



Registry Resource and Service Curation

Registry Working Group

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Curate what ?

❑ The Registry Resource

- Compliance with the XML schema
- Minimal tags correctly filled out
- Extra useful tags and information

Resource Form
Validation

❑ The Service Interface

- Compliance with the IVOA specs
- Minimal metadata and parameters
- Extra optional features and metadata

DAL Validators

❑ The Astronomical Data

- Quality and quantity of metadata
- Astronomical relevance or importance

Agreed not to
address



Curate what ?

□ The Registry Resource

- Compliance with the XML schema
- Minimal tags correctly filled out
- Extra useful tags and information

□ Update of the Euro-VO Registry XForm validations



The Registry Resource

□ Euro-VO Registry HTML Form Validation

- Compulsory and optional metadata
 - Title, Identifier, Publisher, Description, etc ...
- Correct XML schema data types
 - Identifier, Date, Reference URL, etc ...
- Regular expression restrictions
 - Email, Identifier, all ivo-ids, etc ...
- Other specific restrictions
 - Short Name



The Registry Resource

Resource Type : Resource

Title

• 'Title' is a required 'String' value.

Identifier

not/an/IVOA identifier

• 'Identifier' is a required 'Identifier URI' value.

Short Name

Resource Curation

Publisher

• 'Publisher' is a required 'String' value.

Publisher ivo-id

Dates

Insert after selected

Delete selected



Date

not a date

• 'Date' is a required 'Date' value.

Date Role

Email

not an email

• 'Email' is an optional 'Email' value.



The Registry Resource

- Euro-VO Registry Final Steps Validation
 - Correct Identifier for Authority Resources
 - Format and not already existent in IVOA
 - Correct Identifier for all Other Resources
 - Format and locally controlled AuthorityID
- XML Schema validation against XSDs
- Final database metadata validation



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Curate what ?

- ❑ Collaboration between Euro-VO (ESAVO) and NVO on the DALValidator project

- ❑ The Service Interface
 - Compliance with the IVOA specs
 - Minimal metadata and parameters
 - Extra optional features and metadata



The DALValidator project

- ❑ Common project and code repository
 - <http://trac.us-vo.org/project/nvo/wiki/DALValidator>

- ❑ Already existing NVO SCS and SIAP Validators
- ❑ Newly implemented SSAP and SLAP Validators

- ❑ Can be configured and deployed by other projects
 - Java web service with HTML front end
 - XSLT stylesheet implemented tests
 - Configurable HTML look and feel

- ❑ Open to further collaboration and improvements



The Service Interface

- ❑ Tests user supplied, valid, error and metadata query
- ❑ User query with main parameter, format and extra
- ❑ Validation report level and report format selection
- ❑ Links errors back to specifications specific lines
- ❑ Can be extended to other S*AP protocols easily
- ❑ Tests for VOTable DTD, v1.0 and v1.1 XSD



NVO SCS Validator

□ <http://nvo.ncsa.uiuc.edu/dalvalidate/csvalidate.html>

Cone Search Validation

To test a Cone Search Service, enter its base URL below along with a position and radius that you expect to
Unless the "Results Format" is set to "VOTable", this service will actually send three queries to the service. In
query are also sent. When the "VOTable" format is selected, only the VOTable response to the query below i

BASEURL:

RA:

DEC:

Search Radius (SR):

Results Format:

Include in the output:

Failures (Compliance Errors) Warnings Recommendations Passed Tests



NVO SIAP Validator

□ <http://nvo.ncsa.uiuc.edu/dalvalidate/siavalidate.html>

Simple Image Access (SIA) Service Validation

To test an SIA Service, enter its base URL below along with a position and region size that you expect to return at
Unless the "Results Format" is set to "VOTable", this service will actually send three queries to the service. In add
an erroneous query are also sent. When the "VOTable" format is selected, only the VOTable response to the quer

BASEURL:

	Right Ascension	Declination
Search Region Center	<input type="text" value="180.0"/>	<input type="text" value="60.0"/>
Search Region Size	<input type="text" value="1.0"/>	<input type="text" value="1.0"/>

Image Format Types:

Select all types to search for or select "METADATA" for just the VOTable header.

