

Abstract Test Suite for OGC WRS 1.0 EP CIM

Base- & Inspire Conformance Class

Version 0.4

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Revision History	
Revision 0.1	2008-07-15
First draft release containing initial set of abstract test cases.	
Revision 0.2	2008-08-11
Minimal Conformance Level finished	
Revision 0.3	2008-08-11
Start with Inspire Conformance Level (Data)	
Revision 0.4	2008-10-13
Finished Inspire Conformance Level Data 2.1 and 2.2	

Overview

This document is an abstract test suite (ATS): a compendium of test assertions applicable to all implementations of the CSW-ebRIM 1.0 specification that support the Base- and Inspire Conformance Classes of the ISO Metadata (CIM) extension package 0.1.8. An ATS provides a basis for developing an executable test suite (ETS) to verify that an implementation under test (IUT) conforms to all relevant functional specifications.

This Abstract Test Suite is part of the Compliance Test Suite for the CSW-ebRIM 1.0 specification that supports the ISO Metadata (CIM) extension package 0.1.8.

The assertions are gleaned from a set of specification documents; the dependencies among these specifications are shown in Figure 1, "Specification dependencies", where each specification is represented as a UML package.

Figure 1. Specification dependencies[^] tbd

The abstract test cases are organized into conformance levels (test groups) that reflect distinct sets of capabilities. Two main conformance levels (Minimal and Inspire) are distinguished. Within the Conformance Levels different Conformance Sub-Levels are defined. The Inspire Conformance Level Services includes only one Conformance Sub-Level.

The Minimal Conformance Level does not define a CSW ebRIM CIM conformant class while the Inspire Conformance Level does nearly define an OGC conformant class.

Kommentar [uv1]: Only the mandatory ContainsOperation, Association Authority are not supported

For the Inspire Conformance Level Class conformance to the Minimal Conformance Level is mandatory. There is no support for any transactional behaviour.

For the tests no external test data is needed although without test data some capabilities cannot be tested. Implementations under test must assure to deliver at minimum 1 record on an empty query.

Idea: Parametrisierung von CTL-Skipten, so daß diese aus einer Property Datei etwa Einträge lesen, die dann in die Queries eingesetzt werden....

1. Minimal Conformance Level

- 1.1. Interface- and Binding-Availability
- 1.2. Correctness of Request- and Response-Structures

2. Inspire Conformance Level

- 2.1. Correctness of Request- and Response-Structures - mandatory CIM elements
- 2.2. Correctness of Request- and Response-Structures - mandatory CIM / Inspire elements
- 2.3. Correctness of Request- and Response-Structures - mandatory CIM services elements

Source documents

- [OGC™ Cataloguing of ISO Metadata \(CIM\) using the ebRIM profile of CS-W, Version 0.1.8](#) (OGC 07-038r1, under revision)
- [OpenGIS Catalogue Services Specification, Version 2.0.2](#) (OGC 07-006r1, Clause 10)
- [OpenGIS Web Services Common Specification, Version 1.0.](#) (OGC 05-008)
- [OpenGIS Filter Encoding Implementation Specification, Version 1.1](#) (OGC 04-095, 2005-05)
- [OpenGIS Catalogue Services Specification 2.0.2 - ISO Metadata Application Profile \(1.0.0\)](#) (OGC 07-045)
- [ISO 19115:2003, Geographic information - Metadata \(with ISO 19115:2003/Cor. 1:2006, Geographic information - Metadata - Technical Corrigendum 1](#)
- [ISO 19119:2005/PDAM 1, Geographic Information – Services](#)
- [ISO/TS 19139 \(10/2005\), Geographic information - Metadata - Implementation specification](#) (RFC 2616)
- [CSW-ebRIM Registry Service - Part 1: ebRIM profile of CSW \(1.0.0\)](#) (OGC 07-110r2)
- [CSW-ebRIM Registry Service – Part 2: Basic extension package \(1.0.0\)](#) (OGC 07-144r2)
- [ebXML Registry Information Model, Version 3.0](#) (regrep-rim-3.0-os, 2 May 2005)
- [XML media types](#) (RFC 2376)
- [Hypertext Transfer Protocol -- HTTP/1.1](#) (RFC 2616)
- [SOAP Version 1.2 Part 1: Messaging Framework \(Second Edition\)](#) (W3C Recommendation, 27 April 2007)

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Minimal Conformance Level

As a starting point for a catalogue search support and for an easy integration into other communities (not using this catalogue standard) the Minimal Conformance Class provides a very simple search interface which allows simple iterations through the registry content and which allows harvesting of their items by other catalogues. This level does not define a CSW ebRIM CIM conformant class.

