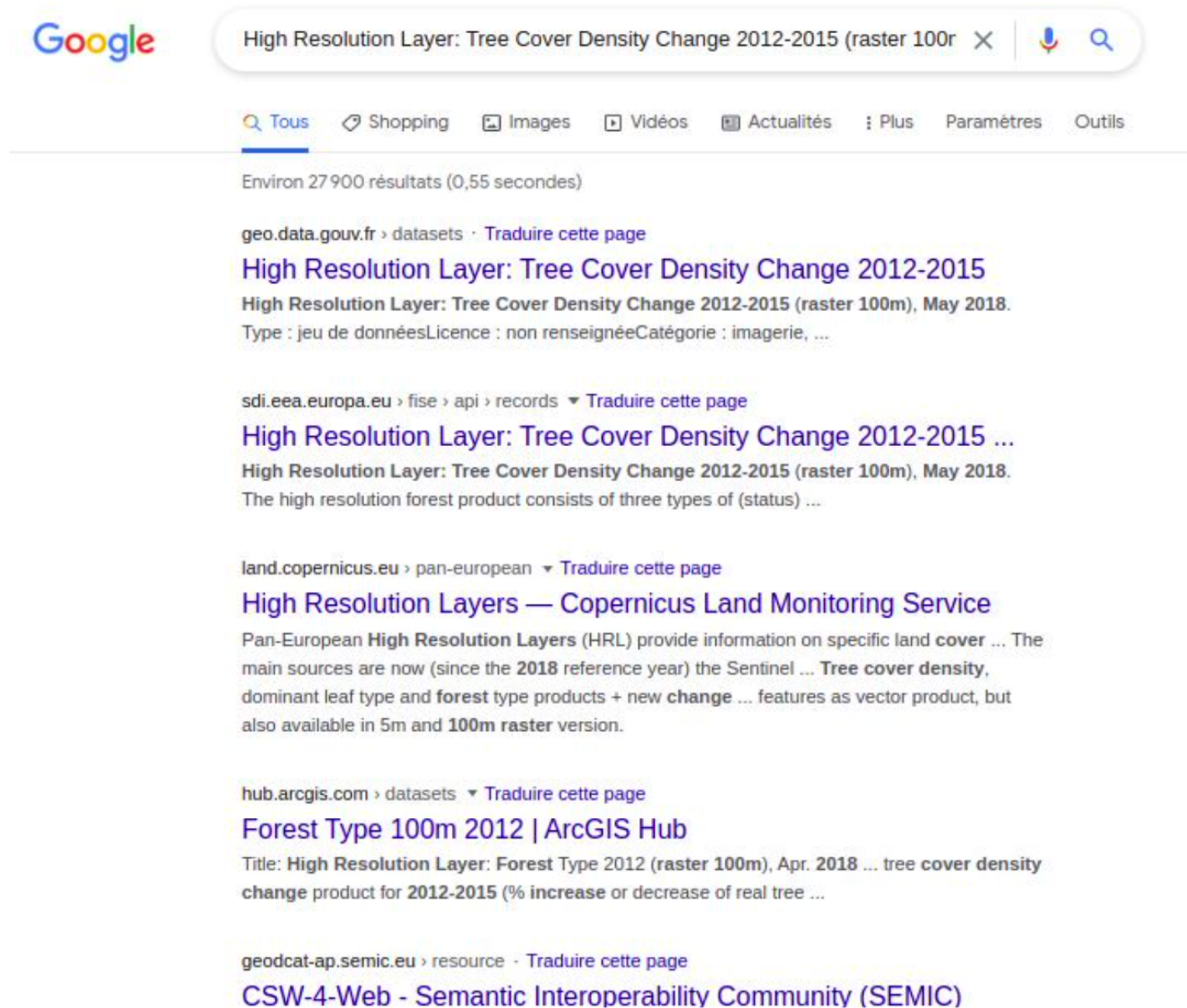
- Better search results
- Spatial search *within* index
- >10 times faster (and smaller)
- Improved autocomplete
- Run index separately (scalability)

OGC:API Records

- Alternative to Catalog Service for the Web
- OGC API Records is implemented on top of GeoNetwork v4
- Implementation requires refactoring while the standard evolves

OGC:API Records - Improve discoverability

Search GIS data
→ Find GIS data



The screenshot shows a Google search interface with the following elements:

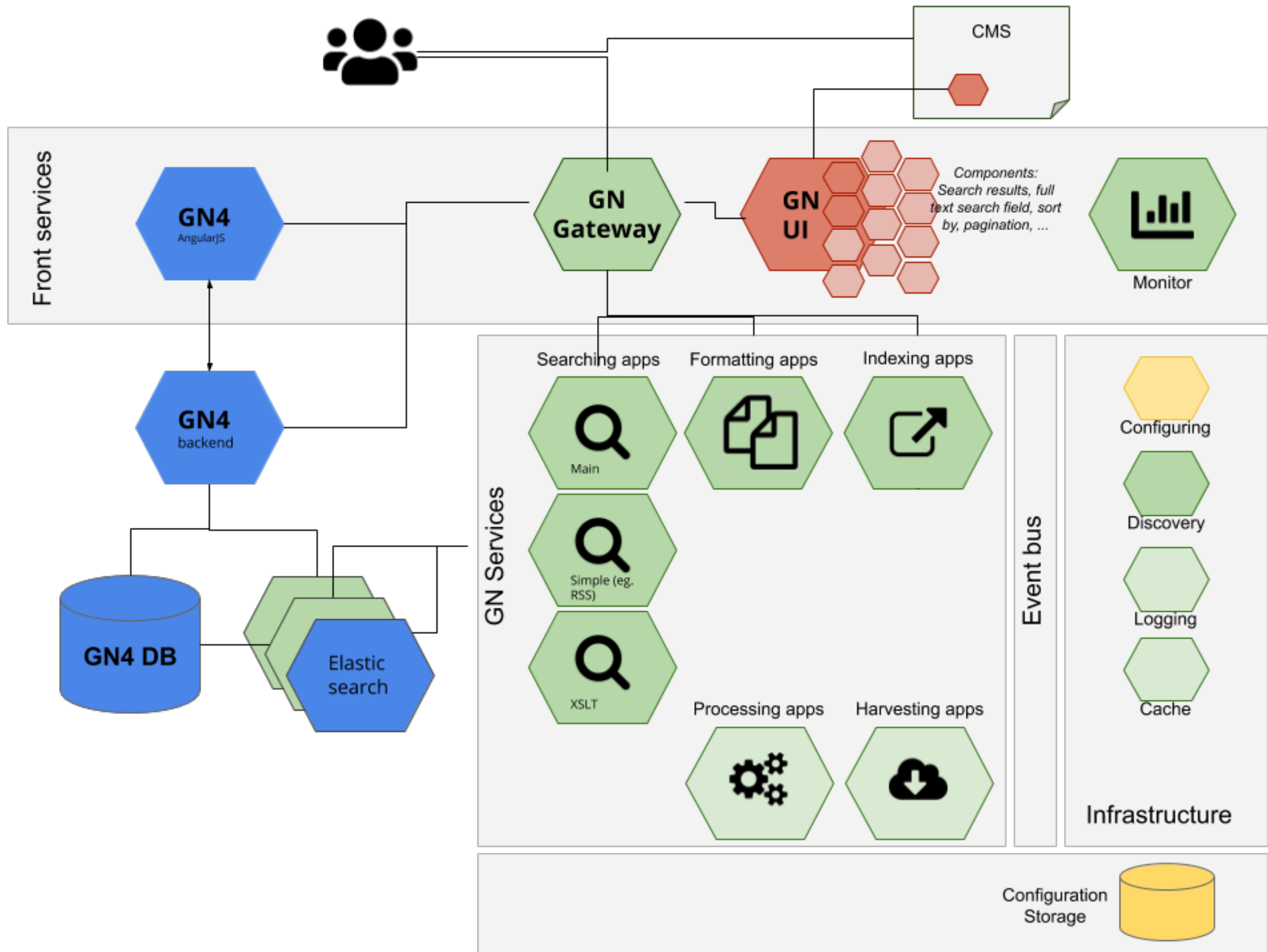
- Search Bar:** Contains the text "High Resolution Layer: Tree Cover Density Change 2012-2015 (raster 100r" and includes a search icon and a close button.
- Navigation:** Includes links for "Tous", "Shopping", "Images", "Vidéos", "Actualités", "Plus", "Paramètres", and "Outils".
- Results:** Shows approximately 27,900 results in 0.55 seconds. The top results are:
 - geo.data.gouv.fr**: "High Resolution Layer: Tree Cover Density Change 2012-2015" (raster 100m), May 2018. Type: jeu de données. Licence: non renseignée. Catégorie: imagerie, ...
 - sdi.eea.europa.eu**: "High Resolution Layer: Tree Cover Density Change 2012-2015 ..." (raster 100m), May 2018. Description: "The high resolution forest product consists of three types of (status) ..."
 - land.copernicus.eu**: "High Resolution Layers — Copernicus Land Monitoring Service". Description: "Pan-European High Resolution Layers (HRL) provide information on specific land cover ... The main sources are now (since the 2018 reference year) the Sentinel ... Tree cover density, dominant leaf type and forest type products + new change ... features as vector product, but also available in 5m and 100m raster version."
 - hub.arcgis.com**: "Forest Type 100m 2012 | ArcGIS Hub". Title: "High Resolution Layer: Forest Type 2012 (raster 100m), Apr. 2018 ... tree cover density change product for 2012-2015 (% increase or decrease of real tree ..."
 - geodcat-ap.semic.eu**: "CSW-4-Web - Semantic Interoperability Community (SEMIC)"

