WEB OF SCIENCE™

WEB SERVICES VERSION 3.0

USER GUIDE

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THOMSON REUTERS

Table of Contents

Introduction

The Thomson Reuters Web of Science™ Web Services are SOAP-based APIs to access and search Web of Science database subscription content. The web services can be used on any platform that can perform an HTTPS POST request and receive and process XML data, including PHP, Java, C#, .Net, C++ and some mobile platforms.

Standards

Web of Science™ Web Services comply with the following standards:

- JSR 224[1]: Java API for XML-based Web Services 2.0 (JAX-WS) specification
- WSDL 1.1 standard
- SOAP 1.1 standard

Web Services

Web of Science™ Web Services consist of two JAX-WS web services:

- WOKMWSAuthenticate
- WokSearch

WOKMWSAuthenticate is an authentication and session management service. WokSearch is a data retrieval service.

Web of Knowledge Web Services are session-based: the services have state. The services retain your authentication information, service entitlements, and the queries that you have run during a single session.

Web Service Clients

A web service client is required to send and receive SOAP messages. To set up a web services client, you can:

- install and configure a commercial or open source web service client that can send and receive SOAP messages. One such tool is soapUI[2].

or

- develop a custom web service client for sending and receiving SOAP messages.

Service Endpoint Addresses

The public endpoint addresses for Web of Knowledge Web Services are:

- http://search.webofknowledge.com/esti/wokmws/ws/WOKMWSAuthenticate

- http://search.webofknowledge.com/esti/wokmws/ws/WokSearch

WSDL File Locations

The addresses of the WSDL documents append **?wsdl** to the endpoint addresses:

- http://search.webofknowledge.com/esti/wokmws/ws/WOKMWSAuthenticate?wsdl
- http://search.webofknowledge.com/esti/wokmws/ws/WokSearch?wsdl

These may be retrieved via an HTTP Get request.

Document Namespaces

The XML namespace in the response document identifies the source of the data and the document structure.

Namespace	Schema	Description
http://scientific.thomsonreuters.com/schema/wok5.X/public/FullRecord	Web of Science schema	This namespace identifies the document as a full record document from a Web of Science version 5.X database, except DIIDW.
http://scientific.thomsonreuters.com/schema/wok5.X/public/Fields	N/A	This namespace identifies the document as a document consisting of selected field data from a Web of Science version 5.X database, except DDIIW.
http://scientific.thomsonreuters.com/schema/wok5.X/public/GB/DIIDW/Record/FullRecord	N/A	This namespace identifies the document as a full record document from DIIDW in Web of Science version 5.X.
http.//scientific.thomsonreuters.com/schema/wok5.X/public/GB/DIIDW/Record/Fields	N/A	This namespace identifies the document as a document consisting of selected field data from DIIDW in Web of Science version 5.X.

Sequence of Requests

This is the basic sequence of service requests:

1. authenticate operation of the WOKMWSAuthenticate service
2. one or more requests to any operation of the WokSearch service
3. closeSession operation of the WOKMWSAuthenticate service

Support

If you have questions about using our products or about your access to them, please visit our support page at http://ip-science.thomsonreuters.com/support. This page has links to our support Knowledgebase, the local telephone numbers, and hours of operation. When you click on the **Open eTicket** tab, your issue will be immediately routed to your local support team.

Questions about network connections and/or the use of your web browser should be directed to your network administrator.

Notes

1. http://jcp.org/aboutJava/communityprocess/pfd/jsr224/index.html
2. http://www.soapui.org/

Authentication

Web of Science™ Web Services are authenticated Web services. They require successful validation of your authentication credentials prior to data retrieval.

Web of Science Web Services support both IP and Username/Password authentication. The appropriate authentication credentials for your site should already be set. If you need to verify that your client IP or username/password combination has been entered in our system, or if you want to change your credentials, contact Thomson Reuters Technical Support at http://science.thomsonreuters.com/support/.[1]

The initial request sent to the WOKMWSAuthenticate service by your web services client submits authentication credentials. If your authentication credentials are validated, a session identifier is returned in the service response. Otherwise, a SOAP fault is returned.

All subsequent requests to Web of Science Web Services do not require authentication as long as the session ID has not expired and is included in each service request.

IP Authentication

IP authentication happens automatically as long as your IP address has been recorded in your customer account. Unlike username/password authentication, IP authentication does not require an authentication header.

Username/Password Authentication

For username/password authentication, the HTTP POST request that sends the authenticate SOAP message must contain the username/password in a Base64-encoded string in the HTTP header. The username and password should be formatted as <username>:<password> and then encoded.

```
Header name:  Authorization
Header value: [Basic the-base64-encoded-username-password]
```

Sample HTTP Header

In this example, the user name is wsfuser1 and the password is password1. Where d3NmdXNlcjE6cGFzc3dvcmQx is wsfuser1:password1 encoded in Base64.

```
Encoding: UTF-8
   HTTP Headers:
   {
   content-length=[182],
   Authorization=[Basic d3NmdXNlcjE6cGFzc3dvcmQ],
   connection=[keep-alive],
   cache-control=[no-cache],
   host=[10.224.10.63:8081],
   user-agent=[Java/1.5.0_09],
   SOAPAction=[""],
   pragma=[no-cache],
   content-type=[text/xml;
   charset=UTF-8],
   Accept=[*]
   }
```

Base64 Encoding References

- Base64[2] Content encoding scheme
- RFC 2617[3] (HTTP Authentication: Basic and Digest Access Authentication)
- Basic access authentication[4]
- http://www.motobit.com/util/base64-decoder-encoder.asp Encode and decode using base64 encoding

The Session Identifier

The session identifier will be returned as a string from the authenticate operation. It will also be present in an HTTP cookie attached to the SOAP response. The cookie name is SID.

All subsequent requests do not require authentication as long as the session ID has not expired and is included in each service request.

By default, your web services client will not send the session identifier with subsequent service requests. You must configure your web services client to send the session identifier. The session ID must be sent in the transport header rather than in the SOAP message. Once authenticated, all service requests are routed to the authenticating server. This routing is done using the session identifier located in the HTTP request header:

```
Header name:  Cookie

Header value:  SID="I4LaCdfKGe8Dhm8Gkd@"
```

Note: The session identifier may contain special characters and therefore must be enclosed in quotation marks.

Sample Header

```
Encoding: UTF-8
Headers:
Cookie=SID="I4LaCdfKGe8Dhm8Gkd@"
content-type=text/xml; charset=UTF-8
```

Notes

1. http://science.thomsonreuters.com/support/
2. http://en.wikipedia.org/wiki/Base64
3. http://www.ietf.org/rfc/rfc2617.txt
4. http://en.wikipedia.org/wiki/Basic_access_authentication

Web Service Operations

Web Service	Operation	Description	Requires a valid session identifier
WOKMWSAuthenticate	authenticate	Send user authentication credentials. If validated, return session identifier.	No
	closeSession	Sends the session identifier and close the server session. Return empty message.	Yes
WokSearch	search	Submits a user query and returns results.	Yes
	citedReferences	Returns the references cited by an article retrieved by a previous search. The citing article is identified by record ID.	Yes
	citingArticles	Searches for articles that cite an article retrieved by a previous search. The cited article is specified by record ID.	Yes
	relatedRecords	Searches for articles that have one or more cited references in common with the article specified by unique identifier (UID).	Yes
	retrieveById	Returns records specified by unique identifiers (UIDs).	Yes
	citedReferencesRetrieve	Returns additional cited references for the article retrieved by the citedReferences operation. This operation should be used if a citedReferences operation returns 100 references, which is the maximum retrieved by that operation. The number of records retrieved is limited to 100 per operation.	Yes
	retrieve	returns additional records that satisfy a previous search, citingArticles, relatedRecords, or retrieveByID operation. The number of records retrieved is limited to 100 per retrieve operation.	Yes

All WokSearch operations return a maximum of 100 records. The operations retrieve and citedReferencesRetrieve use the queryId from a previous search operation to return records beyond the 100-record limit.

WOKMWSAuthenticate

authenticate

The authenticate operation creates a session and obtains a session ID. Subsequent operations must incorporate this session ID.

WSDL Declarations

The input message is defined by the WOKMWSAuthenticate:authenticate type.

The output message is defined by the WOKMWSAuthenticate:authenticateResponse type.