Interface- and Binding-Availability (Level 1.1)

Purpose

The 'Interface- and Binding Availability' (1.1) test group includes assertions for testing if the mandatory operations GetCapabilities and GetRecords and the mandatory bindings for these operations are supported. If an optional combination of operation/binding is tested but not supported by the catalogue it should be checked if the error response is correct. These tests are independent from any metadata documents.

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Table 1. GetCapabilities - GET method

Test case identifier	InterfaceBindings.GetCapabilities-GetMethod
Test purpose	Verify that the GetCapabilities operation is implemented and supports the HTTP/GET/KVP method binding.
Test method	<p>The KVP's of the HTTP/GET request must be defined as follows: service = "WRS", version="1.0.0", request = "GetCapabilities".</p> <p>Pass if the response is a well formed XML Document with a root node named "Capabilities" which is defined within the "http://www.opengis.net/cat/wrs/1.0" namespace.</p> <p>Otherwise fail.</p> <p>TestCase is already part of CSW ebRIM ATS (test case: A.1.2)</p>

Reference	OGC 05-008: cl. 7.1, p. 10 OGC 05-008: cl. 7.2.2; cl. 7.2.3 OGC 07-110r2: cl. 8
Test type	Interface and Bindings

Table 2. GetRecords – SOAP method

Test case identifier	InterfaceBindings.GetRecords-SOAPMethod
Test purpose	Verify that the GetRecords operation is implemented and supports the HTTP/SOAP/POST/XML protocol binding. In the cases of SOAP binding, ensure that SOAP 1.2 is used.
Test method	<p>Pass if the responses of the following GetRecords request (sent via HTTP/SOAP/POST/XML)</p> <pre><csw:GetRecords maxRecords="5" outputFormat="application/xml" outputSchema=„urn:oasis:names:tc:ebxml- regrep:xsd:rim:3.0“ resultType="results" service=„CSW- ebRIM“ startPosition="1" version="1.0.0" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0"> <csw:Query typeNames="wrs:ExtrinsicObject"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject ">summary</csw:ElementSetName> <csw:Constraint version="1.1.0"> </csw:Constraint> </csw:Query> </csw:GetRecords></pre> <p>are well formed XML Documents with a root node named “GetRecordsResponse” and defined within the “http://www.opengis.net/cat/csw/2.0.2” namespace.</p> <p>Otherwise fail.</p>
Reference	OGC 07-006r1: cl. 10.8 OGC 07-110r2: cl. 10
Test type	Interface and Bindings

Table 3. GetRepositoryItem – GET version

Test case identifier	InterfaceBindings.GetRepositoryItem
Test purpose	Verify that all of the following assertions hold for the response to the GetRepositoryItem request (HTTP/GET binding): <ol style="list-style-type: none"> 1. the response entity includes the exception report having <ows:ExceptionReport> as the document element; 2. the value of the exceptionCode attribute specifies the "wrs:InvalidRequest" code value.
Test method	Pass if the response of the following GetRepositoryItem request (sent via HTTP/GET, missing Id parameter) <ServiceURL>?service=WRS&version=1.0.0&request=GetRepositoryItem holds all assertions; fail otherwise.
Reference	OGC 07-110r2: cl. 12 and 7.4, table 4
Test type	Interface and Bindings

Correctness of Request- and Response-Structures (Level 1.2)

Purpose

The ,Correctness of Request- and Response-Structures' test group includes assertions for testing if the XML structures of some request elements (e. g. filter expressions) and of response documents are valid.

