NDL Search

Application Programming Interface (API) Specifications

(Ver. 1.24)

August 29, 2022

Table of Contents

1. Introduction

This document describes interface specifications which are used in search and acquisition of metadata from "NDL Search" (hereinafter referred to as this system) by applications of institutions.

This system provides following Application Programming Interfaces (API).

Table 1-1 List of supported interfaces and their overviews

No.	Interface type	Overview	Input format	Output format
1	SRU	Protocol for searching information by using REST that was developed based on Z39.50, a communication protocol for information search	URL	XML
2	SRW *This service ended March 2, 2020	Protocol for searching information using WebService, which was developed based on Z39.50, a communication protocol for information search	XML	XML
3	OpenSearch	Communication protocol for cross search, which are proposed by A9.com	URL	XML (RSS)
4	OpenURL	Protocol for sending metadata information to link server in URL format to specify link destination of contents	URL	HTML
5	Z39.50 *This service ended March 2, 2020	Communication protocol in client-server style for information search	Z39.50 interface	Z39.50 interface
6	OAI-PMH	Communication protocol, defined by OAI (Open Archives Initiative), for giving requests and receiving results in order to mechanically collect metadata between servers	URL	XML

2. Common Items

(1) Access URL

The access URL (base URL) of each provision method is as follows:

Table 2-1 Access URL

No.	Provision method	URL
1	SRU	https://iss.ndl.go.jp/api/sru
2	SRW	*This service ended March 2, 2020
3	OpenSearch	https://iss.ndl.go.jp/api/opensearch
4	OpenURL	https://iss.ndl.go.jp/api/openurl
5	Z39.50	*This service ended March 2, 2020
6	OAI-PMH	https://iss.ndl.go.jp/api/oaipmh

You can access OpenSearch Description Document, which are the setting files for OpenSearch, respectively, at the following URL:・

・http://iss.ndl.go.jp/api/opensearch_description

(2) List of data providers and their IDs

In each provision method, the database for a search request (hereinafter referred to as "data provider") shall be specified with data provider ID. Data providers are added at any time. For the list of the latest data providers and their IDs, see Appendix 1: List of data providers and their corresponding Application Programming Interfaces (API) in this document.

(3) Data provider group

In each provision method, you can specify group of data providers instead of directly specifying data provider IDs. Following table shows data provider groups:

Table 2-2 Data provider groups

No.	Data provider group ID	Details of data provider groups
1	digitalcontents	Body text, digital images, etc. (Primary information)
2	catalogue	Listing, index, etc.
3	site	Site information
4	reference	Information convenient for search, reference information
5	science	Information about natural sciences
6	humanities	Information about humanities
7	library	Information concerning libraries
8	child	Information for children
9	ndl	Information provided by NDL

For correspondence between data provider groups and data providers, see Appendix 1: List of data providers and their corresponding Application Programming Interfaces (API) in this document.

(4) Character code

Character code shall be UTF-8 for any provision method.

(5) Difference between harvest type and cross search type by data provider

Data providers to be searched in this service are mainly classified into following two types as search method implementations:

- Harvest type: Metadata is collected (harvested) from data providers and a database as this service is created with collected data.
- Cross search type: No database is created but a request is issued directly to data providers via a network at the time of search.

At an application programming interface (API), no result is acquired from data providers in cross search type; therefore, Table 1 “List of data providers and their corresponding Application Programming Interfaces (API)" and Table 2 “Data provider groups and their corresponding data provider" of Appendix 1 describes only harvest-type data providers, and no cross search-type data provider is described.

(6) Relationship with search function of this service

Available search conditions vary depending on each interface, and these conditions differ from the search items in this service. Remember that at the Application Programming Interface (API), basically only part of the conditions available for this service is supported.

(7) Format and contents of data

Format (schema) and contents of data to be returned are explained in the description on each interface in the next section onwards. The "dcndl" and "dcndl_simple" formats or data to be returned are the formats defined in this service based on the NDL Dubrin Core Metadata Description (DC-NDL). For details about dcndl and dcndl_simple, see the DC-NDL (RDF) Format Specifications and DC-NDL (Simple) Format Specifications, respectively.

3. SRU

(1) Overview

This is an interface for external institutions to use this service for search and acquire search results by SRU (Search/Retrieve via URL).