Request Message

For username/password authentication, authentication credentials are sent as HTTP headers. For IP authentication, no special HTTP headers are required. The SOAP message body does not contain any information.

This example shows the request sent by the CXF (client) runtime from an authentication request from a high level web services client (Java) program generated from the WSDL using WSDL2Java.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:auth="http://auth.cxf.wokmws.thomsonreuters.com">
  <soapenv:Header/>
  <soapenv:Body>
    <auth:authenticate/>
  </soapenv:Body>
</soapenv:Envelope>
```

Response Message

The HTTP response to the authentication request contains a session identifier cookie in the HTTP headers as well as in the SOAP message body.

This is a sample HTTP response returned from the CXF server runtime. There are three HTTP headers in the response. Header 1 specifies the encoding. Header 2 specifies a cookie with cookie name, SID.

```
 Headers:
  Content-Type=text/xml;charset=UTF-8
  Set-Cookie=SID=I24P@FG73NeKHan9lIc
  Date=Fri, 01 May 2009 19:15:17 GMT
```

The SID cookie looks like the following.

```
 Encoding: UTF-8
 Cookie: SID=I24P@FG73NeKHan9lIc domain=null; path=null
```

The HTTP response also contains the following SOAP message.

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
 <soap:Body>
   <ns2:authenticateResponse xmlns:ns2="http://auth.cxf.wokmws.thomsonreuters.com">

      <return>I24P@FG73NeKHan9lIc</return>

   </ns2:authenticateResponse>
 </soap:Body>
</soap:Envelope>
```

In this example, I24P@FG73NeKHan9IIc is the session ID. It must be used by all subsequent service requests sent to Web of Science Web Services.

closeSession

The closeSession operation loads the session if it is valid and then closes it and releases the session seat. All the session data are deleted and become invalid after the request is processed. The session ID can no longer be used in subsequent requests.

WSDL Declarations

The input message is defined by the WOKMWSAuthenticate:closeSession type.

The output message is defined by the WOKMWSAuthenticate:closeSessionResponse type.

Prerequisites

The session to close must exist and be active.

Request Message

The SOAP message body does not contain any information.

This is a sample closeSession request. The session identifier is sent as an HTTP header.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:auth="http://
auth.cxf.wokmws.thomsonreuters.com">
   <soapenv:Header/>
   <soapenv:Body>
      <auth:closeSession/>
   </soapenv:Body>
</soapenv:Envelope>
```

Response Message

The response message is an empty message, unless there is an error.

If the session was active when the request was received, this is the response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
   <soap:Body>
      <ns2:closeSessionResponse xmlns:ns2="http://auth.cxf.wokmws.thomsonreuters.com"/>
   </soap:Body>
</soap:Envelope>
```

If the session was already closed at the time the request was received, this is the response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
   <soap:Body>
      <soap:Fault>
         <faultcode>soap:Server</faultcode>
         <faultstring>Session is closed: SID=2WuCwXmlBFfuGn9xA64</faultstring>
         <detail>
            <ns2:SessionException xmlns:ns2="http://auth.cxf.wokmws.thomsonreuters.com"/>
         </detail>
      </soap:Fault>
   </soap:Body>
</soap:Envelope>
```

WokSearch

citedReferences

The citedReferences operation returns references cited by an article identified by a unique identifier. You may specify only one identifier per request.

WSDL Declarations

The input message is defined by the woksearch:citedReferences type.

The output message is defined by the woksearch:citedReferencesSearchResults type.

Prerequisites

The client must be entitled to each database, collection/edition, and time span to be searched. A valid session, identified by sessionID, must be active before the operation can be performed.

Query Parameters

Query parameters specify the target database and define retrieval criteria.

Name	Type	Description
databaseId	string	Database to search. Must be a valid database ID.
uid	string	A unique item identifier. It cannot be null or contain an empty string.
queryLanguage	string	This element can take only one value: en for English.

uid

The uid is a unique item identifier. It is enclosed by the UID element in database records. The exception is DIIDW where the identifier is the pan attribute of the PanTyp1 element.

You can obtain a list of unique identifiers for the records returned by a search operation by using the database option RecordIDs. See the sample request for the search operation.

Database	uid source	Example from Database Record
BCI	UID element	BCI:BCI198120007950
BIOABS	UID element	BIOABS:BACD19644500022158
BIOSIS	UID element	BIOSIS:PREV19462000007721
CABI	UID element	CABI:19470701387
CCC	UID element	CCC:000229106600005
CSCD	UID element	CSCD:2147581
DCI	UID element	DRCI:DATA2012136001723188
DIIDW	pan attribute of PanTyp1 element	2009P76524
FSTA	UID element	FSTA:2009-07-Ne0901
INSPEC	UID element	INSPEC:8679996
MEDLINE	UID element	MEDLINE:17593184

SCIELO	UID element	SCIELO:S1029-30192012000100018
WOS	UID element	WOS:000072501400019
ZOOREC	UID element	ZOOREC:ZOOR13500039192

Results Metadata

Name	Type	Description
queryId	string	The identifier of the query object. The query object is stored in the session. The session ID and queryId can be used to retrieve additional records.
recordsFound	int	The number of records found that satisfy this query.
recordsSearched	long	The number of records searched.
parent	string	
optionValue	array of labelValuesPair	Metadata about the records returned. These metadata must be specified in the request using the retrieve parameter option.
records	complex	List of records returned by the operation.

Example

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
   xmlns:woksearch="http://woksearch.v3.wokmws.thomsonreuters.com">
   <soapenv:Header/>
   <soapenv:Body>
      <woksearch:citedReferences>
         <databaseId>WOS</databaseId>
         <uid>WOS:000270372400005</uid>
         <queryLanguage>en</queryLanguage>
         <retrieveParameters>
            <firstRecord>1</firstRecord>
            <count>100</count>
            <option>
              <key>Hot</key>
              <value>On</value>
            </option>
         </retrieveParameters>
      </woksearch:citedReferences>
   </soapenv:Body>
</soapenv:Envelope>
```

citedReferencesRetrieve

The citedReferencesRetrieve operation submits a query returned by a previous citedReferences operation.

This operation is useful for overcoming the retrieval limit of 100 records per query. For example, a citedReferences operation may find 106 cited references, as revealed by the content of the recordsFound element, but it returns only records 1-100. You could perform a subsequent citedReferencesretrieve operation to obtain records 101-106.

WSDL Declarations

The input message is defined by the woksearch:citedReferencesRetrieve type.

The output message is defined by the woksearch:citedReferencesRetrieveResponse type.

Prerequisites

A valid queryID from a previous citedReferences operation. In addition, a valid session, identified by sessionID, must be active before the operation can be performed.

Query Parameters

For this operation, there is a single query parameter:

queryId (Type: string)

This is the query ID from a previous citedReferences operation. Cannot be null.

