

OAI-PMH API

OpenArchives Initiative Protocol for Metadata Harvesting API

2024-07-17

! Webpage under construction

We appreciate your interest in our website. Please be advised that this page is currently under construction and we are working to improve your experience and will have it up and running shortly. Thank you for your patience and understanding. If you have any questions or need assistance, please [contact us](#).



API is available here: <https://api.aiscr.cz/oai?verb=Identify>.

User registration is available here: <https://amcr.aiscr.cz/accounts/register/>.

This guide is valid for version 2.0.0 of the service and schema.

OAI-PMH AMČR API provides metadata from the AMČR database using the *OpenArchives Initiative Protocol for Metadata Harvesting* (OAI-PMH). The implementation supports two metadata standards:

- [Dublin Core](#) – part of the AMČR data set with metadata on documents and their descriptions,
- AMČR XML – native format with a complete representation of the whole AMČR database.

The API response is an *.xml* file.

Access

The access to some metadata is protected by user roles:

- **A** (anonymous) – anyone on the internet accessing AMČR services,
- **B** (researcher) – registered users,
- **C** (archaeologist) – archaeologist from a licensed organisation,
- **D** (archivist) – AMČR authorized archivist.

Registration to the system is available here: <https://amcr.aiscr.cz/accounts/register/>.

Specification

Schema

Schema (.xsd) for current version (**2.0**) of the service can be found here: <https://api.aiscr.cz/schema/amcr/2.0/>. Schema for previous version (1.0) is accessible here: <https://api.aiscr.cz/schema/amcr/1.0/>

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This part of the webpage will be updated with schemas and further explanations. We apologize for any inconvenience and appreciate your understanding.

Filters

State and accessibility of the record

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Sets

Selective querying can be achieved using predefined sets.

Table 1: Available sets

setSpec	setName	vocabulary
projekt	Projekty / Projects	-
archeologicky_zaznam	Archeologické záznamy / Archaeological Records	-
archeologicky_zaznam:akce	Akce / Fieldwork Events	-
archeologicky_zaznam:lokalita	Lokalita / Sites	-
let	Lety / Flights	-
adb	Archeologické dokumentační body / Archaeological Documentation Points	-
dokument	Dokumenty / Documents	-
ext_zdroj	Externí zdroje / External Sources	-
pian	PIAN / Spatial Units	-
samostatny_nalez	Samostatné nálezy / Individual Finds	-
uzivatel	Uživatelé / Users	-
heslo	Hesláře / Vocabularies	-
ruian_kraj	RÚIAN - Kraje / RÚIAN – Regions	-
ruian_okres	RÚIAN - Okresy / RÚIAN – Districts	-

setSpec	setName	vocabulary
ruian_katastr	RÚIAN - Katastrální území / RÚIAN - Cadastral Municipality	
organizace	Organizace / Organisations	
osoba	Osoby / Persons	

Datestamps

In `ListIdentifiers` and `ListRecords` verbs it is possible to filter based on optional query parameter `datestamp`. (`from` – `until`).

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Login and authorization

To be able to access records with limited accessibility, it is necessary to login using *Basic access authentication* while sending the requests.

cURL

Use flag `-u` to put in your username and password in each request.

```
curl -u <username>:<password> <GET request>
```

Postman

In Postman, username and password can be set up on the *Authorization* tab. Select *Basic Auth* in the *TYPE* menu.

Verbs

OAI-PMH protocol defines several verbs that allow metadata harvesting. OAI-PMH specification is available [here](#).

Identify

Verb `Identify` is used to get information about the repository.

Request: <https://api.aiscr.cz/oai?verb=Identify>

```
curl 'https://api.aiscr.cz/oai?verb=Identify'
```

Sample response:

```
<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
  <responseDate>2024-07-11T12:26:50Z</responseDate>
  <request verb="Identify">http://digiarchiv:8080/oai</request>
  <Identify>
    <repositoryName>Archaeological Map of the Czech Republic (AMCR)</repositoryName>
    <baseURL>https://api.aiscr.cz/oai</baseURL>
    <protocolVersion>2.0</protocolVersion>
    <adminEmail>info@amapa.cz</adminEmail>
    <earliestDatestamp>1990-01-01</earliestDatestamp>
    <deletedRecord>persistent</deletedRecord>
    <granularity>YYYY-MM-DDThh:mm:ssZ</granularity>
    <description>
      <rightsManifest xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/rights/ http://www.openarchives.org/OAI/2.0/rights.xsd">
        <rights>
          <rightsReference ref="http://creativecommons.org/licenses/by-nc/4.0/rdf"/>
        </rights>
      </rightsManifest>
    </description>
    <description>
      <oai_dc:dc xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/oai_dc/ http://www.openarchives.org/OAI/2.0/oai_dc.xsd">
        <dc:title xml:lang="cs">Archeologická mapa České Republiky (AMČR)</dc:title>
        <dc:title xml:lang="en">Archaeological Map of the Czech Republic (AMCR)</dc:title>
        [...]
        <dc:identifier>https://api.aiscr.cz/</dc:identifier>
        <dc:identifier>version 2.0.0</dc:identifier>
        [...]
      </oai_dc:dc>
    </description>
  </Identify>
</OAI-PMH>
```