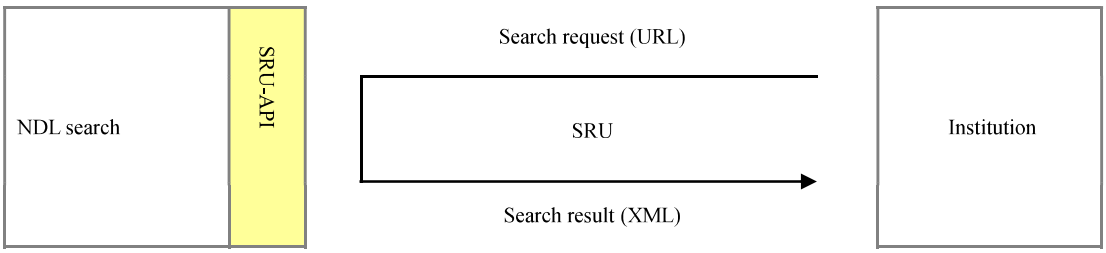

Figure 3-1 Overview of interface provided by SRU

You can find the basic specifications of SRU at the following URL:

http://www.loc.gov/standards/sru/

This service supports SRU version 1.1 and 1.2.

ZEEREX is not supported.

(2) Support range

This service supports "searchRetrieve" and "explain," which are major operations of SRU (Scan operation is not supported).

(3) Argument of searchRetrieve

Table 3-1 Arguments of searchRetrieve

No.	Argument name	Value to specify
1	operation	Required "searchRetrieve"
2	version	Optional 1.1 or 1.2 (The default is 1.2.)

No.	Argument name	Value to specify
3	query	Required Search condition (CQL)　Details are described later.
4	startRecord	Start position The default is 1.
5	maximumRecords	Maximum number of acquired records The default is 200.
6	recordPacking	"xml" or "string" The default is "string."
7	recordSchema	Schema of acquired data dc, dcndl, or dcndl_simple The default is dc.
8	recordXpath	Not used
9	resultSetTTL	Not used
10	sortKeys	Sort key information Valid for version1.1 only
11	schema	Not used
12	path	title, creator, created_date, or modified_date Without sortKeys specified, the default (in the order of title) is applied. (Available only when 1.1 is specified for the version with sortKeys specified)
13	ascending	"0" (descending order), "1"(ascending order) (Available only when 1.1 is specified for the version with sortKeys specified) The default is "1."
14	stylesheet	Not used
15	extraRequestData	Not used
16	inprocess	With "true" specified, only "NDL newly acquired Bibliographic data [1] " is acquired.
17	onlyBib	With "true" specified, only "Bibliographic data" is acquired. (Available only when dcndl is specified for recordSchema)

(4) CQL specifications

CQL is the specification of search queries in SRW. This service is provided based on CQL 1.2. The basic specification of CQL can be found at URL shown in 3 “SRU (1) Overview." The following shows the items available when issuing a query using CQL.

1 Quick delivery service　of inprocess bibliography information on domestic publications and overseas publications collected by NDL

https://www.ndl.go.jp/jp/data/data_service/jnb/index.html

Table 3-2 Search items of SRU

No.	Reference name	Details
1	dpid	Data provider ID
2	dpgroupid	Data provider group ID
3	title	Title
4	creator	Creator
5	publisher	Publisher
6	digitized_publisher	Digitized publisher
7	ndc	Classification (NDC, NDLC, LCC, DCC, UDC)
8	ndlc	Classification (NDLC)
9	description	Contents description
10	subject	Subject
11	isbn	ISBN (Search is available in either 10- or 13-digit format)
12	issn	ISSN
13	jpno	National Bibliography No.
14	from	Start date of publication (YYYY-MM-DD)
15	until	End date of publication (YYYY-MM-DD)
16	anywhere	The search items are the same as that of Simple search of NDL Search.
17	itemno	Item number of bibliography within NDL Search (repository number - item number - branch number)
18	mediatype	Material type Corresponds to the material type of Advanced Search of NDL Search. "1": Book "2": Article/Paper "3": Newspaper "4": Children's literature "5": Reference information "6": Digital material "7": Others "8": Material for the persons with disabilities (Material for Material search for persons with disabilities) "9": Legislative information
19	sortBy (available only when "1.2" is specified for the version argument of searchRetrieve)	Describe the reference name of the sort criterion. Note that the sort criterion that is valid for NDL Search is "title," "creator," "created_date," "modified_date" or "issued_date." To indicate the ascending or descending order, /sort.ascending or /sort.descending shall follow the item.

