

Alephino X-Services

From: Swami Wiki

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General Information

Along with the introduction of MARC XML for universal data exchange format the Alephino was fitted with services providing direct communication with the Alephino server. With these HTTP based set of services it is possible to search for Alephino records of any type as well as creating new records, updating them and also doing deletions. The online data interface and its services are subjects of this documentation.

An executable program **alix(.exe)** acts as CGI gateway to the Alephino server and therefore has to be added to the respective HTTP server configuration. The general syntax of Alephino HTTP requests is as follows:

`http://address[:port]/alix?op=request_name&base=database_name¶m=value...`

- Parameter names and values are dealt with case sensitive.
- Character set is UTF-8.
- The methods GET and POST of the HTTP protocol are supported.

Request types of the Alephino X-Server

For main parameter **op=** the following values will be accepted:

find	Find records by search request
get	Navigate linked record
getrec	Get record MARC XML formatted
putrec	Write MARC XML record back to the database
delrec	Delete record
info	Information about files, search aspects, link aspects ...
publish_avail	Get record MARC XML formatted plus availability information (for Primo)
getbor	Get borrower record PLIF XML formatted
putbor	Write PLIF XML borrower record back to the database

The parameters listed below are valid for all request types:

usr	Staff user name
pwd	Staff user password

The above parameters can be omitted if the general system configuration file **etc/alephino.cfg** contains the following entry:

```
(XService)
User = <User>
Password = <Password>
```

find – Find records by search request

op=find	Parameter
base	Data pool and master file in Alephino notation, i.e. M-TIT for data pool M(arc) master file TIT(le)
query	Search query in Alephino CCL notation, i.e. WRD=Mathematics and PER=Leach*

Response (Example):

```
<?xml version="1.0" encoding="UTF-8" ?>
<find>
  <query>wrд=mathematics and per=leach*</query>
  <base>M-TIT</base>
  <set_number>17</set_number>
  <no_entries>1</no_entries>
</find>
```

get – Navigate linked records

op=get	Parameter
base	Data pool and master file in Alephino notation, i.e. M-TIT for data pool M(arc) master file TIT(le)
idn	Identification number of the respective record

alternatively...

set_number Number of a result set (result of a subsequentially performed **find**)
number_entry Record position within that result set (beginning with number one)

Response (Example):

```
<?xml version="1.0" encoding="UTF-8" ?>
<get>
  <link>SUB</link>
  <set_number>17</set_number>
  <no_entries>8</no_entries>
</find>
```

getrec – Get record MARC/XML-formatted

op=getrec	Parameter
base	Data pool and master file in Alephino notation, i.e. M-TIT for data pool M(arc) master file TIT(le)
idn	Identification number of the respective record

alternatively...

set_number Number of a result set (result of a subsequentially performed **find**)
number_entry Record position within that result set (beginning with number one)

Pls. note that for this the staff user must have "Update" permission.