Example

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
   <soap:Header/>
   <soap:Body>
      <woksearch:citedReferencesRetrieve xmlns:woksearch="http://
woksearch.v3.wokmws.thomsonreuters.com">
         <queryId>22</queryId>
         <retrieveParameters>
            <firstRecord>50</firstRecord>
            <count>10</count>
         </retrieveParameters>
      </woksearch:citedReferencesRetrieve>
   </soap:Body>
</soap:Envelope>
```

citingArticles

The citingArticles operation finds citing articles for the article specified by unique identifier. You may specify only one identifier per request. Web of Science Core Collection (WOS) is the only valid database for this operation.

WSDL Declarations

The input message is defined by the woksearch:citingArticles type.

The output message is defined by the woksearch:citingArticlesResponse type.

Prerequisites

The client must be entitled to each database, collection/edition, and time span to be searched. A valid session, identified by sessionID, must be active before the operation can be performed.

Query Parameters

Query parameters specify the target database and define retrieval criteria.

Name	Type	Description
databaseId	string	Database to search. Must be a valid database ID.
uid	string	A unique item identifier. It cannot be null or contain an empty string.

editions	complex	List of editions to be searched. If null, user permissions will be substituted.
timeSpan	complex	This element defines specifies a range of publication dates. If timeSpan is null, then the maximum time span will be inferred from the editions data.
queryLanguage	string	This element can take only one value: en for English.

uid

The uid is a unique item identifier. It is enclosed by the UID element in database records. You can obtain a list of unique identifiers for the records returned by a search operation by using the database option RecordIDs. See the sample request for the search operation.

Database	uid source	Description	Example from Database Record
WOS	UID element	Thomson Reuters unique record identifier	WOS:000072501400019

editions

Name	Type	Description
collection	string	Name of the collection
edition	string	Name of the edition

timeSpan

Name	Type	Description
begin	string	Beginning date for this search. Format is: YYYY-MM-DD
end	string	Ending date for this search. Format is: YYYY-MM-DD

Results Metadata

Name	Type	Description
queryId	string	The identifier of the query object. The query object is stored in the session. The session ID and queryId can be used to retrieve additional records.
recordsFound	int	The number of records found that satisfy this query.
recordsSearched	long	The number of records searched.
parent	string	
optionValue	array of labelValuesPair	Metadata about the records returned. These metadata must be specified in the request using the retrieve parameter option.

records	complex	List of records returned by the operation.

Example

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
   xmlns:woksearch="http://woksearch.v3.wokmws.thomsonreuters.com">
   <soapenv:Header/>
   <soapenv:Body>
      <woksearch:citingArticles>
         <databaseId>WOS</databaseId>
         <uid>WOS:000270372400005</uid>
         <editions>
            <collection>WOS</collection>
            <edition>AHCI</edition>
         </editions>
         <editions>
            <collection>WOS</collection>
            <edition>SSCI</edition>
         </editions>
         <editions>
            <collection>WOS</collection>
            <edition>SCI</edition>
         </editions>
         <timeSpan>
            <begin>1899-01-01</begin>
            <end>2009-12-31</end>
         </timeSpan>
         <queryLanguage>en</queryLanguage>
         <retrieveParameters>
            <firstRecord>1</firstRecord>
            <count>100</count>
            <option>
               <key>RecordIDs</key>
               <value>On</value>
            </option>
            <option>
               <key>targetNamespace</key>
               <value>http://scientific.thomsonreuters.com/schema/wok5.4/public/FullRecord</value>
            </option>
        </retrieveParameters>
      </woksearch:citingArticles>
   </soapenv:Body>
</soapenv:Envelope>
```

relatedRecords

The relatedRecords operation finds Related Records® for the article specified by unique identifier. Related Records share cited references with the specified record. The operation returns the parent record along with the Related Records. The total number of Related Records for the parent record is shown at the end of the response. Use the retrieve parameter *count* to limit the number of Related Records returned.

Web of Science Core Collection (WOS) is the only valid database for this operation.

WSDL Declarations

The input message is defined by the woksearch:relatedRecords type.

The output message is defined by the woksearch:relatedRecordsResponse type.

Prerequisites

The client must be entitled to each database, collection/edition, and time span to be searched. A valid session, identified by sessionID, must be active before the operation can be performed.

Query Parameters

Query parameters specify the target database and define retrieval criteria.

Name	Type	Description
databaseId	string	Database to search. Must be a valid database ID.
uid	string	A unique item identifier. It cannot be null or contain an empty string.
editions	complex	List of editions to be searched. If null, user permissions will be substituted.
timeSpan	complex	This element defines specifies a range of publication dates. If timeSpan is null, then the maximum time span will be inferred from the editions data.
queryLanguage	string	This element can take only one value: en for English.

uid

The uid is a unique item identifier. It is enclosed by the UID element in database records. You can obtain a list of unique identifiers for the records returned by a search operation by using the database option RecordIDs. See the sample request for the search operation.

Database	uid source	Description	Example from Database Record
WOS	UID element	Thomson Reuters unique record identifier	WOS:000072501400019

editions

Name	Type	Description
collection	string	Name of the collection
edition	string	Name of the edition

timeSpan

Name	Type	Description
begin	string	Beginning date for this search. Format is: YYYY-MM-DD
end	string	Ending date for this search. Format is: YYYY-MM-DD

Results Metadata

Name	Type	Description

queryId	string	The identifier of the query object. The query object is stored in the session. The session ID and queryId can be used to retrieve additional records.
recordsFound	int	The number of records found that satisfy this query.
recordsSearched	long	The number of records searched.
parent	string	
optionValue	array of labelValuesPair	Metadata about the records returned. These metadata must be specified in the request using the retrieve parameter option.
records	complex	List of records returned by the operation.

Example

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
   xmlns:woksearch="http://woksearch.v3.wokmws.thomsonreuters.com">
   <soapenv:Header/>
   <soapenv:Body>
      <woksearch:relatedRecords>
         <databaseId>WOS</databaseId>
         <uid>WOS:000075022300003</uid>

         <editions>
            <collection>WOS</collection>
            <edition>ISSHP</edition>
         </editions>
         <editions>
            <collection>WOS</collection>
            <edition>ISTP</edition>
         </editions>
         <editions>
            <collection>WOS</collection>
            <edition>AHCI</edition>
         </editions>
         <editions>
            <collection>WOS</collection>
            <edition>SSCI</edition>
         </editions>
         <editions>
            <collection>WOS</collection>
            <edition>SCI</edition>
         </editions>

         <timeSpan>
            <begin>1899-01-01</begin>
            <end>2009-12-31</end>
         </timeSpan>
         <queryLanguage>en</queryLanguage>

         <retrieveParameters>
            <firstRecord>1</firstRecord>
            <count>5</count>
            <option>
               <key>RecordIDs</key>
               <value>On</value>
            </option>
            <option>
               <key>targetNamespace</key>
               <value>http://scientific.thomsonreuters.com/schema/wok5.4/public/FullRecord</value>
            </option>
        </retrieveParameters>
      </woksearch:relatedRecords>
```

```
   </soapenv:Body>
</soapenv:Envelope>
```

retrieveById

The retrieveById operation returns records identified by unique identifiers. The identifiers are specific to each database. You may specify multiple identifiers in a single request.

WSDL Declarations

The input message is defined by the woksearch:retrieveById type.

The output message is defined by the woksearch:retrieveByIdResponse type.

Prerequisites

The client must be entitled to each database, collection/edition, and time span to be searched. A valid session, identified by sessionID, must be active before the operation can be performed.

Query Parameters

Query parameters specify the target database and define retrieval criteria.

Name	Type	Description
databaseId	string	Database to search. Must be a valid database ID.
uid	string	A unique item identifier. It cannot be null or contain an empty string.
queryLanguage	string	This element can take only one value: en for English.

uid

The uid is a unique item identifier. It is enclosed by the UID element in database records. The exception is DIIDW where the identifier is the pan attribute of the PanTyp1 element.

You can obtain a list of unique identifiers for the records returned by a search operation by using the database option RecordIDs. See the sample request for the search operation.

Database	uid source	Example from Database Record
BCI	UID element	BCI:BCI198120007950
BIOABS	UID element	BIOABS:BACD19644500022158
BIOSIS	UID element	BIOSIS:PREV19462000007721
CABI	UID element	CABI:19470701387
CCC	UID element	CCC:000229106600005
CSCD	UID element	CSCD:2147581
DCI	UID element	DRCI:DATA2012136001723188
DIIDW	pan attribute of PanTyp1 element	2009P76524
FSTA	UID element	FSTA:2009-07-Ne0901
INSPEC	UID element	INSPEC:8679996
MEDLINE	UID element	MEDLINE:17593184

SCIELO	UID element	SCIELO:S1029-30192012000100018
WOS	UID element	WOS:000072501400019
ZOOREC	UID element	ZOOREC:ZOOR13500039192

Results Metadata

Name	Type	Description
queryId	string	The identifier of the query object. The query object is stored in the session. The session ID and queryId can be used to retrieve additional records.
recordsFound	int	The number of records found that satisfy this query.
recordsSearched	long	The number of records searched.
parent	string	
optionValue	array of labelValuesPair	Metadata about the records returned. These metadata must be specified in the request using the retrieve parameter option.
records	complex	List of records returned by the operation.

Example

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
   xmlns:woksearch="http://woksearch.v3.wokmws.thomsonreuters.com">
   <soapenv:Header/>
   <soapenv:Body>
      <woksearch:retrieveById>
         <databaseId>WOS</databaseId>

         <uid>WOS:000270372400005</uid>
         <uid>WOS:000075022300003</uid>

         <queryLanguage>en</queryLanguage>

         <retrieveParameters>
            <firstRecord>1</firstRecord>
            <count>2</count>
            <option>
               <key>RecordIDs</key>
               <value>On</value>
            </option>
         </retrieveParameters>
      </woksearch:retrieveById>
   </soapenv:Body>
</soapenv:Envelope>
```

search

The search operation searches the specified database edition and retrieves data. This operation returns a query ID that can be used in subsequent operations to retrieve more records.

