



searchRetrieve: Part 0. Overview Version 1.0

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<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part0-overview/searchRetrieve-v1.0-csprd01-part0-overview.html>
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Additional artifacts:

This prose specification is one component of a Work Product which also includes:

- XML schemas: <http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/schemas/>
- *searchRetrieve: Part 0. Overview Version 1.0.* (this document)
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part0-overview/searchRetrieve-v1.0-csprd01-part0-overview.html>
- *searchRetrieve: Part 1. Abstract Protocol Definition Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part1-apd/searchRetrieve-v1.0-csprd01-part1-apd.html>

- *searchRetrieve: Part 2. searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part2-sru1.2/searchRetrieve-v1.0-csprd01-part2-sru1.2.html>
- *searchRetrieve: Part 3. searchRetrieve Operation: APD Binding for SRU 2.0 Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part3-sru2.0/searchRetrieve-v1.0-csprd01-part3-sru2.0.html>
- *searchRetrieve: Part 4. APD Binding for OpenSearch Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part4-opensearch/searchRetrieve-v1.0-csprd01-part4-opensearch.html>
- *searchRetrieve: Part 5. CQL: The Contextual Query Language Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part5-cql/searchRetrieve-v1.0-csprd01-part5-cql.html>
- *searchRetrieve: Part 6. SRU Scan Operation Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part6-scan/searchRetrieve-v1.0-csprd01-part6-scan.html>
- *searchRetrieve: Part 7. SRU Explain Operation Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csprd01/part7-explain/searchRetrieve-v1.0-csprd01-part7-explain.html>

Declared XML namespaces:

- <http://docs.oasis-open.org/ns/search-ws/diagnostic>
- <http://docs.oasis-open.org/ns/search-ws/facetedResults>
- <http://docs.oasis-open.org/ns/search-ws/scan>
- <http://docs.oasis-open.org/ns/search-ws/searchResultAnalysis>
- <http://docs.oasis-open.org/ns/search-ws/soap>
- <http://docs.oasis-open.org/ns/search-ws/sruRequest>
- <http://docs.oasis-open.org/ns/search-ws/sruResponse>
- <http://docs.oasis-open.org/ns/search-ws/xcql>

Abstract:

This is one of a set of documents for the OASIS Search Web Services (SWS) initiative. This document is the Overview and serves to introduce the full collection of documents.

Status:

This document was last revised or approved by the OASIS Search Web Services TC on the above date. The level of approval is also listed above. Check the “Latest version” location noted above for possible later revisions of this document.

Technical Committee members should send comments on this specification to the Technical Committee’s email list. Others should send comments to the Technical Committee by using the “Send A Comment” button on the Technical Committee’s web page at <http://www.oasis-open.org/committees/search-ws/>.

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1 Introduction

This is one of a set of documents for the OASIS Search Web Services (SWS) initiative.

This document is the Overview and serves to introduce the full collection of documents.

The documents in the collection of specifications are:

1. Overview
2. APD
3. SRU1.2
4. SRU2.0
5. OpenSearch
6. CQL
7. Scan
8. Explain

1.1 Terminology

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

1.2 Normative References

The following list of references applies to all of the documents in this collection.

- **RFC2119**
Key words for use in RFCs to Indicate Requirement Levels, IETF RFC 2119, March 1997
<http://www.ietf.org/rfc/rfc2119.txt>
- **Overview**
searchRetrieve: Part 0. Overview Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part0-overview/searchRetrieve-v1.0-csd01-part0-overview.doc>
- **APD**
searchRetrieve: Part 1. Abstract Protocol Definition Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part1-apd/searchRetrieve-v1.0-csd01-part1-apd.doc>
- **SRU1.2**
searchRetrieve: Part 2. SRU searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part2-sru1.2/searchRetrieve-v1.0-csd01-part2-sru1.2.doc>
- **SRU2.0**
searchRetrieve: Part 3. SRU searchRetrieve Operation: APD Binding for SRU 2.0 Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part3-sru2.0/searchRetrieve-v1.0-csd01-part3-sru2.0.doc>
- **OpenSearch**
searchRetrieve: Part 4. APD Binding for OpenSearch 1.0 version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part4-openSearch1.0/searchRetrieve-v1.0-csd01-part4-openSearch.doc>
- **CQL**
searchRetrieve: Part 5. CQL: The Contextual Query Language version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part5-cql/searchRetrieve-v1.0-csd01-part5-cql.doc>