If a search keyword includes "AND" or "OR" (also includes "andy," "organic," etc.), a search error occurs. To avoid this error, add "%20" to before and after "%3d" and execute search.

Example: When you want to specify the search keyword "andy" for the title

Specify "title%20%3d%20%22andy%22."

For the items, "title", "creator", "publisher" and "digitized_publisher" prefix match (^), partial match, and exact match (exact) can be specified as matching condition. If no condition is specified, partial match is assumed.

For other items, no matching condition can be specified.

For "isbn" and "issn," exact match is assumed as the matching condition. If 10- or 13-digit isbn is entered, the condition is converted to both 10 and 13 digits to perform exact match search. If entered in other digits than 10 or 13, the exact match search shall be performed; no other search, such as the prefix search, shall be performed.

For "dpid," "dpgroupid," etc., exact match is assumed as matching condition.

* For the items other than "dpid" and "dpgroupid" for which exact match is assumed, see "Table 3-3 Conditions that can be specified for each item of SRU."

For description and subject, partial match is assumed.

The items, from and until, are specified in YYYY-MM-DD format, and exact match is assumed as matching condition for them. Note that YYYY or YYYY-MM format is also available, and in this case, YYYY-01-01 or YYYY-MM-01 for YYYY or YYYY-MM, respectively, is assumed to be specified as matching condition for exact match.

In addition, as logical condition for each item, you can specify "and" or "or." For join condition for items, you can specify either "all and" or "all or."

Following table shows possible conditions for each item

Table 3-3 Possible conditions for each item of SRU

No.	Reference name	Match condition (^, exact)	Logical condition (all, any, =)	Multiple values
1	dpid	No (exact match)	=, any only	Yes
2	dpgroupid	No (exact match)	= only	No
3	title	Yes	Yes	Yes
4	creator	Yes	Yes	Yes
5	publisher	Yes	Yes	Yes
6	digitized_publisher	Yes	Yes	Yes
7	ndc	No (prefix match)	= only	No
8	ndlc	No (prefix match)	= only	No
9	description	No (partial match)	Yes	Yes
10	subject	No (partial match)	Yes	Yes
11	isbn	No (exact match)	= only	No
12	issn	No (exact match)	= only	No
13	jpno	No (exact match)	= only	No
14	from	No	= only	No
15	until	No	= only	No
16	anywhere	No (partial match)	Yes	Yes
17	itemno	No (exact match)	= only	No
18	mediatype	No (exact match)	= only	Yes

To specify multiple values for one item, you must use "" to enclose the specified values (example: title="ruby python"). If specified value is just one and thus no ambiguity occurs, "" can be omitted.

(Example: title=architecture)

(5) Number of returned data records

Records of up to specified number for maximumRecords are returned. The default is 200. Also, the maximum number of records that can be acquired at a time is 500.

(6) Return format

Table 3-4 Details of SearchRetrieve Response

No.	Item name	Return value
1	Version	"1.2" or "1.1" (Specified in the request)
2	numberOfRecords	Number of search results
3	resultSetId	Not used
4	resultSetIdleTime	Not used
5	Records	Search result list
6	nextRecordPosition	Start position of next record With startRecord=1 and maximumRecords=200, if the number of search results is more than 200, 201 is returned, and if the number of search result is less than 200 (no next page exists), 0 is returned.
7	Diagnostics	Error message list
8	extraResponseData	Search result (facet)
9	echoedSearch retrieveRequest	Not used
10	Record	Start of 1 Book
11	recordSchema	Schema
12	recordPacking	"xml" or "string"
13	recordData	Start of Bibliographic data
14	recordPosition	Position of the Bibliographic data

The format of returned data is XML. The schema is specified at request, which shall be dc, dcndl, or dcndl_simple.

As extraResponseData, facet data of search results is returned. The facet items are as follows. (Note that a facet item whose search result is zero is not included in the returned data):

- Data provider

  Number of search results for each data provider is returned.

  Search result is expressed as dpid="data provider ID" in dp element.