WSDL Declarations

The input message is defined by the woksearch:search type.

The output message is defined by the woksearch:searchResponse type.

Prerequisites

The client must be entitled to each database, collection/edition, and time span to be searched. A valid session, identified by sessionID, must be active before the operation can be performed.

Query Parameters

Query parameters specify the target database and define retrieval criteria.

Name	Type	Description
queryParameters	complex	
databaseId	string	Database to search. Must be a valid database ID.
userQuery	string	User query for requesting data. The query parser will return errors for invalid queries
editions	complex	List of editions to be searched. If null, user permissions will be substituted.
symbolicTimeSpan	string	This element defines a range of load dates. The load date is the date when a record was added to a database. If symbolicTimeSpan is specified, the timeSpan parameter must be omitted. If timeSpan and symbolicTimeSpan are both omitted, then the maximum publication date time span will be inferred from the editions data.
timeSpan	complex	This element defines specifies a range of publication dates. If timeSpan is used, the symbolicTimeSpan parameter must be omitted. If timeSpan and symbolicTimeSpan are both omitted, then the maximum time span will be inferred from the editions data.
queryLanguage	string	This element can take only one value: en for English.

editions

Name	Type	Description
collection	string	Name of the collection
edition	string	Name of the edition

symbolicTimeSpan

Valid Values	Description

1week	Specifies to use the end date as today and the begin date as 1 week prior to today.
2week	Specifies to use the end date as today and the begin date as 2 weeks prior to today.
4week	Specifies to use the end date as today and the begin date as 4 weeks prior to today.

timeSpan

Name	Type	Description
begin	string	Beginning date for this search. Format is: YYYY-MM-DD
end	string	Ending date for this search. Format is: YYYY-MM-DD

Results Metadata

Name	Type	Description
queryId	string	The identifier of the query object. The query object is stored in the session. The session ID and queryId can be used to retrieve additional records.
recordsFound	int	The number of records found that satisfy this query.
recordsSearched	long	The number of records searched.
parent	string	
optionValue	array of labelValuesPair	Metadata about the records returned. These metadata must be specified in the request using the retrieve parameter option.
records	complex	List of records returned by the operation.

Sample Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
   xmlns:woksearch="http://woksearch.v3.wokmws.thomsonreuters.com">
   <soapenv:Header/>
   <soapenv:Body>
      <woksearch:search>
         <queryParameters>
            <databaseId>WOS</databaseId>
            <userQuery>TS=(cadmium OR lead)</userQuery>
            <editions>
               <collection>WOS</collection>
               <edition>SCI</edition>
            </editions>
            <timeSpan>
               <begin>2000-01-01</begin>
               <end>2011-12-31</end>
            </timeSpan>
            <queryLanguage>en</queryLanguage>
         </queryParameters>
         <retrieveParameters>
            <firstRecord>1</firstRecord>
            <count>5</count>
```