ListMetadataFormats

Verb `ListMetadataFormats` returns available metadata formats/standards.

Request: <https://api.aiscr.cz/oai?verb=ListMetadataFormats>

```
curl 'https://api.aiscr.cz/oai?verb=ListMetadataFormats'
```

Sample response:

```
<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/oai_dc.xsd">
  <responseDate>2024-07-11T12:46:31Z</responseDate>
  <request verb="ListMetadataFormats">http://digiarchiv:8080/oai</request>
  <ListMetadataFormats>
    <metadataFormat>
      <metadataPrefix>oai_dc</metadataPrefix>
      <schema>http://www.openarchives.org/OAI/2.0/oai_dc.xsd</schema>
      <metadataNamespace>http://www.openarchives.org/OAI/2.0/oai_dc</metadataNamespace>
    </metadataFormat>
    <metadataFormat>
      <metadataPrefix>oai_amcr</metadataPrefix>
      <schema>https://api.aiscr.cz/schema/amcr/2.0/amcr.xsd</schema>
      <metadataNamespace>https://api.aiscr.cz/schema/amcr/2.0/</metadataNamespace>
    </metadataFormat>
  </ListMetadataFormats>
</OAI-PMH>
```

Supported metadata formats are:

- Dublin Core – metadataPrefix=oai_dc, schema available here http://www.openarchives.org/OAI/2.0/oai_dc.xsd,
- native AMČR .xml format – metadataPrefix=oai_amcr, schema available here <https://api.aiscr.cz/schema/amcr/2.0/>.

ListIdentifiers

Verb **ListIdentifiers** lists record headers. Required parameter is **metadataPrefix**, optional arguments allow filtering based on predefined sets (**set**) and/or timestamps (**from**, **until**). Only first page with limited amount of records is returned, to go to the next page, user has to submit a **resumptionToken** returned in the response.

Request: https://api.aiscr.cz/oai?verb=ListIdentifiers&metadataPrefix=oai_amcr

```
curl 'https://api.aiscr.cz/oai?verb=ListIdentifiers&metadataPrefix=oai_amcr'
```

Sample response:

```

<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
  <responseDate>2024-07-11T12:51:03Z</responseDate>
  <request verb="ListIdentifiers" metadataPrefix="oai_amcr">http://digiarchiv:8080/oai/</request>
  <ListIdentifiers>
    <record>
      <header>
        <identifier>https://api-test.aiscr.cz/id/C-202013149</identifier>
        <timestamp>2024-07-11T12:27:13.968Z</timestamp>
        <setSpec>projekt</setSpec>
      </header>
    </record>
    <record>
      <header>
        <identifier>https://api-test.aiscr.cz/id/P-0334-000377</identifier>
        <timestamp>2024-07-11T12:12:19.386Z</timestamp>
        <setSpec>pian</setSpec>
      </header>
    </record>
    <record>
      <header>
        <identifier>https://api-test.aiscr.cz/id/C-DL-200400209</identifier>
        <timestamp>2024-07-11T12:10:48.403Z</timestamp>
        <setSpec>dokument</setSpec>
      </header>
    </record>
    [...]
    <resumptionToken completeListSize="859142" cursor="0">8F37FA46A1BE68D815CAE66EDFD7EE64</resumptionToken>
  </ListIdentifiers>
</OAI-PMH>

```

ListRecords

Verb `ListRecords` lists records. Required parameter is `metadataPrefix`, optional arguments allow filtering based on predefined sets (`set`) and/or timestamps (`from`, `until`). Only first page with limited amount of records is returned, to go to the next page, user has to submit a `resumptionToken` returned in the response.