You need to get involved!

Early participation is critical for a good standard development

Towards a microservices architecture

Towards micro services



Microservices benefits

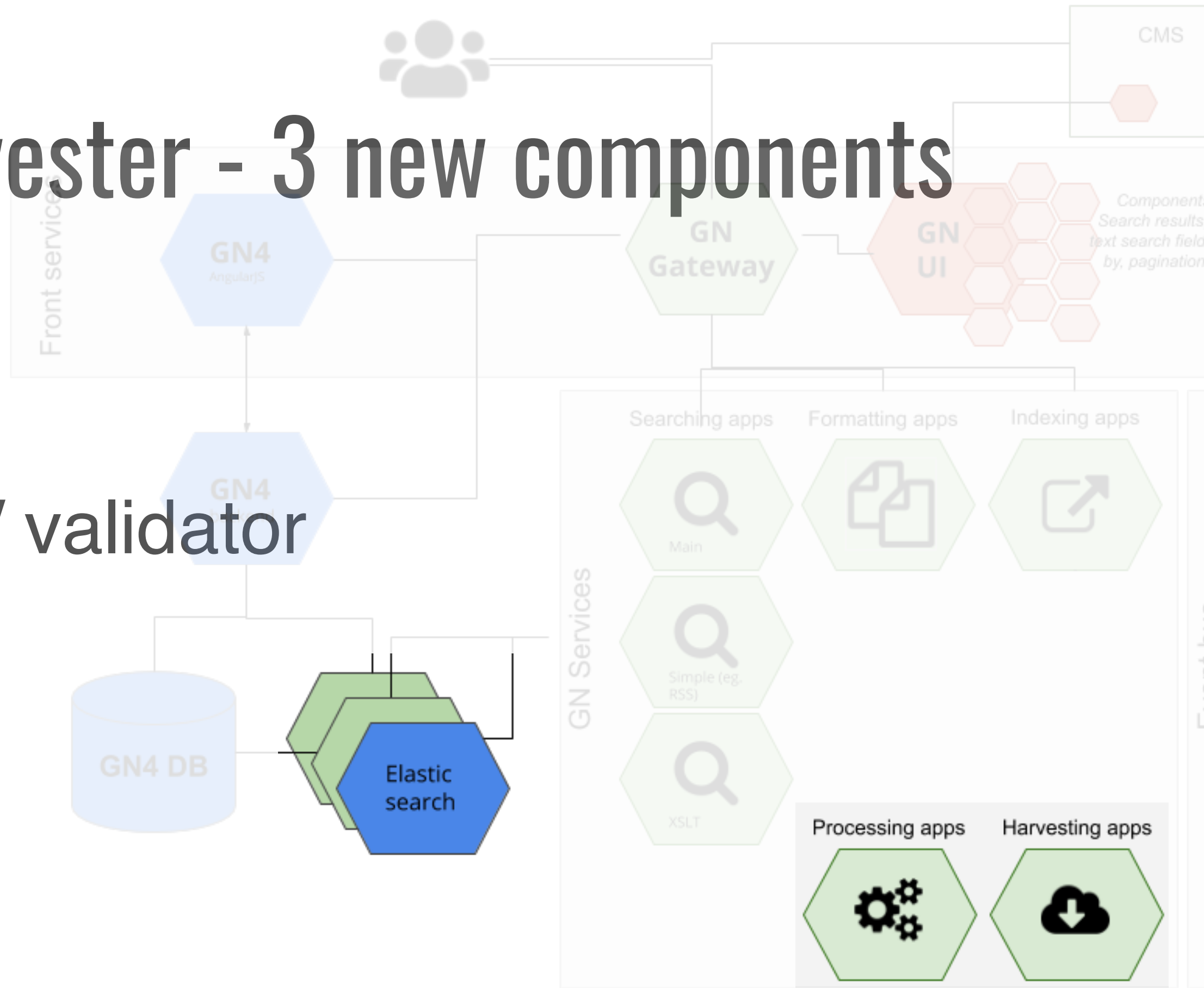
- Background tasks resource management
- Mix and match components
- Scalability
- Happy DevOps
- Refactoring of monolithic application