- **Scan**
searchRetrieve: Part 6. SRU Scan Operation version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part6-scan/searchRetrieve-v1.0-csd01-part6-scan.doc>
- **Explain**
searchRetrieve: Part 7. SRU Explain Operation version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part7-explain/searchRetrieve-v1.0-csd01-part7-explain.doc>
- **MODS**
Metadata Object Description Schema: MODS (Library of Congress)
<http://www.loc.gov/standards/mods/>

1.3 Namespace

XML namespaces used in this standard, and their prefixes:

Prefix	Namespace
sruRequest	http://docs.oasis-open.org/ns/search-ws/sruRequest
diag	http://docs.oasis-open.org/ns/search-ws/diagnostic
facet	http://docs.oasis-open.org/ns/search-ws/facetedResults
scan	http://docs.oasis-open.org/ns/search-ws/scan
sra	http://docs.oasis-open.org/ns/search-ws/searchResultAnalysis
sruResponse	http://docs.oasis-open.org/ns/search-ws/sruResponse
xcql	http://docs.oasis-open.org/ns/search-ws/xcql
sru-soap	http://docs.oasis-open.org/ns/search-ws/soap

1.4 Schemas

XML Schemas used in this standard:

	Schema	Used for	URL
1	SRU	The default format for an SRU response.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/sruResponse.xsd
2	Diagnostics	The format for presentation of a diagnostic within an SRU or Scan response.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/diagnostic.xsd
3	Explain	Explain for SRU 2.0.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/explain.xsd
4	Faceted Search Results	The format for presentation of faceted results within an SRU 2.0 response.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/facetedResults.xsd

5	Search Result Analysis	The format for presentation of search result analysis within an SRU 2.0 response.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/searchResultAnalysis.xsd
6	XCQL	CQL expressed in XML, used to echo a query in a search/retrieve response. It is not used in search/retrieve requests.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/xcql.xsd
7	Scan	The format for a Scan response.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/scan.xsd
8	SOAP Support	Used for the SRU binding to SOAP.	http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/sru-wsdl11.wsdl and http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/schemas/sruRequest.xsd

2 Rationale

The OASIS Search Web Services (SWS) initiative defines a generic protocol for the interaction required between a client and server for performing searches. SWS defines an Abstract Protocol Definition (APD searchRetrieve Part 1) to describe this interaction. All search protocols can be regarded as concrete implementations of this definition. The Abstract Protocol Definition facilitates interoperability between different search protocols by providing a common framework and terminology for describing search protocols.

The APD is a simplification and revision of the abstract model for search and retrieval contained within the NISO Z39.50 standard.

The APD defines the following abstract models:

1. **Data Model** – an abstract model describing the data upon which the search is to be performed
2. **Query Model** – an abstract model describing how the search query is constructed
3. **Processing Model** – an abstract model describing how the query is sent from the client to the server
4. **Result Set Model** – an abstract model describing the structure for the results returned by the search
5. **Diagnostics Model** – an abstract model for how errors are communicated by the server to the client
6. **Description and Discovery Model** – an abstract model for how the search service may be discovered and to enable self-description of the functionality of the service

The **Processing Model** presumes a client-server model where the client and server communicate via a searchRetrieve protocol which incorporates a query language. In this model a client sends a searchRetrieve request to a server, which processes the request and responds with a searchRetrieve request. The APD defines abstract request parameters and abstract response elements. Part of the request parameters include a search query as defined in the **Query Model**. Part of the response parameters include the results generated from the **Data Model** and represented in the response according to the **Result Set Model**. The Response may also include error handling information according to the **Diagnostics Model**. In addition, a client may query the capabilities of the server via the **Description and Discovery Model** (in terms of available data sets which can be queries, available **Result Set Models** in cases where a server supports multiple formats for returning results, available query languages where a server support multiple **Query Models** etc.)

The APD serves as a guideline for the development of *application protocol bindings*. A binding indicates the corresponding actual names of the parameters and elements to be transmitted in a request or response. The SWS document collection includes bindings for SRU1.2, SRU2.0 and OpenSearch

3 SWS documents: Roles and Relationships

3.1 Abstract Protocol Definition

The core of the SWS document collection is the Abstract Protocol Definition (**APD**). The **APD** is described in:

APD

searchRetrieve: Part 1. Abstract Protocol Definition Version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part1-apd/searchRetrieve-v1.0-csd01-part1-apd.doc>

The remaining documents describe three bindings of the **APD**: SRU1.2, SRU2.0, and OpenSearch.