ALL
GRAPHIC
image/fits
image/png
image/jpeg
text/html
METADATA

Additional Parameters:

Add additional parameters, one per line with matching image.

Validation Results Format:

Include in the output: Failures (Compliance Errors) Warnings
 Recommendations Passed Tests



Euro-VO SSAP Validator

□ <http://registry.euro-vo.org:8080/dalvalidate/ssavalidate.html>

Simple Spectral Access (SSA) Service Validation

To test an SSA Service, enter its base URL below along with a position and region size that you expect to
Unless the "Results Format" is set to "VOTable", this service will actually send three queries to the service
an erroneous query are also sent. When the "VOTable" format is selected, only the VOTable response to the

BASEURL:

Right Ascension:

Declination:

Search Region Size:

Spectra Format Types:

Select all types to search for or select "METADATA" for just the VOTable header.

ALL
compliant
native
graphic
votable
fits
xml
text/csv
text/html
METADATA

Additional Parameters:

Add additional parameters, one per line matching spectra.

Validation Results Format:

Include in the output: Failures (Compliance Errors) Warnings
 Recommendations Passed Tests



Euro-VO SLAP Validator

□ <http://registry.euro-vo.org:8080/dalvalidate/slavalidate.html>

Simple Line Access (SLA) Service Validation

To test an SLA Service, enter its base URL below along with a spectral wavelength range that you expect. Unless the "Results Format" is set to "VOTable", this service will actually send three queries to the service and an erroneous query are also sent. When the "VOTable" format is selected, only the VOTable response to the

BASEURL:

Lower Spectral Wavelength:

Upper Spectral Wavelength:

Line Format Types:

Select all types to search for or select "METADATA" for just the VOTable header.

- ALL
- compliant
- native
- graphic
- votable
- fits
- xml
- text/csv
- text/html
- METADATA

Additional Parameters:

Add additional parameters, one per matching line.

Validation Results Format:

Include in the output: Failures (Compliance Errors) Warnings
 Recommendations Passed Tests



Validating the Validators

□ <http://www.ivoa.net/twiki/bin/view/IVOA/ServiceValidation>

- Links to DALValidator project and current validators
- Other projects to add links to their own software
- List of detailed tests for each protocols

□ IVOA partners need to check these pages

- Ensure a correct interpretation of the standards
- Suggest new and improved tests to implement
- Bidirectional feedback: code \Leftrightarrow TWiki pages



Validating the Validators

- ❑ This is the beginning, not the end

- ❑ Entering a “virtuous” circle
 - Release the DAL Validators
 - Checking the resources
 - Checking back the DAL Validators
 - Fixing the resources (if needed)
 - Correcting the DAL Validators (if needed)
 - Defining DAL Validators improvements (new / stronger checks)

- ❑ Run the same process for new DAL services

- ❑ Overall improvements of IVOA Services



Euro-VO Registry integration

EURO-VO Registry

Search Resources

Insert Resources

Update Resources

Validate Resources

CS Validator

SIA Validator

SSA Validator

SLA Validator

Member of



Powered by



Validate a DAL Service

You can use the DAL Validation tools linked below to check various types of DAL (Data Access Layer) Services against the VO Specifications.

We recommend you to check your own Services for major compatibility issues before inserting them in the Registry; and to check already registered Services to bring them up to compliancy with the standards.

The current DAL Validation tools available:

- [Cone Search Service Validation](#)
- [Simple Image Access \(SIA\) Service Validation](#)
- [Simple Spectral Access \(SSA\) Service Validation](#)
- [Simple Line Access \(SLA\) Service Validation](#)

If you have any question regarding the DAL Validators, please send a note to our [Registry manager](#).



