

DOCUMENT

ESA EURO-VO REGISTRY VALIDATOR

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1 SUMMARY OF EUROVO REGISTRY VALIDATION TESTS

The following summarizes the tests performed by the EuroVO Registry Cone Search, SIA and SSA validators at <http://registry.euro-vo.org>.

In order to create this tests the following standard are used:

Name	Document url
Simple Cone Search	http://www.ivoa.net/documents/latest/ConeSearch.html
Simple Image Access Specification	http://www.ivoa.net/documents/latest/SIA.html
Simple Spectral Access Protocol	http://www.ivoa.net/documents/SSA/

Table 1 Standards URLs

Based on the standards was made a set of criterions. These criterions was organized in order to reflect their important/weights. Following is the mapping between the criterion type and its description as part of the respective standard documentation.

Criterion Type	
Name	Description
REQUIREMENT	Tests drawn from 'MUST' statements in the respective standard
WARNING	Tests drawn from strongly encouraged 'SHOULD' statements in the respective standard
RECOMMENDATION	Tests drawn from 'SHOULD' statements in the respective standard
EXTRA	Criteria not defined in the IVOA 'Service Validation' wiki

Table 2 Criterion Type

Further categorization was made in the Service Level as an overall service validation.

Compliance Category	
Compliance	Description
A++	no criterion fails
A+	no requirement, warning or recommendation fails
A	no requirement or warning fails, but at least one recommendation fails
B	no requirement fails, but at least one warning fails
C	at least one (1) requirement fails, but at least one (1) requirement equally succeeds
C-	at least two (2) requirements fails, but at least one (1) requirement equally succeeds
C--	at least three (3) requirements fails, but at least one (1) requirement equally succeeds

D	all requirements fail but some other criterion (of lesser importance) succeeds
E	no criterion succeeds

Table 3 Compliance Category

A more simplified version of it is the following:

Simplified Compliance Category	
Name	Values
Compliant	A++, A+, A, B
Partially Compliant	C, C-, C--
Not Compliant	D, E

Table 4 Simplified Compliance Category

2 EUROVO REGISTRY CONE SEARCH VALIDATOR TESTS

2.1 Must/ Requirement

.on	The service is ON
.zero.xml	The zero response is well-formed XML
.zero.mime-legal	The MIME type of the zero response has a legal value ("text/xml", 'text/xml;content=x-votable' or'text/xml;votable')
.effc.xml	The effective response is well-formed XML
.effc.mime-legal	The MIME type of the effective response has a legal value ("text/xml", 'text/xml;content=x-votable' or'text/xml;votable')
2.2a-i	The service must respond with an XML document in the VOTable format [for the zero URL]
2.2a-ii	The service must respond with an XML document in the VOTable format [for the effective URL]
2.2b-i	The zero response contains no data
2.2b-ii	The effective response has to contain some data
2.2c-i	The VOTable MUST comply with these conditions: [...] Exactly one FIELD must have ucd="ID_MAIN'
2.2c-ii	The VOTable MUST comply with these conditions: [...] Exactly one FIELD must have ucd="POS_EQ_RA_MAIN'
2.2c-iii	The VOTable MUST comply with these conditions: [...] Exactly one FIELD must have ucd="POS_EQ_DEC_MAIN'
2.3b-i	no INFO elements with @name="Error" should appear in the zero response
2.3b-ii	no INFO elements with @name="Error" should appear in the effective response
2.3b	In the case of error the service MUST respond with a VOTable that contains a single PARAM element or a single INFO element with name="Error", where [a] corresponding value attribute [should be present]

2.2 Should/ (Warnings, Recommendation, Extra)

.zero.mime-not-as-may	WARNING	The MIME type of the zero response is not the optional value ("text/xml;content=x-votable')
.effc.mime-not-as-may	WARNING	The MIME type of the effective response is not the optional value ("text/xml;content=x-votable')
.zero.xsd	EXTRA	The zero response is XSD-valid XML
.effc.xsd	EXTRA	The effective response is XSD-valid XML
.zero.mime-should	RECOMMENDATION	The MIME type of the zero response has the recommended value ("text/xml')
.zero.mime-not-as-borderline-may	RECOMMENDATION	The MIME type of the zero response is not the strongly discouraged value ("text/xml;votable')
.effc.mime-should	RECOMMENDATION	The MIME type of the effective response has the recommended value ("text/xml')
.effc.mime-not-as-borderline-may	RECOMMENDATION	The MIME type of the effective response is not the strongly discouraged value ("text/xml;votable')