Response (Example):

```
<?xml version="1.0" encoding="UTF-8" ?>
<collection>
<document base="M-TIT" idn="000000713">
<controlfield tag="001">000000713</controlfield>
<controlfield tag="002">20091120</controlfield>
<controlfield tag="003">DDB</controlfield>
<controlfield tag="005">20100804153942</controlfield>
<controlfield tag="008">030829s2004    gw          u000|u eng d</controlfield>
<datafield tag="015" ind1=" " ind2=" ">
```

```

<subfield code="a">GFR-CIP-03,N39,0574</subfield>
<subfield code="a">DNB-04,A08,0870</subfield>

</datafield>
<datafield tag="016" ind1="7" ind2=" ">
<subfield code="2">GyFmDB</subfield>
<subfield code="a">968675239</subfield>
</datafield>
<datafield tag="020" ind1=" " ind2=" ">
<subfield code="a">1-85233-767-2 :</subfield>
<subfield code="c">Pp. : EUR 128.35</subfield>
</datafield>
<datafield tag="040" ind1=" " ind2=" ">
<subfield code="a">DDB</subfield>
<subfield code="b">ger</subfield>

<subfield code="e">RAK-WB</subfield>
</datafield>
<datafield tag="041" ind1="0" ind2=" ">
<subfield code="a">eng</subfield>
</datafield>
<datafield tag="100" ind1="1" ind2=" ">
<subfield code="L">000000706</subfield>
<subfield code="a">Leach, John A.</subfield>
</datafield>
<datafield tag="245" ind1="1" ind2="0">
<subfield code="a">Matched asymptotic expansions in reaction diffusion theory </subfield>
<subfield code="c">J. A. Leach ; D. J. Needham.</subfield>

</datafield>
<datafield tag="260" ind1=" " ind2=" ">
<subfield code="a">London ;</subfield>
<subfield code="a">Berlin ;</subfield>
<subfield code="a">Heidelberg ;</subfield>
<subfield code="a">New York ;</subfield>
<subfield code="a">Hong Kong ;</subfield>
<subfield code="a">Milan ;</subfield>
<subfield code="a">Paris ;</subfield>
<subfield code="a">Tokyo :</subfield>

<subfield code="b">Springer,</subfield>
<subfield code="c">2004.</subfield>
</datafield>
<datafield tag="300" ind1=" " ind2=" ">
<subfield code="a">X, 290 S. :</subfield>
<subfield code="b">graph. Darst. ;</subfield>
<subfield code="c">24 cm.</subfield>
</datafield>
<datafield tag="490" ind1="0" ind2=" ">
<subfield code="a">Springer monographs in mathematics</subfield>
</datafield>

<datafield tag="500" ind1=" " ind2=" ">
<subfield code="a">Literaturverz. S. 283 - 287</subfield>
</datafield>
<datafield tag="650" ind1=" " ind2="7">
<subfield code="2">SWD</subfield>
<subfield code="a">Reaktions-Diffusionsgleichung</subfield>
<subfield code="x">Asymptotische Entwicklung.</subfield>
<subfield code="L">000000679</subfield>
</datafield>
<datafield tag="700" ind1="1" ind2=" ">
<subfield code="L">000000707</subfield>

<subfield code="a">Needham, David J.</subfield>
</datafield>
<datafield tag="FMT" ind1=" " ind2=" ">BK</datafield>
<leader>00902nam 2200241 i 4500</leader>
<datafield tag="LNG" ind1=" " ind2=" ">eng</datafield>
</document>
</collection>

```

putrec – Update record from MARC/XML input

op=putrec	Parameter
mode	LOAD = Load without checking / [otherwise] = Import including script controlled checkings
data	MARC XML record (see reply from getrec)

Pls. note that for this the staff user must have "Update" permission.

Response = Source XML data record enriched with warnings or error messages (Example):

```
<?xml version="1.0" encoding="UTF-8" ?>
<collection>
<document base="M-TIT" idn="000000713">
<controlfield tag="001">000000713</controlfield>
<controlfield tag="002">20091120</controlfield>
<controlfield tag="003">DDB</controlfield>
<controlfield tag="005">20100804153942</controlfield>
<controlfield tag="008">030829s2004    gw          u000|u eng d</controlfield>
...
<datafield tag="100" ind1=" " ind2=" ">
<subfield code="L">000000706</subfield>
<subfield code="a">Leach, John A.</subfield>
</datafield>
<error type="tag">Indicator 1 not allowed</error>
...
</document>
</collection>
```

delrec – Delete record

op=delrec	Parameter
base	Data pool and master file in Alephino notation, i.e. M-TIT for data pool M(arc) master file TIT(le)
idn	Identification number of the record to be deleted

Pls. note that for this the staff user must have "Update" permission.

Response (Example):

```
<?xml version="1.0" encoding="UTF-8" ?>
<delrec>
<error>Deletion not possible: dependent records ! </error>
</delrec>
<delrec>
```

alternatively (on success) ...

```
<?xml version="1.0" encoding="UTF-8" ?>
<base>M-TIT</base>
<idn>713</idn>
```

</delrec>

info – Information about databases, files, formats, tables, search aspects, link aspects

op=info	Parameter
what	INDEXES = Search aspect SUB-LIBRARY = Sublibraries FORMATS = Display-/List-/Print-/Sort-formats RECLINKS = Links to other records from current record [TABLE_NAME] = Name of an Alephino-table if empty: Databases (data pools) and master files
base	Data pool and master file in Alephino notation, i.e. M-TIT for data pool M(arc) master file TIT(le)
idn	Identification number of record (for record related functions)
alternatively ...	
set_number	Number of a result set (result of a subsequentially performed find)
number_entry	Record position within that result set (beginning with number one)

