CoMET API for Machine-to-Machine Operations

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National Oceanic and Atmospheric Administration | NOAA Satellite and Information Service
NCEI’s Open Data Framework

Data Producers and Operators

Collection Manager
- CEdit
- CoMET
- Metaserver
- Rubrics
- DocuComp
- Collection M/D

Inventory Manager
- M/D Event Log
- workflows

Common Ingest
Data Streams
- S2N + ATRAC

Data Managers

Order Fulfillment + Access Services
- Storage Services
  - Tape
  - Disk
  - Cloud

MD Services
- Search Services
- Storage/Access Services

Public

External Systems
OneStop UI
Thin Portals

OneStop API/Search Engine
- Index
  - C
  - G

Ingest Services
Architecture of CoMET

Metadata Editor

Metadata Sources

Adaptors

RESTful Web API

Database

Templates

Validation

Rubric Tools

Metadata Destinations

ETL Tools
Overview of CoMET RESTful API

Metadata (6)
- import*
- update
- search*
- export*
- delete
- validate

Keyword (3)
- list vocabulary
- suggest*
- reload

Authentication (2)
- login
- logout
Import API

POST /cedit/metadata/formManager

Query params: description, editState, transform (x3), format

Request body: XML document

Response: <createMetadataResponse>

  <message>success</message>
  <status>200</status>
  <uuid>81340e91-57cd-47f1-b097-ef25c63b8275</uuid>

</createMetadataResponse>
(Tentative) Metadata Workflow

- **Deleted**
  - Recover
  - Purge

- **In Draft**
  - Import
  - Create
  - Save
  - Commit
  - Revert
  - Export/View
  - Publish
  - Delete

- **In Review**
  - Approve
  - Reject

- **Approved**
  - Unpublish
  - Edit

- **Unpublished**
  - Edit

- **Recover**
- **Reject**
- **Edit**
- **Delete**
- **Publish**

- **Unpublish**
Search API

GET /cedit/metadata/search/formManager

Query params:  since, max, offset, editState, format
Request body:  not used
Response:  <searchMetadataResponse>
            <totalCount>304</totalCount>
            <createdOrModified>
              <uuid>81340e91-57cd-47f1-b097-ef25c63b8275</uuid>
            ...
            ...
Export API

GET /cedit/metadata/uuid

Query params: transform (x3), format
Request body: not used
Response: XML document
Keyword Suggest API

GET /cedit/keywords/vocabulary

Query params: type, term, max, version, format
Request body: not used
Response:

<suggestKeywordsResponse>
  <message>success</message>
  <status>200</status>
  <keywords>
    <kw>
      url="https://gcmdservices.gsfc.nasa.gov/static/kms/instruments/instruments.xml#00c994a8-64eb-4263-a3fa-85fd902bb91b">GTR</kw>
    </keywords>
  </suggestKeywordsResponse>
What is next?

• Let us know what more to be done.
Any Questions?

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CoMET: Collection Metadata Enterprise Tool

- **API-based**: external systems can manipulate metadata
- **Customizable Input forms**: different communities and different stages of the metadata lifecycle can have tailored input views
- **Extensible, format-neutral internal storage**: supports multiple standards and stakeholder requirements
- **Reusable components**: (like organizations and people) improves consistency and efficiency
- **Single Sign On**: goal is to use Login.gov

Testing underway! User feedback is essential!
Other Collection Manager Components

- **CEdit**: management framework for allowing easily customizable inputs forms without the need for additional software development
- **DocuComp**: system for managing reusable components of metadata, such as people and organizations
- **WAFs**: Web accessible folders for storing multiple exported views of the catalog
- **Rubrics**: services for testing the completeness and compliance of metadata
CoMET: Collection Metadata Enterprise Tool

- **Best Practices**: supports all NOAA “best practice” metadata (OneStop and Rubric V2)
- **Keywords and Vocabularies**: provides APIs and GUIs to support the use of common vocabularies (GCMD, CoRIS, etc.)
- **Version Control**: enable tracking and reporting, recover previous content
- **Coming Soon**:
  - Integrate with Inventory Manager
  - Groups and Roles (who can do what)
  - Workflow (edit, review, publish, retract)
  - 508 Compliance
  - Vocabulary and Component Guessing

Data Managers and Scientists

CoMET

Metadata Management Services