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4. [GetCapabilities – Capabilities Document](#)
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6. [GetRecords – valid Filter](#)
7. [GetRepositoryItem – valid Response Structures](#)

Table 4. GetCapabilities – Capabilities Document

Test case identifier	CorrectRequestResponse.GetCapabilities-CapabilitiesDocument
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Test purpose	<p>The response to a GetCapabilities request (HTTP/GET request where KVP's must be defined as follows: service = "WRS", request = "GetCapabilities) must satisfy the applicable assertion:</p> <ol style="list-style-type: none"> 1. the response is a well formed XML Document with a root node named "Capabilities" which is defined within the "http://www.opengis.net/cat/wrs/1.0" namespace. 2. it contains the XML representation of a capabilities document, which can be validated against the XML schema defined for CSW 2.0.2 (see http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd) 3. must include a Filter_Capabilities section to describe which operands and operators are supported <p>s. Y:\Projekte\beauftragt\International\EU\EUMETSAT\U-MARF\01_Projektmanagement\31_Projektinformationen\03 HMA und OGC Spezifikationen\05 ebRIM Base\03 AP ebRIM 1.0r2\07-110r1\examples</p>
Test method	Pass if the relevant assertion holds; fail otherwise.
Reference	OGC 07-110: cl. 8, p. 16
Test type	Correctness of Request- and Response-Structures

Table 5. GetRecords – valid Response Structures

Test case identifier	CorrectRequestResponse.GetRecords-ValidResponseStructures
Test purpose	<p>The response to a GetRecords request (sent via HTTP/SOAP/POST/XML) must satisfy the applicable assertions:</p> <p>The GetRecords response must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 1. the filter request with an empty constraint is understood by the server, no exception concerning the request is thrown 2. the response includes at minimum one valid metadata entry 3. the XML representation is valid structured

	<p>concerning the CSW 2.0.2 and the CSW-ebRIM Registry Service and the corresponding xml schemas. This response can be validated in two steps:</p> <ol style="list-style-type: none"> 1. validate each ExtrinsicObject entry in the Namespace "urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" separate with rim.xsd of OASIS ebRIM specification 3.0 2. validate the CSW 2.0.2 response frame (the GetRecordsResponse element within the "http://www.opengis.net/cat/csw/2.0.2" namespace) with http://schemas.opengis.net/csw/2.0.2/CW-discovery.xsd
Test method	<p>Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant assertions</p> <pre><csw:GetRecords maxRecords="5" outputFormat="application/xml" outputSchema="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" resultType="results" service="CSW" startPosition="1" version="2.0.2" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0"> <csw:Query typeNames="wrs:ExtrinsicObject"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject">summary</csw:ElementSetName> <csw:Constraint version="1.1.0"> </csw:Constraint> </csw:Query> </csw:GetRecords></pre> <p>Otherwise fail.</p>
Reference	<p>OGC 07-006r1: cl. 10.8 OGC 07-110r2: cl. 10</p>
Test type	Correctness of Request- and Response-Structures

Table 6. GetRecords – valid Filter

Test case identifier	CorrectRequestResponse.GetRecords-ValidFilter
Test purpose	<p>The GetRecords request with a filter statement must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 1. the filter request is understood by the server and no exception concerning the request is thrown 2. the response includes at minimum one valid metadata

	<p>entry</p> <p>3. the XML representation is valid structured concerning the CSW 2.0.2 and the CSW-ebRIM Registry Service and the corresponding xml schemas. This response can be validated in two steps:</p> <ol style="list-style-type: none"> 1. validate each ExtrinsicObject entry in the Namespace "urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" separate with rim.xsd of OASIS ebRIM specification 3.0 2. validate the CSW 2.0.2 response frame (the GetRecordsResponse element within the "http://www.opengis.net/cat/csw/2.0.2" namespace) with http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd
Test method	<p>Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant assertions</p> <pre><csw:GetRecords maxRecords="10" outputFormat="application/xml" outputSchema="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" resultType="results" service="CSW" startPosition="1" version="2.0.2" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0"> <csw:Query typeNames="wrs:ExtrinsicObject"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject">summary</csw:ElementSetName> <csw:Constraint version="1.1.0"> <ogc:Filter> <ogc:PropertyIsLike escapeChar="\ singleChar="?" wildCard="*"> <ogc:PropertyName>/wrs:ExtrinsicObject/@Description</ogc:PropertyName> <ogc:Literal>*</ogc:Literal> </ogc:PropertyIsLike> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords></pre> <p>Otherwise fail.</p>
Reference	<p>OGC 07-006r1: cl. 10.8</p> <p>OGC 07-110r2: cl. 10</p>
Test type	Correctness of Request- and Response-Structures