Request: https://api.aiscr.cz/oai?verb=ListRecords&metadataPrefix=oai_dc

```
curl 'https://api.aiscr.cz/oai?verb=ListRecords&metadataPrefix=oai_dc'
```

Sample response:

```

<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/">
  <responseDate>2024-07-11T13:25:02Z</responseDate>
  <request verb="ListRecords" metadataPrefix="oai_dc">http://digiarchiv:8080/oai</request>
  <ListRecords>
    <record>
      <header>
        <identifier>https://api-test.aiscr.cz/id/C-202013149</identifier>
        <timestamp>2024-07-11T12:27:13.968Z</timestamp>
        <setSpec>projekt</setSpec>
      </header>
      <metadata>
        <oai_dc:dc xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/oai_dc/ http://www.openarchives.org/OAI/2.0/oai_dc/">
          <dc:title xml:lang="cs">AMČR - projekt C-202013149</dc:title>
          <dc:identifier>C-202013149</dc:identifier>
          <dc:subject xml:lang="cs">projekt</dc:subject>
          <dc:description xml:lang="cs">Stav: 6</dc:description>
          <dc:type>http://base_url/id/HES-000865</dc:type>
          [...]
        </oai_dc:dc>
      </metadata>
    </record>
    <resumptionToken completeListSize="859142" cursor="0">2A997D362431AC3FC670E2680E61D782</resumptionToken>
  </ListRecords>
</OAI-PMH>

```

GetRecord

Verb **GetRecord** returns individual record. Required parameters are **metadataPrefix** and **identifier** (unique identifier of the record, URI). Unique identifier of individual record is in the header of each record in the element with tag **<identifier>**. The contents of **<identifier>** element is derived from a unique identifier of the given record stored in the **<amcr:ident_cely>** prefixed with string **https://api.aiscr.cz/id/**.

Request: https://api.aiscr.cz/oai?verb=GetRecord&identifier=https://api-test.aiscr.cz/id/M-FT-110598700&metadataPrefix=oai_amcr

```
curl 'https://api.aiscr.cz/oai?verb=GetRecord&identifier=https://api-test.aiscr.cz/id/M-FT-110598700&metadataPrefix=oai_amcr'
```

Sample response:

```
<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/oai_dc/">
  <responseDate>2024-07-15T09:04:59Z</responseDate>
  <request verb="GetRecord" identifier="https://api-test.aiscr.cz/id/M-FT-110598700" metadata="amcr">
    <GetRecord>
      <record>
        <header>
          <identifier>https://api-test.aiscr.cz/id/M-FT-110598700</identifier>
          <timestamp>2024-05-09T12:39:30.474Z</timestamp>
          <setSpec>dokument</setSpec>
        </header>
        <metadata>
          <amcr:amcr xsi:schemaLocation="https://api.aiscr.cz/schema/amcr/2.0/ https://api.aiscr.cz/schema/amcr/2.0/oai_dc/">
            </amcr:amcr>
          </metadata>
        </record>
      </GetRecord>
    </OAI-PMH>
```

ListSets

Verb **ListSets** lists available sets.

Request: <https://api.aiscr.cz/oai?verb=ListSets>

```
curl 'https://api.aiscr.cz/oai?verb=ListSets'
```

Sample response:

```
<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/oai_dc/">
  <responseDate>2024-07-11T13:28:01Z</responseDate>
  <request verb="ListSets">http://digiarchiv:8080/oai</request>
  <ListSets>
    <set>
      <setSpec>projekt</setSpec>
      <setName>Projekty / Projects</setName>
      <setDescription>
        <oai_dc:dc xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/oai_dc/ http://www.openarchives.org/OAI/2.0/oai_dc/">
          <dc:description xml:lang="cs">
            Evidenční jednotky terénní činnosti badatelského nebo záchranného rázu evidované
          </dc:description>
          <dc:description xml:lang="en">
            Records of field activities of a research or development-led nature recorded in
          </dc:description>
        </oai_dc:dc>
      </setDescription>
    </set>
  </ListSets>
```



```

    </set>
    [...]
  </ListSets>
</OAI-PMH>

```

Parameters

Some verbs have required parameters (typically specifying the metadata format with `metadataPrefix`) and some have optional parameters allowing filtration, pagination etc.

Table 2: Required and optional query parameters

verb	required	optional
Identify	-	-
ListMetadataFormats	-	-
ListIdentifiers	metadataPrefix	set, from, until, resumptionToken
ListRecords	metadataPrefix	set, from, until, resumptionToken
GetRecord	identifier, metadataPrefix	-
ListSets	-	-

Pagination

In case of `ListIdentifiers` and `ListRecords` verbs, only the first page of results is returned. To get another page, a `resumptionToken` returned at the end of the response must be used as a parameter in the following request. Parameter `resumptionToken` should be always the last parameter in the request.