Euro-VO Registry integration

EURO-VO Registry	
Search Resources	Search Results
Resource	1 -- 15 [NEXT]
Organisation	
Authority	San Pedro Martir Open Cluster Survey [SPMOCS] [CHECK XML EDIT CLONE]
Data Collection	IVOA identifier: ivo://vo.sim/Clusters [CatalogService] [ConeSearch]
Service	The San Pedro Martir (SPM) Open Clusters Survey has performed UBVRi CCD photometry in the fields of 300 northern open clusters. This is a highly homogeneous dataset obtained at the SPM observatory (Mexico) with a single instrumental setup (Site1 CCD, Bessel UBVRi filters) and reduced in a consistent way. The field of view per cluster is approximately 5x5 arcmin. This is a first experimental data release. 69 clusters are included. There are known errors in the photometric zero-points which are being corrected. For the moment these data should be considered only for quick look photometric diagrams and other uses that don't require accuracy in the photometric zero points.
Registry	Published by: SIM/FCUL on the 2008-10-22T00:00:00 and last updated on the 2009-02-15T12:00:00
Table Service	
Data Service	
Catalog Service	
Catalog Service (CDS)	
Cone Search (CS)	Cone Search with Cross Links of the SSC Interface for the 2XMMi [CHECK XML EDIT CLONE]
Open Sky Node (OSN)	Catalogue [XCATDBi-corr]
Simple Image Access (SIAP)	IVOA identifier: ivo://xcatdb/2xmmi/cs/withcorr [CatalogService] [ConeSearch]
Proto Spectral Access (PSAP)	2XMMi is the incremental second catalogue of serendipitous X-ray sources from the European Space Agency's (ESA) XMM-Newton observatory. The catalogue has been constructed by the XMM-Newton Survey Science Centre (SSC) on behalf of ESA. The 2XMMi catalogue has about 17% new detections as compared to the 2XMM catalogue and is the largest X-ray source catalogue ever produced, containing more than twice as many discrete sources as either the ROSAT survey or pointed catalogues. 2XMMi complements deeper Chandra and XMM-Newton small area surveys, probing a much larger sky area. The catalogue provides an effective dataset for generating large, well-defined samples of various types of astrophysical object, notably active galaxies (AGN), clusters of galaxies, interacting compact binaries and active stellar coronae, using the power of X-ray selection. The large sky area covered by the serendipitous survey also means that 2XMMi is a rich resource for exploring the variety of the X-ray source populations and identifying ra
Simple Spectral Access (SSAP)	Published by: Observatory of Strasbourg, SSC Team on the 2008-10-06T00:00:00 and last updated on the 2009-09-04T16:32:25Z
Simple Line Access (SLAP)	
Theoretical Spectral Access (TSAP)	