Table 7. GetRepositoryItem – valid Response Structures

Test case identifier	CorrectRequestResponse.GetRepositoryItem-ValidResponseStructures
Test	The response to a GetRepositoryItem request (sent via

purpose	<p>HTTP/GET request where KVP's must be defined as follows: service = "CSW", request = "GetRepositoryItem" and id = "<value of the "identifier" slot of an ExtrinsicObject of type urn:x-ogc:specification:csw-ebrim-cim:ObjectType:MetadataInformation returned by the request defined in testcase CorrectRequestResponse.GetRecords-ValidFilter>") must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 1. the root element of the XML representation is a MD_Metadata entry in the Namespace "http://www.isotc211.org/2005/gmd" 2. it can be validated with the ISO19139 xml schema
Test method	<p>Pass if the response of the following GetRepositoryItem request (sent via HTTP/GET, Id parameter = <value of the "identifier" slot of an ExtrinsicObject of type urn:x-ogc:specification:csw-ebrim-cim:ObjectType:MetadataInformation returned by the request defined in testcase CorrectRequestResponse.GetRecords-ValidFilter>)</p> <p><ServiceURL>?service=CSW&version=2.0.2&request=GetRepositoryItem&Id=.....</p> <p>holds all assertions; fail otherwise.</p>
Reference	OGC 07-110r2: cl. 10
Test type	Correctness of Request- and Response-Structures

Inspire Conformance Level

The main idea of the Inspire Conformance level is to define a Conformance Class which is semantically aligned with the Inspire Discovery Services (which are a small extension to the OGC CSW 2.0.2 AP ISO 1.0 specification [xxx]). The Inspire Conformance level comprises exactly those features (and no more) which are required to map (within a bridge) Inspire discovery requests. If an implementation is conformant to this Inspire Conformance Class it can be integrated into the Inspire SDI by such a bridge.

The Inspire Conformance Level Data do **nearly** define an OGC conformant class. For this Conformance Level the Minimal Conformance Level is mandatory.

Kommentar [uv2]: Only the mandatory ContainsOperation, Association Authority are not supported. Dies als Fußnote

An 'Interface- and Binding Availability' test group is not specified for the Inspire Conformance Level because it requires the same mandatory operations and bindings as the Minimal Conformance Level. The GetRecordById- and the DescribeRecord-Operation are not considered as these would have to be implemented in a bridge (DescribeRecord native, GetRecordById by a mapping to GetRecords/GetRepositoryItem).

These tests for this conformance level are independent from predefined metadata documents. But the catalogue under test must assure that it minimally includes one single metadata set with a boundingBox defined.

Correctness of Request- and Response-Structures - mandatory CIM elements (Level 2.1)

Purpose

The 'Correctness of Request- and Response-Structures – mandatory CIM elements' test group includes assertions for testing if the XML structures of some request elements (e. g. filter expressions) and if the response documents are valid. It additionally tests if some of the mandatory CIM elements are supported within the filter expression and if some of the mandatory CIM elements are correctly included within resultsets.

Kommentar [uv3]: Dieses evtl. in allg ATS für CIM übernehmen

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Table 8. GetRecords – Classification Filter Support

Test case identifier	CorrectRequestResponseCIM.GetRecords-ContentFilterSupport
Test purpose	<p>The GetRecords request with a filter statement must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 1. the filter request is understood by the server and no exception concerning the request is thrown 2. the response includes at minimum one valid metadata entry 3. the XML representation is valid structured concerning the CSW 2.0.2 and the CSW-ebRIM Registry Service and the corresponding xml schemas. Validate the CSW 2.0.2 response frame (the GetRecordsResponse element within the “http://www.opengis.net/cat/csw/2.0.2” namespace) with http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd
Test method	Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant

	<p>assertions</p> <pre> <csw:GetRecords maxRecords="10" outputFormat="application/xml" outputSchema=„urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" resultType="results" service=„CSW-ebRIM“ startPosition="1" version="1.0.0" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0" xmlns:rim="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"> <csw:Query typeNames="wrs:ExtrinsicObject rim:Classification_c1_c2"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject">summary</csw:ElementSetName> <csw:Constraint version="1.1.0"> <ogc:Filter> <ogc:And> <ogc:PropertyIsEqualTo> <ogc:PropertyName>/wrs:ExtrinsicObject/@id</ogc:PropertyName> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$c1/@classifiedObject</ogc:PropertyName> </ogc:PropertyIsEqualTo> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$c1/@classificationNode</ogc:PropertyName> <ogc:PropertyIsEqualTo> <ogc:Literal>urn:ogc:def:ebRIM- ClassificationScheme:TopicCategory:biota</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:PropertyIsEqualTo> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>/wrs:ExtrinsicObject/@id</ogc:PropertyName> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$c2/@classifiedObject</ogc:PropertyName> </ogc:PropertyIsEqualTo> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$c2/@classificationNode</ogc:PropertyName> <ogc:PropertyIsEqualTo> <ogc:Literal>urn:ogc:def:ebRIM- ClassificationScheme:KeywordScheme:forest</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:PropertyIsEqualTo> </ogc:PropertyIsEqualTo> </ogc:And> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords> </pre> <p>Otherwise fail.</p>
Reference	<p>OGC 07-045: cl. 8.2.2.1 OGC 07-006r1: cl. 10.8</p>
Test type	<p>Correctness of Request- and Response-Structures</p>