Response (Examples):

```
<info what="BASICS">
<pool name="M">Library</pool>
<sublib name="CL">Central Library</sublib>
<file name="TIT">Titles</file><file name="AUT">Authorities</file>
<file name="SUB">Subjects</file><file name="HOL">Holdings</file>
<file name="MEX">Items</file><file name="MEM">Memos</file>
<file name="BEN">Users</file><file name="PRM">User permissions</file>
<file name="ADR">Addresses</file><file name="VBU">Loans</file>
<file name="LNH">Loan history</file><file name="VOR">Hold requests</file>
<file name="CSH">Fines</file><file name="OBJ">Digital objects</file>
<file name="THS">Thesaurus master file</file><file name="PER">Persons thesaurus</file>
<file name="ORT">Place thesaurus</file><file name="LND">Country thesaurus</file>
<file name="MAT">Material thesaurus</file><file name="ZTR">Time periods thesaurus</file>
<file name="CNT">Statistic counters</file><file name="CUR">Currencies</file>
<file name="RAT">Currency ratios</file><file name="VDR">Vendors</file>
<file name="VAD">Vendors addresses</file><file name="BUD">Budgets</file>
<file name="BTR">Budget transactions</file><file name="ORD">Orders</file>
<file name="ARR">Arrivals</file><file name="ORL">Order logs</file>
<file name="IVH">Gen. invoice</file><file name="IVP">Invoice position</file>
<file name="ABO">Subscriptions</file><file name="PUB">Publication</file>
```

```
<file name="RTL">Routing list</file><file name="RTM">Routing list member</file>
<file name="SDI">User profile</file><file name="OAI">Update notices</file>
<file name="SLF">eShelf</file>
</info>
```

or:

```
<info what="INDEXES" base="M" file="AUT"><NAM>All Names</NAM>
<PER>Personal names</PER>
<PEW>Authors / Keywords</PEW>
<COR>Corporate names</COR>
<COP>Authors / Corporate names (Phrase)</COP>
<MEE>Meeting names</MEE>
<MEP>Authors / Meeting names (Phrase)</MEP>
<TIT>Uniform titles</TIT>
<IDN>Identification no.</IDN>
<LCC>LoC Control No.</LCC>
<SYC>System Control No.</SYC>
<LCN>LoC Call No.</LCN>
<NLM>NLM Call No.</NLM>
<NAL>NAL Call No.</NAL>
<DDN>DD Call No.</DDN>
<DCC>DD Number</DCC>
</info>
```

or:

```
<info what="FORMATS" base="M" file="AUT"><display name="001">Full format (Cataloging)</display>
<display name="002">Field format (Cataloging)</display>
<display name="TREEINFO"></display>
<list name="ALTFORM">Brief list</list>
<sort name="001">LoC Call no.</sort>
<sort name="002">Authority form</sort>
<sort name="003">Reference form</sort>
<sort name="080"></sort>
<sort name="081"></sort>
<print name="001">Person list</print>
<print name="003">Full format (Cataloging)</print>
<print name="004">Field format (Cataloging)</print>
</info>
```

or:

```
<info what="SUB-LIBRARY" base="M">
<BL>Another Library</BL>
<CL>Central Library</CL>
</info>
```

or:

```
<info what="RECLINKS" base="M" file="TIT" idn="4711">
<NPE name="Personal Names">1</NPE>
<TTP name="Subjects/Topical Terms">5</TTP>
<MEX name="Items">2</MEX>
```

```
</info>
```

or:

```
<info what="USER-ADDRESS-TYPE" base="M">
<entry key="1">Postal address</entry>
<entry key="2">Campus address</entry>
<entry key="3">Inhouse address</entry>
<entry key="99">Backup copy</entry>
</info>
```

publish_avail – Fetch record including availability information

op=publish_avail	Parameter
library	Data pool in Alephino notation, i.e. M for data pool M(arc) or ... external name of the database according to alephino.cfg, Block (Consort), i.e.: LO
doc_num	Identification number of the record