  For data provider ID, see Appendix 1: List of data providers and their corresponding Application Programming Interfaces (API) in this document.

Example:

```
<lst name="REPOSITORY_No">
        <int name="R100000001">159</int>
        <int name="R100000004">7</int>
        ・
        ・
</lst>
```

* Numeric value specified by name=～ is repository number of data provider. For details about repository number, see Appendix 1: List of data providers and their corresponding Application Programming Interfaces (API) in this document.

・NDC

In NDC classification of documents, the number of the first digit of NDC code is interpreted as genre, and number of search results for each field is returned.

Example:

```
<lst name="NDC">
        <int name="7">1</int>
        <int name="9">2</int>
        ・
        ・
</lst>
```

- Year of publication

Number of search results for each publication year is returned.

Search result of facet does not include record if its year of publication is unknown.

Example:

```
<lst name="ISSUED_DATE">
        <int name="1600">1</int>
        <int name="1650">3</int>
・
・
</lst>
```

For details about examples of returned data, see Appendix 3 "Examples of returned data for each interface" in this document.

(7) Error message

If an error occurs, such as a syntax error or a server error, the server returns an error message. Return format and error message details shall comply with the SRU standard specifications "Diagnostics List" (at https://www.loc.gov/standards/sru/diagnostics/diagnosticsList.html).

(8) Request example (CQL example)

Example 1: If the material was published after January 1, 2008 and the title includes "桜," the request shall be title="桜"AND from="2008."

* For the actual request URL to this service, this request is encoded to

(title%3d%22%e6%a1%9c%22%20AND%20from%3d%222008%22),

and this is added to the query, resulting in the following:

http://iss.ndl.go.jp/api/sru?operation=searchRetrieve&query=title%3d%22%e6%a1%9c%22%20AND%20from%3d%222008%22

Example 2: The author is "夏目漱石" (exact match).

CQL is creator exact "夏目漱石."
* For the actual request URL to this service, this request is encoded to (creator%20exact%20%22%e5%a4%8f%e7%9b%ae%e6%bc%b1%e7%9f%b3%22), and this is added to the query, resulting in the following:

http://iss.ndl.go.jp/api/sru?operation=searchRetrieve&query=creator%20exact%20%22%e5%a4%8f%e7%9b%ae%e6%bc%b1%e7%9f%b3%22

4. SRU/SOAP(SRW)

* This service ended March 2, 2020

5. OpenSearch

(1) Overview

This is an interface for external institutions to use this service for search and acquire the search result by OpenSearch.

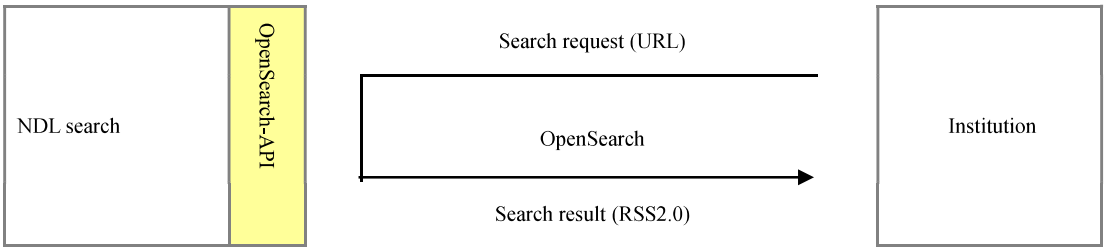

Figure 5-1 Overview of interface provided by OpenSearch

OpenSearch issues a search request in a URL and acquires the search result in RSS 2.0 format. You can find the basic specifications at the following URL. Supported version for this service is 1.0.

http://a9.com/-/spec/opensearchrss/1.0/

(2) Request format

Request format is following URL.

http://iss.ndl.go.jp/api/opensearch?dpid=[dpid]&title=[title]&...

(3) Argument ([query]) format

Following table shows possible items to be specified in a request.

