

OpenSearch API for Earth Observation DataHub service



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NextGEOSS DataHub is powered
by



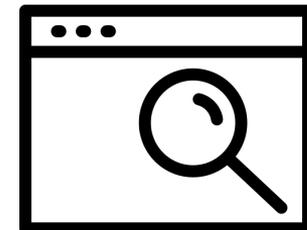
1 OpenSearch – An introduction

2 OpenSearch CKAN
Plugin/OpenSearch API for CKAN

3 2-Step Search

4 Future Improvements

OpenSearch is a collection of technologies that allow websites and search engines to publish search results in a standard and accessible format

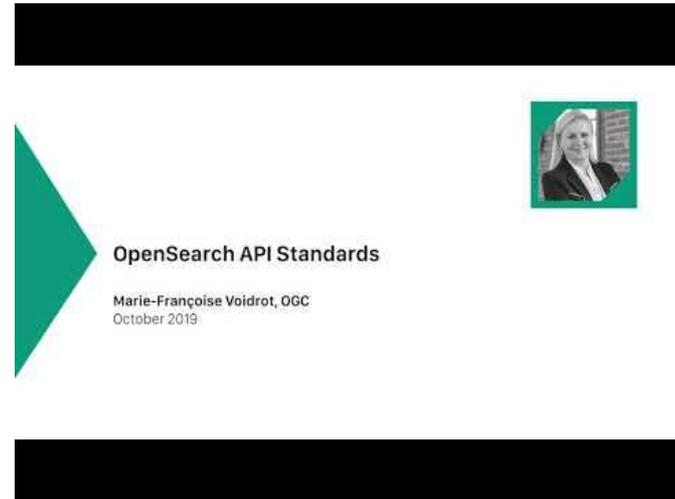




Since OpenSearch is so important to the EO community, the the Open Geospatial Consortium (OGC) published the **OpenSearch Geo and Time extensions standard** to the query protocol to provide a very simple way to make spatial and temporal queries to a repository of geospatial content



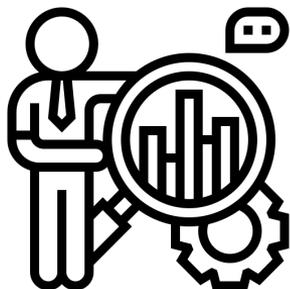
In this video, Marie-Françoise of the Open Geospatial Consortium (OGC), e-shape and partner in NextGEOSS, talks about **the background of the OpenSearch API from a standards point of view** and **a good open API for systems of systems**.



The NextGEOSS Datahub is based on **CKAN**, a fully-featured, mature, open source data management solution.

The **CKAN** architecture is specially designed to enable and encourage the creation and use of plugins to enhance and extend the platform's feature and functionality. All the plugins are freely available and open source and can themselves be modified and extended.

OpenSearch has been **implemented in the NextGEOSS Data Hub** to support client applications and developers who need a standard-based way of interacting with it



A screenshot of a web browser displaying the GitHub repository page for 'ckanext-opensearch'. The address bar shows 'github.com/NextGeoss/ckanext-opensearch'. Below the address bar, the repository name 'ckanext-opensearch' is displayed, along with a green 'build passing' badge. The page content includes a 'README.md' tab, the repository title 'ckanext-opensearch', a description stating 'ckanext-opensearch adds an OpenSearch interface to CKAN.', an 'About' section, and a paragraph explaining that the extension adds three endpoints to a CKAN portal: 'opensearch/description.xml?', 'opensearch/search.atom?', and 'opensearch/collection_search.atom?'. Each endpoint accepts a query and returns an XML document.

The OpenSearch extensions that have been implemented for the NextGEOSS DataHub are following the OGC standards and were validated to be fully compatible with the standard.

↳ The correct implementation of OpenSearch, following standards and compliance tests, allows us to easily integrate with other systems

OpenSearch Time Version 1.0 Draft 1						Score: 100.00%
Validation	Rule	Status	Remarks	Further Information	Score	
1	Time end parameter	Pass	None	None	5	
2	Time namespace is present	Pass	None	None	5	
3	Time start parameter	Pass	None	None	5	



OpenSearch Parameter extension Version 1.0 Draft 1						Score: 100.00%
Validation	Rule	Status	Remarks	Further Information	Score	
1	Parameter attributes	Pass	None	None	5	
2	Url method	Pass	None	None	5	
3	Url enclype	Pass	None	None	5	
4	Param namespace	Pass	None	None	5	

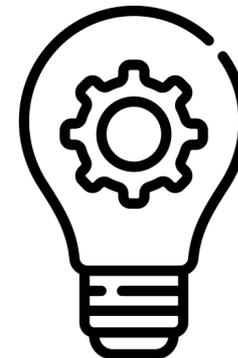


Federation of Earth Science Information Partners (ESIP) OpenSearch Best Practices						Score: 100.00%
Validation	Rule	Status	Remarks	Further Information	Score	
1	Presence of parent link element in collection level result	Pass	None	None	5	
2	Categorization of link elements in res	Pass	meet.google.com is sharing your screen.	None	5	



How does it work?

- A general **description document** is provided with information about the **collections** that are available for searching.
- For each collection there is a separate description document providing further information about the collection specific parameters.



More information available at:

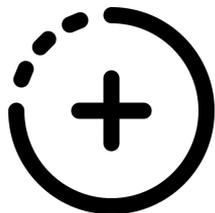
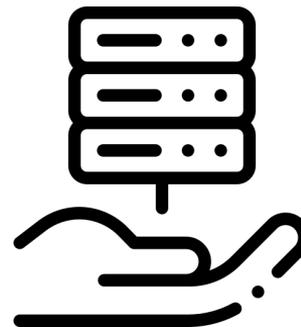
<https://catalogue.nextgeoss.eu/opensearch>

- If you are not very familiar with OpenSearch and you need an OpenSearch response, you can visit the Data Hub and **create your query from the UI**
- The Data Hub search page, provides an **OpenSearch button**, which translates all your filtering and searching on the UI to an OpenSearch API

OpenSearch matching query

We are constantly adding more data connectors to our portal and new collections that will become available through the OpenSearch API.

This will allow us to provide a variety of data for the users and accommodate their needs



Additional collections are planned to be added to the datahub

 Visit NextGEOSS.eu for more information

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Thank you!



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