Response (Example):

```
<?xml version="1.0" encoding="UTF-8" ?>
<publish-avail><OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/
http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
  <ListRecords>
    <record>
      <header>
        <identifier>aleph-publish:000001149</identifier>
      </header>
      <metadata>
        <document base="LOTIT" idn="000001149">
          <controlfield tag="001">000001149</controlfield>
          <controlfield tag="002">20091120</controlfield>
          <controlfield tag="003">DDB</controlfield>
          <controlfield tag="005">20100804153942</controlfield>

          <controlfield tag="008">030917s2003    gw a          u000|u eng d</controlfield>
          <datafield tag="015" ind1=" " ind2=" ">
            <subfield code="a">GFR-CIP-03,N41,1210</subfield>
            <subfield code="a">DNB-04,A08,1812</subfield>
          </datafield>
          <datafield tag="016" ind1="7" ind2=" ">
            <subfield code="2">GyFmDB</subfield>
            <subfield code="a">968792812</subfield>
          </datafield>
          <datafield tag="020" ind1=" " ind2=" ">
            <subfield code="a">3-525-53984-3 (Vandenhoeck & Ruprecht) :</subfield>

            <subfield code="c">kart. : EUR 52.00</subfield>
          </datafield>
          <datafield tag="020" ind1=" " ind2=" ">
```

```

<subfield code="a">3-7278-1444-6 (Univ. Press) :</subfield>
<subfield code="c"> kart.</subfield>
</datafield>
<datafield tag="040" ind1=" " ind2=" ">
<subfield code="a">DDB</subfield>
<subfield code="b">ger</subfield>
<subfield code="e">RAK-WB</subfield>
</datafield>
<datafield tag="041" ind1="1" ind2=" ">
<subfield code="a">eng</subfield>
<subfield code="h">fre</subfield>
</datafield>
<datafield tag="044" ind1=" " ind2=" ">
<subfield code="a">XA-DE-NI</subfield>
</datafield>
<datafield tag="245" ind1="0" ind2="4">
<subfield code="a">The excavations of Khirbet Qumran and Ain Feshkha.</subfield>
<subfield code="c">ed. by J.-B. Humbert and A. Chambon. Transl. and rev. by Stephen J.
Pfann.</subfield>
<subfield code="n">1B,</subfield>

<subfield code="p">Synthesis of Roland de Vaux's field notes </subfield>
</datafield>
<datafield tag="260" ind1=" " ind2=" ">
<subfield code="a">Fribourg, Switzerland :</subfield>
<subfield code="b">Univ. Press,</subfield>
<subfield code="c">2003.</subfield>
</datafield>
<datafield tag="300" ind1=" " ind2=" ">
<subfield code="a">109 S. :</subfield>
<subfield code="b">Ill., graph. Darst., Kt.</subfield>

</datafield>
<datafield tag="490" ind1="1" ind2=" ">
<subfield code="a">Novum testamentum et orbis antiquus / im Auftr. des Biblischen Instituts
der Universität Freiburg, Schweiz. Series archaeologica ;</subfield>
<subfield code="v">1B</subfield>
</datafield>
<datafield tag="700" ind1="1" ind2=" ">
<subfield code="L">000001231</subfield>
<subfield code="a">Vaux, Roland de.</subfield>
</datafield>
<datafield tag="700" ind1="1" ind2=" ">
<subfield code="L">000001232</subfield>
<subfield code="a">Humbert, Jean-Baptiste,</subfield>

</datafield>
<datafield tag="700" ind1="1" ind2=" ">
<subfield code="L">000001233</subfield>
<subfield code="a">Pfann, Stephen J.,</subfield>
</datafield>
<datafield tag="830" ind1=" " ind2="0">
<subfield code="a">Novum testamentum et orbis antiquus / Series archaeologica ;</subfield>
<subfield code="v">1B.</subfield>
</datafield>
<datafield tag="FMT" ind1=" " ind2=" ">BK</datafield>
<leader>01179nam 2200265 i 4500</leader>

<datafield tag="LNG" ind1=" " ind2=" ">eng</datafield>
<datafield tag="AVA" ind1=" " ind2=" ">
<subfield code="a">LOTIT</subfield>
<subfield code="b">ZB</subfield>
<subfield code="c"></subfield>
<subfield code="d"></subfield>
<subfield code="e">available</subfield>
<subfield code="f">2</subfield>
<subfield code="g">0</subfield>
<subfield code="h">N</subfield>

<subfield code="i">0</subfield>
<subfield code="j"></subfield>
</datafield>
</document>
</metadata>
</record>