Table 9. GetRecords – BBOX Filter Support

Test case identifier	CorrectRequestResponseCIM.GetRecords-BBOXFilterSupport
Test purpose	<p>The response to this GetRecords request (sent via HTTP/SOAP/POST/XML) must satisfy the applicable assertions:</p> <p>Search for metadata records which boundingBox intersects the spatial filter representing the world (s. query below).</p> <p>The response of the GetRecords request must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 1. the filter request is understood by the server and no exception concerning the request is thrown 2. the response includes at minimum 1 'full' metadata entry returned in the http://www.isotc211.org/2005/gmd format 3. the XML representation of the response is valid structured concerning the CSW 2.0.2 AP ISO 1.0 schemas. Validation of the CSW 2.0.2 response frame (the GetRecordsResponse element within the "http://www.opengis.net/cat/csw/2.0.2" namespace) with http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd
Test method	<p>Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant assertions</p> <p style="text-align: center;">- 1.2 Test Slot Envelope mit Intersects</p> <ul style="list-style-type: none"> - should return one entry - Check if resultset of a full request includes slots (minimal: name, description) and associations between DataMetadata and MetadataInformation. <p>rim:RegistryObject/rim:Slot[@slotType = "urn:ogc:def:dataType:ISO-19107:GM_Envelope:GM_Envelope"]/rim:ValueList/rim:Value</p> <pre> <ogc:BBOX> <ogc:PropertyName>/rim:ExtrinsicObject/rim:Slot[@name="urn:ogc:def:ebRIM-Slot:OGC-06-131:multiExtentOf"]/wrs:ValueList/wrs:AnyValue</ogc:PropertyName> <gml:Envelope> <gml:lowerCorner>48.86 -124.18</gml:lowerCorner> <gml:upperCorner>51.72 -111.64</gml:upperCorner> </gml:Envelope> </ogc:BBOX> </pre> <p>Otherwise fail.</p>

Reference	OGC 07-045: cl. 8.2.2.1 OGC 07-006r1: cl. 10.8
Test type	Correctness of Request- and Response-Structures

Table 10. GetRecords – Association Filter Support

Test case identifier	CorrectRequestResponse.GetRecords-AssociationFilterSupport
Test purpose	<p>The response to this GetRecords request (sent via HTTP/SOAP/POST/XML) must satisfy the applicable assertions:</p> <p>Search for metadata records which metadata information date is later than 2008/07/15 (s. query below).</p> <p>The response of the GetRecords request must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 1. the filter request is understood by the server and no exception concerning the request is thrown 2. the XML representation of the response is valid structured concerning the CSW 2.0.2 AP ISO 1.0 schemas. Validation of the CSW 2.0.2 response frame (the GetRecordsResponse element within the “http://www.opengis.net/cat/csw/2.0.2” namespace) with http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd
Test method	<p>Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant assertions</p> <pre><csw:GetRecords maxRecords="10" outputFormat="application/xml" outputSchema=„urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" resultType="results" service=„CSW- ebRIM“ startPosition="1" version="1.0.0" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0" xmlns:rim="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"> <csw:Query typeNames="wrs:ExtrinsicObject_e1_e2 rim:Association_a1"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject">full</csw:ElementSetName> <csw:Constraint version="1.1.0"> <ogc:Filter> <ogc:And> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@associationType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- AssociationType:OGC:ResourceMetadataInformation</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@sourceObject</ogc:PropertyName> <ogc:Literal>\$e1/@id</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e2/@id</ogc:PropertyName> </ogc:PropertyIsEqualTo> </ogc:And> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords></pre>

