



Users Management Custom UCDS admin Login

Credentials insertion page

Credentials	TAP_SCHEMA name	Version	Obscore	Obscore version	IVOA schema name	Login
localhost:3306 molinaro	gaps_ni_inh_schema	1.1-1A2	✓	1.1	ivoa	↻
localhost:3306 molinaro	niat	1.1	✗			↻
localhost:5432 molinaro	TAP_SCHEMA	1.1-1A2	✗			↻
palantir14.ats.inaf.it:5432 molinaro	TAP_SCHEMA	1.1-1A2	✓	1.1	ivoa	↻
127.0.0.1:3309 susman	hr_is	1.1-1A2	✗			↻
127.0.0.1:3309 susman	exp_ni	1.1-1A2	✗			↻

[Add new database credentials](#)

TASMAN - Login

Username

Password

[Login](#)

TASMAN 1.3.2 - Powered by IA2

Source credentials

Database type: Postgres

Hostname:

Port: 5432

Username:

Password:

Database: postgres

TAP_SCHEMA credentials

Database type: MySQL

Hostname:

Port: 3306

Username:

Password:

Separate credentials

TAP_SCHEMA name:

TAP_SCHEMA version: 1.1

Has obscore

ObsCore version: 1.1

IVOA schema name: ivoa

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TASMAN (TAP_Schema MANager)

Marco Molinaro, Sonia Zorba
INAF - OATs

Update operations

Entities that will be removed

Keys:

- [4] basti.out_file(id_scenario) -> basti.scenario(id_scenario)

Columns:

- basti.scenario_id_scenario
- basti.scenario.scenario_type

Tables:

- basti.scenario

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Credentials Users Management Custom UCDS

Editing TAP_SCHEMA

Schema TAP_SCHEMA

Schema type:

Schema description: A Bag of Stellar Tracks and Isochrones

Tables

Table type:

Table description: Basic, BestTI simulation info: type, age and mass and reference to simulation parameter tables

Columns

age

Unit: Gyr

Flags:

- all units recognised ✓
- all units recommended ✓
- all constraints satisfied ✓

Description: The age [Gyr] of an isochron, the minimum value is 0.03 Gyr, while the maximum value depends from the adopted Mass loss (lg) and Overlooking (OOV) parameters (see TAP server base or manuals for)

Columns index: 4

Alias:

TASMAN 1.3.2 - Powered by IA2

Sort columns

Unsorted columns: id_out, id_prop, id_scenario, id_kpt, id_prop

Sorted columns: filename, file_type, age, mass, access_url

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UCD Search Dialog

Search by description: Manual insertion

Description: URL to retrieve the (optional) ASCII table representing the simulation dataset

Selected UCD: meta.dataset, meta.table

Other suggested UCD:

Word	Definition	Flag
meta.dataset	Dataset	Q
meta.table	Table or catalogue	S

[Enable UCDS](#)

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Unit:

Gyr

- all units recognised ✓
- all units recommended ✓
- all constraints satisfied ✓



What's it?

- Java EE application
 - graphical user interface, browser based
 - used to create or edit TAP_SCHEMA(ta)
 - without writing SQL statements
- Interop May 2016 – Semantics
 - UCD & VOUnits features
 - <http://wiki.ivoa.net/internal/IVOA/InterOpMay2016-Semantics/ucdrest.pdf>



Building blocks

- Core module & web-app module
 - Java EE
 - Glassfish, Tomcat, Jetty (embedded)
- Requires a connection to a UCD ReST service
 - I/F over CDS UCD tools (<http://cds.u-strasbg.fr/UCD/tools.htx>, SOAP)
 - Validation works also offline
- Uses
 - Unity (N. Gray, <https://bitbucket.org/nxg/unity>)
 - Ucidy (G. Mantelet, <https://github.com/gmantele/ucidy>)
- ~aligned to use with TAPlib (G. Mantelet, <https://github.com/gmantele/taplib>)

Installer and User Guide:

<http://ia2.inaf.it/index.php/13-software/36-tap-schema-manager>



Features

Recommendation support

- TAP_SCHEMA support
 - TAP-1.0 & TAP-1.1 versions
 - “data typing” included
 - Allows customization
 - Consistency check before edit
- Support for ObsCore table
 - Structure validation only
- column_index support
 - numeric/dropdown
- UCD search and validation
 - custom UCDs support
- VOUnit validation