```

```
</ListRecords>
</OAI-PMH>
</publish-avail>
```

or ...

```
<publish-avail>
<OAI-PMH xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/
http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
<ListRecords>
<record>
<header status="deleted">
<identifier>alephino-publish:000005465</identifier>
</header>
<metadata>
</metadata>
</record>
</ListRecords>
</OAI-PMH>
</publish-avail>
```

getbor – Get borrower information PLIF/XML-formatted

op=getbor

Parameter

base	Data pool in Alephino notation, i.e. M for database M(arc)	idn	Identification number of a borrower record
action	PLIF action indicator:		

Response (Example):

```
<?xml version="1.0" encoding="UTF-8" ?>
<PLIF-SET>
<UPDATE-BOR>
<USER-REC>
<USER-REC-ACTION>A</USER-REC-ACTION>
<USER-REC-MATCH-ID-TYPE>0</USER-REC-MATCH-ID-TYPE>
<USER-REC-MATCH-ID>3</USER-REC-MATCH-ID>
<USER-REC-NAME-TITLE>Dr.</USER-REC-NAME-TITLE>
<USER-REC-NAME>Mustermann, Hugo</USER-REC-NAME>
<USER-REC-BIRTH-DATE>00000000</USER-REC-BIRTH-DATE>
<USER-REC-DELINQ-INDEX>1</USER-REC-DELINQ-INDEX>
<USER-REC-DELINQ>0</USER-REC-DELINQ>
<USER-REC-FIELD-INDEX>1</USER-REC-FIELD-INDEX>
</USER-REC>
<NO-ID-REC>2</NO-ID-REC>
<NO-ADDR-REC>1</NO-ADDR-REC>
<NO-BOR-REC>1</NO-BOR-REC>
<LOGIN-REC>
<LOGIN-REC-ACTION>A</LOGIN-REC-ACTION>
<LOGIN-REC-TYPE>0</LOGIN-REC-TYPE>
<LOGIN-REC-NO>0000003</LOGIN-REC-NO>
<LOGIN-REC-VERIFICATION>topsecret</LOGIN-REC-VERIFICATION>
</LOGIN-REC>
<LOGIN-REC>
```

```

<LOGIN-REC-ACTION>A</LOGIN-REC-ACTION>
<LOGIN-REC-TYPE>1</LOGIN-REC-TYPE>
<LOGIN-REC-NO>M001</LOGIN-REC-NO>
</LOGIN-REC>
<ADDR-REC>
<ADDR-REC-ACTION>A</ADDR-REC-ACTION>
<ADDR-REC-SEQUENCE>1</ADDR-REC-SEQUENCE>
<ADDR-REC-TYPE>3</ADDR-REC-TYPE>
<ADDR-REC-ADDR-1>Herr Dr. Hugo Mustermann</ADDR-REC-ADDR-1>
<ADDR-REC-ADDR-2>Willy-Brandt-Allee 123</ADDR-REC-ADDR-2>
<ADDR-REC-ADDR-3>53113 Bonn</ADDR-REC-ADDR-3>
<ADDR-REC-ZIP>53113</ADDR-REC-ZIP>
<ADDR-REC-PHONE>+49 (0) 228 8721945</ADDR-REC-PHONE>
<ADDR-REC-E-MAIL>h.mustermann@online.de</ADDR-REC-E-MAIL>
<ADDR-REC-START-DATE>00000000</ADDR-REC-START-DATE>
<ADDR-REC-STOP-DATE>00000000</ADDR-REC-STOP-DATE>
</ADDR-REC>
<BOR-REC>
<BOR-REC-ACTION>A</BOR-REC-ACTION>
<BOR-REC-SUB-LIBRARY>ZB</BOR-REC-SUB-LIBRARY>
<BOR-REC-STATUS>01</BOR-REC-STATUS>
<BOR-REC-EXPIRY-DATE>20211024</BOR-REC-EXPIRY-DATE>
</BOR-REC>
</UPDATE-BOR>
<UPDATE-BOR>
...
</UPDATE-BOR>
</PLIF-SET>

```

putbor – Update borrower from PLIF/XML input

op=putbor

Parameter

base Data pool in Alephino notation, i.e. **M** for database M(arc)

data Borrower data in PLIF XML format

Response (Example):

```
<UPDATE-BOR>OK</UPDATE-BOR>
```

or:

```

<UPDATE-BOR>
<ADDR-REC>IDN=3 SEQ=1: already exists</ADDR-REC>
</UPDATE-BOR>

```