3 EUROVO REGISTRY SIMPLE IMAGE ACCESS VALIDATOR TESTS

3.1 Must/ Requirement

.on	The service is ON
.zero.xml	The zero response is well-formed XML
.zero.mime-legal	The MIME type of the zero response has a legal value ("text/xml;content=x-votable")
.metd.xml	The metadata response is well-formed XML
.metd.mime-legal	The MIME type of the metadata response has a legal value ("text/xml;content=x-votable")
.effc.xml	The effective response is well-formed XML
.effc.mime-legal	The MIME type of the effective response has a legal value ("text/xml;content=x-votable")
4.2.1a	The VOTable must contain a RESOURCE element, identified with the tag type='results'
4.2.4.a.i	Exactly one field must have ucd='VOX:Image_Title'
4.2.4.a.iv	Exactly one field must have ucd='POS_EQ_RA_MAIN'
4.2.4.a.v	Exactly one field must have ucd='POS_EQ_DEC_MAIN'
4.2.4.a.vi	Exactly one field must have ucd='VOX:Image_Naxes'
4.2.4.a.vii	Exactly one field must have ucd='VOX:Image_Naxis'
4.2.4.a.viii	Exactly one field must have ucd='VOX:Image_Scale'
4.2.4.a.ix	Exactly one field must have ucd='VOX:Image_Format'
4.2.4.e.i	Exactly one field must have ucd='VOX:Image_AccessReference'

3.2 Should/ (Warnings, Recommendation, Extra)

4.2.2a	WARNING	The RESOURCE element should contain an INFO with name="QUERY_STATUS"
4.2.4.a.ii	WARNING	Exactly one field should have ucd='INST_ID'
4.2.4.a.iii	WARNING	Exactly one field should have ucd='VOX:Image_MJDateObs'
4.2.4.b.i	WARNING	Exactly one field should have ucd='VOX:STC_CoordRefFrame'
4.2.4.b.iii	WARNING	Exactly one field should have ucd='VOX:WCS_CoordProjection'
4.2.4.b.iv	WARNING	Exactly one field should have ucd='VOX:WCS_CoordRefPixel'
4.2.4.b.v	WARNING	Exactly one field should have ucd='VOX:WCS_CoordRefValue'
4.2.4.b.vi	WARNING	Exactly one field should have ucd='VOX:WCS_CDMatrix'
4.2.4.c.i	WARNING	Exactly one field should have ucd='VOX:BandPass_ID'
4.2.4.c.ii	WARNING	Exactly one field should have ucd='VOX:BandPass_Unit'
4.2.4.c.iii	WARNING	Exactly one field should have ucd='VOX:BandPass_RefValue'
4.2.4.c.iv	WARNING	Exactly one field should have ucd='VOX:BandPass_HiLimit'

4.2.4.c.v	WARNING	Exactly one field should have ucd="VOX:BandPass_LoLimit'
4.2.4.d.i	WARNING	Exactly one field should have ucd="VOX:Image_PixFlags'
4.2.4.e.iii	WARNING	Exactly one field should have ucd="VOX:Image_FileSize'
.zero.xsd	EXTRA	The zero response is XSD-valid XML
.metd.xsd	EXTRA	The metadata response is XSD-valid XML
.effc.xsd	EXTRA	The effective response is XSD-valid XML
4.2.1b	RECOMMENDATION	If multiple resources are present it is recommended that the query results be returned in the first resource element
4.2.2a-gl	RECOMMENDATION	The RESOURCE element should contain [gloss: "an"->"one"] INFO with name="QUERY_STATUS"
4.2.2b	RECOMMENDATION	Its value attribute should set to "OK"