Application details

- User support
 - Internal
 - multi-user
- DB credentials store
 - TAP_SCHEMA settings
 - ObsCore enable
- server-embedded or server-deployable
- MySQL and PostgreSQL support
 - partial PgSphere type-support



TAP_SCHEMA support

```
<schema name="TAP_SCHEMA" version="1.0" description="a special schema to describe a TAP tableset" datatype="ADQL">
  <table name="schemas" description="description of schemas in this tableset">
    <column name="schema_name">
      <type>VARCHAR</type>
      <size>64</size>
      <updatable>>false</updatable>
      <nullable>>false</nullable>
      <key>schema_name</key>
      <description>schema name for
      <standard>>true</standard>
    </column>
    <column name="utype">
      <type>VARCHAR</type>
      <updatable>>true</updatable>
      <description>lists the utypes
      <standard>>true</standard>
    </column>
    <column name="description">
      <type>CLOB</type>
      <updatable>>true</updatable>
      <description>describes schema
      <standard>>true</standard>
    </column>
  </table>
```

```
<schema name="TAP_SCHEMA" version="1.1" extends="1.0" datatype="V0Table">
  <table name="tables">
    <column name="table_index">
      <type>INTEGER</type>
      <updatable>>true</updatable>
      <standard>>true</standard>
    </column>
  </table>
  <table name="columns">
    <column name="arraysize">
      <type>VARCHAR</type>
      <updatable>>false</updatable>
      <key>arraysize</key>
      <standard>>true</standard>
    </column>
    <column name="xtype">
      <type>VARCHAR</type>
      <updatable>>true</updatable>
      <key>xtype</key>
      <standard>>true</standard>
    </column>
    <column name="column_index">
      <type>INTEGER</type>
      <updatable>>true</updatable>
      <standard>>true</standard>
    </column>
```

```
<schema name="TAP_SCHEMA" version="1.1-IA2" extends="1.1" datatype="V0Table">
  <table name="schemas">
    <column name="schemaID">
      <type>BIGINT</type>
      <updatable>>true</updatable>
      <standard>>false</standard>
    </column>
    <column name="dbname">
      <type>VARCHAR</type>
      <updatable>>false</updatable>
      <key>dbname</key>
      <standard>>false</standard>
    </column>
  </table>
```

custom XML configuration, used for TAP_SCHEMA validation, extensible



Data type mapping

```

<type>
  <adql>REGION</adql>
  <votable>char</votable>
  <xtype>adql:region</xtype>
  <mysql>
    <type>TEXT</type>
  </mysql>
  <pgsql>
    <type>character varying</type>
  </pgsql>
  <java>java.lang.String</java>
</type>

<type>
  <adql>POINT</adql>
  <votable>double</votable>
  <!--<votable>float</votable-->
  <xtype>point</xtype>
  <arraysize>2</arraysize>
  <mysql>
    <type>VARCHAR</type>
  </mysql>
  <pgsql inverse="true">
    <type>spoint</type>
  </pgsql>
  <java>java.lang.String</java>
</type>

```

```

<type>
  <adql>VARCHAR</adql>
  <votable>char</votable>
  <mysql inverse="true">
    <type>VARCHAR</type>
  </mysql>
  <pgsql inverse="true">
    <type>character varying</type>
    <type>varchar</type>
  </pgsql>
  <java>java.lang.String</java>
</type>

```

- Basic types
- type-size-xtype triplets
- PgSphere types (limited)
 - ellipse?

- To tackle
 - TAPlib short goes “unknown”
 - DBMS/VOTable triplets (1:1?) mapping



Column ordering

Sort columns ✕

Unsorted columns ☑ →

- id_out
- id_prop
- id_scenario
- id_kpt
- id_prog

Sorted columns ☑ ←

- filename
- file_type
- age
- mass
- access_url

Close Save changes

Columns ↓

- ✕ id_chemical
- ✕ z
- ✕ y
- ✕ fe_h
- ✕ m_h

fe_h

STD

Datatype:
double

UType:

UCD:
phys.abund.Fe

Unit:

Description:
The iron abundance in the spectroscopic formalism.

