

YouCat: User Catalogue Service

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What is YouCat?

- a TAP service where users can create their own tables and load the content
- use case: relatively large and static content created by projects
- usage scenario:
 - create table
 - create indices (optional)
 - bulk load content
 - create indices (optional)
 - publicly visible via TAP-1.1 API
 - easily hosted by CANFAR in the Compute Canada Cloud

YouCat API

- REST API : basic table operations

GET /youcat/tables/{table_name}	VOSI-tables 1.1
PUT /youcat/tables/{table_name}	create table & add to tap_schema
POST /youcat/tables/{table_name}	update (append rows from stream)
DELETE /youcat/tables/{table_name}	drop table & remove from tap_schema

- PUT input: <vosi:table> or <votable>
- POST input:
 - currently: TSV or CSV (with header row present)
 - planned: VOTable, FITS table
 - all datatypes from DALI-1.1 and TAP-1.1 supported
 - values as specified in DALI-1.1

YouCat API

- REST API: extra operations

POST /youcat/table-update	table operation job (UWS, async)
TABLE={table_name}	table to modify (required)
INDEX={column_name}	create index on column
UNIQUE={column_name}	create unique index on column
SRC={URI to table data}	load rows from location (planned)

- exactly one optional param: job does one thing
- for INDEX or UNIQUE: single column indexes only
- will probably serialise multiple jobs on the same table

Shameless plug: OpenCADC code improvements

- Open source code to implement a TAP service
<https://github.com/opencadc/tap.git>
- recent enhancements:
 - moved the plugin that maps to RDBMS back end to cadc-tap-schema library (which contains the vosi-tables code)
 - implemented InitDatabaseTS that can create or update the tap_schema tables (and self-describing content) automatically
 - added update and delete support to TapSchemaDAO to manage dynamic table creation and deletion
 - implemented a general purpose TableCreator class to support the basic table operations
 - implemented a general purpose TableLoader class to support bulk load of content from an InputStream
 - added optional POST, PUT and DELETE support to VOSI-tables implementation

YouCat

- no standards were harmed
- yes, you need to authenticate to create/modify/drop tables
 - we allocate a “schema” to a user on request
 - currently support owner permissions (single user)
 - planning to allow owner to specify a group with write permission
- any interest in standardising this so tools can help people do it?
 - very little API to agree on

Interesting thought...

- copying a table (or subset of it) from another TAP service would be pretty easy:
- GET {other service}/tables/{table_name} → tn.xml
- PUT tn.xml → {youcat service}/tables/{table_name}
- POST {youcat service}/table-update/{table_name}
 - TABLE={table_name}
 - SRC={other service}/sync?LANG=ADQL&QUERY=select * from {table_name}&RESPONSEFORMAT=TSV
- POST {youcat service}/table-update/{jobID}/phase
 - PHASE=RUN
 -
- maybe create some indices

