C-SCALE

Copernicus – eoSC AnaLytics Engine

The Metadata Query Service

Discovering EO data across the federation

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Service Introduction

MQS (Metadata Query Service)

- Evolved from the original plan to federate Copernicus Data providers within C-SCALE
  - Federation in terms of **access** has been covered in the previous talk
  - **Discovery** across the federation a major goal
  - **Avoid** creating yet another matadata catalogue!
- Main premise: partners already know where their data are
  - Bring their discovery interfaces under a common one
    - single point
    - shared protocol
  - describe their datasets and data retention policies
  - use that to pre-select candidates and redistribute user queries

Datasets and Retention Policies

- Grasp the fact that different partners have different data
  - National archives (full history, limited area)
  - Discipline archives (limited selection of product types, varying retention time)
  - Redistribution services (global coverage, short retention)
  - Big players (ambition to build global archive)

$\Longrightarrow$ Not every query needs to be redistributed to every partner

- Understand the query, select matching providers
- Currently taking into account only product type
  - *Area* and *time* filters not yet applied

Providers' Catalogue

- Called the *EO Resource Catalogue* initially $\rightarrow$ confusion
- Has **only** provider information, not data (product) information
  - Partners
  - Contacts
  - Services
  - Endpoints
- Adopting the well known GOC-DB (`https://goc.egi.eu/`)
  - The "Grid Configuration Database", put to new uses
  - Keep track of members and relevant service endpoints

    `https://goc.egi.eu/gocdbpi/public/?method=get_service_endpoint&scope=C-SCALE`
  - Originally also intended for datasets and retention policies, but the choice of protocol changed that

Choosing the Common Protocol

- Chose from those already used in the federation?
  - OpenSearch, OData, CWS, STAC
  - Then implement translation
- **STAC** selected
  - modern protocol
  - lots of products supporting it
  - active community
  - `https://mqs.eodc.eu/stac/v1/`
- Side effect!
  - Greater granularity wrt. OpenSearch or CWS
  - Canot stay completely true to original intention not to build YAMC
    - Required detail simply not available in existing DBs

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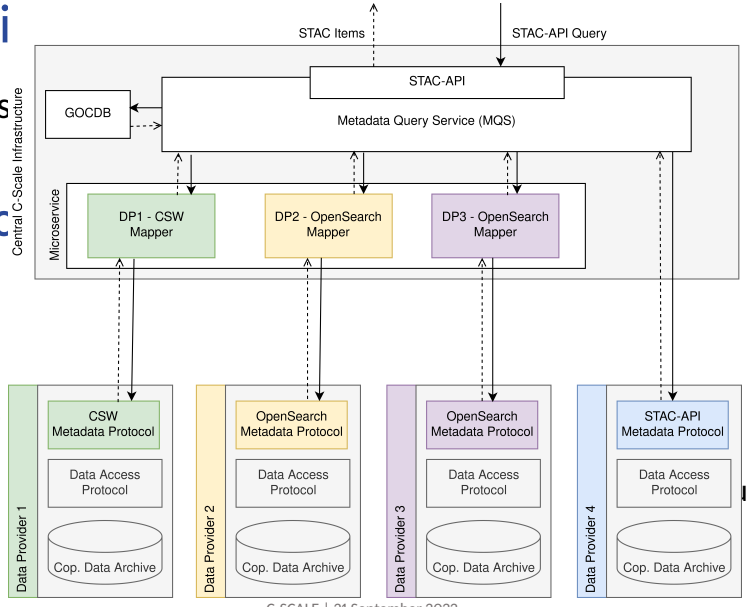

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Challenges

- Standardized STAC Collections structure?
  - At least for members who are building new STAC databases, it might make sense to use a common collection structure
  - Developing now
- Paging
  - How to handle item paging when multiple backends respond?
  - Cache and collate own pages? Send more than the query asked for?

Thank you

Questions any time

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