```
            <option>
               <key>RecordIDs</key>
               <value>On</value>
            </option>
            <option>
               <key>targetNamespace</key>
               <value>http://scientific.thomsonreuters.com/schema/wok5.4/public/FullRecord</value>
            </option>
         </retrieveParameters>
      </woksearch:search>
   </soapenv:Body>
</soapenv:Envelope>
```

User Query

The search operation requires a user query. It consists of one or more field tags and a search string. For example, the query AU=Chen Q* searches the database for records in which Chen Q (or Chen QD, Chen QQ, Chen QY, etc) is found in the Author field.

Searching Multiple Fields

You may combine searches of different fields in the same query. A Boolean search of a single field should be enclosed in parentheses.

- TS=particle swarm AND PY=(2007 OR 2008)
- AU=(Poole M* OR Wise J*) AND AD=Univ* Illinois
- SO=Synthetic Metals AND TI=nanotub*

Search Operators

Search operators AND, OR, NOT, NEAR, and SAME may be used to combine terms in order to broaden or narrow retrieval.

Case does not matter when using search operators. For example, OR, Or, and or returns the same results.

Boolean Operators AND

Use AND to find records containing *all* terms separated by the operator.

OR

Use OR to find records containing any of the terms separated by the operator.

NOT

Use NOT to exclude records containing certain words from your search.

SAME

In Address searches, use SAME to find records where the terms separated by the operator appear in the same address. Use parentheses to group your address terms. For example:

> **AD=(Portland SAME Oregon)** finds records in which the address terms Portland, Oregon, or OR appear in the Address field of a record.

Be aware that SAME works exactly like AND when used in other fields (such as Topic and Title fields) and when the terms appear in the same record. For example:

> **TS=(cat SAME mouse)** retrieves the same results as **TS=(cat AND mouse)**.

Proximity Operators NEAR/x

Use NEAR/x to find records where the terms joined by the operator are within a specified number of words of each other. This is true even when the words are across different fields.

Replace the **x** with a number to specify the maximum number of words that separate the terms.

If you use NEAR without /x, the system will find records where the terms joined by NEAR are within 15 words of each other. For example, these searches are equivalent:

- salmon NEAR virus
- salmon NEAR/15 virus

Be aware that ...

You cannot use the AND operator in Topic and Title queries as a component of the NEAR operator. For example, the following query is valid.

TS=(Brown NEAR "spider bite")

However, **TS=(Brown NEAR spider bite)** is not valid because AND is used as an implied operator between the terms *spider* and *bite*.

On the other hand, **OG=(Brown NEAR Rhode Island)** is valid because this field tag calls for an implied NEAR operator between the terms *Rhode* and *Island*.

Use of Parentheses

Use parentheses to override operator precedence. The expression inside the parentheses is executed first.

(cadmium AND gill*) NOT Pisces finds records containing both cadmium and gill (or gills), but excludes records containing the word *Pisces*.

(salmon OR pike) NEAR/10 virus find records containing salmon or pike within 10 words of virus.

Wildcards

Wildcards can be used in all search fields that allow words and phrases. They can be used in a search query to represent unknown characters.

- The asterisk (*) represents any group of characters, including no character.
- The question mark (?) represents any single character.
- The dollar sign ($) represents zero or one character.

General Rules about Wildcards

- Use wildcards for both right- and left-hand truncation.
- Wildcards may be used inside a word. For example, **odo$r** finds odor and odour.
- You cannot use wildcards after special characters (/ @ #) and punctuation (. , : ; !).
- You cannot use wildcards in a publication year search. For example, **2007** is OK but **200*** is not.
- You cannot search on a wildcard if it appears in a word or name.
- Do not use the dollar sign ($) within quotation marks. For example, the search query **"fish farm$"** will not retrieve records that contain either fish farm or fish farms.

Useful Tips

- The asterisk is useful when you use right-hand and left-hand truncation when searching for publication titles. For example, ***Cell*** finds *Aging Cell*, *Biocell*, *Cell Research* and other titles that follow or precede the text string ***Cell***.

- The asterisk is useful when you use left-hand truncation when searching for substances. For example, ***phosphate** finds diphosphate, monophosphate, triphosphate and other terms that precede the text string ***phosphate**.
- The dollar sign is useful for finding both the British and American spellings of the same word. For example, **flavo$r** finds flavor and flavour.
- The question mark is useful for searching last names of authors where the last character is uncertain. For example, **Barthold?** finds Bartholdi and Bartholdy. It will not find Barthod.

Field Tags

Biological Abstracts

Field Tags

- AD=Address
- AU=Author
- CB=Chemical and Biochemical
- CC=Concept Code
- CH=Chemical
- CR=CAS Registry No.
- DE=Misc. Descriptors
- DS=Disease Data
- ED=Editor
- GE=Geographic Data
- GN=Gene Name Data
- GP=Group Author
- GT=Geological Time Data
- IC=Identifying Codes
- IS=ISSN/ISBN
- MC=Major Concepts
- MQ=Methods & Equipment Data
- PSD=Parts & Structure Data

- PY=Year Published
- SO=Source Publication
- SQ=Sequence Data
- SU=Research Area
- TA=Taxonomic Data
- TI=Title
- TS=Topic
- UT=Accession Number

BIOSIS Citation Index

Field Tags

- AD=Address
- AN=Patent Assignee
- AU=Author
- CB=Chemical and Biochemical
- CC=Concept Code
- CH=Chemical
- DE=Misc. Descriptors
- DS=Disease Data
- ED=Editor
- GE=Geographic Data
- GN=Gene Name Data
- GP=Group Author
- GT=Geological Time Data
- IC=Identifying Codes
- IS=ISSN/ISBN
- MC=Major Concepts

- MI=Meeting Information
- MQ=Methods & Equipment Data
- PSD=Parts & Structure Data
- PY=Year Published
- SO=Publication Name
- SQ=Sequence Data
- SU=Research Area
- TA=Taxonomic Data
- TI=Title
- TS=Topic
- UT=Accession Number

BIOSIS Previews

Field Tags

- AD=Address
- AN=Patent Assignee
- AU=Author
- GP=Group Author
- CB=Chemical and Biochemical
- CC=Concept Codes
- CH=Chemical
- CR=CAS Registry No.
- DE=Miscellaneous Descriptors
- DS=Disease Data
- ED=Editor
- GE=Geographic Data
- GT=Geological Time Data

- GN=Gene Name Data
- GP=Group Author
- IC=Identifying Codes
- IS=ISSN/ISBN
- MC=Major Concepts
- MI=Meeting Information
- MQ=Methods & Equipment Data
- PSD=Parts & Structure Data
- PY=Year Published
- SO=Publication Name
- SQ=Sequence Data
- SU=Research Area
- TA=Taxonomic Data
- TI=Title
- TS=Topic
- UT=Accession Number

CABI: CAB Abstracts and Global Health

Field Tags

- AD=Address
- AU=Author
- BD=Broad Descriptors
- CCO=CABICODES
- CF=Conference
- CR=CAS Registry No.
- DE=Descriptors
- ED=Editor

- GP=Group Author
- IS=ISSN/ISBN
- PA=Accession No.
- PY=Year Published
- SO=Publication Name
- SU=Research Area
- TI=Title
- TS=Topic

Chinese Science Citation Database

Field Tags

- AD=Address
- AU=Author
- CI=City
- CU=Country
- IS=ISSN/ISBN
- OG=Organization
- PS=Province/State
- PY=Year Published
- SG=Suborganization
- SO=Publication Name
- SU=Research Area
- TI=Title
- TS=Topic
- UT=Accession Number
- ZP=Zip/Postal Code

Current Contents Connect

Field Tags

- AD=Address / Institution
- AU=Author
- CI=City
- CU=Country
- DIS=Discipline
- ED=Editor
- GP=Group Author
- OG=Organization
- PS=Province/State
- PY=Year Published
- SA=Street Address
- SG=Suborganization
- SO=Publication Name
- TI=Title
- TS=Topic
- ZP=Zip/Postal Code

Data Citation Index

Field Tags

- AD=Address
- AI=Author Identifiers
- AU=Author
- DE=Subject Descriptors
- DM=Demographics
- DO=DOI

- DT=Document Type
- DY=Data Type
- ED=Editor
- FT=Funding Text
- GN=Gene Name
- GP=Group Author
- GS=Geospatial
- GT=Time
- ML=Miscellaneous
- NP=Named Person
- OD=Method
- PY=Year Published
- SO=Source Titles
- SU=Subject Area
- TA=Taxonomic Data
- TI=Title
- TS=Topic
- UT=Accession Number
- WC=Web of Science Category

Derwent Innovations Index

Field Tags

- AN=Assignee Name
- AC=Assignee Code
- AE=Assignee Name + Code
- AU=Inventor
- CAC=Cited Assignee

- CPC=Cited Assignee Code
- CD=Cited PAN
- CAU=Cited Inventor
- CN=Cited Assignee Name
- CP=Cited Patent Number
- CX=CP + Family
- DC=Class Code
- DCN=Derwent Compound Number
- DCR=DCR Number
- DRN=Derwent Registry Number
- IP=Int Patent Classification
- MAN=Derwent Manual Code
- PAN=Derwent Prim. Access. No.
- PN=Patent Number
- RIN=Ring Index Number
- TI=Title
- TS=Topic

Food Science and Technology Abstracts

Field Tags

- AD=Address
- AN=Patent Assignee Name
- AU=Author/Inventor
- AU=Inventor
- DE=Descriptors
- FS=FSTA Sections
- GP=Group Author

- IS=ISSN/ISBN
- IC=Identifying Codes
- PY=Year Published
- SO=Publication Name
- SU=Research Area
- TI=Title
- TS=Topic
- UT=Accession Number

Inspec

Field Tags

- AD=Address
- AO=Astronomical Index
- AU=Author
- CH=Chemical Data
- CIX=Controlled Index
- CL=Classification
- ED=Editor
- IC=Identifying Codes
- MI=Meeting Information
- PY=Year Published
- SO=Source Title
- TI=Title (article title)
- TS=Topic
- UI=Uncontrolled Index

MEDLINE

Field Tags

- AD=Address
- AU=Author
- CH=Chemical
- CPD=Collaborating Partner
- GI=Grant Information
- GP=Corporate Author
- IC=Identifying Codes
- IS=ISSN
- MH=MeSH Heading
- MT=MeSH Major Topic
- NL=NLM Unique ID
- PD=Publication Date
- PM=PubMed ID
- PY=Year Published
- RN=Registry Number
- RO=Record Owner
- SO=Publication Name
- SU=Subject Area
- TI=Title
- TS=Topic

SciELO Citation Index

Field Tags

- AD=Address
- AI=Author Identifiers
- AU=Author
- DO=DOI

- EC=SciELO Categories
- ED=Editor
- IS=ISSN/ISBN
- OG=Organization
- PY=Year Published
- SO=Publication Name
- SU=Research Area
- TI=Title
- TS=Topic
- UT=Accession Number

Web of Science Core Collection

Field Tags

- AD=Address
- AU=Author
- CF=Conference
- CI=City
- CU=Country
- DO=DOI
- ED=Editor
- FG=Grant Number
- FO=Funding Agency
- FT=Funding Text
- GP=Group Author
- IS=ISSN/ISBN
- OG=Organization - Enhanced
- OO=Organization

- PS=Province/State
- PY=Year Published
- RID=ResearcherID
- SA=Street Address
- SG=Suborganization
- SO=Publication Name
- SU=Research Area
- TI=Title
- TS=Topic
- UT=Accession Number
- WC=Web of Science Category
- ZP=Zip/Postal Code

Zoological Record

Field Tags

- AD=Address
- AU=Author
- BN=Biblio Note
- BT=Broad Terms
- DE=Descriptors
- ED=Editor
- GP=Group Author
- IC=Identifying Codes
- IS=ISSN/ISBN
- PU=Publisher
- PY=Year Published
- SD=Subject Descriptors

- SO=Publication Name
- ST=Super Taxa
- SU=Research Area
- SY=Systematics
- SY=Organism
- TI=Title
- TN=Taxa Notes
- TS=Topic
- UT=Accession Number

retrieve

The retrieve operation submits a query returned by a previous search, citingArticles, relatedRecords, or retrieveById operation. However, different retrieval parameters may be used to modify the output. For example, if a search operation returns five records sorted by times cited, a subsequent retrieve operation could run the same search against the same database and edition but return 10 records sorted by relevance.

This operation is also useful for overcoming the retrieval limit of 100 records per query. For example, a search operation may find 220 records, as revealed by the content of the recordsFound element, but it returns only records 1-100. A subsequent retrieve operation could return records 101-200 and a third retrieve operation the remaining 20.

WSDL Declarations

The input message is defined by the woksearch:retrieve type.

The output message is defined by the woksearch:retrieveResponse type.

Prerequisites

A valid queryID from a previous operation. In addition, a valid session, identified by sessionID, must be active before the operation can be performed.

Query Parameters

For this operation, there is a single query parameter. Retrieve parameters define the scope of the output and the content of each record.

queryId (Type: string)

The query ID from a previous search. Cannot be null.

Example

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
<soap:Body>
  <ns2:retrieve xmlns:ns2="http://woksearch.v3.wokmws.thomsonreuters.com">

    <queryId>1</queryId>
```

```
    <retrieveParameters>
       <firstRecord>101</firstRecord>
       <count>100</count>
    </retrieveParameters>

  </ns2:retrieve>
</soap:Body>
</soap:Envelope>
```

Retrieve Parameters

Retrieve parameters define the scope of the output and the content of each record. They specify which records are returned, the sort order of the records, the data included in each record and the metadata about each record returned. Retrieve parameters are grouped in a structure called retrieveParameters.