Developments for the INSPIRE Geoportal



Super Harvester - 3 new components

1. Harvester
2. Link checker / validator
3. Ingest engine



New harvester - standalone application

Previous 4 / 4 Next

+ Harvest from ▾ Clone ▾ ↻

- ArcSDE
- Directory
- GeoNetwork (2.0)
- GeoNetwork (from 2.1 to 3.x)
- GeoPortal REST
- OAI/PMH
- OGC CSW 2.0.2
- OGC CSW 2.0.2 (remote harvester)**
- OGC Web Services
- OGC WFS GetFeature
- Thredds catalog
- WebDAV / WAF



Harvest status ▶ Harvest

Settings Harvester history **551 Metadata records**

▼ Summary

551
Metadata records

▼ Filter

Type of resources ▾

- Dataset (213)
- Service (336)
- series (2)

Available in ▾

63
Download service

58
View service

Harvester for INSPIRE end points

- Catalog harvesters
- Catalog harvester report
- Feature harvesters

Harvester

Harvester		
AT (OGC CSW 2.0.2 (remote harvester)) Last run : a day ago (2022-04-26, 18:13:40) Harvested records <table border="1"><tr><td>Total</td></tr><tr><td>1237</td></tr></table>	Total	1237
Total		
1237		
BE-GEO (OGC CSW 2.0.2 (remote harvester)) Last run : a day ago (2022-04-26, 18:13:45) Harvested records <table border="1"><tr><td>Total</td></tr><tr><td>144</td></tr></table>	Total	144
Total		
144		
BE-GEOBRU (OGC CSW 2.0.2 (remote harvester)) Last run : a day ago (2022-04-26, 18:13:48) Harvested records <table border="1"><tr><td>Total</td></tr><tr><td>106</td></tr></table>	Total	106
Total		
106		
BE-VLAANDEREN (OGC CSW 2.0.2 (remote harvester)) Last run : a day ago (2022-04-26, 18:13:52) Harvested records <table border="1"><tr><td>Total</td></tr><tr><td>0</td></tr></table>	Total	0
Total		
0		
BE-WALLONIE (OGC CSW 2.0.2 (remote harvester)) Last run : a day ago (2022-04-26, 18:13:56) Harvested records <table border="1"><tr><td>Total</td></tr><tr><td>212</td></tr></table>	Total	212
Total		
212		

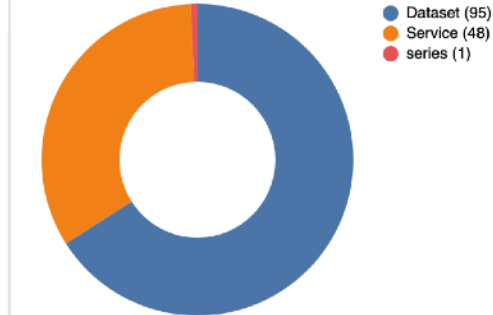
Summary

Last run : a day ago (2022-04-26, 18:13:45)

144
Metadata records

Filter

Type of resources



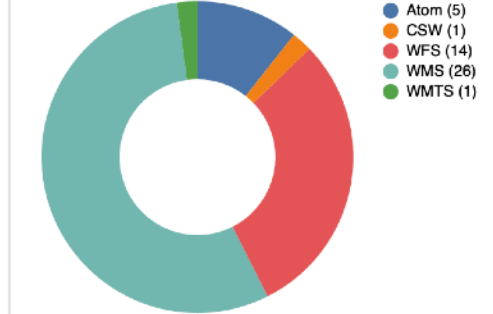
Available in

82 Download service

78 View service

Capabilities type

If > 1 capabilities, then the most common type (WMS/WFS/WMTS/ATOM) is displayed. If there is an equal number, then choose any one.



Link checker application

Result of harvest job

Any linked capabilities document has a link to a Service Metadata Record. ▼
 PASS if ANY linked capabilities document has a link to a Service Metadata Record that resolves to a Service Metadata Record.

✔ **33**
PASS

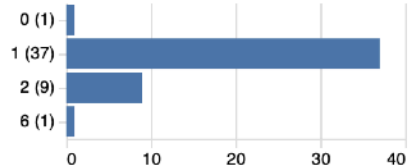
✘ **15**
FAIL

Any linked capabilities document's Service Metadata Record has the same file identifier. ▼
 PASS if ANY linked capabilities document's Service Metadata Record has the same file identifier as our starting service metadata record.