Table 5-1 Search items of OpenSearch

No.	Reference name	Details	Match condition	Multiple values
1	dpid	Data provider ID	Exact match	Yes
2	dpgroupid	Data provider group ID	Exact match	No
3	any	All items are searched.	Partial match	Yes
4	title	Title	Partial match	Yes
5	creator	Creator	Partial match	Yes
6	publisher	Publisher	Partial match	Yes
7	digitized_publisher	Digitized publisher	Partial match	Yes
8	ndc	Classification (NDC)	Prefix match	No
9	from	Start date of publication (YYYY-MM-DD)		No
10	until	End date of publication (YYYY-MM-DD) (YYYY-MM-DD)		No
11	cnt	Upper limit of output record (The default is 200.)		No
12	idx	Start position of record acquisition (The default is 1.)		No
13	isbn	ISBN If entered in 10 or 13 digits, the item is converted to both 10 and 13 digits for exact match search. If entered in other digits, prefix match search is performed.	Exact match or Prefix match	No
14	mediatype	Material type Corresponds to the material type of Advanced Search of NDL Search. "1": Book "2": Article/Paper "3": Newspaper "4": Children's literature "5": Reference information "6": Digital material "7": Others "8": Material for the persons with disabilities (Material for Material search for persons with disabilities) "9": Legislative information	Exact match	Yes

Note: The logical conditions between items are all AND.

Note: Space-separated multiple keywords can be specified in one search item.

In this case, OR search is used for "dpid" and AND search for other items. No search is available with only "dpid" or "dpgroupid" specified.

Note: If an argument (parameter) is wrong, no search result is acquired.

(4) Number of returned data records

Records of up to the number specified for cnt parameter are returned. The default is 200. The maximum number of records that can be acquired at a time is 500.

(5) Return format

The data return format is an extended version of RSS 2.0 for this service. For details about examples of returned data, see the appendix 3 ("Examples of returned data for each interface") in this document.

(6) Request example

Example 1: Title includes "マリーアントワネット".

http://iss.ndl.go.jp/api/opensearch?title=%e3%83%9e%e3%83%aa%e3%83%bc%e3%82%a2%e3%83%b3%e3%83%88%e3%83%af%e3%83%8d%e3%83%83%e3%83%88

Example 2: Within Aozora Bunko, author includes "夏目".

http://iss.ndl.go.jp/api/opensearch?dpid=aozora&creator=%e5%a4%8f%e7%9b%ae

6. OpenURL

(1) Overview

This is an interface for external institutions to use this service for search and acquire search results by OpenURL.

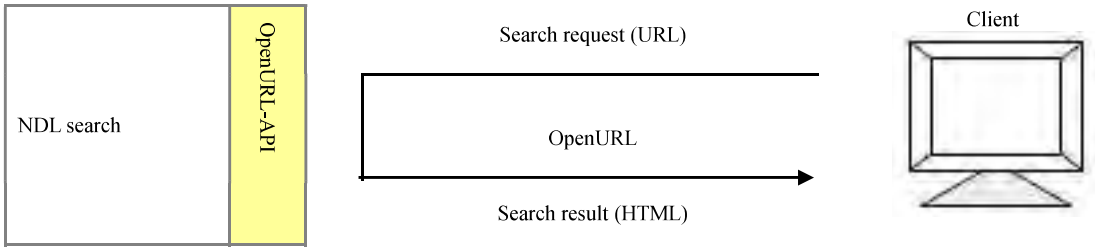

Figure 6-1 Overview of interface provided by OpenURL

OpenURL returns a result on the screen (HTML) for a request issued in a URL. You can find the basic specifications at the following URL:
http://www.niso.org/kst/reports/standards?step=2&gid=None&project_key=d5320409c5160be4697dc046613f71b9a773cd9e

(2) Request format

A request is an URL in following format

http://iss.ndl.go.jp/api/openurl?genre=[genre]&…

Note that a search result HTML returned in this URL format is the same as the search result screen on the Web of this service; therefore, the result can be displayed only by a browser supporting this service.

(3) genre specification and where to search

genre (or rtf.genre) can be specified. This service searches a different place depending on following three patterns. Note that the same result is acquired when specifying "genre=" or "rtf.genre=."

- For genre=article
- For other than genre=article (Other than article among possible items for genre for OpenURL)
- When genre is not specified

For details about correspondence between genre and data providers, see Appendix 2 "Specification of OpenURL-genre and the corresponding data provider" in this document.

If there is an inconsistency between specified items for genre (or rft.genre) and atitle or btitle, an error message is displayed and the search is stopped.