Name	Type	Description
firstRecord	int	Required. First record in results to return. Must be greater than zero.
count	int	Required. Number of records to display in the result. Cannot be less than 0 and cannot be greater than 100. If count is 0 then only the summary information will be returned: No records will be returned.
sortField	complex	Optional. Sort criteria. ***IMPORTANT:*** *if a sortField was provided in the original request (via a search, citingArticles, relatedRecords, or retrieveById operation, then the same sortField must be specified here.*
viewField	complex	Optional. Defines the fields to be included in returned records. This parameter is not valid in the citedReferences and citedReferencesRetrieve operations. In a request that contains the targetNamespace database option, the viewField parameter must be present if the specified namespace ends in *Fields*. It must be absent if the specified namespace ends in *Full Record*. See Document Namespaces (page 4).
option	complex	Optional. Requests that additional metadata be returned along with the records. These parameters are specific to each database. See Database Options (page 46).

sortField

Name	Type	Description
name	string	Name of the field to order by. Use a two-character abbreviation to specify the field.

sort	string	Must be A (ascending) or D (descending). The sort parameter can only be D for Relevance and TimesCited.

Sort Fields

Abbreviation	Field
AU	Author
CF	Conference Title
CG	Page
CW	Source
CV	Volume
CY	Publication Year
LC	Local Times Cited
LD	Load Date
PG	Page
PY	Publication Year
RS	Relevance
SO	Source
TC	Times Cited
VL	Volume

viewField

Name	Type	Description
collectionName	string	The collectionName is the same as the databaseID. See Database Editions and Options.
fieldName	string	Field to be returned. To request multiple fields, enclose each field in a separate element. Web of Science fieldName Values (page 52)

Note: If the viewField parameter is omitted, then all record data are returned. If it is included but fieldName is empty, then only item identifiers are returned.

Example

This example requests 5 records, starting with record 1, sorted in descending order by date. It requests that each record contain all names and all titles, including the item and publication title. It also requests that a list of unique identifiers for all records be returned at the top of the response.

```
<retrieveParameters>
          <firstRecord>1</firstRecord>
          <count>5</count>
          <sortField>
            <name>AU</name>
            <sort>A</sort>
          </sortField>
          <viewField>
             <collectionName>WOS</collectionName>
             <fieldName>name</fieldName>
             <fieldName>title</fieldName>
```

```
            </viewField>
            <option>
               <key>RecordIDs</key>
               <value>On</value>
            </option>
   </retrieveParameters>
```

Database Editions

Each database has a database ID (the databaseId), which is the same as its collection ID. A database also has at least one edition. The edition parameter is optional. You can request data from multiple databases in a single request by using the WOK (All Databases) databaseId.

All Databases

databaseId

WOK

editions

The query parameter <editions> is optional. If you do not include it, your request for data will be run against all Web of Knowledge databases in your subscription.

To limit retrieval to records from selected databases, specify the collection and edition of the databases you wish to search. For example, this search limits retrieval to records from BIOSIS Previews and CAB Abstracts:

```
<databaseId>WOK</databaseId>
      <userQuery>TS=(genotoxic* AND mutagenic*)</userQuery>
      <editions>
               <collection>BIOSIS</collection>
               <edition>PREVIEWS</edition>
      </editions>
      <editions>
               <collection>CABI</collection>
               <edition>ABSTRACTS</edition>
     </editions>
```

Biological Abstracts

databaseId

BIOABS

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
BIOABS	ABSTRACTS	Biological Abstracts

BIOSIS Citation Index

databaseId

BCI

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
BCI	BCI	BIOSIS Citation Index

BIOSIS Previews

databaseId

BIOSIS

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
BIOSIS	PREVIEWS	BIOSIS Previews

CABI: CAB Abstracts and Global Health

databaseId

CABI

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
CABI	ABSTRACTS	CAB Abstracts
CABI	HEALTH	Global Health

Chinese Science Citation Database

databaseId

CSCD

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
CSCD	CSCD	Chinese Science Citation Index

Current Contents Connect

databaseId

CCC

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
CCC	CCCA	Agriculture, Biology & Environmental Sciences
CCC	CCCB	Social & Behavioral Sciences
CCC	CCCC	Clinical Medicine
CCC	CCCP	Life Sciences
CCC	CCCS	Physical, Chemical & Earth Sciences
CCC	CCCT	Engineering, Computing & Technology
CCC	CCCY	Arts & Humanities
CCC	CCCBC	Business Collection
CCC	CCCEC	Electronics & Telecommunications Collection

Data Citation Index

databaseId

DCI

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
DCI	DSCI	Science
DCI	DSSHCI	Social Sciences & Humanities

Derwent Innovations Index

databaseId

DIIDW

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
DIIDW	CDerwent	Chemical Sections (A-M)
DIIDW	MDerwent	Engineering Sections (P-Q)
DIIDW	EDerwent	Electrical and Electronic Sections (S-X)

Food Science and Technology Abstracts

databaseId

FSTA

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
FSTA	FSTA	Food Science and Technology Abstracts

Inspec

databaseId

INSPEC

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
INSPEC	INSPEC	INSPEC

SciELO Citation Index

databaseId

SCIELO

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
SCIELO	SCIELO	SciELO Citation Index

MEDLINE

databaseId

MEDLINE

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
MEDLINE	MEDLINE	MEDLINE

Web of Science Core Collection

databaseId

WOS

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
WOS	SCI	Science Citation Index Expanded
WOS	SSCI	Social Sciences Citation Index
WOS	AHCI	Arts & Humanities Citation Index
WOS	ISTP	Conference Proceedings Citation Index - Science
WOS	ISSHP	Conference Proceedings Citation Index - Social Sciences
WOS	IC	Index Chemicus
WOS	CCR	Current Chemical Reactions
WOS	BSCI	Book Citation Index - Science
WOS	BHCI	Book Citation Index - Social Sciences and Humanities

Zoological Record

databaseId

ZOOREC

editions

The query parameter <editions> has two child elements: collection and edition.

Collection	Edition	Edition Full Name
ZOOREC	RECORDS	Zoological Record

Database Options

Database options are retrieve parameters defined in key-value pairs. Additional database options are available for Web of Science Core Collection (page 47).

Key	Value	Description
RecordIDs	On	Return a list of unique record identifiers. Record identifiers are used in the following operations: retrieveById, citedReferences, citingArticles, and relatedRecords. This option is not valid in the citedReferences and citedReferencesRetrieve operations
RecordIDs	Off	
targetNamespace	One of four possible namespaces (page 4)	Defines the XML document that you want returned. If you do not specify a namespace, a default namespace will be assumed, based on the databaseId and the presence or absence of the viewField retrieve parameter (page 37). For example, if the databaseId is WOS and there is no viewField retrieve parameter in the request, the namespace assumed is http://scientific.thomsonreuters.com/schema/wok5.4/public/FullRecord. If the databaseId is DIIDW and there is a viewField parameter in the request, then the namespace assumed is http://scientific.thomsonreuters.com/schema/wok5.4/public/GB/DIIDW/Record/Field.

Database Options - Web of Science Core Collection

Database options are retrieve parameters defined in key-value pairs.

Key	Value	Description
Hot	On	Indicates that 1) a cited reference matches a source record in Web of Science Core Collection and 2) the source record belongs to a database year and edition to which the customer subscribes. This parameter is only valid in the citedReferences operation.
Hot	Off	Indicates that the cited reference does not meet either of the two criteria necessary for the Hot flag to be turned on.
RecordIDs	On	Return a list of unique record identifiers. Record identifiers are used in the following operations: retrieveById, citedReferences, citingArticles, and relatedRecords. This option is not valid in the citedReferences and cited ReferencesRetrieve operations
RecordIDs	Off	
SharedRefCount	On	Show the number of shared references between two Related Records. This option is only value for the relatedRecords operation.
SharedRefCount	Off	
targetNamespace	One of two possible namespaces (page 4)	Defines the XML document that you want returned. If you do not specify a namespace, a default namespace will be assumed, based on the databaseId and the presence or absence of the viewField retrieve parameter (page 37). For example, if the databaseId is WOS and there is no viewField retrieve parameter in the request, the namespace assumed is http://scientific.thomsonreuters.com/schema/wok5.X/public/FullRecord. If the databaseId is WOS and there is a viewField parameter in the request, then the namespace assumed is http://scientific.thomsonreuters.com/schema/wok5.X/public/Fields.