✔ **33**
PASS

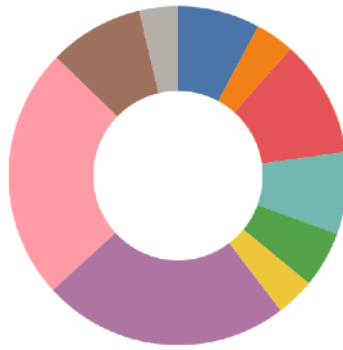
✘ **15**
FAIL

Resolves to Capabilities ▼
 Number of links that resolve to a capabilities document. PASS if > 0



Number of links	Count
0	1
1	37
2	9
6	1

Keywords ▼



- Belgian part of the North Sea (47)
- Federal Atom (22)
- Federal government (67)
- Greater North Sea, incl. the Katte...
- Land and natural area cover and ...
- Marine Strategy Framework Direc...
- National (141)
- Reporting INSPIRE (144)
- federal government (54)
- marine monitoring (22)

[more](#)

Result per record

Link analysis

All the Capabilities Layer links resolved. i	FAIL
All OperatesOnLinks Dataset Metadata documents match a document. i	FAIL
All OperatesOnLinks resolve to a Metadata document. i	PASS
Any linked capabilities document has a link to a Service Metadata Record. i	FAIL
Any linked capabilities document's Service Metadata Record has the same file identifier. i	FAIL
Any linked capabilities document's Service Metadata Record has same file identifier and XML documents. i	FAIL
Resolves to Capabilities i	0

Harvester history

Harvester

Filter

■ ■ IT (OGC CSW 2.0.2 (remote harvester))

Last run : a day ago (2022-04-26, 18:14:45)

Harvested records

Total

8146

■ ■ LI (OGC CSW 2.0.2 (remote harvester))

Last run : a day ago (2022-04-26, 18:31:23)

Harvested records

Total

74

■ ■ LT (OGC CSW 2.0.2 (remote harvester))

Last run : a day ago (2022-04-26, 18:31:25)

Settings

Harvester history

8145 Metadata records

Harvester history

✕ Delete



8146 record(s) harvested in 4882 seconds

📄 Log file

🕒 a day ago

◦ total: 8146



8146 record(s) harvested in 4364 seconds

📄 Log file

🕒 2 days ago

◦ total: 8146



8115 record(s) harvested in 46133 seconds

📄 Log file

🕒 20 days ago

◦ total: 8115

«

<

1 / 4 of 12 record(s)

>

»

Some other developments

Data Catalog Vocabulary (DCAT)

- DCAT is a metadata standard from W3C to describe datasets
- De facto core standard for metadata, many sector standards are based on it
- OGC will likely adopt DCAT as a base for upcoming metadata standards
- DCAT had a second release, incorporating some spatial aspects
- GeoNetwork contains a DCAT schema-plugin (optional install)

Open Data support

- GeoDCAT2-AP output
- DCAT2 plugin
 - Templates
 - Schemas
 - Indexing
 - Simple editor
- Dataviz via GN-UI

Dataset (in DCAT2) Categories ▾

▼ Main information

Title
Dataset (in DCAT2)

Description

Themes
Energy x Environment x
Search ...

Tags/Keywords

Access rights
public x

▼ Contacts

2022 Proposal: a new metadata editor (camptocamp)

Catalogue > Référencer un jeu de donnée

Description générale

Informations de contact

Distribution de la donnée

Conditions d'accès et d'usage

Informations détaillées

5 éléments remplis sur 18
Encore 3 éléments obligatoires à remplir

Identifiant
Vous pouvez modifier manuellement cet identifiant si vous le souhaitez **obligatoire**

FR-12345-ABCDEF-XXXX-YYYY

Titre
Décrivez le jeu de donnée de manière succincte. **obligatoire**

Description
Description complète. L'utilisation de [Markdown](#) est permise. **obligatoire**

Date de création
Date à laquelle la donnée a été initialement produite

Date de modification
Date de dernière modification du jeu de donnée

Affiche un avertissement si l'identifiant n'est pas valide/déjà pris

Affiche un avertissement si le titre est trop long (ex. > 200 caractères)

Affiche un avertissement si la description contient du HTML ou des balises interdites

Possibilité de voir un aperçu (comme github)

Un clic sur cette mention envoie sur le premier champ obligatoire non rempli

Contact me for more information



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