3.2 OpenSearch

The **OpenSearch** binding is intended to be fully compatible with
http://www.opensearch.org/Specifications/OpenSearch/1.1/Draft_5

The **OpenSearch** binding is described in:

OpenSearch

searchRetrieve: Part 4. APD Binding for OpenSearch 1.0 version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part4-openSearch1.0/searchRetrieve-v1.0-csd01-part4-openSearch.doc>

3.3 SRU

SRU (*SRU: Search/Retrieve via URL*) is a web service protocol supported over both SOAP and REST for client-server based search. **SRU1.x** was developed as a web service replacement for the NISO Z39.50 protocol. **SRU2.0** is a revision to **SRU** which as well as including many enhancements to SRU1.2 was developed alongside the **APD**.

For the SRU protocol model, three operations are defined as part of its **Processing Model**:

1. **SearchRetrieve Operation.** The actual SearchRetrieve operation defined by the SRU protocol; A SearchRetrieve operation consists of a SearchRetrieve request from client to server followed by a SearchRetrieve response from server to client.
2. **Scan Operation.** Similar to SRU, the Scan protocol defines a request message and a response message for iterating through available search terms. a Scan operation consists of a Scan request followed by a Scan response.
3. **Explain Operation.** Every SRU or scan server provides an associated Explain document as part of its **Description and Discovery Model**, providing information about the server's capabilities. A client may retrieve this document and use the information to self-configure and provide an appropriate interface to the user. When a client retrieves an Explain document, this constitutes an Explain operation.

3.3.1 SRU1.2

The **SRU1.2** binding is the specification of the protocol *SRU: Search/Retrieve via URL*, and is intended to be compatible with the specification at <http://www.loc.gov/standards/sru/specs/>.

The base **SRU1.2** binding is defined in:

SRU1.2

searchRetrieve: Part 2. SRU searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part2-sru1.2/searchRetrieve-v1.0-csd01-part2-sru1.2.doc>

As part of its processing model, **SRU1.2** supported the ability to iterate through search terms using the Scan operation which is defined in:

Scan

searchRetrieve: Part 6. SRU Scan Operation version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part6-scan/searchRetrieve-v1.0-csd01-part6-scan.doc>

The **SRU1.2 Query Model** is defined to be the Contextual Query Language and is defined in:

CQL

searchRetrieve: Part 5. CQL: The Contextual Query Language version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part5-cql/searchRetrieve-v1.0-csd01-part5-cql.doc>

The **SRU2.0 Discovery and Description Model** is implemented via the Explain Operation which is defined in:

Explain

searchRetrieve: Part 7. SRU Explain Operation version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part7-explain/searchRetrieve-v1.0-csd01-part7-explain.doc>

3.3.2 SRU2.0

SRU2.0 is a revised specification of the SRU protocol, includes many enhancements to SRU1.2 that SRU developers have requested. The base **SRU2.0** binding is defined in:

SRU2.0

searchRetrieve: Part 2. SRU searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part2-sru1.2/searchRetrieve-v1.0-csd01-part2-sru1.2.doc>

As part of its processing model, **SRU2.0** supported the ability to iterate through search terms using the Scan operation which is defined in:

Scan

searchRetrieve: Part 6. SRU Scan Operation version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part6-scan/searchRetrieve-v1.0-csd01-part6-scan.doc>

The **SRU2.0 Query Model** is defined to be the Contextual Query Language and is defined in:

CQL

searchRetrieve: Part 5. CQL: The Contextual Query Language version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part5-cql/searchRetrieve-v1.0-csd01-part5-cql.doc>

The **SRU2.0 Discovery and Description Model** is implemented via the Explain Operation which is defined in:

Explain

searchRetrieve: Part 7. SRU Explain Operation version 1.0

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part7-explain/searchRetrieve-v1.0-csd01-part7-explain.doc>

3.4 Other protocols and bindings

Other protocols for search can be described in terms of the **APD**.

Both the **Explain** and **CQL**, whilst mandatory components of **SRU**, are defined to be usable independently of **SRU** by other protocols and bindings.

Appendix A. Acknowledgements

The following individuals were members of the OASIS SWS TC at the time of publication of this standard:

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