Request: https://api.aiscr.cz/oai?verb=ListRecords&metadataPrefix=oai_amcr

```
curl 'https://api.aiscr.cz/oai?verb=ListRecords&metadataPrefix=oai_amcr'
```

Sample response:

```

<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/">
  <responseDate>2024-07-15T11:57:23Z</responseDate>
  <request verb="ListRecords" metadataPrefix="oai_amcr">http://digiarchiv:8080/oai</request>
  <ListRecords>
    <record>
      <header>
        [...]
      </header>
      <metadata>
        [...]
      </metadata>
    </record>
  </ListRecords>
  <resumptionToken>[...]</resumptionToken>
</OAI-PMH>

```

```

    </metadata>
  </record>
  <resumptionToken completeListSize="859162" cursor="0">55CC4AC4A4BDAA3245F6B3E0E8B1CE0A
</ListRecords>
</OAI-PMH>

```

Follow up request with *resumptionToken*: <https://api.aiscr.cz/oai?verb=ListRecords&resumptionToken=55CC4AC4A4BDAA3245F6B3E0E8B1CE0A>

```
curl 'https://api.aiscr.cz/oai?verb=ListRecords&resumptionToken=55CC4AC4A4BDAA3245F6B3E0E8B1CE0A'
```

```

<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/">
  <responseDate>2024-07-15T12:01:28Z</responseDate>
  <request verb="ListRecords" resumptionToken="55CC4AC4A4BDAA3245F6B3E0E8B1CE0A">http://di.aiscr.cz/
  <ListRecords>
    <record>
      <header>
        [...]
      </header>
      <metadata>
        [...]
      </metadata>
    </record>
    <resumptionToken completeListSize="859162" cursor="100">AC59E153A7C3CDBAC4200F62CAC678
  </ListRecords>
</OAI-PMH>

```

Notice the attributes of the *resumptionToken* element *completeListSize* indicating total number of results and *cursor* indicating that the first record in the given response is n-th returned record.

Filters

Selective harvesting is allowed thanks to timestamps of records and sets.

Record accessibility

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Sets

Available sets of records are returned using the `ListSets` verb. The contents of the `<setSpec>` element can be used in a `set` parameter in `ListIdentifiers` and `ListRecords` verbs.

Request: https://api.aiscr.cz/oai?verb=ListIdentifiers&set=pian&metadataPrefix=oai_amcr

```
curl 'https://api.aiscr.cz/oai?verb=ListIdentifiers&set=pian&metadataPrefix=oai_amcr'
```

Sample response:

```
<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
  <responseDate>2024-07-15T12:17:21Z</responseDate>
  <request verb="ListIdentifiers" set="pian" metadataPrefix="oai_amcr">http://digiarchiv.8
  <ListIdentifiers>
    <record>
      <header>
        <identifier>https://api-test.aiscr.cz/id/P-1223-101288</identifier>
        <timestamp>2024-07-15T11:13:45.237Z</timestamp>
        <setSpec>pian</setSpec>
      </header>
    </record>
    [...]
    <resumptionToken completeListSize="219014" cursor="0">A828ECF79EF4EABB40CDD5EAB26F62B1
  </ListIdentifiers>
</OAI-PMH>
```

Datestamps

Parameters `from` and `until` in verbs `ListIdentifiers` and `ListRecords` allow filtering based on a datestamp of the given record. Use dates in ISO-8601 standard format, i.e. YYYY-MM-DD.

Request: https://api.aiscr.cz/oai?verb=ListIdentifiers&set=projekt&from=2023-04-21&until=2024-04-27&metadataPrefix=oai_amcr

```
curl 'https://api.aiscr.cz/oai?verb=ListIdentifiers&set=projekt&from=2023-04-21&until=2024-04-27&metadataPrefix=oai_amcr'
```

Sample response:

```
<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/ http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
  <responseDate>2024-07-15T12:20:21Z</responseDate>
  <request verb="ListIdentifiers" set="projekt" from="2023-04-21" until="2024-04-27" metadataPrefix="oai_dc">
    <ListIdentifiers>
      <record>
        <header>
          <identifier>https://api-test.aiscr.cz/id/M-202204394</identifier>
          <timestamp>2024-04-26T13:08:37.256Z</timestamp>
          <setSpec>projekt</setSpec>
        </header>
      </record>
      [...]
      <record>
        <header>
          <identifier>https://api-test.aiscr.cz/id/C-202401944</identifier>
          <timestamp>2024-03-17T06:32:08.143Z</timestamp>
          <setSpec>projekt</setSpec>
        </header>
      </record>
      <resumptionToken completeListSize="180105" cursor="0">6ABB1C7ACC374C52B5106D1ABCA113C6</resumptionToken>
    </ListIdentifiers>
  </OAI-PMH>
```