Column index:
4

Xtype:

- Drag&Drop sorting
- Explicit numerical sorting
- If unspecified:
 - NULL? Empty?
 - -1 / -N ?



ObsCore support

```
<schema name="ivoa" version="1.1">
  <table name="obscore">
    <column name="dataprodukt_type">
      <type>VARCHAR</type>
      <updateable>true</updateable>
      <description>Logical data product type (image etc.)</description>
      <standard>true</standard>
      <mandatory>true</mandatory>
      <utype>ObsDataset.dataProductType</utype>
      <ucd>meta.id</ucd>
      <principal>true</principal>
      <enum-values>image, cube, spectrum, sed, timeseries, visibility, event, measurements</enum-values>
    </column>
    <column name="dataprodukt_subtype">
      <type>VARCHAR</type>
      <updateable>true</updateable>
      <description>Data product specific type</description>
      <standard>true</standard>
      <mandatory>false</mandatory>
      <utype>ObsDataset.dataProductSubtype</utype>
      <ucd>meta.id</ucd>
      <principal>true</principal>
    </column>
    <column name="calib_level">
      <type>INTEGER</type>
      <updateable>true</updateable>
      <nullable>false</nullable>
      <description>Calibration level {0, 1, 2, 3, 4}</description>
      <standard>true</standard>
      <mandatory>true</mandatory>
      <utype>ObsDataset.calibLevel</utype>
      <ucd>meta.code;obs.calib</ucd>
      <principal>true</principal>
      <min>0</min>
      <max>4</max>
    </column>
  </table>
</schema>
```

- XML config like TAP_SCHEMA
- Structure and metadata validation
- NO content validation
- Instantiate new or validate existing
- Allow for custom additions



Thanks!

- TAP_SCHEMA (multi version) management
- VOTable datatype support
- ObsCore support
- UCD & VOUnits validation

Unit:

Gyr

- all units recognised ✓
- all units recommended ✓
- all constraints satisfied ✓

```
<type>
  <adql>VARCHAR</adql>
  <votable>char</votable>
  <mysql inverse="true">
    <type>VARCHAR</type>
  </mysql>
  <pgsql inverse="true">
    <type>character varying</type>
    <type>varchar</type>
  </pgsql>
  <java>java.lang.String</java>
</type>
```

```
<schema name="TAP_SCHEMA" version="1.1" extends="1.0" datatype="VOTable">
  <table name="tables">
    <column name="table_index">
      <type>INTEGER</type>
      <updatable>true</updatable>
      <standard>true</standard>
    </column>
  </table>
  <table name="columns">
    <column name="arraysize">
      <type>VARCHAR</type>
      <updatable>false</updatable>
      <key>arraysize</key>
      <standard>true</standard>
    </column>
    <column name="xtype">
      <type>VARCHAR</type>
      <updatable>true</updatable>
      <key>xtype</key>
      <standard>true</standard>
    </column>
    <column name="column_index">
      <type>INTEGER</type>
      <updatable>true</updatable>
      <standard>true</standard>
    </column>
  </table>
</schema>
```

Users Management Custom UCDs admin Logout

Credentials insertion page

Credentials	TAP_SCHEMA name	Version	Obscore	Obscore version	IVOA schema name	Login
localhost:3306 molinaro	gaps_ts_tap_schema	1.1-IA2	✓	1.1	ivoa	
localhost:3306 molinaro	test	1.1	✗			
localhost:5432 molinaro	TAP_SCHEMA	1.1-IA2	✗			
palantir14.oats.inaf.it:5432 molinaro	TAP_SCHEMA	1.1-IA2	✓	1.1	ivoa	
127.0.0.1:3309 tasman	ivr_ts	1.1-IA2	✗			
127.0.0.1:3309 tasman	exo_ts	1.1-IA2	✗			

[+ Add new database credentials](#)

UCD Search Dialog

Search by description
 Manual insertion

Description:

URL to retrieve the (custom) ASCII table representing the simulation dataset

Selected UCD: meta.dataset;meta.table

Other suggested UCD:

Word	Definition	Flag
<input type="checkbox"/> meta.dataset	Dataset	Q
<input type="checkbox"/> meta.table	Table or catalogue	S

[Rebuild UCDs](#)

[Close](#) [Save changes](#)