In addition, if ndl_dpid is specified for search, data provider specified for genre becomes invalid.

(4) atitle or btitle specification and where to search

If ndl_dpid is specified for search, specified atitle or btitle for search location becomes invalid, and the search is performed in the same manner when the title=search character string&ndl_dpid=search location is specified.

(5) Possible search items

This service supports a part of parameters (keys) of OpenURL1.0. Following table shows possible parameters:

Table 6-1 Search items concerning OpenURL

No.	Item	genre=article	Other than genre=article	genre is not specified	Match condition	Search method	Multiple values
1	aulast (or rft.aulast)	Yes	Yes	Yes	Partial match	Same as au(rft.au) *1	No
2	aufirst (or rft.aufirst)	Yes	Yes	Yes			
3	au (or rft.au)	Yes	Yes	Yes	Partial match	Authors are searched.	Yes
4	title, atitle (or rft.title, rft.atitle)	Yes	-	Yes	Partial match	Titles (of articles) are searched.	Yes
5	btitle (or rft.btitle)	-	Yes	Yes	Partial match	Titles are searched.	Yes

No.	Item	genre=article	Other than genre=article	genre is not specified	Match condition	Search method	Multiple values
6	jtitle (or rft.jtitle)	Yes	-	Yes	Partial match	Journal titles are searched.	Yes
7	pub (or rft.pub)	-	Yes	Yes	Partial match	Publishers are searched.	Yes
8	issn (or rft.issn)	Yes	Yes	Yes	Prefix match	ISSNs are searched.	No
9	isbn (or rft.isbn)	-	Yes	Yes	Exact match or Prefix match	ISBNs are searched. (If 10- or 13-digit isbn is entered, the condition is converted to both 10 and 13 digits to perform exact match search. If entered in other digits, the prefix match search is performed.)	No
10	Any	Yes	Yes	Yes	Partial match	All data are searched. (Equivalent to Simple search)	Yes
11	ndl_jpno	-	Yes	Yes	Prefix match	National Bibliography No. is searched. (Uniquely extended)	No
12	ndl_dpid	Yes	Yes	Yes	Exact match	Given data providers only are searched. (Uniquely extended)	Yes
13	mediatype	Yes	-	Yes	Exact match	Material types are searched. (Uniquely extended)	Yes

Note: The logical conditions between items are all AND.

Note: Space-separated multiple keywords can be specified for an item other than isbn, issn, and ndl_jpno.
If multiple keywords are specified, OR search is used for "ndl_dpid" and AND search for other items.

*1: If "aufirst" and "aulast" are specified at the same time, these two conditions are used for AND search.

(6) Number of returned data records

Number of returned data records is limited to 500.

(7) Return format

Data is returned in the HTML format to requested client, and is displayed in GUI on browser.

(8) Request example

Example 1: Title includes "電子図書館."

http://iss.ndl.go.jp/api/openurl?btitle=%e9%9b%bb%e5%ad%90%e5%9b%b3%e6%9b%b8%e9%a4%a8

Example 2: Author includes "夏目漱石."

http://iss.ndl.go.jp/api/openurl?au=%e5%a4%8f%e7%9b%ae%e6%bc%b1%e7%9f%b3

7. Z39.50

* This service ended March 2, 2020

8. OAI-PMH

(1) Overview

This is an interface providing metadata that this service collects by OAI-PMH (Open Archives Initiative Protocol for Metadata Harvesting).

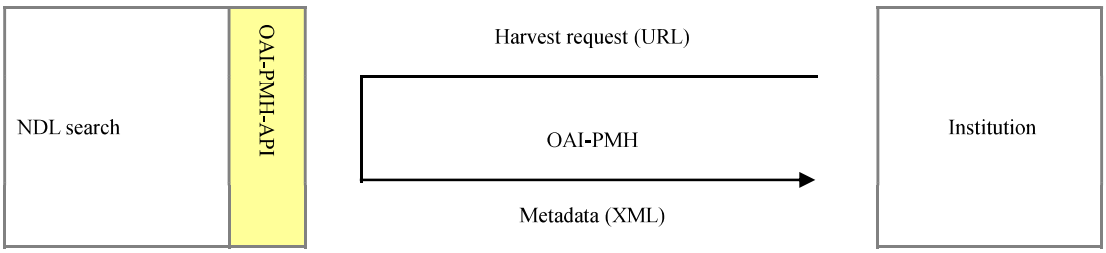

Figure 8-1 Overview of interface provided by OAI-PMH

OAI-PMH is a protocol being developed by OAI (Open Archives Initiative) for metadata exchange. You can find the basic specifications at the following URL:

http://www.openarchives.org/OAI/openarchivesprotpcol.html

In addition, the National Institute of Informatics published Japanese translation of this at

http://www.nii.ac.jp/irp/archive/translation/oai-pmh2.0/

In OAI-PMH, you can access repositories by using the following six operations (called verb). "Item" is one data (In this service, a unit of information displayed as a search result).

- GetRecord (acquires one record of metadata of a particular item)
- Identify (acquires an information about a repository)
- ListIdentifiers (acquires identifiers of all items)
- ListMetadataFormats (acquires supported format of metadata)
- ListRecords (acquires metadata of all items)
- ListSets (acquires supported sets (group: narrowing condition))

Following describes the specifications of repository (Application Programming Interface (API) of OAI-PMH) of this service.

(2) Repository basic information

As repository basic information, describe return details in response to an Identify request.

Table 8-1 Repository basic information

Tag name	Details	Return value
repositoryName	Repository name	NDL Digital Archive Portal
baseURL	Base URL of the repository	http://iss.ndl.go.jp/api/oaipmh
protocolVersion	Version of OAI-PMH supported by the repository	Version 2.0
adminEmail	Email of the repository administrator	
earliestDatestamp	Lower limit of all the date stamps for recording change, correction, and deletion within the repository. There is no item with date stamp earlier than this date.	Initial building date or full re-building date of repository
deletedRecord	Processing method for deleted repository records	transient: Retains the information on the deletion with restriction (Retain the records with date stamp of a certain date onwards)
granularity	Accuracy of date supported by the repository	YYYY-MM-DD
repositoryIdentifier	Name to uniquely identify the repository	oai:iss.ndl.go.jp:ID

(3) Support requests and arguments

The following requests and the arguments are supported.

Table 8-2 Requests and arguments

No.	Request	Arguments					
		identifier	metadata Prefix	from	until	set	resumption Token
1	GetRecord	◎	◎	-	-	-	-
2	Identify	-	-	-	-		-
3	ListIdentifiers		◎	◎	Yes	Yes	Yes
4	ListMetadataFormats	Yes	-	-	-	-	-
5	ListRecords		◎	◎	Yes	Yes	Yes
6	ListSets	-	-	-	-	-	-

◎: Required, Yes: Optional (The period of from and until are limited, which is described later.)

(4) Set

"Set" is the definition for grouping items for selective harvest. "Set" is also used to acquire metadata related only to item group with a particular attribute.

"Sets" include data provider (ID), data provider group (ID), NDC (please note you can specify it up to the three digit class number), Collection Code and Access Rights. Collection Code and Access Rights can be used when "NDL Digital Collections (ndl-dl)" or "NDL Digital Collections (Online publication) (ndl-dl-online)" is specified.

* Overview of the materials that can specify in Collection Code, are presented in the following page.
http://dl.ndl.go.jp/en/intro.html#idx4

* Details of Access Rights are presented in the following page.
http://dl.ndl.go.jp/en/intro.html#idx2-1

For NDC, Collection Code and Access Rights, prefix match shall be applied. For example, if a digit "7" is specified, bibliographic data with the classification code "7xx" will be returned. If three digit "D07" is specified for the Collection Code, metadata with the Collection Code "D07X" (lower level of Collection Code "D07") will be returned (see appendix4 for exceptions). For example, if Aozora Bunko is specified for the data provider, specify as "set=aozora".

To specify multiple items at the same time, for example, if you want to specify data provider and NDL classification simultaneously, you must separate each item with a colon (:). You can specify in any order, for the data whose NDC classification is "735", specify as "set=735". For the data of Aozora Bunko with NDC classification "735", specify as "set=aozora:735" or "set=735:aozora." For the data with Collection Code "D07" of NDL Digital Collection (Online publications), you should specify "set=ndl-dl-online:D07" or "set=D07:ndl-dl-online". For the data with NDC "735" of NDL Digital Collection (Online publications), with Collection Code "D07" and Access Rights "Available only at the NDL, you should specify "set=ndl-dl-online:735:D07:ARkannai", or "set=ARkannai:735:D07:ndl-dl-online".