	<pre> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e1/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:DataMetadata</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e2/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:MetadataInformation</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsGreaterThan> <ogc:PropertyName>\$e2/@rim:Slot[@name='date']/rim:ValueList/rim:Value</ogc:PropertyName> <ogc:Literal>2008-07-15</ogc:Literal> </ogc:PropertyIsGreaterThan> </ogc:And> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords> </pre> <p>Otherwise fail.</p>
Reference	<p>OGC 07-045: cl. 8.2.2.1</p> <p>OGC 07-006r1: cl. 10.8</p>
Test type	Correctness of Request- and Response-Structures

Correctness of Request- and Response-Structures - mandatory CIM / Inspire elements (Level 2.2)

Purpose

The 'Correctness of Request- and Response-Structures – mandatory CIM / Inspire elements' test group includes assertions for testing if the XML structures of some request elements (e. g. filter expressions) and if the response documents are valid. It additionally tests if some of the mandatory CIM / Inspire elements are supported within the filter expression and if some of the mandatory CIM / Inspire elements are correctly included within resultsets.

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Table 11. GetRecords – InspireAssociations Filter Support

Test case	CorrectRequestResponse.GetRecords-InspireAssociationsFilterSupport
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identifier	
Test purpose	<p>The response to this GetRecords request (sent via HTTP/SOAP/POST/XML) must satisfy the applicable assertions:</p> <p>Search for metadata records which degree of conformity to the Inspire specification is true (s. query below).</p> <p>The response of the GetRecords request must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 3. the filter request is understood by the server and no exception concerning the request is thrown 4. the response includes at minimum 1 'full' metadata entry returned in the http://www.isotc211.org/2005/gmd format and this entry includes at a minimum the association link 'ResourceMetadataInformation' from DataMetadata to 'MetadataInformation' and the association link 'Specification' from 'MetadataInformation' to 'QualityConformanceInformation'. 5. the XML representation of the response is valid structured concerning the CSW 2.0.2 AP ISO 1.0 schemas. Validation of the CSW 2.0.2 response frame (the GetRecordsResponse element within the "http://www.opengis.net/cat/csw/2.0.2" namespace) with http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd
Test method	<p>Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant assertions</p> <pre><csw:GetRecords maxRecords="10" outputFormat="application/xml" outputSchema="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" resultType="results" service="CSW-ebRIM" startPosition="1" version="1.0.0" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0" xmlns:rim="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"> <csw:Query typeNames="wrs:ExtrinsicObject_e1_e2_e3 rim:Association_a1_a2"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject">full</csw:ElementSetName> <csw:Constraint version="1.1.0"> <ogc:Filter> <ogc:Or> <ogc:And> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@associationType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM-AssociationType:OGC:ResourceMetadataInformation</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@sourceObject</ogc:PropertyName> <ogc:Literal>\$e1/@id</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e2/@id</ogc:PropertyName> </ogc:PropertyIsEqualTo> </ogc:And> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@targetObject</ogc:PropertyName> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e1/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM-ObjectType:OGC:DataMetadata</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:Or> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords></pre>

	<pre> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e2/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:MetadataInformation</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a2/@associationType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- AssociationType:OGC:Specification</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a2/@sourceObject</ogc:PropertyName> <ogc:Literal>\$e2/@id</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e3/@id</ogc:PropertyName> <ogc:PropertyName>\$a2/@targetObject</ogc:PropertyName> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e3/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:QualityConformanceInformation</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e3/@rim:Slot[@name='specPass']/rim:ValueList/rim:Value</ogc:PropertyName> <ogc:Literal>>true</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:And> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e1/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:DataMetadata</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:Or> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords> Otherwise fail. </pre>
Reference	<p>OGC 07-045: cl. 8.2.2.1</p> <p>OGC 07-006r1: cl. 10.8</p>
Test type	Correctness of Request- and Response-Structures