Web of Science Schema

The Web of Knowledge schema comprises several schema documents.

scientific.thomsonreuters.com.schema.wokversion.public.xsd

This schema depicts a hierarchy of elements. This is the best starting point for analyzing Web of Knowledge schema. The three chief categories of XML elements are:

- **UID** - Record identifiers
- **static_data** - Static bibliographic elements derived from source publications or from database-specific, value-added indexing
- **dynamic_data** - Bibliographic elements and metadata generated by database processing and integration

BIOSIS_common.xsd

Elements in this schema define fields that are shared by the BIOSIS databases: Biological Abstracts, BIOSIS Previews, BIOSIS Citation Index, and Zoological Record.

EWUID.xsd

Elements in this schema define the identifiers that uniquely identify a database record and that supply additional processing capabilities.

summary.xsd

Elements in this schema define the core bibliographic fields that make up a summary record in Web of Knowledge.

common_types.xsd

Elements in this schema extend the core list of elements in summary.xsd. Not every element defined in this schema is found in all databases. Conversely, some elements in this schema may occur in only one or two databases.

fullrecord_metadata.xsd

Elements in this schema describe bibliographic fields and record metatdata not displayed in summary records.

item_[database].xsd

Elements in this schema describe bibliographic fields and record metadata unique to one database.

Bandwidth Throttling

Web of Knowledge Web Services use throttling to manage the number of requests processed per second and the amount of data sent per request. Throttling ensures consistent and reliable performance for all users of the services.

All throttling messages begin with the text **Request denied by Throttle server**. Each message indicates the reason for the denial.

Reason	Explanation	Your Action
Throttle Server is not available.	The service is temporarily unavailable.	Wait a few minutes and then resubmit your request.
Internal Error	Web services could not process your request.	Contact Thomson Reuters Technical Support[1]. There may not be a problem with your request. However there is a problem with our Web service. Please have the details within this message available for Thomson Reuters Technical Support.
limit of <number> requests per period has been exceeded for throttle AUTH-ReqPerPeriod	The number of requests for a new session is limited to 5 per five-minute period.	Resubmit the request. It may be necessary to adjust your Web client to limit the number of requests submitted per second.
limit of <number> requests per period has been exceeded for throttle REQ-ReqPerSec	The number of data requests (user queries) is limited to 2 per second.	Resubmit the request. It may be necessary to adjust your Web client to limit the number of requests submitted per second.
amount requested exceeds limit of 100 per request for throttle REC-AmtPerReq	Each search operation limits the number of records retrieved to 100 per request.	Submit a request for additional data. The operation retrieve enables you to overcome the 100 records per query limit.
amount requested exceeds limit of 100 per request for throttle REF-AmtPerReq	The citedReferences operation limits the number of references retrieved to 100 per request.	Submit a request for additional data. The operation citedReferencesRetrieve enables you to overcome the 100 references per query limit.
amount requested exceeds limit of <number> per period	The number of records retrieved per period is specified by your license agreement.	You cannot request more data. However, if you believe that you are entitled to more data, contact Thomson Reuters Technical Support.

Notes

1. http://science.thomsonreuters.com/support/

Error Messages

Error messages may be classified into three categories:

- Session Errors
- SOAP Request Errors
- Web Service Exception Errors

Errors that fall into the first two categories can generally be remedied by correcting the request or simply by resubmitting it. Web Service Exception Errors indicate a problem with the web service itself. This type of message includes the following instruction: **Remedy: Call customer support. This is not a problem within your SOAP client.** Before calling customer support, wait a short period of time and then resubmit your request. Often problems with the web service are temporary.

Session Errors

Error Message	Meaning/Action
Session identifier cookie value cannot be null or an empty string. It is required that the high level Web service client program participate in the session initialized by the server.	Your request for data does not have a session ID. Please establish a new session. Be sure that the session ID is automatically added to your request for data.
There is a problem with your session identifier (SID). Reason: Session identifier [{0}] is invalid: it has no entity id. Remedy: This is an entitlement issue. Contact customer support.	The session ID cannot be linked to a valid customer account.
There is a problem with your session identifier (SID). Reason: Error received from a server supporting the Web service. Cause: Supporting server error message = [{1}]. Supporting server error code = [{0}]. Remedy: If the session identifier is expired or invalid, get a new session identifier and submit your request again. If the session identifier is missing correct your SOAP client. Otherwise call customer support.	This message appears most often when a session has expired. Execute the authenticate operation again in order to obtain a new session ID.

SOAP Request Errors

All SOAP request error messages start with **The SOAP request message is invalid**.

Reason	Meaning/Action
The queryParameters element cannot be nil.	Each WokSearch operation requires certain query parameters. Consult the appropriate section of this guide for a list of valid query parameters for a WokSearch operation.
Cannot specify timeSpan and symbolicTimeSpan together: one or both must be nil.	The number of records retrieved by a search operation may be limited by load date (symbolicTimeSpan) or publication date (timeSpan). You may define one or the other but not both in the same request.

The timeSpan element cannot be nil.	The operations citingArticles and relatedRecords require the timeSpan query parameter. The search operation requires the timeSpan query parameter if symbolicTimeSpan is not used.
The databaseId element cannot be nil.	Every request for data must specify a target database using the databaseId element.
The databaseId element cannot be an empty string: it cannot be a string of length 0.	The databaseId element must contain a valid database ID.
The databaseId [{0}] is invalid.	Double-check the spelling of the database ID of the target database.
The editions element cannot be nil.	The editions element must contain the abbreviation of the database edition you wish to search.
The queryLanguage element cannot be nil.	The queryLanguage must be specified in all operations except retrieve and citedReferencesRetrieve. It has only one value: en for English.
The queryLanguage element cannot be an emtpy string: it cannot be a string of length 0.	The queryLanguage must be specified in all operations except retrieve and citedReferencesRetrieve. It has only one value: en for English.
The queryId element cannot be nil.	The operations retrieve and citedReferencesRetrieve use a query returned by a previous operation to obtain additional records or a data set defined by different retrieve parameters. These operations require a valid queryId.
The queryId element cannot be an empty string: it cannot be a string of length 0.	The operations retrieve and citedReferencesRetrieve use a query returned by a previous operation to obtain additional records or a data set defined by different retrieve parameters.
The uid element cannot be nil.	Certain operations require that the uid of a record be specified. The uid is a unique item identifier assigned by Thomson Reuters. For example, to obtain the citing articles for a record, you must specify the record's uid as a query parameter in the citingArticles operation
The uid element cannot be an empty string: it cannot be a string of length 0.	The uid specified in a citedReferences, citingArticles, relatedRecords or retrieveById operation must be valid.
The list of uid elements cannot be nil.	You may specify multiple uids in the retrieveById operation. Make sure that each <uid> element contains a valid uid.
There must be at least one uid element in the SOAP request message.	You must specify a uid in the citedReferences, citingArticles, relatedRecords or retrieveById operation.
The [{0}]th uid element cannot be nil.	Make sure that each uid element contains valid content.
The [{0}]th uid element cannot be an empty string: it cannot be a string of length 0.	Make sure that each uid element contains valid content.
The retrieveParameters element cannot be nil.	Retrieve parameters define the scope of the output and the content of each record. The parameters firstRecord and count are required.
The count element cannot be negative.	
The firstRecord element cannot be less than one.	
Error received from a server supporting the Web service. Supporting server error message = [{2}]. Supporting server error code = [{1}]. Supporting server API call = [{0}].	
Error received from a server supporting the Web service. Cause: The following input is invalid [{0}].	
The userQuery element is invalid. Cause: {0}.	Check the syntax of the user query. There may be a missing equal sign or parenthesis.