Euro-VO Registry integration

EURO-VO Registry	<h2>Search Results</h2> <p>1 -- 15 [NEXT]</p> <div><p>The XMM-Newton Science Archive InterOperability System [XMM-Newton SIAP] [CHECK XML EDIT CLONE]</p><p>IVOA identifier: ivo://esavo/xmm/siap [CatalogService] [SimpleImageAccess]</p><p>The European Space Agency's (ESA) X-ray Multi-Mirror Mission (XMM-Newton) was launched by an Ariane 504 on December 10th 1999. XMM-Newton is ESA's second cornerstone of the Horizon 2000 Science Programme. It carries 3 high throughput X-ray telescopes with an unprecedented effective area, and an optical monitor, the first flown on a X-ray observatory. The large collecting area and ability to make long uninterrupted exposures provide highly sensitive observations. Since Earth's atmosphere blocks out all X-rays, only a telescope in space can detect and study celestial X-ray sources. The XMM-Newton mission is helping scientists to solve a number of cosmic mysteries, ranging from the enigmatic black holes to the origins of the Universe itself. Observing time on XMM-Newton is being made available to the scientific community, applying for observational periods on a competitive basis.</p><p>Published by: European Space Agency on the 2005-08-02T00:00:00 and last updated on the 2009-04-08T12:00:00</p></div> <div><p>The ISO Data Archive InterOperability System [ISO SIAP] [CHECK XML EDIT CLONE]</p><p>IVOA identifier: ivo://esavo/iso/siap [CatalogService] [SimpleImageAccess]</p><p>The Infrared Space Observatory (ISO) was the world's first true orbiting infrared observatory. Equipped with four highly-sophisticated and versatile scientific instruments, it was launched by Ariane in November 1995 and provided astronomers world-wide with a facility of unprecedented sensitivity and capabilities for a detailed exploration of the Universe at infrared wavelengths. The two spectrometers (SWS and LWS), a camera (ISOCAM) and an imaging photo-polarimeter (ISOPHOT) jointly covered wavelengths from 2.5 to around 240 microns with spatial resolutions ranging from 1.5 arcseconds (at the shortest wavelengths) to 90 arcseconds (at the longer wavelengths). Its 60 cm diameter telescope was cooled by superfluid liquid helium to temperatures of 2-4 K.</p><p>Published by: European Space Agency on the 2005-08-02T00:00:00 and last updated on the 2009-04-08T12:00:00</p></div>
Search Resources	
Resource	
Organisation	
Authority	
Data Collection	
Service	
Registry	
Table Service	
Data Service	
Catalog Service	
Catalog Service (CDS)	
Cone Search (CS)	
Open Sky Node (OSN)	
Simple Image Access (SIAP)	
Proto Spectral Access (PSAP)	
Simple Spectral Access (SSAP)	
Simple Line Access (SLAP)	
Theoretical Spectral Access (TSAP)	



Euro-VO Registry integration

EURO VO
AIDA Astronomical Infrastructure for Data Access

The Euro-VO projects: [VOTECH](#) [EuroVO-DCA](#) [EuroVO-AIDA](#)

Simple Image Access Service Verification Results

Base URL of Service: <http://xsa.esac.esa.int:8080/aio/jsp/siap.jsp?>

The following 4 test queries were sent to the service:

- **user:** POS=180.0,60.0&SIZE=1.0,1.0&FORMAT=ALL
- **optional:** POS=270,13&SIZE=0.25&FORMAT=ALL&INTERSECT=COVERS&NAXIS=256&PROJ=SIN&VERB=2
- **user input error:** POS=as3f,13.0&SIZE=0.25
- **metadata:** FORMAT=METADATA

Test Query Name: user

Description: user-provided region
Type: normal query
Arguments: POS=180.0,60.0&SIZE=1.0,1.0&FORMAT=ALL
URL: <http://xsa.esac.esa.int:8080/aio/jsp/siap.jsp?POS=180.0,60.0&SIZE=1.0,1.0&FORMAT=ALL>
VOTable version returned: 1.1 (dtd)
Number of records returned: 0

Compliance Errors
None found.

Warnings
None found.



Future DALValidator evolutions

- ❑ Validating and correcting the current base tests
 - Review of tests description on Twiki, agreement
- ❑ Expanding the current base tests with new ones
 - uTypes checking, groups, optional parameters
- ❑ Implementing for new DAL protocols and versions
 - TSAP, SLAP Rec, SIAP v2, etc ...
- ❑ Integration with the Registry ValidationLevel tag
 - First 3 levels as error, warning, recommendation



Summary of important links

- ❑ <http://nvo.ncsa.uiuc.edu/dalvalidate/csvalidate.html>
- ❑ <http://nvo.ncsa.uiuc.edu/dalvalidate/siavalidate.html>
- ❑ <http://registry.euro-vo.org:8080/dalvalidate/ssavalidate.html>
- ❑ <http://registry.euro-vo.org:8080/dalvalidate/slavalidate.html>
- ❑ <http://www.ivoa.net/twiki/bin/view/IVOA/ServiceValidation>
- ❑ <http://trac.us-vo.org/project/nvo/wiki/DALValidator>