Table 12. GetRecords – InspireQueryable Filter Support

Test case identifier	CorrectRequestResponse.GetRecords-InspireAssociationsFilterSupport
Test purpose	<p>The response to this GetRecords request (sent via HTTP/SOAP/POST/XML) must satisfy the applicable assertions:</p> <p>Search for metadata records Search where the name of the organization responsible for the metadata is 'EUMETSAT', where the lineage statement is like '*SomeStatement*' and which SecurityConstraints are unclassified.</p> <p>The response of the GetRecords request must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 6. the filter request is understood by the server and no exception concerning the request is thrown 7. the XML representation of the response is valid structured concerning the CSW 2.0.2 AP ISO 1.0 schemas. Validation of the CSW 2.0.2 response frame (the GetRecordsResponse element within the "http://www.opengis.net/cat/csw/2.0.2" namespace) with http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd
Test method	<p>Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant assertions</p> <pre> <csw:GetRecords maxRecords="10" outputFormat="application/xml" outputSchema="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" resultType="results" service="CSW-ebRIM" startPosition="1" version="1.0.0" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0" xmlns:rim="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"> <csw:Query typeNames="wrs:ExtrinsicObject_e1_e2_e3_e4 rim:RegistryObject_r1 rim:Association_a1_a2_a3_a4 rim:Classification_c1_c2"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject">full</csw:ElementSetName> <csw:Constraint version="1.1.0"> <ogc:Filter> <ogc:And> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@associationType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- AssociationType:OGC:ResourceMetadataInformation</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@sourceObject</ogc:PropertyName> <ogc:Literal>\$e1/@id</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e2/@id</ogc:PropertyName> <ogc:Literal>\$e2/@id</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$a1/@targetObject</ogc:PropertyName> <ogc:Literal>\$e1/@objectType</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e2/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:DataMetadata</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e2/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:MetadataInformation</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:And> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords> </pre>

```

</ogc:PropertyIsEqualTo>
<ogc:PropertyIsEqualTo>
  <ogc:PropertyName>$a2/@associationType</ogc:PropertyName>
  <ogc:Literal>urn:ogc:def:ebRIM-
AssociationType:OGC:MetadataPointOfContact</ogc:Literal>
  </ogc:PropertyIsEqualTo>
  <ogc:PropertyIsEqualTo>
    <ogc:PropertyName>$a2/@sourceObject</ogc:PropertyName>
    <ogc:Literal>$e2/@id</ogc:Literal>
    </ogc:PropertyIsEqualTo>
    <ogc:PropertyIsEqualTo>
      <ogc:PropertyName>$r1/@id</ogc:PropertyName>
    </ogc:PropertyIsEqualTo>
  </ogc:PropertyIsEqualTo>
  <ogc:PropertyName>$a2/@targetObject</ogc:PropertyName>
  </ogc:PropertyIsEqualTo>
  <ogc:PropertyIsEqualTo>
    <ogc:PropertyName>$r1/@objectType</ogc:PropertyName>
    <ogc:Literal>urn:ogc:def:ebRIM-
ObjectType:OGC:Organization</ogc:Literal>
  </ogc:PropertyIsEqualTo>
  <ogc:PropertyIsEqualTo>
    <ogc:PropertyName>$r1/@rim:Slot[@name='name']/rim:ValueList/rim:Value</ogc:PropertyName>
    <ogc:Literal>EUMETSAT</ogc:Literal>
    </ogc:PropertyIsEqualTo>
    <ogc:PropertyIsEqualTo>
      <ogc:PropertyName>$a3/@associationType</ogc:PropertyName>
      <ogc:Literal>urn:ogc:def:ebRIM-
AssociationType:OGC:Lineage</ogc:Literal>
    </ogc:PropertyIsEqualTo>
    <ogc:PropertyIsEqualTo>
      <ogc:PropertyName>$a3/@sourceObject</ogc:PropertyName>
      <ogc:Literal>$e2/@id</ogc:Literal>
      </ogc:PropertyIsEqualTo>
      <ogc:PropertyIsEqualTo>
        <ogc:PropertyName>$e3/@id</ogc:PropertyName>
      </ogc:PropertyIsEqualTo>
    </ogc:PropertyIsEqualTo>
    <ogc:PropertyName>$a3/@targetObject</ogc:PropertyName>
    </ogc:PropertyIsEqualTo>
    <ogc:PropertyIsEqualTo>
      <ogc:PropertyName>$e3/@objectType</ogc:PropertyName>
      <ogc:Literal>urn:ogc:def:ebRIM-
ObjectType:OGC:QualityLineageInformation</ogc:Literal>
    </ogc:PropertyIsEqualTo>
    <ogc:PropertyIsLike escapeChar="\ singleChar="?" wildCard="*">
      <ogc:PropertyName>$e3/@rim:Slot[@name='statement']/rim:ValueList/rim:Value</ogc:PropertyName>
      <ogc:Literal>*SomeStatement*</ogc:Literal>
    </ogc:PropertyIsLike>
    <ogc:PropertyIsEqualTo>
      <ogc:PropertyName>$a4/@sourceObject</ogc:PropertyName>
      <ogc:Literal>$e1/@id</ogc:Literal>
      </ogc:PropertyIsEqualTo>
      <ogc:PropertyIsEqualTo>
        <ogc:PropertyName>$e4/@id</ogc:PropertyName>
      </ogc:PropertyIsEqualTo>
    </ogc:PropertyIsEqualTo>
  </ogc:PropertyIsEqualTo>