Web of Science Core Collection fieldName Values

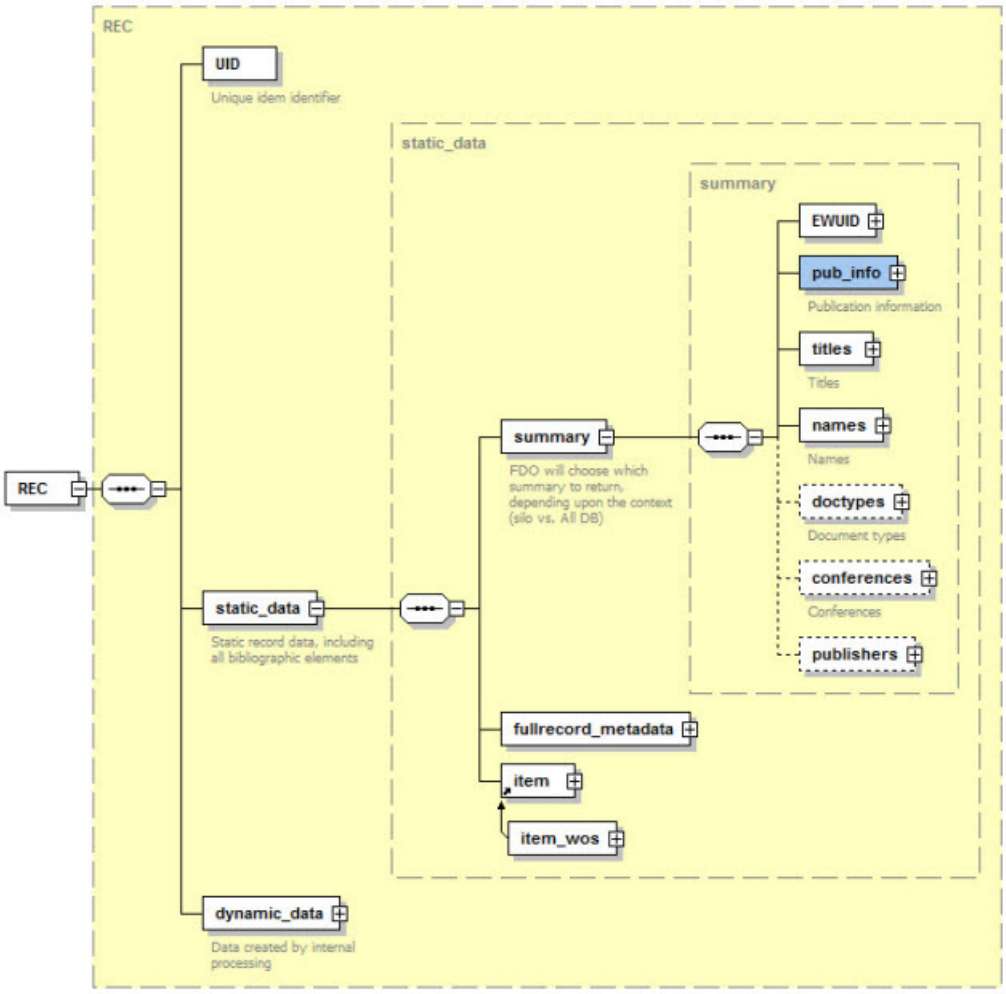
The table on page 53 maps Web of Science Core Collection field names to schema elements. The element name should be used in the fieldName retrieve parameter (page 37) to limit records to selected fields. For example, the following retrieve parameters will return records that contain 1) author addresses, 2) funding text, and 3) funding agency and grant number.

```
<retrieveParameters>


  <viewField>
    <collectionName>WOS</collectionName>
    <fieldName>addresses</fieldName>
    <fieldName>fund_text</fieldName>
     <fieldName>grant</fieldName>
  </viewField>


</retrieveParameters>
```

Only the name of the element (in boldface in the table) can be used as a fieldName parameter. You cannot use a full or partial XPath as a fieldName parameter. The XPath is provided to assist you in finding the element in the schema as well as in the full Web of Science record. The full XPath begins with **/records/records/REC**. For example, the full XPath for the pub_info element is /records/records/REC/static_data/summary/pub_info. Here is the schema view of the XPath for pub_info in the base schema scientific.thomsonreuters.com.schemawok5.X.public:



Because many fields are uniquely identified by a combination of element and attribute, you may not be able to limit record content to a precise degree. For example, the fieldName parameter **titles** will always return document titles, publication names (both full and abbreviated), and book titles. You cannot limit retrieval to only document (item) titles or only publication (source) titles because *item* and *source* are attribute values, not elements. You cannot include attributes in fieldName parameters.

Web of Science Core Collection fieldName Table

Web of Science Core Collection Field Name	Schema Element (XPath)
Publication Type possible values: • Book • Book in series • Books • Books in series	.../static_data/summary/**pub_info**

• Journal	
Authors	.../static_data/summary/**names**
Author Full Name	.../static_data/summary/names/name/**full_name**
Book Authors	.../static_data/summary/**names**
Group Authors	.../static_data/summary/**names**
Book Group Authors	.../static_data/summary/**names**
Document Title	.../static_data/summary/**titles**
ResearcherID Number	.../static_data/summary/**names**
Editors	.../static_data/summary/**names**
Publication Name	.../static_data/summary/**titles**
Book Series Title	.../static_data/summary/**titles**
Book Series Subtitle	.../static_data/summary/**titles**
Language	.../static_data/fullrecord_metadata/languages/**language**
Document Type	.../static_data/summary**/doctypes**
Conference Title	.../static_data/summary/conferences/conference/conf_titles/**conf_title**
Conference Date	.../static_data/summary/conferences/conference/conf_dates/**conf_date**
Conference Host	.../static_data/summary/conferences/conference/**conf_host**
Conference Location	.../static_data/summary/conferences/conference/**conf_locations**
Conference Sponsors	.../static_data/summary/conferences/conference/**sponsors**
Author Keywords	.../static_data/fullrecord_metadata/**keywords**
Keywords Plus®	.../static_data/item/**keywords_plus**
Abstract	.../static_data/fullrecord_metadata/abstracts/**abstract**
Author Address	.../static_data/fullrecord_metadata/**addresses**
Reprint Address	.../static_data/item/**reprint_contact**
E-mail Address	.../static_data/summary/names/name/**email_addr**
Funding Agency and Grant Number	.../static_data/fullrecord_metadata/fund_ack/grants/**grant**
Funding Text	.../static_data/fullrecord_metadata/fund_ack/**fund_text**
Cited References	[Use the citedReferences and citedReferencesRetrieve operations to retrieve an item's cited references.]
Total Times Cited Count (WoS, BCI, and CSCD)	[Cannot be specified in a fieldName retrieve parameter.]
Cited Reference Count	.../static_data/fullrecord_metadata/**refs**
Times Cited	[Cannot be specified in a fieldName retrieve parameter.]
Publisher	.../static_data/summary/publishers/publisher/**names**
Publisher City	.../static_data/summary/publishers/publisher/**address_spec**
Publisher Address	.../static_data/summary/publishers/publisher/**address_spec**
Web of Science Category	.../static_data/fullrecord_metadata/**category_info**
Subject Category	.../static_data/fullrecord_metadata/**category_info**
International Standard Serial Number (ISSN)	.../dynamic_data/cluster_related/**identifiers**
International Standard Book Number (ISBN)	.../dynamic_data/cluster_related/**identifiers**

Book Digital Object Identifier (DOI)	.../dynamic_data/cluster_related/**identifiers**
29-Character Source Abbreviation	.../static_data/summary/**titles**
ISO Source Abbreviation	.../static_data/summary/**titles**
Publication Date	.../static_data/summary/**pub_info**
Year Published	.../static_data/summary/**pub_info**
Volume	.../static_data/summary/**pub_info**
Issue	.../static_data/summary/**pub_info**
Part Number	.../static_data/summary/**pub_info**
Supplement	.../static_data/summary/**pub_info**
Special Issue	.../static_data/summary/**pub_info**
Beginning Page	.../static_data/summary/pub_info/**page**
Ending Page	.../static_data/summary/pub_info/**page**
Article Number	.../dynamic_data/cluster_related/**identifiers**
Page Count	.../static_data/summary/pub_info/**page**
Chapter Count in a Book	.../static_data/item/**book_chapters**
Digital Object Identifier (DOI)	.../dynamic_data/cluster_related/**identifiers**
Document Delivery Number	.../static_data/item/**ids**
Accession Number	.../**UID**