4 EUROVO REGISTRY SIMPLE SPECTRAL ACCESS VALIDATOR TESTS

4.1 Must/ Requirement

.on	The service is ON
.zero.xml	The zero response is well-formed XML
.zero.mime-legal	The MIME type of the zero response has a legal value ("text/xml;content=x-votable")
.metd.xml	The metadata response is well-formed XML
.metd.mime-legal	The MIME type of the metadata response has a legal value ("text/xml;content=x-votable")
.effc.xml	The effective response is well-formed XML
.effc.mime-legal	The MIME type of the effective response has a legal value ("text/xml;content=x-votable")
4.2a	The VOTable must contain a RESOURCE element, identified with the tag type="results", containing a single TABLE element which contains the results of the query
4.2b	The RESOURCE element must contain an INFO with name="QUERY_STATUS"
4.2.5.1	Access.Reference URI (URL) used to access the dataset MAN
4.2.5.2	Access.Format MIME type of dataset MAN
4.2.5.4a	Dataset.DataModel Datamodel name and version MAN
4.2.5.4c	Dataset.Length Number of points in spectrum MAN
4.2.5.5a	DataID.Title Dataset title MAN
4.2.5.6a	Curation.Publisher Publisher MAN
4.2.5.10a	Char.SpatialAxis.Coverage.Location.Value Observed position, e.g., RA DEC MAN
4.2.5.10b	Char.SpatialAxis.Coverage.Bounds.Extent Aperture angular diameter, deg MAN
4.2.5.10e	Char.TimeAxis.Coverage.Location.Value Midpoint of exposure (MJD) MAN
4.2.5.10k	Char.SpectralAxis.Coverage.Location.Value Midpoint of Spectral coord range MAN
4.2.5.10l	Char.SpectralAxis.Coverage.Bounds.Extent Width of spectrum in meters MAN

4.2 Should/ (Warnings, Recommendation, Extra)

.zero.xsd	EXTRA	The zero response is XSD-valid XML
.metd.xsd	EXTRA	The metadata response is XSD-valid XML
.effc.xsd	EXTRA	The effective response is XSD-valid XML
4.2b-gl	RECOMMENDATION	The RESOURCE element should contain [gloss:'an'->'one'] INFO with name="QUERY_STATUS"
4.2c	RECOMMENDATION	Its value attribute should set to 'OK'
4.2d	RECOMMENDATION	Another INFO with name="SERVICE_PROTOCOL" should contain the protocol version number in its value attribute
4.2e	RECOMMENDATION	Another INFO with name="SERVICE_PROTOCOL" should contain [...] the name of the service protocol as the fixed string 'SSAP'
4.2.1	RECOMMENDATION	UTYPEs of standard fields are required for identification of interface elements and must be given

4.2.3.1	RECOMMENDATION	Query.Score Degree of match to query params REC
4.2.5.3	RECOMMENDATION	Access.Size Estimated (not actual) dataset size REC
4.2.5.5b	RECOMMENDATION	DataID.Creator Creator name (string) REC
4.2.5.5c	RECOMMENDATION	DataID.Collection IVOA Identifier of collection (string) REC
4.2.5.5e	RECOMMENDATION	DataID.CreatorDID Creator assigned dataset identifier REC
4.2.5.5j	RECOMMENDATION	DataID.DataSource Original source of data REC
4.2.5.5k	RECOMMENDATION	DataID.CreationType Dataset creation type REC
4.2.5.6b	RECOMMENDATION	Curation.Reference URL or Bibcode for documentation REC
4.2.5.6c	RECOMMENDATION	Curation.PublisherDID Publisher's ID for the dataset REC
4.2.5.8a	RECOMMENDATION	CoordSys.SpaceFrame.Name Spatial coordinate frame REC
4.2.5.9a	RECOMMENDATION	Char.FluxAxis.Ucd ucd for flux REC
4.2.5.9b	RECOMMENDATION	Char.SpectralAxis.Ucd ucd for spectral coord REC
4.2.5.10f	RECOMMENDATION	Char.TimeAxis.Coverage.Bounds.Extent Total elapsed exposure time REC
4.2.5.10m	RECOMMENDATION	Char.SpectralAxis.Coverage.Bounds.Start Start in spectral coordinate REC
4.2.5.10n	RECOMMENDATION	Char.SpectralAxis.Coverage.Bounds.Stop Stop in spectral coordinate REC
4.2.5.11c	RECOMMENDATION	Char.FluxAxis.Calibration Type of flux calibration REC
4.2.5.11g	RECOMMENDATION	Char.SpectralAxis.Calibration Type of coord calibration REC
4.2.5.11h	RECOMMENDATION	Char.SpectralAxis.Resolution Spectral resolution FWHM REC
4.2.5.11n	RECOMMENDATION	Char.SpatialAxis.Accuracy.StatError Astrometric statistical error REC
4.2.5.11p	RECOMMENDATION	Char.SpatialAxis.Calibration Type of coord calibration REC
4.2.5.11q	RECOMMENDATION	Char.SpatialAxis.Resolution Spatial resolution of data REC