```

	<pre> <ogc:PropertyName>\$a4/@targetObject</ogc:PropertyName> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e4/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:SecurityConstraints</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$e4/@id</ogc:PropertyName> <ogc:PropertyName>\$c1/@classifiedObject</ogc:PropertyName> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>\$c1/@classificationNode</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ClassificationScheme:ClassificationCode:unclassified</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:And> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords> Otherwise fail. </pre>
Reference	<p>OGC 07-045: cl. 8.2.2.1</p> <p>OGC 07-006r1: cl. 10.8</p>
Test type	Correctness of Request- and Response-Structures

Correctness of Request- and Response-Structures - mandatory CIM services elements (Level 2.3)

Purpose

This is an extension of the 'Correctness of Request- and Response-Structures – mandatory CIM elements' test group supporting Service Metadata. It includes assertions for testing if the XML structures of some request elements (e. g. filter expressions) and if the response documents are valid. It additionally tests if some of the mandatory CIM elements concerning services are supported within the filter expression and if some of the mandatory CIM elements are correctly included within resultsets.

Kommentar [uv4]: Maybe overtaken by general CIM ATS

List of Tables

13. [GetRecords – Services Filter Support](#)

Table 13. GetRecords – Services Filter Support

Test case identifier	CorrectRequestResponseCIM.GetRecords-ServicesFilterSupport
Test purpose	<p>The GetRecords request with a filter statement must satisfy the applicable assertions:</p> <ol style="list-style-type: none"> 4. the filter request is understood by the server and no exception concerning the request is thrown 5. the XML representation is valid structured concerning the CSW 2.0.2 and the CSW-ebRIM Registry Service and the corresponding xml schemas. Validate the CSW 2.0.2 response frame (the GetRecordsResponse element within the “http://www.opengis.net/cat/csw/2.0.2” namespace) with http://schemas.opengis.net/csw/2.0.2/CSW-discovery.xsd
Test method	<p>Pass if the response of the following GetRecords request (sent via HTTP/SOAP/POST/XML) holds the relevant assertions</p> <pre> <csw:GetRecords maxRecords="10" outputFormat="application/xml" outputSchema=„urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" resultType="results" service=„CSW-ebRIM“ startPosition="1" version="1.0.0" xmlns:csw="http://www.opengis.net/cat/csw/2.0.2" xmlns:ogc="http://www.opengis.net/ogc" xmlns:wrs="http://www.opengis.net/cat/wrs/1.0" xmlns:rim="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"> <csw:Query typeNames="wrs:ExtrinsicObject_e1_e2_e3_e4 rim:RegistryObject_r1 rim:Association_a1_a2_a3_a4 rim:Classification_c1_c2"> <csw:ElementSetName typeNames="wrs:ExtrinsicObject">brief</csw:ElementSetName> <csw:Constraint version="1.1.0"> <ogc:Filter> <ogc:And> <ogc:PropertyIsEqualTo> <ogc:PropertyName>wrs:ExtrinsicObject/@objectType</ogc:PropertyName> <ogc:Literal>urn:ogc:def:ebRIM- ObjectType:OGC:ServiceMetadata</ogc:Literal> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>wrs:ExtrinsicObject/@id</ogc:PropertyName> <ogc:PropertyName>rim:Classification/@classifiedObject</ogc:PropertyName> </ogc:PropertyIsEqualTo> <ogc:PropertyIsEqualTo> <ogc:PropertyName>rim:Classification/@classificationNode</ogc:PropertyName> <ogc:Literal>urn:ogc:serviceType:WebMapService</ogc:Literal> </ogc:PropertyIsEqualTo> </ogc:And> </ogc:Filter> </csw:Constraint> </csw:Query> </csw:GetRecords> </pre>

	Otherwise fail.
Reference	OGC 07-045: cl. 8.2.2.1 OGC 07-006r1: cl. 10.8
Test type	Correctness of Request- and Response-Structures