You cannot specify multiple conditions in the same field. For example, when you specify NDL classification simultaneously (request example "set=913:914"), it will return an error.

Even if Collection Code or Access Right in a record is changed, delete record will not be returned retrospectively. Therefore, if you harvest data with set "Collection Code" or "Access Rights", you are supposed to update all of data on a regular schedule.

* If you want to know about the latest Collection Code and Access Rights, see Appendix 4: List of Collection Code and Access Rights.

* Since 2010, NDL has provided the newly acquired NDL bibliographic data. The data provider of the newly acquired NDL bibliographic data is NDL Online. If you want to acquire the metadata of the newly acquired bibliographic data, make a request with "set=iss-ndl-opac-inprocess" specified. Note that although the metadata of NDL Online can be acquired by a request with "set=iss-ndl-opac" specified, the result from this request does not include the data of the newly acquired NDL bibliographic data.

* Since 2013, NDL Search provides the Japanese national bibliography. The data provider NDL Online includes the Japanese national bibliography. If you want to scope the Japanese national bibliography, make a

request with "set=iss-ndl-opac-national". Note that the Japanese national bibliography is equivalent to data with "set=iss-ndl-opac" and JPNO.

(5) Number of returned data records

For ListIdentifiers, ListRecords, and ListSets, the number of returned data records at a time is 200. To acquire 201st and later records, make a request while specifying the resumptionToken notified when the first 200 records were acquired.

(6) Return format

The data return format is XML. For the schema (metadataPrefix), you can select either oai_dc, dcndl or dcndl_simple.

To acquire the bibliographic data only, make a request with onlyBib=true specified.

(Available only when dcndl is specified for metadataPrefix)

For an example of returned data, see Appendix 3 (Examples of returned data for each interface) in this document.

(7) Identifier

For OAI-PMH, a unique item identifier on the repository side can be received on the service provider side. By using this, you can update the data on the service provider at the time of differential harvest (the parameter described as the identifier in (3) Support requests and argument).

This service uses this identifier as the metadata ID. (The ID, with the configuration shown below, uniquely given to all the metadata of this service.)

oai:iss.ndl.go.jp :[repository number]-[item number]-[branch number]

(8) from, until

If a date (YYYY-MM-DD or YYYY-MM-DDThh:mm:ssZ) is specified for "from," the bibliographic data updated after the specified date is returned. If a date (YYYY-MM-DD or YYYY-MM-DDThh:mm:ssZ) is specified for "until" the bibliographic data updated earlier than the specified date is returned.

The restriction on the period of "from" and "until," see "(10) Access restriction of OAI-PMH."

(9)Access restriction of OAI-PMH

OAI-PMH applies following restriction to accesses in order to prevent the load on this service from being raised by accesses for large data acquisition.

For ListRecords and Listidentifier, "from" is required. The following restriction is applied to the range (period) that can be specified by "from" or "until":

* Maximum period is one year.

* In case of non-specified, maximum period (one year) is automatically assigned.

(11) Request sample

Example 1: Identify request

http://iss.ndl.go.jp/api/oaipmh?verb=Identify

Example 2: ListMetadataFormats request

http://iss.ndl.go.jp/api/oaipmh?verb=ListMetadataFormats

Example 3: ListIdentifiers request

http://iss.ndl.go.jp/api/oaipmh?verb=ListIdentifiers&metadataPrefix=oai_dc&from=2010-07-01

Example 4: ListRecords request

http://iss.ndl.go.jp/api/oaipmh?verb=ListRecords&metadataPrefix=oai_dc&set=aozora&from=2010-07-01

http://iss.ndl.go.jp/api/oaipmh?verb=ListRecords&metadataPrefix=dcndl_simple&f rom=2011-02-01&set=iss-ndl-opac-inprocess

Example 5: GetRecord request

http://iss.ndl.go.jp/api/oaipmh?verb=GetRecord&metadataPrefix=oai_dc&identifier=oai:iss.ndl.go.jp:R000000014-I000044174-00

Example 6: ListSets request

http://iss.ndl.go.jp/api/oaipmh?verb=ListSets